

**STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER RIGHTS
P.O. BOX 2000
SACRAMENTO, CA 95812-2000**

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

I. BACKGROUND

PROJECT TITLE: Palisades Ranch Water Right Project

Petitions for Change for Licenses 2947, 7430, 13396
(Applications 9574, 18949, 19374) and Permit 19189 (Application 27625)

Petition for Extension of Time for Permit 19189 (Application 27625)

PETITIONER: Jerome W. and Flora C. Komes, Flora Springs Winery
2006 West Zinfandel Lane
St. Helena, CA 94574

PETITIONER'S CONTACT PERSON: Wagner & Bonsignore Consulting Civil Engineers
2151 River Plaza Drive, Suite 100
Sacramento, CA 95833-4133

GENERAL PLAN DESIGNATION: Agricultural Resource

ZONING: Agricultural Watershed

Introduction

Palisades Ranch is situated in northwestern Pope Valley approximately one mile southeast of Aetna Springs, and about two miles northwest of the community of Pope Valley in Napa County, California (**Figure 1**). The project is located within Township 9N, Range 5W and 6W of the "Aetna Springs, California" U.S. Geological Survey (USGS) 7.5 minute topographic quadrangle (**Figure 2**).

On November 10, 1998, the Petitioner filed petitions with the State Water Resources Control Board (State Water Board), Division of Water Rights (Division) for a change in the place of use (POU) under Water Right Licenses 2947, 7430, and 13396 (Applications 9574, 18949, and 19374, respectively), and Permit 19189 (Application 27625). These petitions sought the addition of 175 acres to the existing 175 acre POU for a total of 350 acres. On October 1, 2002, an amendment to these petitions was filed reducing the request to the addition of 114 acres to the existing POU. On June 23, 2009, the Petition for Change acreage was corrected based on better engineering data (but there was no actual change in the place of use boundary) resulting in a change from 114 to 121 acres.

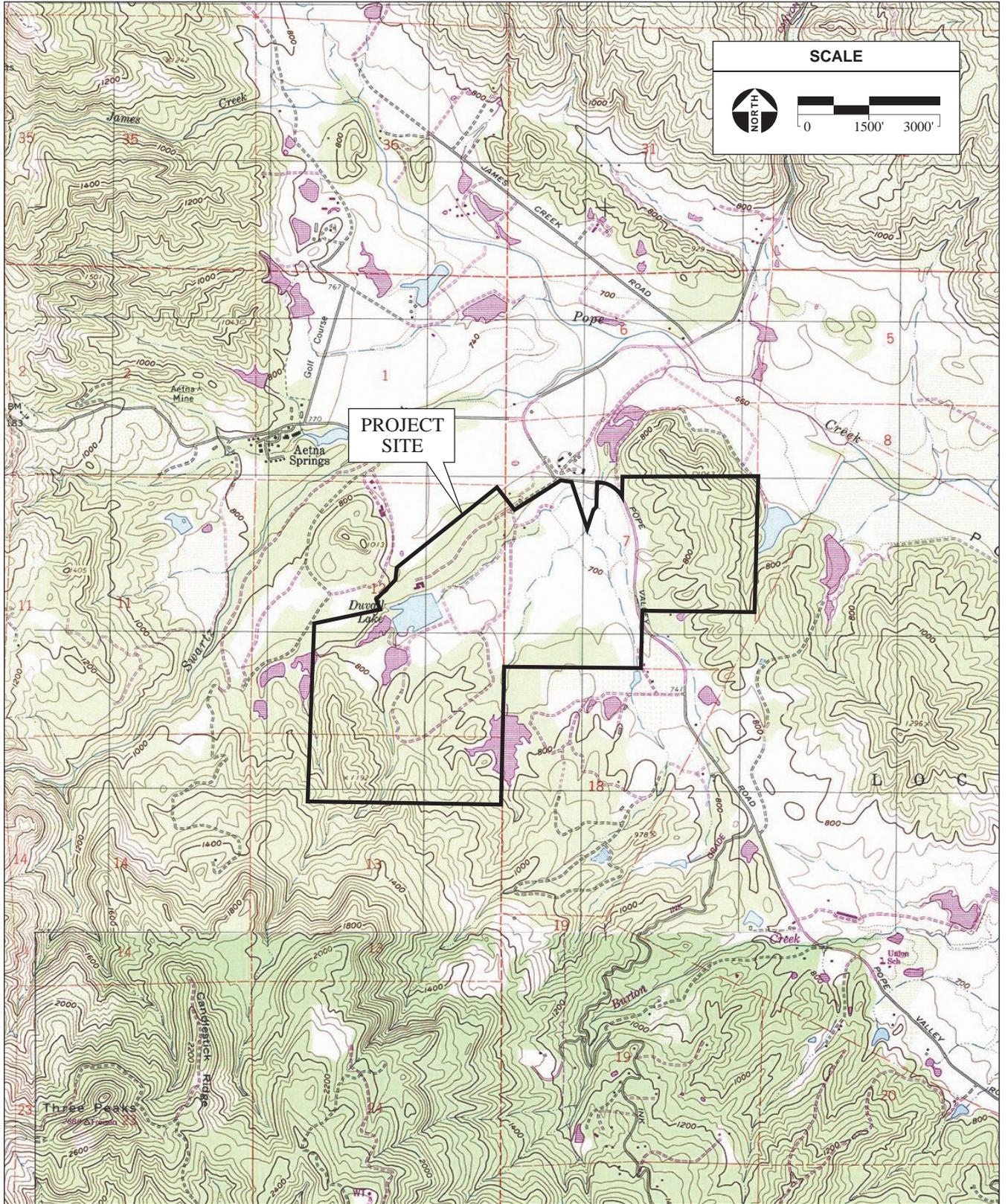
A Petition for Extension of Time was filed on Permit 19189 on May 28, 1996, to allow time to complete full beneficial use of the water under the permit. An additional Petition for Extension of Time was filed on June 30, 2009, since the first petition expired before environmental review was complete. No other changes to the water right licenses or permits have been requested.



SOURCE: ESRI Data, 2007; AES 2009

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Figure 1
Regional Location Map



SOURCE: "Aetna Springs, CA" USGS 7.5 Minutes Quadrangle, Sections 7, 12, 13, T9N, R5W & 6W, Mount Diablo Base and Meridian ; AES, 2003

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Figure 2
Site and Vicinity Map

Project Description

The Petitioner is proposing the addition of 121 acres, which includes approximately 110 acres of existing vineyard, to the POU named in Licenses 2947, 7430, and 13396, and Permit 19189. The location of the 121-acre proposed POU is described in **Table 1** below and is shown in **Figure 3**. The location of the 175-acre existing POU is described in **Table 2** and is shown in **Figure 3**.

TABLE 1: PROPOSED PLACE OF USE¹

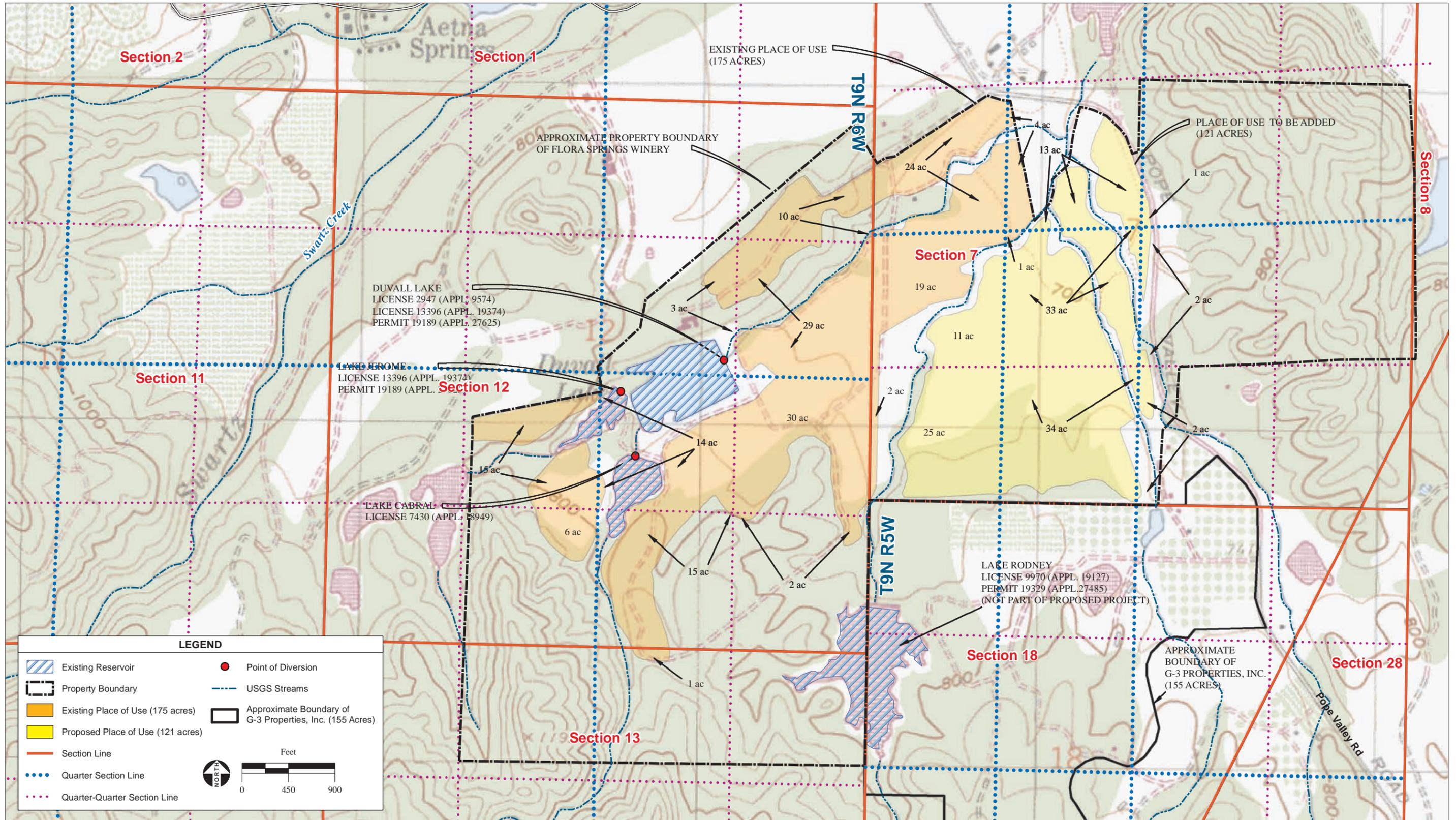
Use Within	Section	Township	Range	B & M	Number of Acres
NE¼ of SW¼	7	9N	5W	MD	33
NW¼ of SE¼	7	9N	5W	MD	2
NW¼ of SW¼	7	9N	5W	MD	11
SE¼ of NW¼	7	9N	5W	MD	13
SE¼ of SW¼	7	9N	5W	MD	34
SW¼ of NE¼	7	9N	5W	MD	1
SW¼ of SE¼	7	9N	5W	MD	2
SW¼ of SW¼	7	9N	5W	MD	25
TOTAL					121

TABLE 2: EXISTING PLACE OF USE²

Use Within	Section	Township	Range	B & M	Number of Acres
NE¼ of SW¼	7	9N	5W	MD	1
NW¼ of SW¼	7	9N	5W	MD	19
SE¼ of NW¼	7	9N	5W	MD	4
SW¼ of NW¼	7	9N	5W	MD	24
SW¼ of SW¼	7	9N	5W	MD	2
NE¼ of NE¼	7	9N	5W	MD	10
NE¼ of SE¼	7	9N	5W	MD	30
NE¼ of SW¼	7	9N	5W	MD	15
NW¼ of SE¼	7	9N	5W	MD	14
SE¼ of NE¼	7	9N	5W	MD	29
SE¼ of SE¼	7	9N	5W	MD	2
SE¼ of SW¼	7	9N	5W	MD	6
SW¼ of NE¼	7	9N	5W	MD	3
SW¼ of SE¼	7	9N	5W	MD	15
NW¼ of NE¼	7	9N	5W	MD	1
TOTAL					175

Water from three existing storage reservoirs would be used to serve the additional acreage. Flora Springs Winery holds Licenses 2947, 7430, and 13396, and Permit 19189 for water storage in the three reservoirs: Lake Duvall (under Licenses 2947 and 13396, and Permit 19189 [Applications 9574, 19374, and 27625]), Lake Cabral (under License 7430 [Application 18949]) and Lake Jerome (under License 13396 [Application 19374] and Permit 19189 [Application 27625]). The licensed rights presently provide for the diversion of 265 acre-feet (af) of water from Unnamed Streams tributary to Pope Creek, and for the maximum annual withdrawal of 236 af (43 af from Lake Cabral and 193 af from Lakes Duvall and Jerome) for the irrigation of 175 acres of vineyard (**Table 2**). Summary information about the water rights is provided in table format (**Tables 5** and **6**) in the Hydrology and Water Quality section below.

The time to complete construction under Permit 19189 ended on December 31, 1992 and the time to complete application of the 112 af of water (72 af in Lake Duvall and 40 af in Lake



SOURCE: James C. Hanson, Engineer, 2010; "Aetna Springs, CA" USGS 7.5 Minute Topographic Quadrangle, T9N R6W Sections 12 & 13, T9N R5W Sections 7 & 18, Mt. Diablo Baseline & Meridian; AES, 2010

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Figure 3
Proposed Project Features

Jerome) to beneficial use ended on December 31, 1993. On May 28, 1996, the Permittee petitioned for a 10-year extension of time, which would have extended the time to complete construction to December 31, 2002, and the time to complete full beneficial use to December 31, 2003. As the first petition expired before environmental review was complete, an additional Petition for Extension of Time was filed on June 30, 2009. The petition seeks a 26-year extension for Permit 19189, from December 31, 1993 to December 31, 2019, to complete beneficial use, and a 27 year extension, from December 31, 1992 to December 31, 2019, to complete construction.

With the proposed project, the total POU (existing and proposed) would include 296 acres, as described in **Table 3**. The Petitioner has stated that the amount of water provided by the existing licenses and permit is adequate for the irrigation, frost protection and heat control, if necessary, of the entire 296 acres. Water stored in the existing reservoirs would also be used for incidental recreation.

TABLE 3: EXISTING AND PROPOSED PLACE OF USE³

Use Within	Section	Township	Range	B & M	Number of Acres
NE¼ of SW¼	7	9N	5W	MD	34
NW¼ of SE¼	7	9N	5W	MD	2
NW¼ of SW¼	7	9N	5W	MD	30
SE¼ of NW¼	7	9N	5W	MD	17
SE¼ of SW¼	7	9N	5W	MD	34
SW¼ of NE¼	7	9N	5W	MD	1
SW¼ of SE¼	7	9N	5W	MD	2
SW¼ of NW¼	7	9N	5W	MD	24
SW¼ of SW¼	7	9N	5W	MD	27
NE¼ of NE¼	7	9N	5W	MD	10
NE¼ of SE¼	7	9N	5W	MD	30
NE¼ of SW¼	7	9N	5W	MD	15
NW¼ of SE¼	7	9N	5W	MD	14
SE¼ of NE¼	7	9N	5W	MD	29
SE¼ of SE¼	7	9N	5W	MD	2
SE¼ of SW¼	7	9N	5W	MD	6
SW¼ of NE¼	7	9N	5W	MD	3
SW¼ of SE¼	7	9N	5W	MD	15
NW¼ of NE¼	7	9N	5W	MD	1
TOTAL					296

In addition to the foregoing rights, Flora Springs Winery and G-3 Properties, Inc. are co-owners of Lake Rodney, as shown on **Figure 3**. License 9970 (Application 19127) and Permit 19329 (Application 27485) provide for the existing maximum storage capacity of Lake Rodney. License 9970 provides for the annual withdrawal from Lake Rodney of 155 af, and Permit 19329 allows for *additional* annual withdrawal of up to 274 af total under License 9970 and Permit 19329. The total POU associated with Lake Rodney under License 9970 and Permit 19329 is 330 acres (175 acres on the Flora Springs Winery property and 155 acres on the G-3 Properties, Inc. property). The 175 acres on the Flora Springs Winery property is identical to the POU presently allowed under Licenses 2947, 7430, and 13396, and Permit 19189. However, none of the water from Lake Rodney under License 9970 or Permit 19329 would be used on the additional 121 acres sought to be added by the subject petitions.

The proposed project would not result in the use of more water than is already allowed under existing rights issued by the State Water Board (Licenses 2947, 13396, and 7430, and Permit 19189). No additional water rights are required.

Project Background

The majority of the 121 acres that would be added to the POU was historically used for grazing of range cattle. Approximately 110 acres of the proposed POU has been developed into vineyard. The vineyard in the proposed POU is irrigated through drip irrigation with water from Lake Duvall, Lake Cabral, and Lake Jerome.

