



Initial Study

Water Right Application A031501 of County Line Vineyard, LLC

April 2014

Prepared by:



Prepared for:

State Water Resources Control Board, Division of Water Rights

STATE WATER RESOURCES CONTROL BOARD

DIVISION OF WATER RIGHTS

P.O. BOX 2000

SACRAMENTO, CA 95812-2000

INITIAL STUDY

PROJECT TITLE: County Line Vineyard, LLC
Application to Appropriate
Water

APPLICATION: A031501

APPLICANT: County Line Vineyard, LLC
4026 Spring Mountain Road
St. Helena, CA 94574

APPLICANT'S CONTACT PERSON: Ryan Stolfus
Wagner & Bonsignore, CCE
2151 River Plaza Drive, Suite 100
Sacramento, CA 95833

GENERAL PLAN DESIGNATION: RRD100

ZONING: Resources and Rural Development (RRD) – 100-acre density, and Biotic
Resource and Scenic Resource overlays.

1. INTRODUCTION

On April 27, 2004, County Line Vineyard, LLC (formerly Pride Mountain Vineyard) filed an application to appropriate water by permit (Application 31501) with the State Water Resources Control Board (State Water Board), Division of Water Rights (Division). The Applicant is seeking the right to appropriate water from an Unnamed Stream tributary to Mark West Creek thence the Russian River in the County of Sonoma. The Applicant is proposing to construct an onstream reservoir and an offset well for seasonal diversion to storage of up to 10 acre-feet (af) of water. The appropriated water will be used for irrigation and heat control of 11 acres of existing vineyard, incidental fire protection, and incidental recreation. The project is located west of Spring Mountain Road and north of St. Helena Road in the Mayacamas Mountains between Santa Rosa and St. Helena, California (Figures 1 and 2).

2. PROJECT DESCRIPTION

PROPOSED PROJECT

Application 31501 proposes:

- The seasonal diversion to storage of up to 10 af from two Points of Diversion (POD) located on the same Unnamed Stream. POD 1 (N. 1,953,276 and E. 6,402,925; NAD 83) is a proposed 10 af onstream reservoir located near the headwaters of the Unnamed Stream. POD 2 (N. 1,952,479 and E. 6,401,762; NAD 83) is a proposed offset well located approximately 1600 feet downstream of POD 1 (Figure 3);
- A diversion season of December 15 to March 15;
- Construction of an earthen embankment dam at POD 1 and an offset well at POD 2;
- Construction of a new pipeline from POD 2 to the reservoir at POD 1;
- A rate of diversion at POD 2 of no more than 1 cubic foot per second (cfs); and
- Irrigation and heat control of an existing 11-acre vineyard place of use (POU), incidental fire protection, and incidental recreation at the reservoir (Figure 3).

PROJECT BACKGROUND

Public notice for Application 31501 was posted on June 16, 2006. Seven protests were received against Application 31501. Each of these protests is summarized below; all protests are currently unresolved.

- California Department of Fish and Wildlife[±] (CDFW) filed a protest on July 11, 2006, identifying concerns that the proposed project may result in direct and cumulative adverse impacts to the resources of the Unnamed Stream, Mark West Creek and the Russian River watersheds by reducing instream flow and water availability that is required to maintain riparian and fish rearing habitat within the drainage.
- Frederick John Wessa and Yvonne A. Wessa filed a protest on July 16, 2006, expressing concerns for the effects of the proposed project on aquatic life and other species.
- George and Edie Bou filed a protest on July 17, 2006, expressing concerns that the proposed project would adversely affect the headwaters and gravel beds of a steelhead stream during spawning.
- Trout Unlimited of California filed a protest on July 17, 2006, expressing concerns that the proposed reservoir would be taking water from the stream at a time of low flows and capturing early season rainfall important to upstream migrating coho salmon and steelhead.
- Friends of the Mark West Watershed filed a protest on July 22, 2006 expressing concerns about the cumulative effects of diversions from sources that feed into Mark West Creek, which supports steelhead trout and coho salmon. Particular note was made about recent reductions in summer flows.
- Griffin Okie filed a protest on July 26, 2006, expressing the concern that the proposed project would affect the amount of water available at his property, five miles downstream from the proposed reservoir.
- Casey and Maurine Caplinger filed a protest on July 26, 2006, expressing concerns that the proposed project would: interfere with existing water rights, adversely impact the environment, adversely impact the public interest, violate state and local law, and occur outside the jurisdiction of the State Water Board.

ENVIRONMENTAL SETTING

The project site consists of 11 acres of existing vineyards on a 235-acre estate. The site is located along Spring Mountain Road in the mountains between Santa Rosa and St. Helena in Sonoma County near the border with Napa County. The topography consists of moderately steep, hilly terrain and is approximately 1,700 feet above sea level. Surrounding features include scattered vegetation, vineyards, and one existing building.