The filing date for the Petitions for Change, November 10, 1998, is considered the California Environmental Quality Act (CEQA) baseline date for the proposed addition of 121 acres to the POU. The date to complete beneficial use of the water under Permit 19189, December 31, 1993, is considered the baseline date for the Petition for Extension of Time. Project components that are subject to environmental review are limited to those that were undeveloped at the time of the CEQA baseline dates. By 1998, 175 acres of existing vineyard (existing POU) and the reservoirs were developed; the proposed POU was undeveloped at the baseline date. By 1993, water was diverted to storage under Permit 19189, but no water had been used because water is withdrawn from Lake Duvall and Lake Jerome by priority of right; Licenses 2947 and 13396 have prior rights to water in Lake Duvall, and License 13396 has prior rights to water in Lake Jerome.

The petitions were noticed on March 16, 2001. A protest was received from the Solano County Water Agency (Agency) on April 13, 2001, based on the premise that the proposed project would result in injury to the water rights exercised by the Agency under contract with the U.S. Bureau of Reclamation. The Agency's protest was resolved based on inclusion of standard language required by Order WR 96-002 regarding prior rights in any of the permits and licenses that did not yet have the standard language.

The California Department of Fish and Game (DFG) filed a protest on May 10, 2001. The State Water Board did not accept the protest. Currently, a maximum annual withdrawal of 236 af for the existing 175-acre vineyard occurs. However, existing water rights allow for a total withdrawal of 377 af per annum (afa) (as described further in **Table 6** in the Hydrology and Water Quality section below). Thus, there is sufficient water for the proposed addition of 121 acres.

Environmental Setting

The project area is located in Pope Valley and is bisected by Pope Valley Road. Several unnamed intermittent streams tributary to Pope Creek and Putah Creek flow through the project site. The 121-acre proposed POU is located within Assessor Parcel Numbers 18-070-023, 18-070-024, 18-070-025, and a fourth (yet to be numbered) parcel.

Elevations on Palisades Ranch range from relatively flat grassland to hillsides with low to moderate slopes. Soils in the central portion of the project site consist primarily of Pleasanton loam with 2 to 5 percent slopes. Data from a National Weather Service weather station in Angwin reports that average precipitation is approximately 40 inches per year and that average temperatures range from the mid 40s to high 50s November through May, and from the 60s to low 70s June through October.⁴ The Napa County General Plan designates the project site as

Agriculture Resource. Allowable land uses include agricultural production and ancillary services.

Habitat types identified within the project area include ruderal grassland, oak woodland, conifer forest, riparian corridor, and vernal pool. Site photographs of the proposed POU and riparian corridors in the vicinity of the proposed POU are shown in **Figure 4**. The Biological Resources section below includes a detailed discussion of the biological communities and potentially occurring special-status species within the project area.

Responsible and Trustee Agencies

The State Water Board is the lead agency under CEQA with the primary authority for project approval. In addition, the following responsible and trustee agencies may have jurisdiction over all or some portion of the proposed project:

- DFG – Streambed Alteration Agreement, California Endangered Species Act (CESA) Compliance
- State Water Board, Division of Water Rights – Clean Water Act Section 401 Consultation and State Water Quality Certification
- U.S. Fish and Wildlife Service (USFWS) – Federal Endangered Species Act (ESA) Compliance
- U.S. Army Corps of Engineers (USACE) – Clean Water Act Section 404 Compliance

II. ENVIRONMENTAL IMPACTS

The environmental factors checked below could be potentially affected by this project. See the checklists on the following pages for more detail.

- | | | |
|--|--|--|
| <input type="checkbox"/> Geology and Soils | <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Utilities and Service Systems |
| <input checked="" type="checkbox"/> Air Quality and Greenhouse Gas Emissions | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Aesthetics |
| <input checked="" type="checkbox"/> Hydrology and Water Quality | <input type="checkbox"/> Hazards and Hazardous Materials | <input checked="" type="checkbox"/> Cultural Resources |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Population and Housing | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Transportation and Circulation | <input checked="" type="checkbox"/> Mandatory Findings of Significance |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Public Services | |



View southeast across proposed place of use.



View of riparian corridor in northern portion of site.



View of undeveloped northeast portion of proposed place of use.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Geology and Soils. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated in the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soils, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternate wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Napa County is part of the hilly to steep mountains of the California Coast Range. The County is characterized by a number of northwesterly parallel mountain ridges and intervening valleys of varying widths.⁵ The project site is located in northern Napa County in Pope Valley. The floor of Pope Valley is relatively level and has an approximate elevation of 700 feet above mean sea level. The mountainous area surrounding the valley rises up to elevations greater than 2,000 feet above mean sea level.

According to the Soil Survey of Napa County, soil in the proposed POU consists primarily of Pleasanton loam, 2 to 5 percent slopes. This soil is derived from sedimentary rock, is well drained and has a slight erosion hazard. Suited uses of Pleasanton soil include dry land and irrigated pasture, orchards, and vineyards. Also found on the alluvial fans is Tehama silt loam, 0 to 5 percent slopes. Tehama silt loam is a well-drained soil formed in alluvium from sandstone and shale, which has a slight erosion hazard and is suitable mainly for pasture but small areas are included with adjacent soils in vineyards.⁶

Six acres within the proposed POU included areas with slopes greater than 5 percent, and an Erosion Control Plan for this area was approved by Napa County (discussed in the Land Use and Planning section below). Upland areas in the south-central portion of the project site consist of Boomer-Forward-Felta complex, 5 to 30 percent slopes. This soil formed in material weathered from mixed igneous rocks, is well drained, and has a slight erosion hazard. Boomer-Forward-Felta complex soils are suited to dry land and irrigated pasture. Soils on lower side slopes are suited to orchards and vineyards under careful management.⁷

Suspected faults in Napa County roughly parallel the northwest-southwest course of the San Andreas Fault, which, at its closest point, is about 30 miles southwest of the City of Napa. Three main active faults have been identified within Napa County. From east to west they are the Cordelia and Green Valley faults (approximately 25 miles southeast of the project site) and the West Napa fault (approximately 17 miles southeast of the project site). The Hunting Creek Fault, approximately 11 miles northeast of the project site, is a possible northward extension of the Green Valley Fault.⁸ The Hunting Creek Fault is identified by the Alquist-Priolo Earthquake Fault Zone Map⁹; however, the project site is not located in a fault-rupture hazard zone. Therefore, the primary seismic hazards in the project area are ground shaking and ground failure.

Ground shaking occurs as energy is released when the earth's crust moves at the earthquake focus and is transmitted as elastic waves up through the bedrock to become a series of complex waves or oscillations in the ground surface. Such ground shaking is one of the main causes of earthquake damage.

Liquefaction and landslides can increase damage from ground shaking. Liquefaction changes water-saturated soil to a semi-liquid state, removing support from foundations and causing buildings to sink. Landslides are considered to be the most important seismic hazard within Napa County, as many areas within the County are susceptible. The project site is not located within an area of Napa County mapped with landslide features.¹⁰ The project area is mapped in an area that is subject to very low to moderate liquefaction potential.¹¹

Questions A-D

The project site is not located in a fault-rupture hazard zone. Therefore, primary seismic hazards in the project area are ground shaking and ground failure. Development of the proposed project does not include the construction of facilities such as buildings or reservoirs, which could be impacted by ground shaking or ground failure. The undeveloped portion of the proposed POU occurs on slopes less than 5 percent and development would avoid steep slopes and highly erosive soils, thereby minimizing potential geologic hazards. Impacts from geologic hazards such as landslides or ground failures are expected to be less than significant.

The development of vineyards would occur in areas where the soil has a slight erosion hazard. The proposed project would implement Best Management Practices (BMPs) to control erosion during construction activities in order to minimize potential erosion impacts from construction activities. At a minimum, BMPs should include, but not be limited to the following measures:

- Vegetation removal shall be limited to the minimum amount necessary to accommodate the proposed project. As the permanent vegetation cover is maturing, temporary vegetation or other erosion control measures sufficient to stabilize the soil shall be established on all disturbed areas. New plantings shall be protected by using such measures as jute netting, straw mulching and fertilizing;
- Temporary erosion control measures, such as silt fences, staked straw bales, and

- o temporary revegetation, shall be installed in disturbed areas;
- o No disturbed surfaces shall be left without erosion control measures in place during the winter and spring months; and
- o Sediment shall be retained onsite by a system of sediment basins, traps, or other appropriate measures.

Section 18.108.070 of the Napa County Zoning Ordinance requires that prior to commencement of a project involving grading, earthmoving, or land disturbance of any kind on slopes greater than 5 percent, an Erosion Control Plan must be prepared by a qualified professional and approved by the County unless Standard Erosion Control Measures are permitted to be installed.

A Negative Declaration, dated June 17, 2002, was prepared by Napa County pursuant to CEQA and Napa County CEQA guidelines for six acres of vineyard within the proposed POU that occur on slopes greater than 5 percent. An Erosion Control Plan for this area was approved on September 24, 2002 by Napa County. The remaining POU is not subject to Napa County Erosion Control Plan requirements as the slopes are less than 5 percent. Potential soil erosion impacts are considered less than significant.

Question E

No septic tanks or wastewater disposal systems are proposed as part of the project. No impacts would occur.

Findings

The proposed project would result in less than significant impacts with regards to geology and soils.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
2. Air Quality and Greenhouse Gas Emissions. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The proposed project is located within a mountainous region of the Coast Ranges within the San Francisco Bay Air Basin, falling under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The San Francisco Bay Air Basin is generally affected by regionally high pollution emissions.

Air quality in the area is a function of the criteria pollutants emitted locally, the existing regional ambient air quality, and the meteorological and topographic factors that influence the intrusion of pollutants into the area from sources outside the immediate vicinity.

Regulations

The 1977 Federal Clean Air Act (CAA) required the United States Environmental Protection Agency (EPA) to identify National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. NAAQS have been established for the six “criteria” air pollutants: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO_x), sulfur dioxide (SO_x), respirable particulate matter (PM₁₀), and lead. Pursuant to the 1990 CAA Amendments (CAAA), the EPA has classified air basins (or portions thereof) as either “attainment” or “non-attainment” for each criteria air pollutant, based on whether or not the NAAQS have been achieved. Under the NAAQS, the Bay Area is currently designated a non-attainment area for 8-hour O₃ and is designated as unclassified/attainment for all other criteria pollutants. **Table 4** shows national standards for O₃.

The California Air Resources Board (CARB) regulates mobile emissions sources and oversees the activities of county Air Pollution Control Districts (APCDs) and regional Air Quality Management Districts (AQMDs). CARB regulates local air quality indirectly by State Ambient Air Quality Standards (SAAQS) and vehicle emission standards by conducting research activities, and through its planning and coordinating activities.

California has adopted ambient standards that are more stringent than the Federal standards for the criteria air pollutants. Under the California Clean Air Act (CCAA), patterned after the Federal CAA, areas have been designated as attainment or non-attainment with respect to SAAQS. Under the CAAQS, the Bay Area is designated as a non-attainment for O₃ and particulate matter (PM₁₀, and PM_{2.5}).¹² **Table 4** shows state standards for PM_{2.5}, PM₁₀, and O₃.

TABLE 4: STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS¹³

Pollutant	Averaging Time	SAAQS ¹	NAAQS ²
Ozone (O ₃)	8-hour	0.070 ppm	0.075 ppm
	1 hour	0.09 ppm	-
Particulate Matter (PM _{2.5})	24 hour	-	35 µg/m ³
	Annual	12 µg/m ³	15 µg/m ³
Respirable Particulate Matter (PM ₁₀)	24 hour	50 µg/m ³	150 µg/m ³
	Annual	20 µg/m ³	50 µg/m ³

¹ SAAQS (i.e., California standards) for ozone and respirable particulate matter are values that are not to be exceeded.

² NAAQS (i.e., national standards) - The ozone standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard.

ppm = parts per million by volume

µg/m³ = micrograms per cubic meter of air

Ozone (O₃)

O₃ is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere. Through a complex series of photochemical reactions, in the presence of strong sunlight and ozone precursors (nitrogen oxides [NO_x] and reactive organic gases [ROG]), O₃ is created. Motor vehicles are a major source of O₃ precursors. O₃ causes eye and respiratory irritation, reduces resistance to lung infection, and may aggravate pulmonary conditions in persons with lung disease.

Respirable Particulate Matter (PM₁₀)

Respirable particulate matter consists of particulate matter 10 microns (one micron is one one-millionth of a meter) or less in diameter, which can be inhaled. Relatively small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorine or ammonia) that may be injurious to health. Primary sources of PM₁₀ emissions in Napa County are entrained road dust and construction and demolition activities. Burning of wood in residential wood stoves and fireplaces and open agricultural burning are other sources of PM₁₀. The amount of particulate matter and PM₁₀ generated is dependent on the soil type and the soil moisture content.

Regulation of air quality is achieved through both federal and state ambient air quality standards and emission limits for individual sources of air pollutants.

Greenhouse Gas (GHG) Emissions

California has been a leader among the states in outlining and aggressively implementing a comprehensive climate change strategy that is designed to result in a substantial reduction in total statewide GHG emissions in the future. California's climate change strategy is multifaceted and involves a number of state agencies that are in the process of implementing a variety of state laws and policies. At the local level, the BAAQMD released draft CEQA thresholds on October 9, 2009, which included thresholds for criteria pollutants and GHGs.¹⁴ These BAAQMD CEQA guidelines were adopted on June 2, 2010 and were effective as of the adoption date. However, as stated on the BAAQMD's website, it is the BAAQMD's policy that the adopted thresholds apply to projects for which environmental analysis begins on or after the applicable effective date.¹⁵ As discussed under the Project Background section above, November 10, 1998 is considered the CEQA baseline date and the date that environmental review for the project began; as such, the proposed project is not subject to the thresholds identified in the

recently adopted 2010 BAAQMD CEQA Guidelines. A GHG emissions threshold of significance pertinent to tree loss has not been adopted at the state or local level.

Questions A-D

Air quality impacts associated with the proposed project are limited to those resulting from short-term construction activities. Construction-related emissions could include exhaust from construction equipment and fugitive dust from land clearing, earthmoving, movement of vehicles, and wind erosion of exposed soil during construction of the proposed vineyards.

The BAAQMD has prepared guidelines for assessing the air quality impacts of proposed projects.¹⁶ The BAAQMD's approach to assessment of construction-related air quality impacts is to emphasize the implementation of effective and comprehensive control measures for PM₁₀ emissions rather than provide detailed quantification of emissions.¹⁷

In order to minimize PM₁₀ impacts associated with construction, a dust control plan would be developed and implemented for the proposed project. At a minimum, the plan should include, but not be limited to the following measures:

- Active construction areas shall be watered at least twice daily; all trucks hauling soil, sand, or other loose material shall be covered or required to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer);
- Exposed stockpiles shall be covered or watered twice daily;
- All construction vehicles and equipment shall be properly maintained and operated, and the use of construction equipment that meets the current emission standards for diesel engine-powered equipment shall be required; and
- Traffic speeds on unpaved access roads shall be limited to 15 miles per hour.

To protect air quality and the health of construction workers, a permit term, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *Permittee shall submit a detailed Dust Control and Mitigation Plan for review and approval by the Bay Area Air Quality Management District (BAAQMD). Prior to the start of construction or diversion or use of water under this permit or license, Permittee shall submit documentation to the Deputy Director for Water Rights showing that the BAAQMD has approved the Permittee's Dust Control and Mitigation Plan.*

Question E

Application of agricultural chemicals during vineyard operation, such as sulfur products, has the potential to result in objectionable odors; however, the project includes agricultural activities within an area zoned for agricultural use. Compliance with requirements of the Napa County Agricultural Commissioner would minimize nuisance odors to a less than significant level.

Questions F and G

Construction GHG emissions would be reduced with the implementation of the BAAQMD construction emission reduction measures outlined in *Questions A-D* above. Operational sources of GHG emissions include vehicle travel, energy use, and water transport; however, as the project site currently and historically has operated as a vineyard, no additional workers or vehicles, which are the primary sources of operational GHG emissions, would be required for operation of the proposed project. Increases in energy use and water transport would be

minimal as there is little electricity used onsite and water sources are close in proximity. Past development in the proposed POU resulted in tree loss and future development within the proposed POU may also result in tree loss. With implementation of the Tree Mitigation Plan described in *Question E* in the Biological Resources section below, which includes tree planting and preservation on the property, impacts to GHG emissions are considered less than significant. The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Impacts are considered less than significant.

Findings

The proposed project could result in potentially significant impacts to air quality. However, with implementation of the identified measures, potential impacts would be reduced to a less than significant level.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
3. Hydrology and Water Quality. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site, including through alteration of the course of a stream or river, or substantially increase the rate or volume of surface runoff in a manner that would:				
i) result in flooding on- or off-site	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) create or contribute runoff water that would exceed the capacity of existing or planned stormwater discharge	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) provide substantial additional sources of polluted runoff	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) result in substantial erosion or siltation on-or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Place housing or other structures which would impede or re-direct flood flows within a 100-yr. flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Expose people or structures to a significant risk of loss, injury, or death involving flooding:				
i) as a result of the failure of a dam or levee?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) from inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Would the change in the water volume and/or the pattern of seasonal flows in the affected watercourse result in:				
i) a significant cumulative reduction in the water supply downstream of the diversion?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) a significant reduction in water supply, either on an annual or seasonal basis, to senior water right holders downstream of the diversion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) a significant reduction in the available aquatic habitat or riparian habitat for native species of plants and animals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) a significant change in seasonal water temperatures due to changes in the patterns of water flow in the stream?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
v) a substantial increase or threat from invasive, non-native plants and wildlife	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Several unnamed intermittent drainages flow through the project area. These drainages converge at the northern portion of the project area and are tributary to Pope Creek approximately 0.75 mile to the northeast. Pope Creek is tributary to Putah Creek thence Lake Berryessa.

Existing reservoirs on the project site are Lake Duvall, Lake Jerome, and Lake Cabral, under rights held solely by Flora Springs Winery. Though not a part of this project, there is a fourth existing reservoir, Lake Rodney, which is partially located on the Flora Springs Winery property (see **Figure 3**). Lake Rodney is jointly owned by Flora Springs Winery and G-3 Properties, Inc. The POU named in Lake Rodney License 9970 and Permit 19329 was originally listed as 189 acres, but the Division subsequently corrected the acreage to be 175 acres on the Flora Springs Winery property. The POU for the Lake Rodney water rights includes 155 acres on the G-3 Properties, Inc. property. None of the water from Lake Rodney would be used on the 121 acres sought to be added by the subject petitions.

A summary of all water rights serving the existing POU is shown in **Table 5** below. For reference purposes, the water rights pertinent to Lake Rodney are also shown therein. The historic water use data (from 1995 to 2003) for Lakes Duvall, Jerome, Cabral, and Rodney are shown in **Table 6** below.

Question A

The proposed project could result in impacts to water quality resulting from erosion due to vegetation removal and earthmoving activities associated with the establishment of vineyard.

TABLE 5: WATER RIGHTS SERVING THE EXISTING PLACE OF USE

Water Right	Storage Facility	Source	Storage Season	Maximum Annual Diversion to Storage	Maximum Annual Withdrawal	Purpose of Use	Existing Place of Use
Water Rights Pertaining to Lakes Duvall, Jerome, and Cabral							
License 2947 (A009574)	Lake Duvall	Unnamed Stream tributary to Pope Creek thence Putah Creek thence Lake Berryessa	November 1-April 30	150 af	150 af	Irrigation, Frost and Heat Protection, Recreational	175 acres (see Figure 3)
License 7430 (A018949)	Lake Cabral	Unnamed Stream tributary to Pope Creek	October 1-April 1	45 af	43 af	Irrigation, Frost and Heat Protection, Recreation	175 acres
License 13396 (A019374)	Lake Duvall and Lake Jerome	Unnamed Stream tributary to Pope Creek	November 1-May 1	70 af (20 af in Lake Jerome and 50 af in Lake Duvall). Total storage under this license and License 2947 shall not exceed 220 afa.	193 af combined from both Lake Jerome and Lake Duvall under this License and License 2947	Irrigation, Frost and Heat Protection, Recreational, Domestic	175 acres as shown on Figure 3 .
Permit 19189 (A027625)	Lake Duvall and Lake Jerome	Unnamed Stream tributary to Pope Creek	October 15-April 30	112 afa (40 af in Lake Jerome and 72 af in Lake Duvall).	Allows for a total of 60 af from Lake Jerome and 272 af from Lake Duvall under this Permit and License 2947 and License 13396	Irrigation, Frost and Heat Protection, Recreational	175 acres
Water Rights Pertaining to Lake Rodney							
License 9970 (A019127)	Lake Rodney	Unnamed Stream tributary to Pope Creek thence Putah Creek thence Lake Berryessa	November 1-May 1	200 af	155 af	Irrigation, Frost Protection, Stockwatering, Recreational	175 acres on Flora Springs Winery Property and 155 acres on G-3 Properties, Inc. lands.
Permit 19329 (A027485)	Lake Rodney	Unnamed Stream tributary to Pope Creek	October 15-May 15	274 afa Total storage under this permit and License 9970 shall not exceed 274 afa.	274 af	Irrigation, Frost and Heat Protection, Recreational	175 acres on Flora Springs Winery Property and 155 acres on G-3 Properties, Inc. lands.

TABLE 6: EXISTING STORAGE FACILITIES HISTORIC WATER USE

Storage Facility and Water Right	Storage Amount (af)	Accumulated Annual Storage Amount (af)	Perfected Annual Withdrawal (af)	Annual Water Use by Water Right (af)									
				1995	1996	1997	1998	1999	2000	2001	2002	2003	
Lake Duvall Total Existing Storage Capacity 245 Acre-Feet													
License 2947 (A009574)	150	150	150	150	150	150	127	150	150	145	150	150	
License 13396 (A019374)	50	200	35	35	20	35	0	14	24	0	26	17	
Permit 19189 (A027625)	72	272		0	0	0	0	0	0	0	0	0	
Lake Jerome Total Existing Storage Capacity 22 Acre-Feet													
License 13396 (A019374)	20	20	8	6	6	8	6	20	20	20	20	20	
Permit 19189 (A027625)	40	60		0	0	0	0	2	1	2	2	2	
Lake Cabral Total Existing Storage Capacity 45 Acre-Feet													
License 7430 (A018949)	45	45	43	31	30	34	29	32	33	42	35	34	
Totals for Lakes Duvall, Jerome, and Cabral	377	377	236	222	206	227	162	218	228	209	233	223	
Lake Rodney Total Existing Storage Capacity 274 Acre-Feet													
License 9970 (A019127)	200	200	155	114	132	134	89	155	76	155	97	85	
Permit 19329 (A027485)	74	74		0	0	0	0	22	0	33	0	0	
Totals for Lake Rodney	274	274	155	114	132	134	89	177	76	188	97	85	

Implementation of the BMPs discussed in the Geology and Soils section above will protect water quality. In addition, permit terms, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *No construction shall be commenced and no water diverted or used under these rights shall be applied to the 121 acre expanded place of use until all necessary federal, state and local approvals have been obtained for the planting of the 121 acre expanded place of use and the diversion and use of water.*
- *In order to prevent degradation of the quality of water during and after construction of the project, Permittee shall file a report pursuant to Water Code section 13260 prior to commencement of construction and shall comply with all waste discharge requirements imposed by the California Regional Water Quality Control Board, San Francisco Bay Region, or by the State Water Resources Control Board.*
- *No debris, soil, silt, cement that has not set, oil, or other such foreign substance will be allowed to enter into or be placed where it may be washed by rainfall runoff into the waters of the State. When operations are completed any excess materials or debris shall be removed from the work area.*

Question B

The proposed project would not involve the use of groundwater. No impact would occur.

Questions C and D

Vineyard development on the project site would result in negligible effects to the existing drainage pattern of the site. Refer to *Questions B and C* in the Biological Resources section for a discussion of impacts and mitigation measures for riparian habitat and swales. The proposed POU would be irrigated with water stored in the existing Lake Duvall (under Licenses 2947 and 13396, and Permit 19189), Lake Jerome (under License 13396 and Permit 19189), and Lake Cabral (under License 7430). Runoff flows from the project site would not substantially increase under the proposed project. No substantial additional sources of polluted runoff would occur. BMPs discussed above would reduce the potential of erosion and siltation to a less than significant level. The proposed project would result in less than significant impacts to the existing drainage pattern and water quality.

Question E

The proposed project would not result in the development of housing within a 100-year flood zone. No impediments would be created as a result of the development of the proposed project. Potential impacts are considered less than significant.

Question F

The proposed project does not include the construction of dams or levees. The project site is not located in an area susceptible to inundation from seiche, tsunami, or mudflow. No impact would occur.

Question G

Water from three existing storage reservoirs would be used to serve the 121 acres proposed by the project. Flora Springs Winery holds water right Licenses 2947, 7430, and 13396, and Permit 19189 issued by the State Water Board for the three existing storage reservoirs, Lakes Duvall, Cabral, and Jerome. The licensed rights presently provide for the diversion to storage of

265 af of water from the Unnamed Streams tributary to Pope Creek, and for the maximum annual withdrawal of 236 af for the irrigation of 175 acres of vineyard. In addition, 112 af is stored in Lake Duvall and Lake Jerome under Permit 19189; the Petition for Extension of Time on the permit would allow for the additional withdrawal of up to 139 af from Lake Jerome and Lake Duvall under this permit and Licenses 2947 and 13396 (which includes 27 af of storage authorized under Licenses 2947 and 13396). Further, Flora Springs Winery holds a one-half interest in License 9970 and Permit 19329 (not part of the subject petitions) for the storage of water in Lake Rodney, which provides an additional 274 af of annual withdrawal for use on the 175 acres within the existing POU and on the 155 acres associated with neighboring G-3 Properties, Inc.

Table 6 illustrates the historic water use from Lakes Duvall, Jerome, Cabral, and Rodney. The majority of the vineyard area is planted in red varieties, which typically have a later bud-break thereby requiring less water for frost protection purposes. The rootstock used for these varieties also results in an earlier harvest, which shortens the irrigation season by as much as four weeks. Further, reduced flow emitters for frost protection are being considered, which typically use much less water than overhead sprinklers. Also, temperature monitoring of specific vineyard blocks provides the ability to apply water for frost protection only on those specific blocks (rather than the entire vineyard area) during any given frost event. Due to these practices, the Petitioner has stated that the addition of 121 acres of vineyard would be served with the same amount of water historically used on the existing 175 acres of vineyard and no additional water rights are required.

The additional POU could cumulatively impact water use related to Lake Rodney under License 9970 and Permit 19329. If the water from Lakes Duvall, Jerome, and Cabral which serves the existing 175 acre POU also serves the 121 acre proposed POU, additional water from Lake Rodney may be required to supplement the irrigation, frost, and heat protection for the 175 acre POU. However, as indicated in **Table 6**, annual water use is currently below the amounts authorized by existing water rights and could accommodate additional demand of up to 141 afa. Past experience has shown an annual approximate water use of 0.5-0.7 af/acre in the Pope Valley area; the proposed POU of 121 acres should result in additional demand of approximately 61 to 85 afa, well below the 141 af maximum. However, demand would not be able to be met without the approval of the Petition for Extension of Time.

The proposed project would not reduce the water volume in the Unnamed Streams from historic levels under the existing rights, as the full amount of licensed and permitted water is stored annually and the expanded POU would be served with the same amount of water historically used on the existing POU. Approval of the Petition for Extension of Time would allow for the operation of the project within the quantity limits of the existing rights. The proposed project is also not expected to significantly change the pattern of seasonal flows in the stream. Refer to *Questions B and C* in the Biological Resources section for a discussion of impacts and mitigation measures for riparian habitat and swales.

The proposed project would involve the continued operation and establishment of vineyard on a property that has been subject to historical and current agricultural activities. The proposed project would not result in a substantial increase or threat from invasive, non-native plants and wildlife. Impacts are considered less than significant.

Findings

The proposed project could result in potentially significant impacts to water quality standards. However, with implementation of the identified measures in *Question A* above, potential impacts would be reduced to a less than significant level.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
4. Biological Resources. Would the project:				
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 DFG or USFWS?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 DFG or USFWS?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the federal Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed project is located near the northwestern end of Pope Valley, about one mile southeast of Aetna Springs and two miles northwest of the community of Pope Valley. Land uses surrounding the proposed project include vineyard, open grazing lands, rural residential, and open space. Average annual precipitation in the project area is approximately 40 inches and average temperatures range from the mid 40s to high 50s November through May, and from the 60s to low 70s June through October.¹⁸

Biological surveys of the proposed POU (as originally drawn) were conducted by Kjeldsen Biological Consulting on October 16, 1998, and February 5, May 5, June 2, and August 9, 1999.¹⁹ These surveys were conducted by driving access roads to the proposed POU and walking transects through and around this area. As the surveys also covered the immediate vicinity of the proposed POU, the full extent of habitats occurring within the 121-acre proposed POU (as currently drawn) would have been covered. The surveys were conducted to characterize existing habitat types, determine the presence/absence of special-status plant or

animal species, identify potential habitat for any special-status species, and evaluate the potential of the proposed project to result in impacts to sensitive biological resources. A copy of the biological resources report is on file with the Division of Water Rights. An additional site visit was conducted on December 9, 2003 by Analytical Environmental Services (AES) to map habitat within and adjacent to the proposed POU (**Figure 5**; the features on the 2003 aerial (when the AES surveys were conducted) and 2006 aerial shown in **Figure 5** are identical and the habitat types are shown on the 2006 aerial because it is higher resolution), and to specifically map elderberry shrubs (*Sambucus mexicana*) and the vernal pool identified by Kjeldsen in 1999 (**Figure 5**). Additional surveys were conducted by AES biologists on January 16, 2007 to address outstanding issues related to oak woodland, special-status species, vernal pools, and riparian corridor and stream setbacks²⁰; a copy of the supplemental biological survey report is on file with the Division of Water Rights.

Habitats

Habitat types identified within the proposed POU include ruderal grassland, oak woodland, conifer forest, riparian corridor and swales, and vernal pool. These habitat types are described below and are depicted in **Figure 5**.

Ruderal Grassland

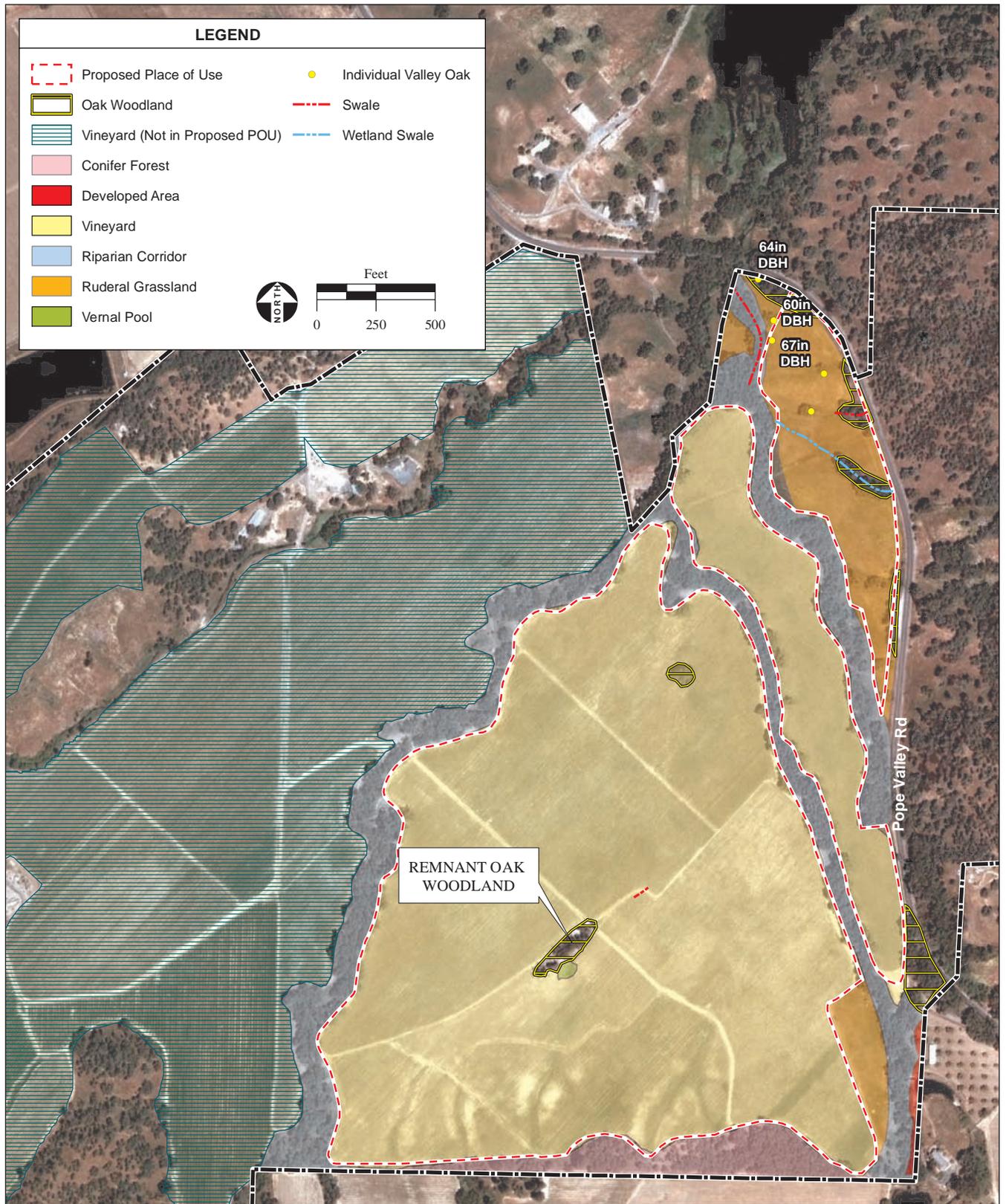
The remaining undeveloped proposed POU consists primarily of ruderal grassland habitat. Ruderal grasslands support a flora that is a result of decades of grazing and the introduction of non-native plants. The ruderal grassland habitat within the proposed POU consists of naturalized exotic species that have been introduced and selected for by grazing over time. The dominant grasses within this vegetation community are in the following genera: *Avena*, *Bromus*, *Briza*, *Cynosurus*, *Phalaris*, and *Taeniatherum*. **Figure 6, Photo 1** depicts this habitat within the proposed POU. Based on review of historic aerial photographs of the approximately 110 acres that were planted into vineyard, approximately 65 acres was ruderal grassland and approximately 45 acres was oak woodland.