The climate of Sonoma County is generally mild and characterized by moist cool winters and warm dry summers. Annual rainfall in the Cloverdale area of Sonoma County averages

[±] Effective January 1, 2013, the California Department of Fish and Game (DFG) became the California Department of Fish and Wildlife (CDFW). In this report, references to the agency, even in the past will use CDFW. However, reports prepared by the agency prior to the name change will be referenced as DFG.

approximately 42 inches. Most of the precipitation falls during the winter with very little precipitation during the summer months.

CALIFORNIA ENVIRONMENTAL QUALITY ACT BASELINE CONDITIONS

The baseline date for the proposed project is April 27, 2004. As shown in **Table 1**, the baseline setting consists of the existing 11-acre vineyard, irrigation system, access roads, and a small abandoned earthen dam with an outlet pipe at the location of the proposed onstream reservoir. Aerial photography shows that the vineyard was constructed sometime prior to 2002 (**Figure 4**). The date of construction of the small abandoned earthen dam is unknown, and the vegetation encroaching into the earthen dam area consists of established trees and shrubs (including bay, live oak, poison oak, and manzanita), suggesting that the abandoned earthen dam was constructed prior to the baseline date (**Figure 5**).

The California Environmental Quality Act (CEQA) document will analyze potential impacts associated with the construction of the onstream reservoir at POD 1 and the offset well at POD 2, installation of pipeline between POD 2 and the reservoir, and the seasonal diversion and storage of up to 10 af of water. A Water Availability Analysis / Cumulative Flow Impairment Index Report (1/8/09[†]), Terrestrial Biological Resources Assessment¹ (1/14/13); Wetland Delineation Report² (May 2009); Aquatic Biological Resources Assessment³ (1/21/13), and Cultural Resources Assessment⁴ (1/16/12) have been prepared and the results contained therein are discussed in the relevant sections of this CEQA document.

Table 1. CEQA Baseline Conditions and Project Components

Existing Components at Baseline	CEQA Baseline Date	Proposed Project Components
<ul style="list-style-type: none"> • 11 acres of vineyard (planted in 2000 and 2002), • an irrigation system, • a small, abandoned earthen dam with overflow pipe at the location of the proposed new dam; • roads to allow management of the vineyard; and • Ongoing vineyard operations including irrigation, application of pesticides and herbicides, routine maintenance, and harvesting. 	<p>April 27, 2004</p>	<ul style="list-style-type: none"> • Seasonal diversion to storage of up to 10 af of water; • construction of reservoir (POD 1); • construction of POD 2 (offset well); and • installation of pipeline.

^{† †} Addendum published on 12/22/09; 2nd addendum on 3/8/10; amendment to CFII on 1/2/13; Division addendum on 6/26/13; and revised 2nd addendum on 1/31/13.

RESPONSIBLE, TRUSTEE AND FEDERAL AGENCIES

The State Water Board is the lead agency under the CEQA with primary authority for project approval. In addition, the responsible, trustee, and federal agencies shown in Table 2 may have jurisdiction over some or all of the elements of the proposed project:

Table 2. CEQA Baseline Conditions and Project Components

Agency	Permit/Approval
Sonoma County	Erosion and Sedimentation Control Plan approval and Grading Permit issuance
California Department of Fish and Wildlife (DFW)	Streambed Alteration Agreement, California Endangered Species Act (CESA) compliance
California Regional Water Quality Control Board (Regional Board)	Clean Water Act Section 401 Water Quality Certification, General Construction National Pollutant Discharge Elimination System (NPDES) permit issuance,
U.S. Army Corps of Engineers (Corps)	Clean Water Act Section 404 Permit
National Marine Fisheries Service (NMFS)	Federal Endangered Species Act Compliance
United States Fish and Wildlife Service (USFWS)	Federal Endangered Species Act Compliance