Oak Woodland

Oak woodland habitat occurs on the upland slopes within the proposed POU. This vegetation community is dominated by blue oak (*Quercus douglasii*); other common woody vegetation includes coast live oak (*Quercus agrifolia*), California black oak (*Quercus kelloggii*), valley oak (*Quercus lobata*), madrone (*Arbutus menziesii*), California buckeye (*Aesculus californica*), California bay laurel (*Umbellularia californica*), coyote brush (*Baccharis pilularis*), snowberry (*Symphoricarpos albus*), poison oak (*Toxicodendron diversilobum*), manzanita (*Arctostaphylos glandulosa*), French broom (*Genista monspessulana*), and western raspberry (*Rubus leucodermis*).

Within the undeveloped proposed POU along Pope Valley Road, pure stands of valley oak were observed. Five individual valley oak trees were observed in this area; three of the trees were observed with large diameters at breast height (dbh) (60, 64, and 67 inches) (**Figure 5**). The southernmost proposed POU supports a remnant stand of oak woodland amidst the developed vineyard (**Figures 5 and 6, Photo 2**).

Based on review of historic aerial photographs, it is estimated that approximately 45 acres of the currently proposed POU that is planted in vineyard was previously oak woodland (**Figure 7**). In order to make an estimate of trees removed, AES biologists counted the number of trees occurring in two representative patches of oak woodland (sample plots) remaining along the southern boundary of the property (**Figure 7**). Sample Plots 1 and 2 were chosen because they



SOURCE: DigitalGlobe aerial photograph, 5/17/2006; James C. Hanson, 2002; AES, 2010

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Figure 5
Habitat Map



PHOTO 1: View of ruderal grassland from within the undeveloped place of use looking north.



PHOTO 2: View of remnant oak woodland looking northwest from within the developed place of use (vineyard).



PHOTO 3: Typical view of riparian corridor habitat within the project area.



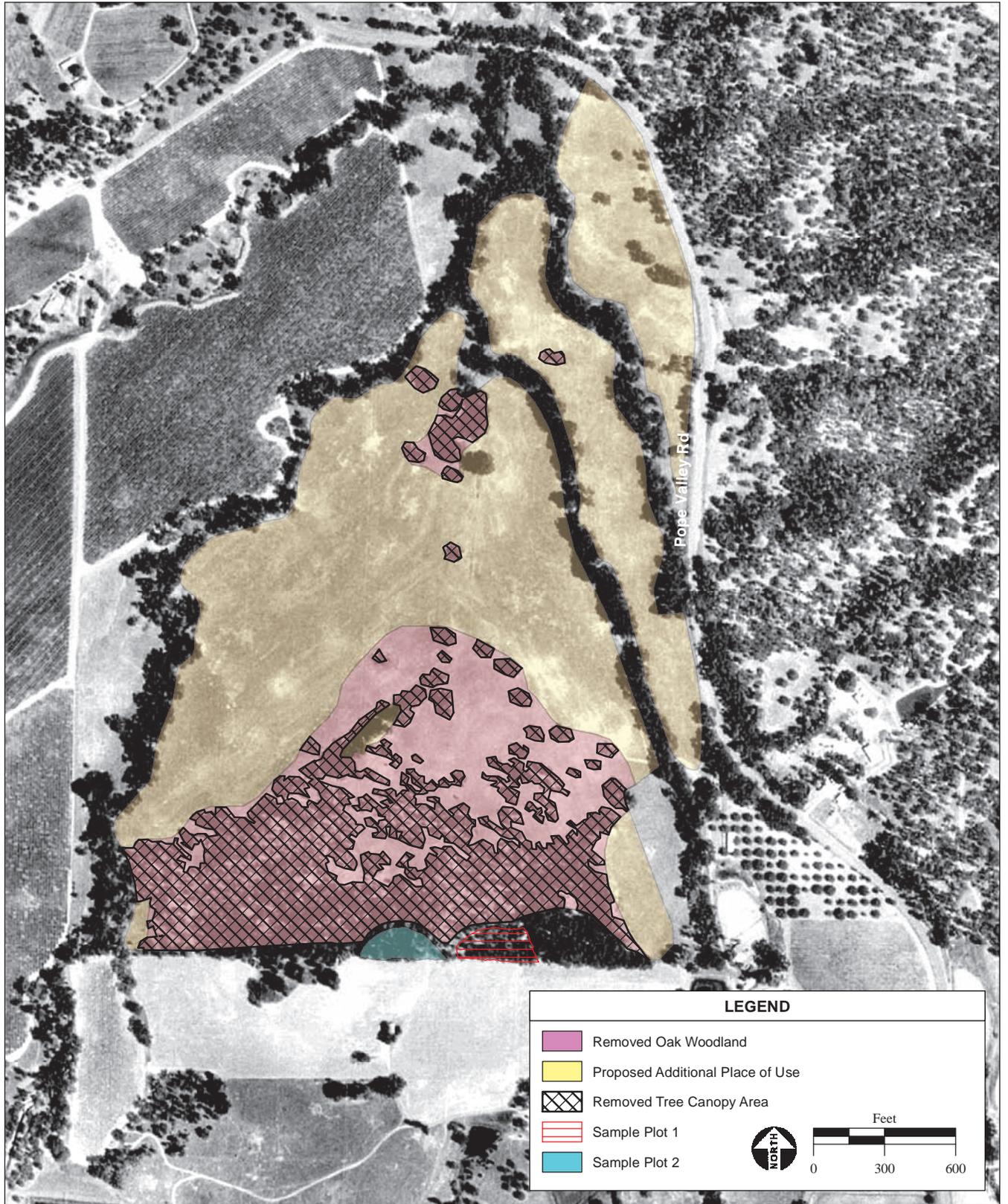
PHOTO 4: Typical view of elderberry re-sprouts with stumps found within the riparian corridors of the project area.



PHOTO 5: View of the vernal pool looking southwest from within the proposed place of use.



PHOTO 6: View of the vernal pool looking southeast from the edge of the remnant oak woodland.



SOURCE: Aerial Photograph, dated 1993; AES, 2010

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Figure 7
Oak Woodland Removal

represent a relatively dense patch of oak woodland and a relatively sparse patch of oak woodland, respectively. Calculation of the sample plots resulted in an average area of 0.87 acres (3,508 m²) and an average number of 118.5 trees. Each of these sample plots represents a different density of trees in an area slightly less than one acre. Thus, averaging the size of the sample plots and number of trees in the plots provides a general estimation of the average number of trees in an area of the same size, within the same habitat as these sample plots. Using a historic aerial and GIS technology, the area of tree canopy removed (for the sake of accuracy, large patches of open grassland in the oak woodland were excluded from canopy calculations) from within the 45-acre area was calculated to be 25.9 acres. These data were then used to extrapolate an approximate number of oak trees removed in the 45 acres of oak woodland. The results of the estimate indicate that approximately 3,528 oak trees were removed.²¹

Six acres of the approximately 45 acres of oak woodland/25.9 acre tree canopy area were reviewed in an Erosion Control Plan (#98609-ECPA) and a Negative Declaration, dated June 17, 2002, was prepared pursuant to CEQA and Napa County CEQA guidelines. The Erosion Control Plan was approved by Napa County on September 24, 2002. Since the area was covered in the previous CEQA document and no mitigation was required to offset tree removal within the six acres, the mitigation in this CEQA document will not re-assess tree removal within the six acres. This reduces the tree canopy area to 19.9 acres and reduces the total estimated number of trees removed to 2,711 within the 39 acres.

The small areas of oak woodland habitat in the undeveloped proposed POU (**Figure 5**) total approximately two acres and, using the density estimates described above, contain approximately 272 trees.

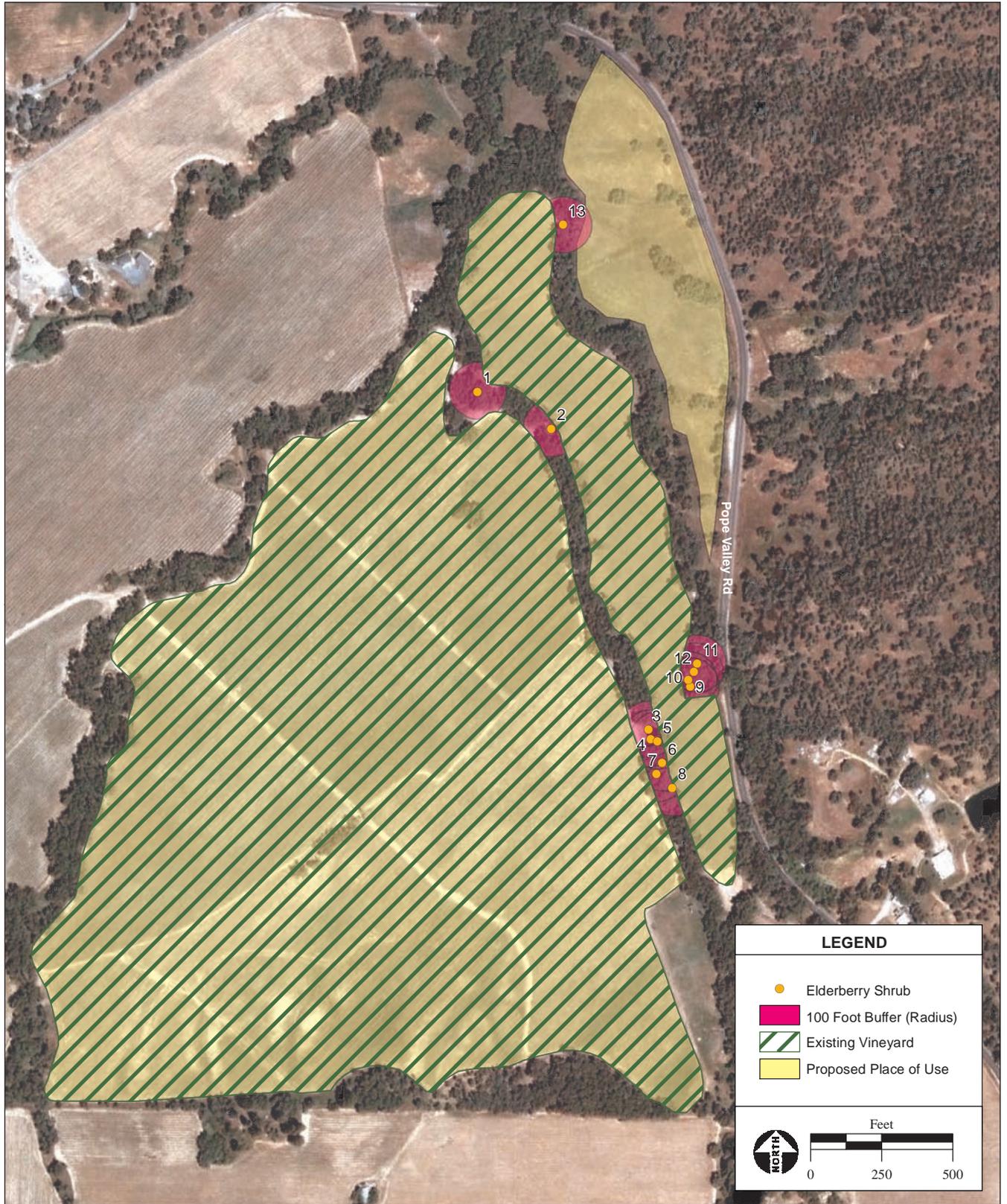
Conifer Forest

A conifer forest of foothill pine (*Pinus sabiniana*) is found mixed with the currently mapped oak woodland and is not part of the 45 acres that was historically removed. At the south side of the proposed POU there is a low ridge supporting conifer forest that is not proposed for conversion to vineyard.

Riparian Corridors and Swales

Mature riparian corridors are associated with unnamed intermittent drainages that drain through the project area (**Figure 6, Photo 3**). Based on a review of aerial photos of the project site prior to vineyard installation (**Figure 7**) and current aerial photos (**Figure 8**), no riparian habitat has been removed from the required setback areas associated with the proposed project. Dominant woody vegetation within the riparian corridor includes big leaf maple (*Acer macrophyllum*), California black oak, California buckeye, and valley oak. The riparian corridor also supports understory shrubs, ferns, and herbs including California maiden-hair (*Adiantum jordanii*), goldback fern (*Pentagramma triangularis*), California buckeye (*Aesculus californica*), arroyo willow (*Salix lasiolepis*), hazelnut (*Corylus cornuta*), snowberry (*Symphoricarpos alba*), poison hemlock (*Conium maculatum*), and mugwort (*Artemisia douglasiana*).

In addition, elderberry shrubs (*Sambucus mexicana*) were identified within these areas of the project site (**Figure 8; Figure 6, Photo 4**). Elderberry shrubs are potential habitat for the valley elderberry longhorn beetle (VELB; *Desmocerus californicus dimorphus*), a federally listed threatened species. The USFWS requires protocol surveys to be conducted for VELB in elderberry shrubs occurring within the species' range.²² The protocol survey process involves completing an inventory of the number and size of stems 1 inch in diameter or greater, documenting whether the shrubs are located inside or outside of riparian habitat, and searching



SOURCE: James C. Hanson, 2002; DigitalGlobe aerial photograph, 2006; AES, 2010

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Figure 8
Elderberry Shrub Locations

for evidence of VELB. In order to demonstrate complete avoidance of impacts to VELB, USFWS requires a 100 foot buffer to be established around elderberry shrubs within the range of VELB that contain stems 1 inch in diameter or greater at ground level.

As part of the biological surveys conducted on January 16, 2007, AES biologists completed a protocol survey for VELB according to USFWS guidelines.²³ Although all of the shrubs are located in riparian habitat, no exit holes or any other evidence of VELB presence was observed. The shrub locations are shown on **Figure 8**. The elderberry shrubs do not appear to be currently occupied by VELB. **Table 7** reports the results of the surveys.

TABLE 7: ELDERBERRY SHRUB SURVEY RESULTS²⁴

Plant Number	Number of Stems by Diameter Class			Exit Holes?	Riparian Habitat?
	≥ 1" - < 3"	>3" - < 5"	≥ 5"		
1	2			No	Yes
2*	N/A	N/A	N/A	No	Yes
3	3	0	0	No	Yes
4	5	0	0	No	Yes
5	3	0	0	No	Yes
6*	N/A	N/A	N/A	No	Yes
7*	N/A	N/A	N/A	No	Yes
8*	N/A	N/A	N/A	No	Yes
9	1	0	0	No	Yes
10	1	0	0	No	Yes
11	1	0	0	No	Yes
12*	N/A	N/A	N/A	No	Yes
13	1	1	0	No	Yes

* Elderberry shrub stump with numerous stump sprouts less than 1 inch in diameter, but no living stems over 1 inch in diameter.

Elderberry shrub numbers 1 to 8 are located in a riparian corridor that is currently bordered by vineyard blocks on both sides. The buffer around these elderberry shrubs ranges from 10 feet to 100 feet. Although vineyard placement encroaches within the recommended buffer, the shrubs do not appear to be occupied by VELB. Elderberry shrubs numbers 9 to 13 are located in a riparian corridor that is adjacent to proposed POU that could potentially be developed in the future.

Three swales were observed in the undeveloped portion of the proposed POU. One swale was observed to channel runoff from a culvert underneath Pope Valley Road across the proposed POU and into the adjacent intermittent stream (**Figure 9, Photos 1, 2, and 3**). A strip of valley oaks was observed in association with this feature extending from the road to the middle of the undeveloped POU. The swale was also vegetated with occasional *Rumex* sp. and *Juncus* sp. and had an intermittently defined channel. The swale identified in **Figure 5** at the northern end of this area appears to channel localized runoff to the north into the intermittent stream nearest crossing underneath Pope Valley Road (**Figure 9, Photo 4**). This feature did not support any wetland vegetation, however, this area is connected to the riparian corridor of the creek and is vegetated with a strip of valley oaks. The third swale also extends from Pope Valley Road into the proposed POU, but only for approximately 50 feet, at which point it ends (**Figure 9, Photo 5**). Also, an isolated wetland swale was observed in association with the remnant oak woodland stand in the vicinity of the vernal pool (discussed below). During the December 9, 2003 site visit this feature was observed with 3 to 4 inches of standing water (**Figure 9, Photo 6**). Several swales occur in the area of removed oak woodland in the southern portion of



PHOTO 1: View of culvert underneath Pope Valley Road looking east from within the wetland swale.



PHOTO 2: View of wetland swale looking northwest from near Pope Valley Road.



PHOTO 3: View of wetland swale where it becomes an incised channel looking northwest.



PHOTO 4: View of swale in riparian area near the northeast corner of the project area looking south.



PHOTO 5: View of swale from near Pope Valley Road looking west.



PHOTO 6: View of wetland swale from within remnant oak woodland looking east.

the project site and are visible on **Figure 8**. The swales did not have a defined bed and bank and do not meet the definition of streams according to Napa County guidelines.

Vernal Pool

A vernal pool occurs within the southern portion of the project area, where the slope changes from the alluvial flatlands to oak woodlands. During Kjeldsen's site visit the vernal pool was inundated during the early spring and supported a population of prickly coyote-thistle (*Eryngium armatum*), oniongrass (*Melica bulbosa*), curly dock (*Rumex crispus*), common yellow monkeyflower (*Mimulus guttatus*), irisleaf rush (*Juncus xiphioides*), spotted-throat downingia (*Downingia concolor*), and Douglas' Pogogyne (*Pogogyne douglasii*).

On December 9, 2003 and January 16, 2007, the vernal pool area was visited by AES biologists to more accurately map the feature and evaluate the vernal pool for the potential to provide habitat for federally threatened vernal pool fairy shrimp (*Branchinecta lynchi*). The vernal pool was observed to be planted over in vineyard, with only a portion of it preserved in an adjacent stand of valley oaks (**Figure 6, Photos 5 and 6**). Based on the extent of inundation observed at the time of this visit, the vernal pool appeared to be approximately 0.12 of an acre and was approximately 5 inches deep. As discussed in the Waters of the U.S. section below, the vernal pool is an isolated wetland feature that is not hydrologically connected to any other feature that is likely a water of the U.S. No other vernal pools were observed and/or have been documented within the project site. The vernal pool is not connected to a seasonal wetland swale complex, nor is it part of a larger vernal pool matrix. Though not subject to USACE jurisdiction since it is isolated, the vernal pool is still functional (based on the vegetation and presence of wetland hydrology within the feature) and mitigation for impact to the vernal pool is discussed in *Question E* below. Mitigation includes the implementation of an invasive weed removal plan and abandonment of a dirt harvest road that bisects the remaining portion of the vernal pool in order to facilitate natural vernal pool recovery and restoration. The project is outside of the known range of vernal pool fairy shrimp²⁵ and this species is not expected to occur on the project site.

Special-Status Species

For the purposes of this Initial Study, "special-status" is defined to include those species that are:

1. Listed as endangered or threatened under the federal Endangered Species Act (or formally proposed, or candidates, for listing);
2. Listed as endangered or threatened under the California Endangered Species Act (or proposed for listing);
3. Designated as endangered or rare, pursuant to California Fish and Game Code (§1901);
4. Designated as fully protected, pursuant to California Fish and Game Code (§3511, §4700, or §5050);
5. Designated as species of special concern by DFG;
6. Plants or animals that meet the definitions of rare or endangered under CEQA;
7. Plants listed as rare under the California Native Plant Protection Act; or
8. Plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" (Lists 1B and 2).

A list of regionally occurring special-status plant and animal species was compiled based upon a review of the Biological Resources Report prepared by Kjeldsen Biological Consulting, and other pertinent literature, informal consultation with USFWS, and the results of a California Natural Diversity Data Base (CNDDDB) query of all reported occurrences of special-status

species within Napa County, California.²⁶ Habitat requirements for each special-status species were assessed and compared to the habitats occurring within the proposed project areas. Based upon the review of regionally occurring special-status species and the results of the biological surveys conducted by Kjeldsen Biological Consulting and AES, the proposed POU and/or surrounding vicinity represent potential habitat for one invertebrate and two special-status bird species. The proposed POU has been subject to historic agricultural activities and does not contain suitable habitat for species-status plants known to occur within the region. One special-status plant species (Douglas's pogogyne, *Pogogyne douglassi*) was observed in the vernal pool in the project area during botanical surveys conducted by Kjeldsen in 1999; at that time this plant's status was a CNPS List 3, but it now has no CNPS status. In addition, the five site visits conducted by Kjeldsen from 1998 to 1999 failed to identify any special-status species. The name, regulatory status, potential habitat, and period of identification for potentially occurring special-status species are identified in **Table 8** below.

TABLE 8: POTENTIALLY OCCURRING SPECIAL-STATUS SPECIES²⁷

Common Name Scientific Name	Regulatory Status USFWS/ CDFG	Potential Habitat Within Proposed Project Areas	Period of Identification
Invertebrates			
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT/--	Elderberry shrubs with stems 1" in diameter or greater.	All year
Birds			
Sharp-shinned hawk <i>Accipiter striatus</i>	--/CSC	Suitable trees on or within 500 feet of the project site represent potential nesting habitat for this species.	March - September
White-tailed kite <i>Elanus leucurus</i>	--/CFP	Suitable trees on or within 500 feet of the project site represent potential nesting habitat for this species.	March - September

STATUS CODES:

FEDERAL: (U.S. Fish and Wildlife Service)

FT = Listed as Threatened by the Federal Government

STATE: (California Department of Fish and Game)

CFP = California Fully Protected Species

CSC = California Species of Special Concern

Nesting Raptors and Migratory Birds

Raptor species (birds of prey) and migratory birds other than those listed as special-status species, may also potentially nest in trees and other vegetation located on or within the immediate vicinity of the proposed project areas. All raptors, including common species, and their nests are protected from take according to California Fish and Game Code; active nests of migratory bird species are protected under the federal Migratory Bird Treaty Act.

Waters of the U.S.

The term "waters of the U.S." is defined as:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands; or
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or

natural ponds, the use or degradation of which could affect interstate or foreign commerce including any such waters.

“Wetlands” are defined as:

Waters of the U.S. or isolated features that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

The biological surveys identified swales and a vernal pool occurring within the proposed POU and intermittent drainages occurring in the vicinity of the proposed POU. The three swales located in the undeveloped portion of the proposed POU are likely subject to USACE jurisdiction and may also be subject to DFG jurisdiction under California Fish and Game Code but will not be impacted by the proposed project. Stream setbacks will be established along the three swales based on Section 18.108.025 of the Napa County Conservation Regulations discussed in **Table 9** in the Land Use and Planning section below. Because the swales are on slopes between 1 and 5 percent, the required setback is 45 feet.

The several swales in the southern portion of the project site do not have a defined bed and bank and do not meet the definition of streams according to Napa County guidelines. These swales are not likely subject to USACE jurisdiction, as they are not hydrologically connected to, nor believed to have a significant nexus to, a TNW or tributary of a TNW. The vernal pool is also not likely subject to USACE jurisdiction, as it is not hydrologically connected to, nor believed to have a significant nexus to, a TNW or tributary of a TNW.

Question A

The proposed POU and/or surrounding vicinity represent potential habitat for special-status animal species, nesting raptors, and migratory bird species. These species could potentially be adversely impacted by the proposed project.

Elderberry shrubs were observed during the original biological field surveys²⁸ and the USFWS has indicated that VELB could be affected by projects within the general project area.²⁹ If construction activities would involve impacts to elderberry shrubs that support a population of VELB, the proposed project could result in adverse impacts to this species. On December 9, 2003 and January 16, 2007, AES biologists visited the site to map the locations of the elderberry shrubs (**Figure 8**). Thirteen elderberry shrubs were observed within the riparian corridors flanking the proposed POU.

Elderberry shrub numbers 1 to 8 are located in a riparian corridor that is currently bordered by vineyard blocks on both sides. Elderberry shrubs numbers 9 to 13 are located in a riparian corridor that is adjacent to a vineyard block as well as proposed POU that could potentially be developed in the future. The shrubs do not appear to be occupied by VELB and current vineyard activities are not expected to adversely impact VELB. However, because the elderberry shrubs are potential habitat for VELB, they should be protected from future vineyard operations by the establishment of a buffer around each shrub extending laterally along the intermittent drainage to a distance of 100 feet (or the remaining riparian corridor in areas where existing vineyard development has encroached within the 100-foot buffer) and outwardly to the “outermost perimeter of the riparian zone.” The “outermost perimeter of the riparian zone” shall be defined as the perimeter of the dripline of the riparian tree(s) that extend furthest outward from the intermittent drainage. The buffer area around each shrub will be left undisturbed.

Although the elderberry shrubs have been severely pruned during previous clearing activities, they are all expected to recover based on the abundance of stump sprouts observed during the survey. For this reason, no further mitigation (such as replacement) is necessary. To minimize biological impacts to valley elderberry longhorn beetle, a permit term, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *Construction avoidance measures shall be incorporated into any future vineyard development plans to avoid all elderberry shrubs. A 100-foot (or wider) buffer shall be established and maintained around the elderberry shrubs (*Sambucus mexicana*) for complete avoidance of adverse impacts. The buffer shall consist of fencing and flagging; contractors and construction crews shall be briefed on the purpose of the buffer, the need for protection, areas to avoid and reporting measures to carry out if an impact occurs. Buffer areas shall be maintained during the duration of construction. In areas where existing vineyard development has encroached within the 100-foot buffer, all remaining portions of the existing riparian corridor (defined by extant riparian vegetation) shall be maintained. Photographs and a map indicating the location(s) of all elderberry shrubs and established buffers at the project site in proximity to any new vineyard development in the place of use should be submitted to the Deputy Director for Water Rights 30 days prior to the development.*

Potential nesting habitat for raptor and non-raptor migratory bird species occurs within the proposed POU and/or surrounding vicinity. If active nests are present in the vicinity of the construction areas, vegetation removal, land clearing, and other activities associated with development of the proposed project could result in adverse impacts to these species. The five notable oak trees in the proposed POU shall be preserved, as discussed in *Question E* below; any additional tree removal would be conducted consistent with the Tree Mitigation Plan described in *Question E* below.

To minimize biological impacts to nesting birds, permit terms, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *If construction activities are to occur between February 1 and September 30, a biologist, whose qualifications are acceptable to the Deputy Director for Water Rights, shall conduct a pre-construction survey for the purpose of identifying nesting bird species. The pre-construction survey shall include all potential nesting habitat within 500 feet of proposed construction areas. The survey shall be conducted no more than 14 days prior to the beginning of construction activities. If an active raptor or migratory bird nest is found during the pre-construction survey, the Permittee shall notify the California Department of Fish and Game. If an active raptor nest is found during the pre-construction survey, a 500-foot no-disturbance buffer shall be established and maintained around the nest until all young have fledged. If an active nest of any other migratory or non-migratory bird is found, a 250-foot buffer shall be established around the nest until all young have fledged.*

Questions B and C

Intermittent drainages, which meet the requirements for streams according to Napa County definitions, occur within the riparian corridors on the property. The Petitioner is required to abide by Napa County stream setback requirements based on Section 18.108.025 of the Napa County Conservation Regulations, which states that clearing of land for new agricultural uses is

required to comply with designated stream setbacks unless a use permit is obtained from Napa County, or unless an exemption in Section 18.108.050 applies. Setbacks are measured from the top of the bank on both sides of the stream as it exists at the time of replanting, redevelopment, or new agricultural activity.

Because the intermittent drainages are on slopes between 1 and 5 percent, the required setback of 45 feet will be established along the intermittent drainages. Based on a review of aerial photographs of the project site prior to vineyard installation (**Figure 7**) and current aerial photographs (**Figure 8**), no riparian habitat has been removed from the required setback areas associated with the proposed project. No further encroachment into the riparian corridors adjacent to the proposed POU will occur. No activities, with the exception of those permitted under Napa County Code Section 18.108.25 E will occur within the designated setback areas. Portions of existing riparian corridors onsite will be enhanced as part of the Tree Mitigation Plan³⁰ developed for the project (discussed in *Question E* below).

In addition, stream setbacks will be established along the three swales that occur within and in close proximity to the northernmost portion of the undeveloped proposed POU (**Figure 5**) consistent with Section 18.108.025 of the Napa County Conservation Regulations; because the swales are on slopes between 1 and 5 percent, the required minimum setback is 45 feet.

For the protection of riparian habitat, a permit term, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *For the protection of riparian habitat, Permittee shall establish a setback as shown on Figure 5, Riparian Corridors, of the Initial Study/Mitigated Negative Declaration. The setback shall be at least 45 feet wide along the intermittent drainages and swales adjacent to the expanded place of use as measured from the top of the bank on both sides of the stream. No ground disturbing activities shall occur within the setback area, including, but not limited to, grading, herbicide spraying, roads, fencing, and use or construction of storage areas, with the exception of occasional equipment access reasonably necessary for continued operation of the vineyard. Equipment access through the setback shall be limited to previously disturbed areas of the setback when possible and is only allowed when other means of access are not available. Equipment access through the setback area shall incorporate best management practices to minimize disturbance to water, soils, and vegetation. Planting and irrigation of native riparian vegetation within the setback area is allowed. Permittee shall restrict cattle or other domestic stock access to the riparian area. These requirements shall remain in effect as long as water is being diverted under this permit.*

To mitigate for previous project-related impacts to the isolated vernal pool located in the proposed POU, an invasive weed removal plan will be implemented and a dirt harvest road that bisects the remaining portion of the vernal pool will be abandoned in order to facilitate natural vernal pool recovery and restoration. While the precise dimensions of the vernal pool prior to project-related impacts are not identified in the 1999 report, it is assumed that approximately half the acreage of this feature has been lost. Additionally, due to the planting of vineyard rows and the installation of the dirt harvest road, the vernal pool qualities of the wetland area have been lost. In keeping with the State Water Board's policy of no net loss of wetlands, the approximately 0.12 acres of impacted wetland shall be mitigated at a ratio of 1.5 to 1 (restored to impacted) in the vicinity of the wetland swale mapped in the northeastern portion of the proposed place of use (**Figure 5**). These measures are outlined in the permit terms below.

The following permit terms, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *The vernal pool that occurs in the southern portion of the expanded place of use and the adjacent stand of valley oaks (Figure 5, Initial Study/Mitigated Negative Declaration) shall be preserved. Invasive weeds shall be removed from the vernal pool area biannually for five years. Photographs shall be taken prior to and after each vernal pool weed removal and submitted to the Deputy Director for Water Rights with annual progress reports. The dirt harvest road that bisects the remaining portion of the vernal pool shall be permanently taken out of service to facilitate natural vernal pool recovery as long as water is being diverted under this permit.*
- *The 0.12 acres of wetland habitat assumed to be impacted by the project shall be mitigated through creation/restoration of wetlands at a ratio of 1.5 to 1 (restored to impacted) wetland acreage. No less than 0.18 acres of wetland shall be enhanced to support wetland plants similar to those previously found at the impacted wetland, such as prickly coyote-thistle (*Eryngium armatum*), oniongrass (*Melica bulbosa*), curly dock (*Rumex crispus*), common yellow monkeyflower (*Mimulus guttatus*), irisleaf rush (*Juncus xiphioides*), spotted-throat downingia (*Downingia concolor*), and Douglas' Pogogyne (*Pogogyne douglasii*). The plants used for wetland mitigation shall be approved by the Department of Fish and Game prior to mitigation implementation. The mitigation shall occur on the project site, in the vicinity of the wetland swale in the northeastern portion of the expanded place of use (Figure 5, Initial Study/Mitigated Negative Declaration), or in a comparable onsite location that would support the hydrology and wetland plants similar to those previously found at the impacted wetland.*

A minimum setback of 50 feet shall be maintained from the edge of the mitigated wetland. No ground disturbing activities shall occur within the setback area, including, but not limited to, grading, herbicide spraying, roads, fencing, and use or construction of storage areas. Planting, maintenance, and irrigation of wetland vegetation within the setback area are allowed.

The mitigation site shall be monitored annually for five years by a biologist whose qualifications are acceptable to the Deputy Director for Water Rights to assess the success of the wetland vegetation. Photograph locations will be established along the mitigation site. During the annual monitoring visit, photographs will be taken and the success of the vegetation will be documented. Reports shall include photo documentation of the mitigation site. Monitoring reports shall be submitted annually to the Deputy Director for Water Rights and the Department of Fish and Game for the five monitoring years (as-built report at the completion of restoration/ creation of wetlands plus reports for two monitoring years thereafter) or until mitigation has been deemed successful. The mitigation will be considered successful if, at the end of the five-year monitoring period, the mitigation site has achieved an overall 80 percent cover. If the survival of the vegetation is determined to be below 80 percent after any of the annual monitoring events, additional wetland plants will be planted in order to achieve success.