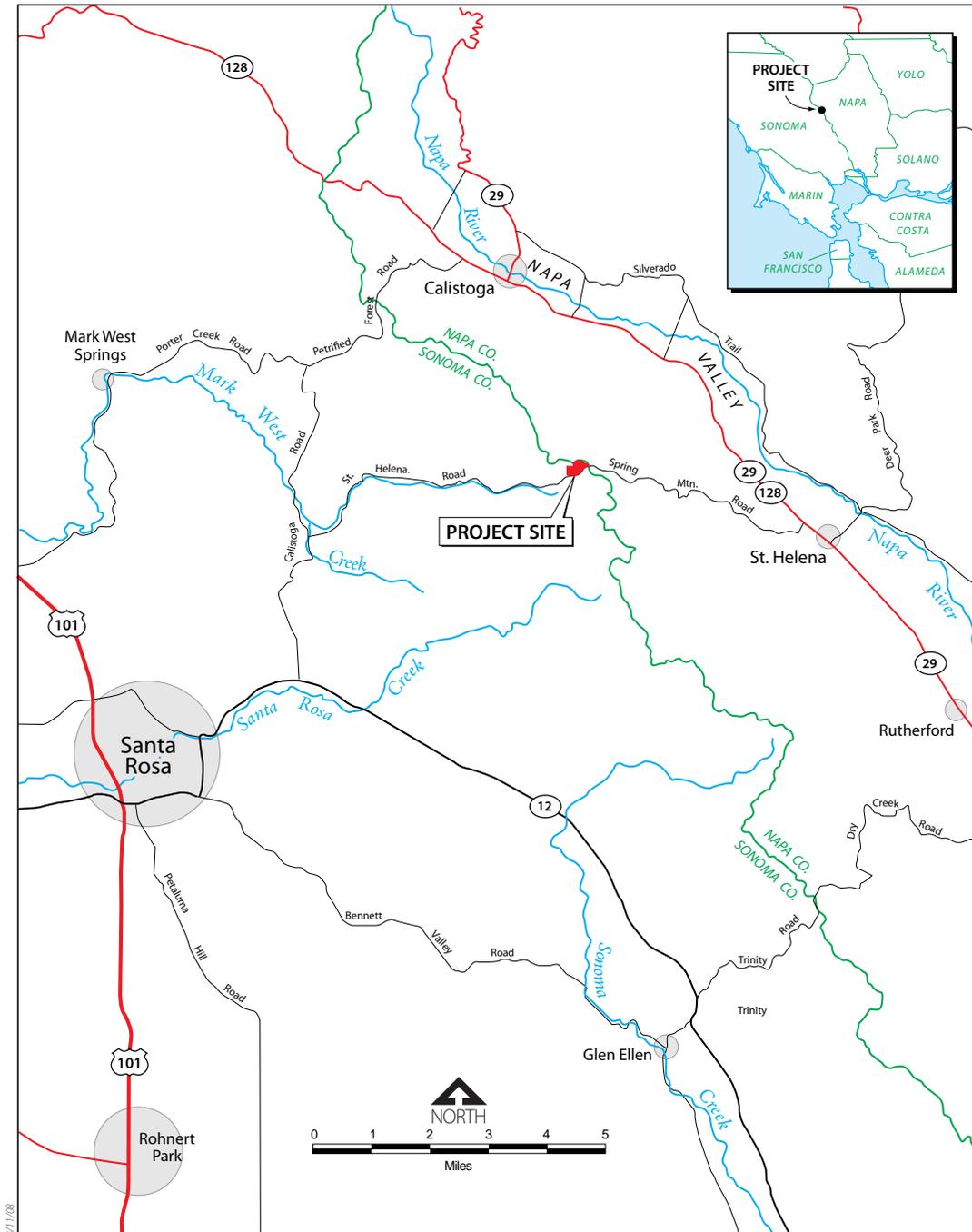


Figure 1
Regional Location

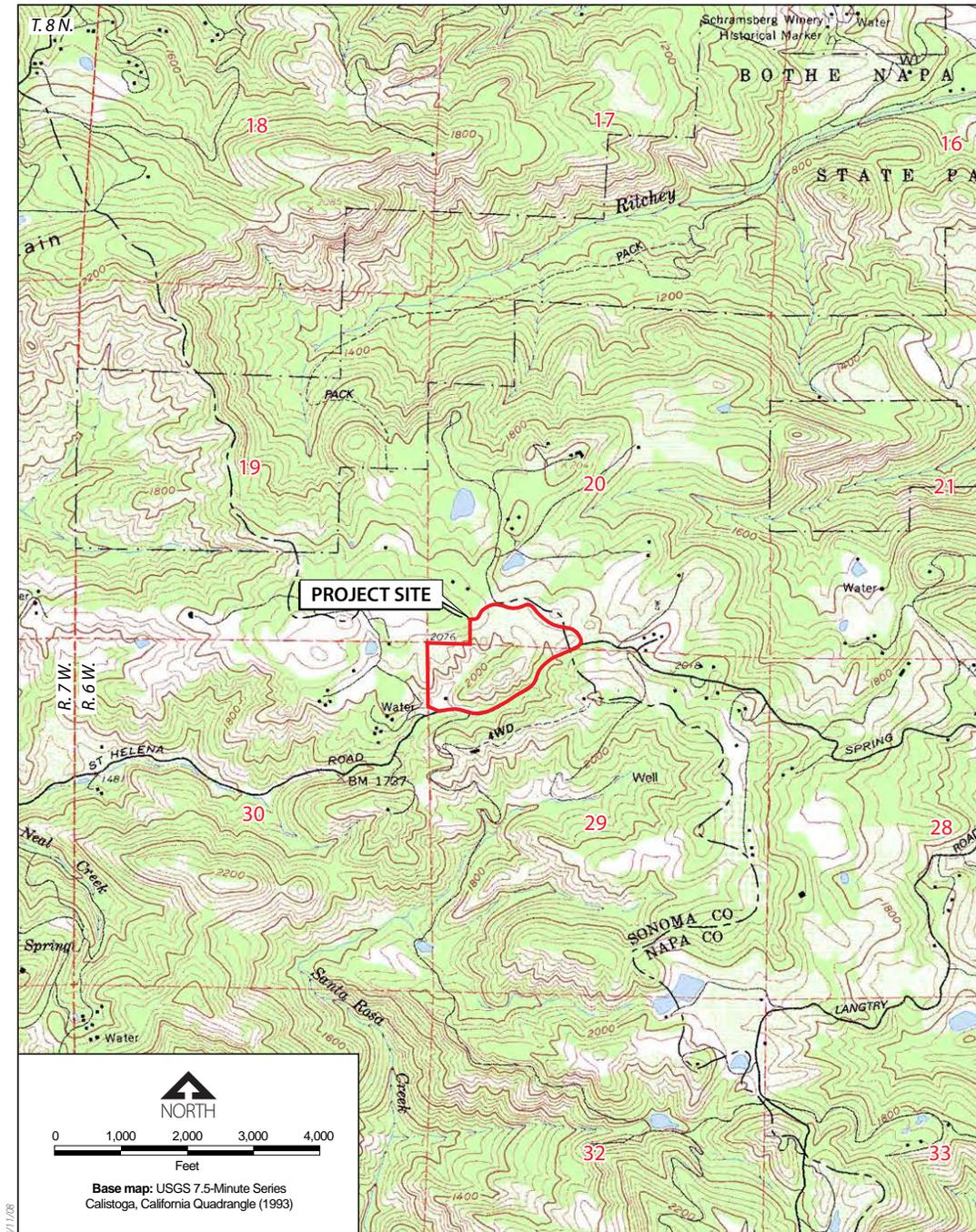


Figure 2
Location of the Project Site

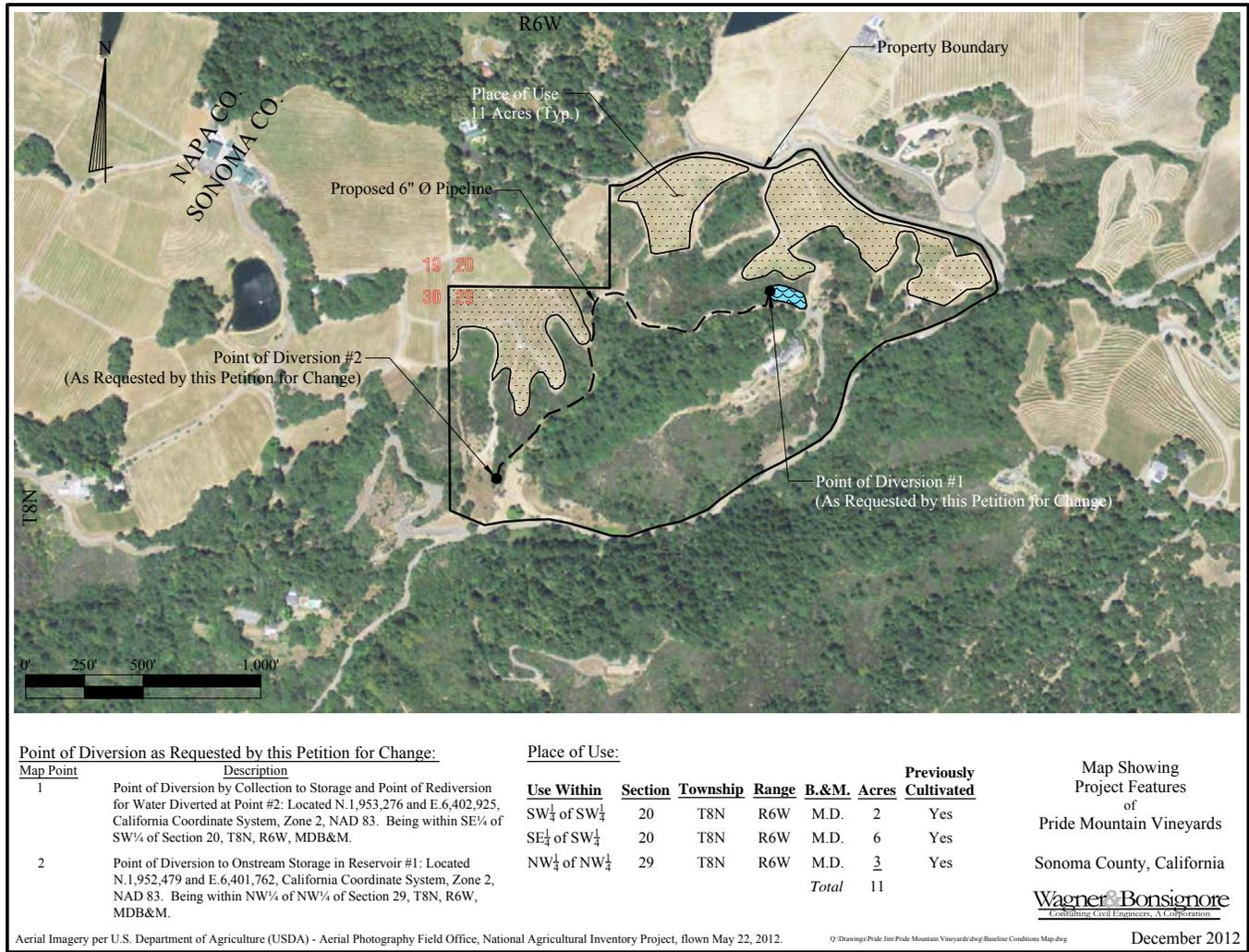


Figure 3. Location of Project Features

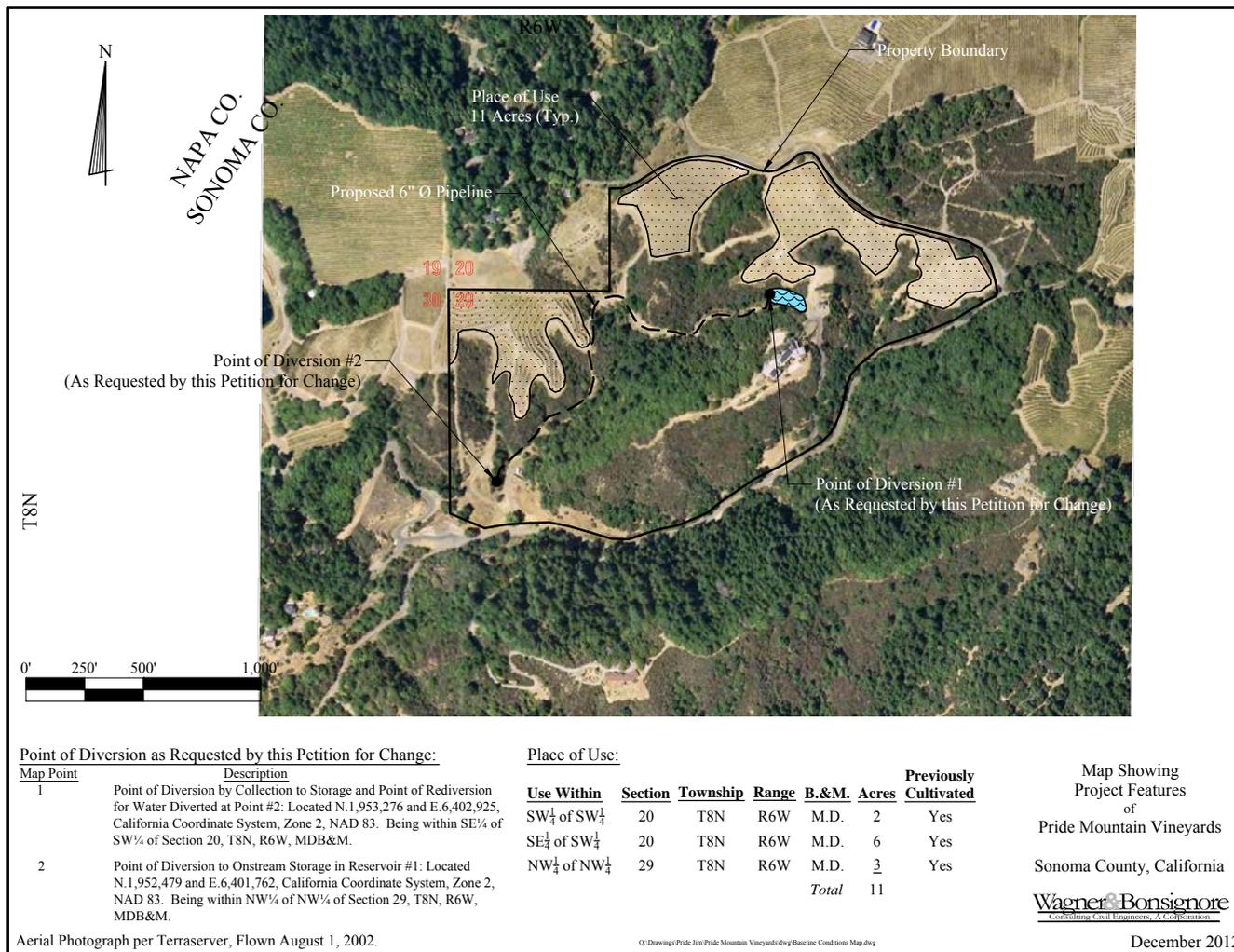


Figure 4. Project Site on August 1, 2002 (Baseline Conditions)



Figure 5

Looking at Upstream Face of Existing Dam within Reach 7A (October 2012)

3. ENVIRONMENTAL CHECKLIST

The environmental factors checked below could be potentially affected by this project. The checklists and text on the following pages provide detail regarding the potential effects.

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

3.1 AESTHETICS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?			<input checked="" type="checkbox"/>	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			<input checked="" type="checkbox"/>	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			<input checked="" type="checkbox"/>	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The zoning for the project site includes a scenic design (SD) combining district, which is intended to preserve the visual character and scenic resources of lands in the county and to implement the provisions of Sections 2.1, 2.2 and 2.3 of the general plan Open Space & Resource Conservation Element (Ord. No. 4643, 1993).