- *No work shall commence and no water shall be diverted and used on the 121 acre expanded place of use under this permit or license until a signed copy of a Streambed Alteration Agreement between the Department of Fish and Game and the Permittee is filed with the Division of Water Rights. Compliance with the terms and conditions of the agreement is the responsibility of the Permittee. If a Streambed Alteration Agreement is*

not necessary for this permitted project, the Permittee shall provide the Division of Water Rights a copy of a waiver signed by the State Department of Fish and Game.

- *Prior to the start of construction, or diversion and use of water on the 121 acre expanded place of use under this permit or license, Permittee shall obtain the appropriate permit from the U.S. Army Corps of Engineers (USACE) and file a copy with Division of Water Rights. If a permit from the USACE is not necessary for this permitted project, the Permittee shall provide the Division of Water Rights with a letter from the USACE affirming that a permit is not needed.*
- *Prior to the start of construction, or diversion and use of water on the 121 acre expanded place of use under this permit or license, Permittee shall obtain Clean Water Act section 401 Water Quality Certification from the State Water Board or the San Francisco Bay Regional Water Quality Control Board unless certification is waived by the U.S. Army Corps of Engineers.*

Question D

The proposed POU consists of areas that historically have been used for agricultural purposes and are located adjacent to other agricultural land uses. According to the Petitioner, fencing was installed around the property between 1999 and 2000; the fencing extends from the east along Pope Valley Road to the western property boundary. In addition, some riparian corridors within the property are also fenced. The proposed project will maintain setbacks from existing riparian corridors, as described in *Questions B and D* above. No migratory fish occur in the project area as the project is located upstream of Lake Berryessa. The proposed project would not interfere with the movement of fish or wildlife. Therefore, potential impacts are considered less than significant.

Question E

The oak woodlands occurring within the southern portion and edges of the proposed POU that have already been impacted by vineyard conversion will be mitigated through the implementation of the Tree Mitigation Plan³¹ prepared for the project. The total estimated number of trees removed was 2,711.³² Further development of the proposed POU could impact up to two additional acres of oak woodland habitat, containing approximately 272 trees, as well as three notable valley oak trees and two individual valley oak trees located in ruderal grassland habitat; the five trees would be avoided and any future impact to the oak woodland habitat within the proposed POU would be mitigated through the implementation of the Tree Mitigation Plan.

The Tree Mitigation Plan was designed to recreate and mimic the extant oak woodlands onsite. Mitigation ratios and associated species composition recommendations were based upon evaluation of the existing oak woodland habitat quality, tree density, tree species composition, extent of tree canopy cover, understory species composition, understory density, and overall visual appearance. The ultimate goal of the Tree Mitigation Plan is to ensure that the final result is compensatory oak woodland stands that have a similar canopy cover to the areas that previously existed. In order to meet these criteria an 80 percent success criterion was established. A tree mitigation ratio of 1.5 (replaced) to 1 (impacted) was chosen to partially offset the effects of time for the establishment of the new oak woodland areas. Napa County does not have a standardized tree mitigation requirement and/or a preservation ordinance; however, the Napa County Code provides some guidance regarding tree canopy cover and vegetation requirements associated with sensitive domestic water supply drainages. It identifies seven specific drainages that the County classifies as sensitive domestic water supply

drainages and the streams within the project site are not among these identified drainages (Napa County Code Section 18.108.027). The revised General Plan for Napa County (2008) recommends replacement of lost oak woodlands or preservation of like habitat at a 2 to 1 ratio when retention of existing vegetation is found to be infeasible. The recommended Tree Mitigation Plan would achieve ample replacement of lost oak woodlands, even though the subject loss of oak woodland habitat was prior to the effective date of the newly revised Napa County General Plan.

To minimize and mitigate impacts to the oak woodlands, a permit term, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *No oak trees shall be removed until an Oak Tree Mitigation Plan is approved by the Deputy Director for Water Rights. Tree replacement shall be conducted consistent with the Tree Mitigation Plan that has been submitted to the Division of Water Rights and tree mitigation shall occur in the areas depicted in Figure 4 of the Tree Mitigation Plan. The previously removed oak woodlands (approximately 2,711 trees within approximately 39 acres) and oak woodlands remaining within the 121 acre expanded place of use (if impacted, consisting of approximately 272 trees within two acres) shall be replaced in the approximately 41 undeveloped acres identified on site at a 1.5 to 1 ratio. Associative native shrub species shall also be planted along with the replacement trees at a 1 to 0.25 ratio (tree:shrub). The Tree Mitigation Plan includes planting specifications for replacement trees and shrubs, irrigation methods, maintenance and monitoring requirements, and success criteria for mitigation plantings. Failed plantings shall be replaced to achieve net success criteria of 80 percent survival after five years. Trees surviving five years shall be maintained in perpetuity. Photo documentation showing the results of the tree replacement shall be submitted to the Deputy Director for Water Rights when requested after five years. All photos shall be dated and the location of the photos shown on a drawing. After five years, any trees which die of natural causes shall be photographed and photos indicating the date the photo was taken and location of the tree(s) shall be submitted to the Deputy Director for Water Rights with annual progress reports.*

The five notable trees (Figure 5, Initial Study/Mitigated Negative Declaration) shall also be avoided. To protect oak trees intended to remain undisturbed from project-related disturbance, construction fencing shall be installed as far as feasible outside the driplines of oak trees within the vicinity of construction areas. No encroachment into the fenced areas shall be permitted and fencing shall remain in place until all construction activities have ceased. Where encroachment is necessary past the driplines, a certified arborist shall document compliance with the following: at least 12 inches of mulch will be temporarily placed to protect roots from compaction; any tree roots to be severed shall be the maximum feasible distance from the trunk; any roots over one-inch in diameter that are damaged as a result of construction activities shall be traced back and cleanly cut behind any damaged area; and exposed roots shall be kept moist or covered immediately. Documentation, including photographs, that this mitigation measure has been completed shall be submitted to the Division within 30 days of installation of new vineyard blocks.

Question F

No Habitat Conservation Plan or Natural Community Conservation Plan has been adopted for the proposed project area. The proposed project would not result in conflicts with any approved local, regional, state, or federal habitat conservation plans. No impact would occur.

Findings

The proposed project could result in potentially significant impacts to biological resources. However, with implementation of the identified mitigation measures, potential impacts would be reduced to a less than significant level.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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5. Agriculture and Forestry Resources. In determining whether impacts to agricultural resources are significant environmental impacts, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Agriculture and agricultural production are prevalent land uses in Napa County. Fertile valley and foothill areas have been identified by Napa County as areas where agriculture is and should continue to be the predominant land use. Urban-centered growth and agricultural preservation are objectives of the county.³³ The project site lies within an area zoned and designated for agricultural use.

Questions A, D, and E

The project site is designated within the Napa County General Plan as Agricultural Resource. Under the proposed project, the project site would continue to be used for agricultural purposes. The proposed project would not involve the conversion of forest land to non-forest use. As discussed in the Biological Resources section, the total estimated number of trees removed was 2,711.³⁴ Further development of the proposed POU could impact up to two additional acres of oak woodland habitat, containing approximately 272 trees. With implementation of mitigation to offset previous tree loss discussed in Question E in the Biological Resources section, impacts are considered less than significant.

Questions B and C

The project site is zoned as Agricultural Watershed, and therefore would not conflict with existing zoning for forest land or timberland. No impact would occur.

Findings

No significant impacts would occur to agriculture and forestry resources as a result of the proposed project.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
6. Noise. Would the project result in:				
a) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing in or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing in or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The dominant sources of noise in Napa County consist of highway traffic, railroads, airports, industry/commerce, and agriculture. Major noise sources in the rural/agricultural areas of Napa County consist primarily of agricultural noise and occasional construction noise. Agricultural noise includes general machinery use, pest control devices often use noise to drive away birds from agricultural areas, and frost protection devices, which employ engine-driven propellers to move air in a frost, threatened field.³⁵

The Napa County Noise Ordinance requires that construction activities be conducted in such a manner that the maximum noise levels at surrounding residential properties will not exceed 75 dBA between 7:00 AM and 7:00 PM and 60 dBA between 7:00 PM and 7:00 AM.

Noise sensitive areas identified within Napa County are those areas that are subject to noises that adversely affect what people are doing on the land.³⁶

Questions A-D

Noise generated at the project site would consist of construction and routine agricultural activities and would be similar to that already existing in the vicinity. No engine driven frost equipment is expected, as overhead sprinklers are proposed. This impact would be less than significant.

Questions E and F

The project site is not located near an airport or airstrip. No impacts would occur.

Findings

The proposed project would result in less than significant noise impacts.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
7. Land Use and Planning. Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Existing Land Uses

Vineyards, riparian corridors dominated by oaks, and fallow fields interspersed with oak trees characterize the project site. Surrounding land uses consist of vineyard, pasture, residences associated with agricultural properties, and open space.

Napa County General Plan

The project site lies within an area designated as Agricultural Resource (AR) by the Napa County General Plan. The Napa County General Plan describes the intent of the Agricultural Resource designation as follows:

To identify areas in the fertile valley and foothill areas of the county in which agriculture is and should continue to be the predominant land use, where uses incompatible with agriculture should be precluded, and where the development of urban type uses would be detrimental to the continuance of agriculture and the maintenance of open space which are economic and aesthetic attributes and assets of the County of Napa.³⁷

General uses of the Agricultural Resource designation provided by the General Plan consist of agriculture, processing of agricultural products, and single-family dwellings.

Napa County Zoning Ordinance

The project site lies within an area zoned as an Agricultural Watershed (AW) District. The Napa County Zoning Ordinance describes the intent of the Agricultural Watershed designation as follows:

The AW district classification is intended to be applied in those areas of the county where the predominant use is agriculturally oriented, where watershed areas, reservoirs and floodplain tributaries are located, where development would adversely impact on all such uses, and where the protection of agriculture, watersheds and floodplain tributaries from fire, pollution and erosion is essential to the general health, safety and welfare.³⁸

Agriculture is a related use allowed within an Agricultural Watershed district, which does not require a use permit.

Napa County Erosion Control Plans

Erosion Control Plans are required for all agricultural developments which involve an earthmoving activity, grading, improvement, or construction of a structure on sites of 5 percent slope or greater. The Napa County Conservation, Development and Planning Department administers the ordinance and grants approvals. The Napa County Resource Conservation District reviews all Erosion Control Plans for agriculture on slopes greater than 5 percent, and passes on its recommendations to Napa County Conservation, Development and Planning Department.³⁹

When a project that is proposed within an area with slopes greater than 5 percent requires a discretionary permit such as a use permit from Napa County or an administrative permit, such as a grading or building permit, the permit is subject to the following conditions⁴⁰:

- 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 (DBH) or larger located on a site for which either an administrative or discretionary permit is required shall not be removed until the required permits have been approved by the decision-making body and tree removal has been specifically authorized.
- C. Trees to be retained or designated for retention shall be protected through the use of barricades or other appropriate methods during the construction phase.
- D. Wherever removal of vegetation is necessitated or authorized, the director or his 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 his designee, or replaced with smaller trees at a higher ratio to be determined by the director or his 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 his designee concurrently with the Erosion Control Plan. 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.

Napa County Stream Setbacks

Section 18.108.025 of the Napa County Conservation Regulations states that clearing of land for new agricultural uses are required to comply with designated stream setbacks shown in **Table 9**, unless a use permit is obtained from Napa County, or unless an exemption in Section 18.108.050 applies.⁴¹

TABLE 9: NAPA COUNTY STREAM SETBACKS⁴²

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

The intermittent drainages are on slopes between 1 and 5 percent, requiring a minimum setback of 45 feet measured from the top of the bank on both sides of the stream as it exists at the time of replanting, redevelopment, or new agricultural activity. No further encroachment into the riparian corridors adjacent to the proposed POU would occur, as described in *Questions B and C* in the Biological Resources section above. Portions of the riparian corridor located within the stream setback areas would be enhanced as part of the oak woodland mitigation (discussed in the Biological Resources section above). Based on aerial photographs of the project site, no riparian habitat has been removed from the required setback areas associated with the current vineyard project.

Question A

The project site is currently developed with agricultural uses. The proposed project would not result in physical barriers that would divide an established community. No impact would occur.

Question B

In compliance with the Napa County Zoning Ordinance, Napa County prepared a Negative Declaration, dated June 17, 2002, pursuant to CEQA and Napa County CEQA guidelines for the six acres located on slopes greater than 5 percent within the 121 acres of proposed POU and the Petitioner received Erosion Control Plan approval by Napa County on September 24, 2002. The developed portion of the proposed POU has established setbacks from the stream corridors.

Question C

No Habitat Conservation Plan or Natural Community Conservation Plan currently exists for the project area. No impact would occur.

Findings

The proposed project would not result in significant impacts to land use and planning.

8. Mineral Resources. Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Napa County General Plan identifies mercury deposits in the vicinity of the project, northwest of Aetna Springs.⁴³ Mercury was mined extensively in the mid to late 1800s as a result of the demand for the mineral in refining gold and making explosives. Historic mines in the project area include Oat Hill Mine and Aetna Mine, northwest of Aetna Springs, and the Knoxville Mine, north of Lake Berryessa. Mercury mining proved to be unprofitable and most operations closed by the 1890s.

Questions A and B

Known mineral resources located in the vicinity of the project are limited to mercury. No onsite mercury deposits are known to exist on the project site and mercury is no longer a primary mineral mined in California. No impact would occur.

Findings

The proposed project would not impact mineral resources.

9. Hazards and Hazardous Materials. Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project site is currently used as a vineyard. Past uses include grazing practices. Hazardous materials found on the project site generally consist of common petroleum products (i.e., fuel, oil, lubricants) and agricultural products (i.e., pesticides, herbicides, fertilizer). These products, when stored and used according to manufacturer's guidelines and regulatory standards, do not pose significant hazards. Petroleum products stored on site include several 550 to 1,000 gallon fuel tanks, and an oil container. Agricultural products used on site consist primarily of two sulfur dry treatments that are applied to the existing vineyard each year. A site assessment conducted in January 2003 did not identify the presence of hazards in the proposed project area (i.e., stained soil, improperly stored hazardous materials). A search of government environmental records did not reveal any known hazardous materials sites within the project site.⁴⁴

The record search did reveal one hazardous materials site immediately north of the project site at 7220 Pope Valley Road. A leak in an underground diesel fuel storage tank was found in 1995. The tank was closed and contaminated soil was removed from the site thereby limiting the possibility of further contamination. According to the geologist who conducted remediation work at the site, groundwater contamination is not considered likely due to bedrock characteristics and the depth to groundwater at the site.⁴⁵

Questions A and B

Hazardous materials that would be used during the construction and operation of the proposed project would be limited to common petroleum and agricultural products. As discussed above, when properly used, these products do not present a significant hazard. Therefore, a less than significant impact is expected.

Question C

The proposed project is not located within 0.25 mile of any existing or proposed schools. No impact would occur.

Question D

A search of government environmental records did not reveal any known hazardous materials sites within the project site. No impact would occur.

Questions E and F

The project site is not located near an airport or airstrip. No impacts would occur.

Question G

The proposed project does not include features that would interfere with an adopted emergency plan. No impact would occur.

Question H

The proposed project is located in a rural area that contains substantial fuels (e.g., grasses, shrubs, and other vegetation) that are susceptible to wildland fire. The risk of wildland fire for the proposed project is similar to that for other construction sites and can be minimized through the use of BMPs. The proposed project would implement BMPs (e.g., clearing construction areas of combustible material, ensuring spark arresters are in good working order) during project construction. Therefore, potential impacts are considered less than significant.

Findings

The proposed project would not result in significant hazard and hazardous materials impacts.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
10. Population and Housing. Would the project:				
a) Induce substantial population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Napa County General Plan does not identify acceptable areas for large-scale residential development in the vicinity of the proposed project.

Question A

The proposed project is not anticipated to directly or indirectly induce substantial growth in the project area. Potential impacts are considered less than significant.

Questions B and C

The proposed project would not displace people or housing. No impact would occur.

Findings

The proposed project would not result in significant impacts to population and housing.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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11. Transportation and Circulation. Would the project:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with an applicable congestion management program, including, but not limited to level-of-service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Conflict with adopted policies regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance of such facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Vehicular access to the project site is provided by Pope Valley Road, a two lane county road, which connects the community of Pope Valley in the south with Aetna Springs in the north. The nearest highway is State Routes 29 and 128 in St. Helena in the Napa Valley, approximately 10 miles to the south.