IMPACT ASSESSMENT

a) Have a substantial adverse effect on a scenic vista?

Less-Than-Significant Impact

The new reservoir would not be visible from the road because of the terrain between the proposed reservoir site and surrounding roadways, including Spring Mountain Road and St. Helena Road. The reservoir would be consistent with the agricultural uses on the project site and surrounding parcels. For these reasons, the proposed project would have a less than significant impact on a scenic vista.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a site and its surroundings?

Less-Than-Significant Impact

There are no designated scenic resources on the project site, although the site is within a Scenic Design zoning area. The construction of the proposed reservoir will result in the removal of some vegetation, but this would not be visible from Spring Mountain Road or St. Helena Road. No rock outcroppings or historic buildings would be affected by the proposed project.

For these reasons, the proposed project would have a less than significant impact on scenic resources.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less-Than-Significant Impact

The proposed reservoir would be consistent with the agricultural nature of the project site, which consists of scattered vegetation, vineyards, and one existing building. For these reasons, the proposed project would have a less than significant impact on the existing visual character or quality of the site and its surroundings.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

No Impact

The proposed project would not create any new permanent sources of light or glare. Therefore, the proposed project would have a less than significant impact on day or nighttime views in the area.

3.2 AGRICULTURAL AND FORESTRY RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 use?				<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of forest land, timberland, or timberland zoned Timberland Production?				<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?				<input checked="" 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 checked="" type="checkbox"/>

ENVIRONMENTAL AND REGULATORY SETTING

Agriculture and agricultural production are prevalent land uses in Sonoma County. The Sonoma County General Plan⁵ designates the proposed project area as a Resources and Rural Development land use designation. Permitted land uses within this category include agricultural production activities. Accordingly, construction of the onstream reservoir, offset well and pipeline, and the installation of the irrigation system are consistent with the prevalent land uses in Sonoma County, as well as the permitted land uses that fall under the Resources and Rural Development land use designation.

The Agricultural Resources Element in the Sonoma County General Plan⁶ acknowledges the importance of agricultural production in and to Sonoma County:

The purpose of the element is to establish policies to insure the stability and productivity of the County's agricultural lands and industries. The element is intended to provide clear guidelines for decisions in agricultural areas. It is also intended to express policies, programs and measures that promote and protect the current and future needs of the agricultural industry. If future technology, and/or enterprises, of the agriculture industry require alternative and yet unforeseen policies and implementation mechanisms, those

should be consistent with the County's commitment to encourage the maintenance of a healthy agriculture sector of the County's economy.

Lastly, the ridge on which the proposed project is located is chaparral land that contains several trees, except where it has been cleared for agricultural and other uses. For more discussion of project zoning and general plan consistency, please see the *Land Use* section.

IMPACT ANALYSIS

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 use?

No Impact

The proposed project would not result in the conversion of any farmland to other uses.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact

The proposed project is related to and completely compatible with existing agricultural uses on the site. The proposed project site is not under a Williamson Act contract.

c) Conflict with existing zoning for, or cause rezoning of forest land, timberland, or timberland zoned Timberland Production?

No Impact

The proposed project does not request and would not result in any changes in zoning for the parcels involved. Thus, no forest land, timberland, or land zoned Timberland Production would be affected.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact

The proposed project would not result in the loss of forest land or convert any forest land to other uses. The only land to be cleared is the small patch of chaparral land where the proposed reservoir is to be located. The proposed pipeline will be installed along existing roadways.

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?

No Impact

The proposed project would not involve any changes that would lead to the conversion of farmland to other uses. Its purpose is to facilitate the continued operation of the property for agricultural uses. Neither would it lead to the conversion of any forest land to non-forest use, as it would not change any uses on the proposed project site, or result in any other change that would affect the uses of adjoining properties.

3.3 AIR QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			<input checked="" type="checkbox"/>	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		<input checked="" type="checkbox"/>		
c) 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 which exceed quantitative thresholds for ozone precursors)?		<input checked="" type="checkbox"/>		
d) Expose sensitive receptors to substantial pollutant concentrations?		<input checked="" type="checkbox"/>		
e) Create objectionable odors affecting a substantial number of people?				<input checked="" type="checkbox"/>

REGULATORY SETTING

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

Federal Clean Air Act

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 six criteria air pollutants: ozone, carbon monoxide, oxides of nitrogen, oxides of sulfur, respirable particulate matter, and lead⁷. EPA publishes standards for these pollutants. The EPA has classified air basins (or portions of basins) as either “attainment” or “non-attainment” for each of these criteria air pollutants, based on whether or not monitoring data indicates that the NAAQS have been achieved within the basin.

California Clean Air Act

The California Air Resources Board (ARB) is the state agency responsible for protecting public health and the environment from the harmful effects of air pollution. ARB oversees all air pollution control efforts in California, including the activities of 35 independent local air districts.

State law vests ARB with direct authority to regulate pollution from motor vehicles, fuels, and consumer products. Primary responsibility for controlling pollution from business and industry lies with the local air districts. The California Clean Air Act sets and regulates State Ambient Air Quality Standards (SAAQS) for the same criteria pollutants as those listed above under the CAA. The SAAQS are in most cases more stringent than the NAAQS.

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) attains and maintains air quality conditions in the San Francisco Bay Area Air Basin (SFBAAB) through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of the BAAQMD includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, and issuance of permits for stationary sources of air pollution. The BAAQMD also inspects stationary sources of air pollution and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by the Federal and State Clean Air Acts.

Criteria Pollutants

As required by the CAA, the EPA identifies and set standards to protect human health and welfare for six pollutants: ozone, carbon monoxide, particulate matter (PM₁₀), sulfur dioxide, lead, and nitrogen oxide. Because the San Francisco Bay Area Air Basin is designated as not attaining federal and/or state standards for three of these pollutants, these are described further below. The NAAQS and SAAQS for these three criteria pollutants are presented in **Table 3**.

Ozone (O³) - Ozone is a pungent, colorless, toxic gas. Close to the earth's surface, it is produced photochemically from hydrocarbons, oxides of nitrogen, and sunlight and is a major component of smog. Ozone causes eye and respiratory irritation, reduces resistance to lung infections, and may aggravate pulmonary conditions in persons with lung disease.

Carbon Monoxide (CO) - CO is a colorless, odorless, toxic gas produced by the incomplete combustion of carbon-containing substances. One of the major air pollutants, it is emitted in large quantities by exhaust from gasoline-powered vehicles. High levels of CO can impair the transport of oxygen in the bloodstream, thereby aggravating cardiovascular disease and causing fatigue, headaches, and dizziness.

Respirable Particulate Matter (PM₁₀ and PM_{2.5}) - Particulate matter, or PM, is the term for particles found in the air, including dust, dirt, soot, smoke, and liquid droplets. Particles can be suspended in the air for long periods of time. Some particles are large or dark enough to be seen as soot or smoke. Others are so small that individually they can only be detected with an electron microscope.

Tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols less than 10 micrometers in diameter are referred to as PM₁₀. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the air sacs in the lungs where they may be deposited, resulting in adverse health effects. Particles less than 2.5 micrometers in diameter referred to as PM_{2.5}, are believed to pose the greatest health risks. Because of their small size

(approximately 1/30th the average width of a human hair), PM_{2.5} particles can lodge deeply into the lungs.

In many parts of the world, natural particles like dust and pollens are the principal source of air pollution; in industrialized regions, particulate emissions caused by human activities predominate. Some types of particulate matter are more toxic than others. Smoke, composed of carbon and other products of incomplete combustion, is the most obvious form of particulate pollution. Open fires, incinerators, petroleum refinery flares, and fuel burning in vehicles and aircraft all produce these highly visible particulates. Industrial processes, such as those used in refining crude oil and in manufacturing chemicals, also contribute to particulate formation. Liquid aerosols and solid particles form photochemically in the atmosphere when sunlight reacts with waste gases. Grinding or pulverizing materials, as in cement production, forms industrial dust. Earth-moving operations, especially farming and construction, can also cause large amounts of dust to enter into the air.

Studies of exposed workers have shown that particles from diesel combustion engines are highly carcinogenic, prompting regulators to focus on implementing tighter controls for diesel-powered trucks, ships, trains, and construction equipment. PM₁₀ also causes visibility reduction.

Table 3. National and State Ambient Air Quality Standards

Pollutant	Averaging Time	NAAQS	SAAQs
O ₃	1 hour	N/A	0.09 ppm
	8 hour	0.075 ppm	0.07 ppm
CO	1 hour	35 ppm	20 ppm
	8 hour	9.0 ppm	9.0 ppm
PM ₁₀	24 hour	150 µg/m ³	50 µg/m ³
	Annual	N/A	20 µg/m ³
PM _{2.5}	24 hour	35 µg/m ³	N/A
	Annual	15 µg/m ³	12 µg/m ³

Notes: Under the NAAQS, the ozone standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is less than or equal to the standard. The standards for other pollutants, other than those based on annual averages or annual measures are not to be exceeded more than once a year. Under the SAAQS, standards for ozone, carbon monoxide, and PM₁₀ values are not to be exceeded.

Source: BAAQMD website⁸.

ENVIRONMENTAL SETTING

Local Climate

The information in this section is taken from the BAAQMD website⁹.

The climate of the basin is Mediterranean in character, with mild, rainy weather from November through April, and hot, sub-humid weather from May through October. The closest weather information for the project site is for the Napa Valley, located just east of the project. The 27-mile long Napa Valley is nestled between the Mayacamas Mountains to the west and the Vaca

Mountains to the east. These mountains are effective barriers to the prevailing northwesterly winds.