Questions A-F

The proposed project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, nor would it conflict with an applicable congestion management program. The proposed project would not result in any changes to air traffic patterns. A negligible increase in traffic is anticipated from the implementation of the proposed project. A temporary increase in traffic would occur by construction crews and transportation of materials to and from the proposed construction area. Operation and maintenance of the vineyard would also generate seasonal vehicle trips by vineyard staff; the most labor-intensive period would occur during the harvest season from about August through October. However, construction and harvest activities would take place during off-peak traffic hours and any increase in traffic that they generate would be slight and would not represent a significant impact to transportation or circulation. No substantial new impediments to emergency access or incompatible uses are anticipated. The proposed project is not expected to result in inadequate parking capacity, or conflict with adopted alternative

transportation policies, plans, or programs. Potential impacts are considered less than significant.

Findings

The proposed project would not result in significant impacts to transportation and traffic.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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12. Public Services. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- | | | | | |
|-----------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Fire protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Parks? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Public services include fire and police protection, schools, parks, and other public facilities. The project area is located within unincorporated Napa County and law enforcement services for this area are provided by the Napa County Sheriff's Department. Fire protection services are provided by the Napa County Fire Department and the California Department of Forestry (CDF). The Pope Valley Union Elementary School provides K through eighth grade public education in the Pope Valley area, while 9th through 12th grade public education is provided by St. Helena High School.

Questions A-E

The proposed project would not generate substantial additional demand for government facilities or services. A less than significant impact is expected.

Findings

The proposed project would not result in significant impacts to public services.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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13. Utilities and Service Systems. Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project site is not served by public water or wastewater services. Residences in the project area rely on private wells for domestic water supply and private septic systems for wastewater treatment. Solid waste from the project area is disposed of at the Clover Flat Landfill located at 4380 Silverado Trail in Calistoga. The Clover Flat Landfill is expected to provide for the disposal needs of the project until 2035.⁴⁶

Questions A-C

The proposed project would not result in additional wastewater generation. The project site is not connected to wastewater or stormwater facilities. The proposed POU would be irrigated with water stored in the existing Lake Duvall operated pursuant to Licenses 2947 and 13396, and Permit 19189, Lake Jerome operated pursuant to License 13396 and Permit 19189, and Lake Cabral operated pursuant to License 7430. A discussion of surface water supply is included in the Hydrology and Water Quality section above. Additional water supplies, such as connection to public water supply, would not be required. Adequate capacity at Clover Flat Landfill is projected to exist until at least 2035. The proposed project would add a negligible amount of solid waste and would not conflict with government regulations concerning the generation, handling or disposal of solid waste. Impacts are considered to be less than significant.

Findings

The proposed project would not result in significant impacts to utilities and service systems.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
14. Aesthetics. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

The project area contains scenic resources, which characterize rural Napa County in general, including mountainous landscapes, agricultural and pastoral settings, and riparian areas. The existing agricultural use of the project site is consistent with rural aesthetic quality of the project area.

Questions A-D

The proposed project would not significantly impact local aesthetics. The proposed project is considered agricultural in nature, located within an agricultural area, and is compatible with surrounding land uses. No substantial new sources of light or glare would result from the proposed project. Therefore, the proposed project would not substantially degrade the existing visual character of quality of the area and potential impacts are considered less than significant.

Findings

The proposed project would not result in significant impacts to aesthetics.

15. Cultural Resources. Would the project:

- | | | | | |
|---|--------------------------|-------------------------------------|--------------------------|--------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Regulatory Framework

Under CEQA, historical resources are considered part of the environment (Public Resources Code, §§ 21060.5, 21084.1). An “‘historical resource’ includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California (Public Resources Code, §§ 21084.1, 5020.1, subd. (j)).”

In 1992, the Public Resources Code was amended as it affects historical resources. The amendments included creation of the California Register of Historic Resources (California Register) (Public Resources Code, § 5024.1). The State Historical Resources Commission administers the California Register and adopted implementing regulations effective January 1, 1998 (Cal. Code Regs., tit. 14, § 4850 et seq.). The California Register includes historical resources that are listed automatically by virtue of their appearance on, or eligibility for, certain other lists of important resources. The California Register incorporates historical resources that have been nominated by application and listed after public hearing. Also included are historical resources listed as a result of the State Historical Resources Commission's evaluation in accordance with specific criteria and procedures.

CEQA requires consideration of potential impacts to resources that are listed or qualify for listing on the California Register, as well as resources that are significant but may not qualify for listing.

Cultural Resources Studies

The project site has been subject to previous cultural resources investigations, which resulted in the recordation of several cultural resources within the property. The cultural resources studies characterize past uses of the project area, summarize the results of field surveys and archival records results, and provide resource treatment recommendations. Banks and Beard et al. conducted cultural resource investigations in 1983 and 1999, respectively, and identified 15 cultural resources.⁴⁷ As a result of the previous investigations, a total of three resources, including CA-NAP-314, CA-NAP-670, and CA-NAP-672, were recommended as requiring further investigation if slated for development. Two additional sites, CA-NAP-936 and CA-NAP-938/H, were identified as locales that should be excluded from development.⁴⁸

A review of ethnographic literature and maps found that the Wappo, the Lake Miwok, and possibly the Patwin shared portions of Pope Valley. Archival research conducted at the Northwest Information Center, Sonoma State University, revealed 22 previously recorded cultural resources sites within approximately one mile of the project site; however, no previously recorded resources were found recorded within the 121-acre project area. Historically, the project lies adjacent to the Mexican land grant called Rancho Locoallomi. The grant was made to Julian Pope in 1841. Examination of historical maps found evidence of a nineteenth-century homestead in the southern portion of the project site, and a second building probably dating to the early twentieth century east of Pope Valley Road, also within the project site. No other historical buildings, structures, or other features were depicted within the project site.

During 1999 field surveys conducted by Origer & Associates, six cultural resource sites were identified and recorded within the study area: Flora Springs 1 (CA-NAP-936), Flora Springs 2 (CA-NAP-937), Flora Springs 3 and 4, Flora Springs 5 (CA-NAP-938/H) and Flora Springs 6 (CA-NAP-939H).⁴⁹ Flora Springs 1 (CA-NAP-936) consists of a broad prehistoric lithic scatter with associated midden. Flora Springs 2 (CA-NAP-937) consists of a sparse prehistoric lithic scatter. Flora Springs 3 and 4, two historic-period resources, consist of two small stone alignments and a hand dug stone lined well, respectively. Flora Springs 5 (CA-NAP-938/H), a multi-component site, contains both a prehistoric lithic scatter with associated midden and a historic-period archaeological deposit dominated by square cut nails and glass and ceramic fragments. Flora Springs 6 (CA-NAP-939H) is an early twentieth-century farmstead consisting of a collapsed house, outbuildings, and a standing garage. Each of these resources represents a variety of prehistoric and historic-period site types including human habitation, resource procurement, and resource utilization. In addition to these recorded resources, Origer noted widely dispersed obsidian flakes throughout the study area. As isolated specimens, these

flakes do not constitute archaeological sites. However, they serve as evidence of the use of the valley as a place where prehistoric people came to hunt and gather resources.

Of the six cultural resource sites that were identified and recorded within the study area, Origer determined that Flora Springs 1 (CA-NAP-936) should be avoided and protected by a fence that would preclude ground disturbance. Flora Springs Site 2 (CA-NAP-937) was treated with the California Archaeological Resource Identification and Data Acquisition Program (CARIDAP) and is unlikely to yield new information. Flora Springs Site 3 was examined and also deemed unlikely to yield new information. Flora Springs Sites 2 and 3 resulted in the determination that these sites are unlikely to yield any new information and, therefore, development of these sites is not considered impacts to cultural resources. The well at Flora Springs 4 has been filled to prevent injury; no archaeological materials were discovered during investigation of the site. Flora Springs 5 (CA-NAP-938/H) was recommended to be fenced for protection and avoided by ground disturbance. Recommendations for CA-NAP-939H (Flora Springs 6) included retaining an archaeologist to monitor for any historical features that may be encountered, if there is to be any ground-disturbance.

In 2009, Origer & Associates conducted testing and data recovery at four resources located within the project area, including CA-NAP-314, CA-NAP-670, CA-NAP-672 and CA-NAP-936.⁵⁰ Results of the investigations are summarized below.

- **CA-NAP-314:** This prehistoric resource was determined to be 370-x-125 meters in dimension. The artifact assemblage was dominated by chipped stone debitage and tools, primarily of the local Glass Mountain source, with lesser frequencies of groundstone and quartz crystals (Lake County diamonds). An abundance of micro-debitage indicates late slate tool making and tool maintenance likely took place at CA-NAP-314. Lesser quantities of primary and secondary flakes suggest early stage cobble reduction and tool manufacture took place, albeit in lesser frequencies. This location was probably a temporary occupation site, likely associated with a large habitation site in the area, since there is a lack of well developed midden and temporally diagnostic artifacts were not recovered. Based on the chronological sequence put forth by Frederickson⁵¹, obsidian hydration indicates the primary occupation of the site took place during the Upper Archaic Period and Lower Emergent Periods (500-2,500 B.P.).⁵² Management recommendations made in light of the 2009 excavations include: 1) erecting permanent fence posts that mark the sensitive areas; 2) disturbance of this area in the form of ripping, trenching, leveling or installation of pipelines is not permitted within the boundaries of the resource; and, 3) vine removal should be conducted when the ground is damp and vines should be pulled straight up, as has been shown to minimize ground disturbance.⁵³
- **CA-NAP-670:** This prehistoric site was determined to be a sparse lithic scatter. During the 2009 investigation, seven specimens of flaked stone debitage were recovered. During the original recordation of the resource in 1983, Banks reported midden soil and potential fire-affected rock (FAR).⁵⁴ A careful examination of the resource did not result in the relocation of midden or prehistoric FAR.⁵⁵ The FAR that was present on the site was likely a result of clearing the field prior to vineyard installation and the 'midden' may have been ashy soils associated with burning of the cleared vegetation. Due to the paucity of archaeological specimens recovered during the 2009 investigation, the site did not qualify as an archaeological resource. It was recommended that the site continue to be used as a vineyard. However, if significant archaeological materials are located

proximal to the resource, work should be halted in the area and a qualified archaeologist should be contacted to assess the significance of the remains.⁵⁶

- **CA-NAP-672:** This prehistoric site was determined to be approximately 115-x-45 meters in dimension. The artifact assemblage was dominated by flaked stone debitage, five bifaces, and two edge modified flakes. Based on an examination of the debitage, it is assumed that all stages of tool manufacture and maintenance took place at CA-NAP-672. According to the chronological sequence put forth by Frederickson's⁵⁷ obsidian hydration data, the major occupation of the site was most likely during the Upper Archaic Period (1,000-2,500 B.P.). Obsidian hydration dating also indicates the site was occupied during the more distant past (2,500 to 6,000 B.P.). Management recommendations made in light of the 2009 excavations include: 1) erecting permanent fence posts that mark the sensitive areas; 2) disturbance of this area in the form of ripping, trenching, leveling or installation of pipelines is not permitted within the boundaries of the resource; and, 3) vine removal should be conducted when the ground is damp and vines should be pulled straight up, as has been shown to minimize ground disturbance.⁵⁸
- **CA-NAP-936:** Cultural constituents of this prehistoric resource were described as a midden deposit with a diverse artifact assemblage and sub-surface features associated with the prehistoric occupation. Chipped stone materials include debitage, projectile points, bifaces, drills, choppers, edge modified flakes and cores. Additionally, five specimens of groundstone, including two handstones, fragments of two mortars and a grinding slab, were recovered from CA-NAP-936. Seven fragments of quartz crystals, known colloquially as Lake County diamonds, were also included in the artifact assemblage. Archaeological features were represented by a single human burial encountered proximal to the grinding slab.

The artifact assemblage provides insight into the activities performed at CA-NAP-936. Overall the presence of groundstone indicates food preparation occurred, such as grinding acorns. The chipped stone debitage assemblage includes a high frequency of small flakes that represent late stage tool manufacture and maintenance. Large sized debitage was also reported suggesting early stage cobble reduction and tool manufacture took place, although less often.

The artifact assemblage also indicated when the site was occupied. The morphology of the projectile points in the assemblage implies the site was occupied during the Archaic and Upper Emergent Periods. The presence of the handstone implies an age of occupation to be older than 4,000 years, as it has been suggested that handstones precede the use of mortar and pestles. Fragments of two mortars indicate the site was occupied also after the transition to the mortar and pestle. Based on the chronological sequence put forth by Frederickson⁵⁹ obsidian hydration data suggests the primary occupation of the site was during the Upper Archaic and Lower Emergent Periods (200 -2,500 B.P.).⁶⁰

Management recommendations for CA-NAP-936 made in light of the 2009 investigation of the site include: 1) removal of grapevines, line stakes, posts, trellis and other viticulture related implements as soon as the ground has dried; 2) removal of said materials must be done with a qualified archaeologist present to ensure minimal ground disturbance; 3) enclose CA-NAP-936 (including a 15 feet buffer) with a fence, at least five feet in height to protect the resource from inadvertent impacts; 4) the route of the

fence will be determined by T. Origer in consultation with the State Water Board archaeologist; 5) the boundaries of CA-NAP-936 must be recorded via global positioning system (GPS); and, 6) discontinue the use of herbicides in the vicinity of CA-NAP-936 as to lessen impacts to the chemical composition of the archaeological matrix.⁶¹

Native American Consultation

The data recovery efforts at CA-NAP-314, CA-NAP-670, CA-NAP-672 and CA-NAP-936 were completed in conjunction with Mishewal-Wappo Tribe of Alexander Valley. Tribal representatives who were present during the fieldwork included Dana Couey, Denise Couey and Earl Couey. At the time when human remains were discovered, Earl Couey served as the Most Likely Descendant (MLD). Additionally, Scott Gabaldon, Tribal Chair of the Mishewal-Wappo Tribe, visited the sites and provided comments regarding the perspective of the tribe.

Questions A-D

Previous cultural resource studies identified 15 archaeological sites⁶² and the Petitioner previously agreed to terms for site avoidance or for future investigations of the sites should the land use change. The conditions of the 15 previously identified cultural resources were re-evaluated in 2009, and the previously recommended investigations were conducted at the sites where impacts were occurring.⁶³ The following resource-specific measures would protect the sites from impact.

To protect the site identified as CA-NAP-251, a permit term, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *The cultural resource site, identified as CA-NAP-251 by Peter Banks in the report titled "An Archaeological Reconnaissance of the Komes-Edge Hill Farms Properties, Pope Valley, Napa County, California" dated July 25, 1983, shall not be impacted by the proposed project (e.g., water diversion, storage reservoirs, and distribution facilities, installation of pipelines; road improvements; and ripping, trenching, grading or planting related to both the conversion of land to agricultural use and maintenance of the place of use). CA-NAP-251 shall be protected by installing and maintaining a fence around the site perimeter. The placement of the fence inclusive of a buffer zone of 15 feet shall be determined by Tom Origer & Associates in consultation with the State Water Board archaeologist. The fencing shall remain in place for as long as water is being diverted pursuant to any permits and licenses. Weed growth within the fenced area may be controlled by mowing; however, herbicides shall not be used because they could alter the site's chemistry and adversely impact the archaeological deposit. Any future project-related activities or developments at the location of the above listed site may be allowed only if an archaeologist that has been approved by the California Historical Information System to work in the area, and that is acceptable to the Deputy Director for Water Rights is retained to determine the significance of the site. If mitigation is determined to be necessary, then the archeologist shall design an appropriate mitigation plan and submit the plan for approval by the Deputy Director for Water Rights. After the plan has been approved, the mitigation must be completed to the satisfaction of the Deputy Director for Water Rights prior to activities in the area of the site. GPS coordinates shall be used to identify the boundary of the sensitive area and be submitted to the staff of the Division of Water Rights. Permittee shall be responsible for all costs associated with the cultural resource related work.*

To protect the site identified as CA-NAP-252, a permit term, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *The cultural resource site, identified as CA-NAP-252 by Peter Banks in the report titled “An Archaeological Reconnaissance of the Komes-Edge Hill Farms Properties, Pope Valley, Napa County, California” dated July 25, 1983, shall not be impacted by the proposed project (e.g., water diversion, storage reservoirs, and distribution facilities, installation of pipelines; road improvements; and ripping, trenching, grading or planting related to both the conversion of land to agricultural use and maintenance of the place of use). Ongoing agricultural related impacts at CA-NAP-252 have occurred as a result of the previous location of equipment storage sheds, roads, and farm-related activities where CA-NAP-252 is located. In order to minimize any possible additional impacts to CA-NAP-252, the site shall be covered with a layer of gravel, the distribution of which is to be determined by Tom Origer & Associates in consultation with the State Water Board archaeologist. Any future project-related activities or developments at the location of the above listed site may be allowed only if an archaeologist that has been approved by the California Historical Information System to work in the area, and that is acceptable to the Deputy Director for Water Rights is retained to determine the significance of the site. If mitigation is determined to be necessary, then the archeologist shall design an appropriate mitigation plan and submit the plan for approval by the Deputy Director for Water Rights. After the plan has been approved, the mitigation must be completed to the satisfaction of the Deputy Director for Water Rights prior to activities in the area of the site. GPS coordinates shall be used to identify the boundary of the sensitive area and be submitted to the staff of the Division of Water Rights. Permittee shall be responsible for all costs associated with the cultural resource related work.*

To protect the site identified as CA-NAP-314, a permit term, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *The cultural resource site identified as CA-NAP-314, by Peter Banks in the report titled “An Archaeological Reconnaissance of the Komes-Edge Hill Farms Properties, Pope Valley, Napa County, California” dated July 25, 1983, and again by Tom Origer & Associates in the report titled “Archaeological Investigations at Cypress and Palisades Ranches, Pope Valley, Napa County, California” dated January 2010, shall not be impacted by any subsurface disturbances (e.g., ripping, trenching, grading, or installation of buried pipelines). Routine maintenance of existing vineyard, including shallow discing and weed mowing will continue to be allowed. When vine replacement is necessary, vine removal shall be done as non-invasively as possible, by pulling the vines vertically with a chain attached to the hydraulic system on a tractor. Vine removal shall occur only while the soil is moist down to six inches, and new vines shall be replanted in the same location as the vines which were removed. The Permittee shall mark the location of CA-NAP-314 with permanent line stakes extending a minimum of two feet above the height of the existing line stakes. The delineation of the site area shall be determined by Tom Origer & Associates in consultation with the State Water Board archaeologist. GPS coordinates shall be used to identify the boundary of the sensitive area and be submitted to the staff of the Division of Water Rights. Permittee shall be responsible for all costs associated with the cultural resource related work.*

To protect the site identified as CA-NAP-670, a permit term, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *The location of the site previously identified as CA-NAP-670, by Peter Banks in the report titled “An Archaeological Reconnaissance of the Komes-Edge Hill Farms Properties, Pope Valley, Napa County, California” dated July 25, 1983, and again discussed by Tom Origer & Associates in the report titled “Archaeological Investigations at Cypress and Palisades Ranches, Pope Valley, Napa County, California” dated January 2010, may continue to be used as vineyard. Routine maintenance of the vineyard, including shallow discing and weed mowing will continue to be allowed with no limitations for ripping or replanting. If future ground disturbing activities should uncover possible archaeological specimens, work shall be halted until the Deputy Director for Water Rights is notified of the discovery and a professional archeologist is retained by the Permittee to evaluate the find and recommend appropriate mitigation measures. Proposed mitigation measures shall be submitted to the Deputy Director for Water Rights for approval. After the plan has been approved, the mitigation must be completed to the satisfaction of the Deputy Director for Water Rights prior to activities in the area of the site. Permittee shall be responsible for all costs associated with the cultural resource related work.*

To protect the site identified as CA-NAP-672, a permit term, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *The site identified as CA-NAP-672, by Peter Banks in the report titled “An Archaeological Reconnaissance of the Komes-Edge Hill Farms Properties, Pope Valley, Napa County, California” dated July 25, 1983, and again by Tom Origer & Associates in the report titled “Archaeological Investigations at Cypress and Palisades Ranches, Pope Valley, Napa County, California” dated January 2010, shall not be impacted by any subsurface disturbances (e.g., ripping, trenching, grading, or installation of buried pipelines). Routine maintenance of the existing vineyard, including shallow discing and weed mowing will continue to be allowed. If vine replacement is necessary, vine removal shall be done as non-invasively as possible, by pulling the vines vertically with a chain attached to the hydraulic system on a tractor. Vine removal shall occur only while the soil is moist down to six inches, and new vines shall be replanted in the same location as the vines that were removed. The Permittee shall mark the sensitive area of CA-NAP-672 with permanent line stakes extending a minimum of two feet above the height of the existing line stakes. The delineation of the sensitive area shall be determined by Tom Origer & Associates in consultation with the State Water Board archaeologist. GPS coordinates shall be used to identify the boundary of the sensitive area and be submitted to the staff of the Division of Water Rights. Permittee shall be responsible for all costs associated with the cultural resource related work.*

To protect the site identified as CA-NAP-936 (Flora Springs 1), a permit term, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *The site identified as CA-NAP-936, by Tom Origer & Associates in the report titled “Archaeological Investigations at Cypress and Palisades Ranches, Pope Valley, Napa County, California” dated January 2010 shall be excluded from the place of use and*

avoided during project construction, development, and operation. Existing vines will be cut off and treated to prevent re-growth when the Permittee determines that production of the vines has decreased or disease requires removal of the vines. The vineyard infrastructure including line stakes, posts and the drip lines in the site area shall be removed at the same time. The existing vineyard road (avenue) bisecting the site will no longer be used and the road will be re-routed around the location of CA-NAP-936. An archaeologist, who has been approved by the California Historical Resources Information System to work in the area and who is acceptable to the Deputy Director for Water Rights, shall be present during the removal of the vineyard infrastructure including the stakes and posts and irrigation system to ensure minimal ground disturbance. The site area shall be protected from future use by erecting a permanent fence around the site perimeter. The fence shall be at least five-feet in height and set back 15 feet from the site edge to create a buffer. The placement of the fence shall be determined by the senior author of the 2010 Tom Origer & Associates report in consultation with the State Water Board archaeologist. GPS shall be used to identify the boundary of the sensitive area and the GPS coordinates shall be submitted to the staff of the Division of Water Rights. Weed growth within the fenced area may be controlled by mowing; however, herbicides shall not be used because they could alter the site's chemistry and adversely impact the archaeological deposit. Permittee shall be responsible for all costs associated with the cultural resource related work.

To protect the site identified as Flora Springs 4 (the hand dug stone lined well) a permit term, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *The site identified as Flora Springs 4 (the hand dug stone lined well) by Tom Origer & Associates in the report titled "A Cultural Resource Study for the Flora Springs Water Rights Application Project, Pope Valley, Napa County, California" dated September 15, 1999 shall be filled and avoided during project construction, development, and operation. The site shall not be impacted by any of the features of the proposed project (e.g., water diversion, storage reservoirs, and distribution facilities, including installation of buried pipelines; and ripping, trenching, grading, or planting related to conversion and maintenance of the place of use-vineyards). Routine maintenance of the vineyard, including shallow discing and weed mowing will continue to be allowed. If future project-related activities or developments at the location of Flora Springs 4 are unavoidable, then an archaeologist who has been approved by the California Historical Information System to work in the area and who is acceptable to the staff of the Division of Water Rights shall determine the significance of the site. If mitigation is determined to be necessary, then the archaeologist shall design an appropriate mitigation plan and submit the plan for approval by the Deputy Director for Water Rights. After the plan has been approved, the mitigation must be completed to the satisfaction of the Deputy Director for Water Rights prior to activities in the area of the site. Permittee shall be responsible for all costs associated with the cultural resource related work.*

To protect the site identified as CA-NAP-938/H (Flora Springs 5), a permit term, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *The site identified as CA-NAP-938/H (Flora Springs 5), by Tom Origer & Associates in the report titled "A Cultural Resource Study for the Flora Springs Water Rights*

Application Project, Pope Valley, Napa County, California” dated September 15, 1999 shall be avoided during project construction, development, and operation. The site shall remain fenced and shall not be impacted by any of the features of the proposed project (e.g., water diversion, storage reservoirs, and distribution facilities, including installation of buried pipelines; and ripping, trenching, grading, or planting related to conversion and maintenance of the place of use-vineyards). If future project-related activities or developments at the location of CA-NAP-938/H (Flora Springs 5) are unavoidable, then an archaeologist who has been approved by the California Historical Information System to work in the area and who is acceptable to the staff of the Division of Water Rights shall determine the significance of the site. If mitigation is determined to be necessary, then the archaeologist shall design an appropriate mitigation plan and submit the plan for approval by the Deputy Director for Water Rights. After the plan has been approved, the mitigation must be completed to the satisfaction of the Deputy Director for Water Rights prior to activities in the area of the site. Permittee shall be responsible for all costs associated with the cultural resource related work.

To protect the site identified as CA-NAP-939H (Flora Springs 6), a permit term, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *The site identified as CA-NAP-939H (Flora Springs 6), by Tom Origer & Associates in the report titled “A Cultural Resource Study for the Flora Springs Water Rights Application Project, Pope Valley, Napa County, California” dated September 15, 1999 shall be avoided during project construction, development, and operation. The site shall not be impacted by any of the features of the proposed project (e.g., water diversion, storage reservoirs, and distribution facilities, including installation of buried pipelines; and ripping, trenching, grading, or planting related to conversion and maintenance of the place of use-vineyards). If avoidance is unfeasible, an archaeologist who has been approved by the California Historical Information System to work in the area, and who is acceptable to the staff of the Division of Water Rights, shall monitor all ground disturbance, determine the boundaries of newly discovered features, and determine the significance of the site. If mitigation is determined to be necessary, then the archaeologist shall design an appropriate mitigation plan and submit the plan for approval by the Deputy Director for Water Rights. After the plan has been approved, the mitigation must be completed to the satisfaction of the Deputy Director for Water Rights prior to activities in the area of the site. Permittee shall be responsible for all costs associated with the cultural resource related work.*

There is the possibility that additional subsurface archaeological deposits could be present and accidental discovery could occur. The following permit term, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *Should any buried archaeological materials be uncovered during project activities, such activities shall cease within 100 feet of the find. Prehistoric archaeological indicators include: obsidian and chert flakes and flaked stone tools; bedrock outcrops and boulders with mortar cups; ground stone implements (grinding slabs, mortars and pestles) and locally darkened midden soils containing some of the previously listed items plus fragments of bone and fire affected stones. Historic period site indicators generally include: fragments of glass, ceramic and metal objects; milled and split lumber; and structure and feature remains such as building foundations, privy pits, wells and dumps;*

and old trails. The Deputy Director for Water Rights shall be notified of the discovery and a professional archeologist shall be retained by the Permittee to evaluate the find and recommend appropriate mitigation measures. Proposed mitigation measures shall be submitted to the Deputy Director for Water Rights for approval. Project-related activities shall not resume within 100 feet of the find until all approved mitigation measures have been completed to the satisfaction of the Deputy Director for Water Rights.

There is also the possibility that an unanticipated discovery of human remains could occur. The following permit term, substantially as follows, shall be included in any water right orders or licenses issued pursuant to Applications 9574, 18949, 19374, and 27625:

- *If human remains are encountered, then the Permittee shall comply with Section 15064.5 (e)(1) of the CEQA Guidelines and the Health and Safety Code Section 7050.5. All project-related ground disturbances within 100 feet of the find shall be halted until the Napa County Coroner has been notified. If the Coroner determines that the remains are Native American, the Coroner will notify the Native American Heritage Commission to identify the most-likely descendants of the deceased Native Americans. Project-related ground disturbance, in the vicinity of the find, shall not resume until the process detailed under Section 15064.5 (e) has been completed and evidence of completion has been submitted to the Deputy Director for Water Rights.*

Findings

The proposed project could result in potentially significant impacts to cultural resources. However, with implementation of the identified permit terms, potential impacts would be reduced to a less than significant level.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
16. Recreation. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Recreational areas in Napa County include forests, wild land areas, lakes, and creeks which offer such recreational opportunities as hiking, picnicking, hunting, boating, fishing, and swimming. Lake Berryessa in eastern Napa County, and numerous State Parks located near Napa Valley provide abundant recreational facilities in the project area.

Question A

The proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. A less than significant impact is expected.

Question B

The proposed project does not include recreation facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. No impact would occur.

Findings

The proposed project would not result in significant impacts to recreation.

Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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17. Mandatory Findings of Significance.

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Questions A-C

As discussed in the preceding sections, the proposed project has a potential to degrade the quality of the environment by adversely impacting air quality, hydrology and water quality, biological resources, and cultural resources. However, with implementation of the identified permit terms, potential impacts would be reduced to a less than significant level. Potential adverse environmental impacts in combination with the impacts of other past, present, and future projects, could contribute to cumulatively significant effects on the environment. However, with implementation of the identified permit terms, the proposed project would avoid or minimize potential impacts and would not result in cumulatively considerable environmental impacts. No potentially significant adverse affects to humans have been identified.

III. DETERMINATION

On the basis of this initial evaluation

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A NEGATIVE DECLARATION will be prepared.

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

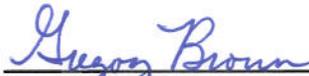
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Prepared By:

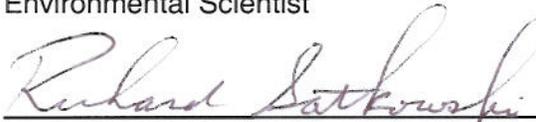
 10-25-10

Date
David Zweig
Analytical Environmental Services

Reviewed By:

 10/27/10

Date
Gregory Brown
Environmental Scientist

 12/31/10

Date
for Phillip Crader, Manager
Water Rights Permitting Section

(Form updated 3/28/00)

Authority: Public Resources Code Sections 21083, 21084, 21084.1, and 21087.

Reference: Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21082.1, 21083, 21083.1 through 21083.3, 21083.6 through 21083.9, 21084.1, 21093, 21094, 21151; *Sundstrom v. County of Mendocino*, 202 Cal. App. 3d 296 (1988); *Leonoff v. Monterey Board of Supervisors*, 222 Cal. App. 3d 1337 (1990).

IV. Information Sources

- ¹ *Correction to Petition for Change of Place of Use for Water Right Licenses 2947, 7430 and 13396 (Applications 9574, 18949, 19374), and Permit 19189 (Application 27625) by Flora Springs Winery, Napa County.* Letter from James C. Hanson Consulting Civil Engineer to Kathy Mrowka, State Water Resources Control Board. June 23, 2009.
- Correction to Petition for Change of Place of Use Licenses 2947 (Application 9574), License 7430 (Application 18949), License 13396 (Application 19374), and Permit 19189 (Application 27625).* Letter from James C. Hanson Consulting Civil Engineer to Jennifer Aranda, Analytical Environmental Services. July 2, 2009.
- ² Ibid.
- ³ *Correction to Petition for Change of Place of Use for Water Right Licenses 2947, 7430 and 13396 (Applications 9574, 18949, 19374), and Permit 19189 (Application 27625) by Flora Springs Winery, Napa County.* Letter from James C. Hanson Consulting Civil Engineer to Kathy Mrowka, State Water Resources Control Board. June 23, 2009.
- ⁴ *Soil Survey of Napa County, California.* Prepared by U.S. Department of Agriculture, Soil Conservation Service in cooperation with the University of California, Agricultural Experiment Station. Issued August 1978.
- ⁵ Ibid.
- ⁶ Ibid.
- ⁷ Ibid.
- ⁸ *Napa County General Plan.* June 2008. Available online at: <http://www.countyofnapa.org/GeneralPlan/>
- ⁹ *Fault-Rupture Hazard Zones in California. Special Publication 42.* California Division of Mines and Geology. 1999.
- ¹⁰ Napa County GIS Data. March 2010.
- ¹¹ Ibid.
- ¹² State and National Area Designation Maps of California. California Air Resources Board. 2006. Available online at: <http://www.arb.ca.gov/desig/adm/adm.htm>.
- ¹³ Ambient Air Quality Standards. California Air Resources Board. Available online at: <http://www.arb.ca.gov/aqs/aaqs2.pdf>.
- ¹⁴ Bay Area Air Quality Management District (BAAQMD), 2009. Draft CEQA Air Quality Guidelines, December 2009. Available online at: http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/Draft%20BAAQMD%20CEQA%20Guidelines_Dec%207%202009.ashx.
- ¹⁵ Updated CEQA Guidelines. Planning and Research Division of the Bay Area Air Quality Management District. December 2010. Available online at: <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Updated-CEQA-Guidelines.aspx>
- ¹⁶ BAAQMD CEQA Guidelines, Assessing the Impacts of Projects and Plans. Prepared by the Planning and Research Division of the Bay Area Air Quality Management District. December 1999. Available online at: http://www.baaqmd.gov/pln/ceqa/ceqa_guide.pdf.
- ¹⁷ Ibid.
- ¹⁸ *Soil Survey of Napa County, California.* Prepared by U.S. Department of Agriculture, Soil Conservation Service in cooperation with the University of California, Agricultural Experiment Station. Issued August 1978.
- ¹⁹ *Biological Resources Report: Flora Springs Palisades Vineyards, LLC, Pope Valley, Napa County, California.* Kjeldsen Biological Consulting. Santa Rosa, California. August 28, 1999.
- ²⁰ *Supplemental Biological Survey Report for Palisades Ranch.* Analytical Environmental Services. June 2007.
- ²¹ Ibid.

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- ²² *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office, Sacramento, California. 1999.
- ²³ Ibid.
- ²⁴ *Supplemental Biological Survey Report for Palisades Ranch*. Analytical Environmental Services. June 2007.
- ²⁵ *Fairy Shrimps of California's Puddles, Pools, and Playas*. Clyde H. Eriksen and Denton Belk. Mad River Press, Inc. Eureka, California. 1999.
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