An upvalley wind frequently develops during warm summer afternoons drawing from air flowing through the San Pablo Bay. During the evening, especially in the winter, downvalley drainage flow can occur. At the BAAQMD Napa Station, the prevailing winds are upvalley, southwest through south southeasterly, and occur about 53% of the time. The second most common winds are down valley drainage winds, north northwesterly through northeasterly, which occur 26% of the time. Wind speeds are low with almost 50% of the winds between calm and 4 mph and an average speed of about 5 mph.

Summer average maximum temperatures at the southern end of the valley are in the low 80's with extremes in the high 80's, and at the northern end are in the low 90's with extremes in the high 90's. Summer minima are in the low 50's. Winter maxima are in the high 50's and low 60's with minima in the high to mid-30's with the slightly cooler temperatures favoring the northern end. Winter minima extremes range from the high 20's to the mid 20's.

Air pollution potential is high. Summer and fall prevailing winds can transport non-local and locally generated ozone precursors northward where the valley narrows, effectively trapping and concentrating the pollutants under stable conditions. The local upslope and downslope flows setup by the surrounding mountains may also recirculate pollutants adding to the total burden. Also, the high frequency of light winds and associated stable conditions during the late fall and winter, contributes to the buildup of particulates and carbon monoxide from automobiles, agricultural burning and fireplace burning.

Current Pollutant Levels

The California ARB maintains several ambient air quality monitoring stations within the BAAQMD that provide information on the average concentrations of criteria air pollutants in the region. The station closest to the proposed project site is the Santa Rosa – 5th Street monitoring station. It should be noted, that this station is located in an urban area in a valley, while the proposed project is in a rural area in the hills. **Table 4** lists the monitoring data for the three most recent years at the Santa Rosa monitoring station, and indicates the number of violations of the NAAQS and SAAQS that occurred in each year.

Table 4. Recent Air Quality Monitoring Data^(a)

Pollutant	2009	2010	2011
O₃ 1 hour^(b)			
1 st highest (ppm)	0.086	0.084	0.073
2 nd Highest (ppm)	0.071	0.071	0.065
Days above SAAQS	0	0	0
O₃ 8 hour^(b)			
1 st highest (ppm)	0.065	0.068	0.053
2 nd Highest (ppm)	0.063	0.055	0.049
Days above NAAQS	0	0	0
CO^(b)			
Highest 8-hour concentration (ppm)	1.34	1.15	1.19
Days above SAAQS	0	0	0
PM₁₀^(c)			
Highest 24-hour concentration (µg/m ³)	21.0	33.0	42.0
National Annual Average (µg/m ³)	10.3	10.0	13.2
State Annual Average (µg/m ³)	N/A	10.2	13.6
Days above federal standard	0	0	0
Days above state standard	0	0	0
PM_{2.5}^(b)			
Highest 24-hour concentration (µg/m ³)	29.0	26.6	33.2
National Annual Average (µg/m ³)	8.3	7.2	8.6
Days above federal standard	0	0	0

Notes:

- (a) Source: ARB website¹⁰
 (b) For Santa Rosa-5th Street monitoring station.
 (c) For Healdsburg-133 Matheson Street monitoring station.

METHODOLOGY

In 1999, the BAAQMD prepared *BAAQMD CEQA Guidelines – Assessing the Air Quality Impacts of Projects and Plans*¹¹. This document presents guidelines and significance thresholds for assessing the air quality impacts of proposed projects. The guidelines were updated in 2010 and 2011. However, in 2012 the Alameda County Superior Court ordered the BAAQMD to set aside the updated thresholds. The BAAQMD has appealed the Alameda County Superior Court decision, and has once again updated the guidelines¹². For now, the BAAQMD internet website¹³ notes:

“Lead agencies may continue to rely on the Air District’s 1999 Thresholds of Significance and they may continue to make determinations regarding the significance of an individual project’s air quality impacts based on the substantial evidence in the record for that project.”

Rather than requiring detailed analysis of the construction-related pollutant emissions of proposed projects involving less than four acres of disturbance, the 1999 BAAQMD guidelines instead emphasize the implementation of effective and comprehensive control measures. These measures are intended to control the creation of PM10 at sites involving less than four acres of disturbance. The 1999 BAAQMD guidelines were used for the purposes of analyzing the construction-related air quality impacts of the proposed project.

IMPACT ANALYSIS

a) Conflict with, or obstruct implementation of, the applicable air quality plan?

Less-Than-Significant Impact

The proposed project would not change any of the existing land use designations for the site, and thus would be consistent with the land uses contained in the BAAQMD air plan. Because it would not involve any urban development, it would not increase population, employment, or automobile travel beyond that already contained in local plans and accounted for in the State Implementation Plan. Neither would the proposed project involve any major stationary or area-wide emission sources. Operation of the proposed project would not change the number of trips to and from the site. Implementation of the proposed project would therefore not conflict or obstruct implementation of the air quality improvement efforts of the BAAQMD.

b) Violate any air quality standard or contribute substantially to an existing, or projected, air quality violation?

Less-Than-Significant Impact with Mitigation Incorporated

The operation of the proposed project would not create any significant additional pollutant emissions, as any pumping would be done using electrical pumps. The construction of the proposed project would create some air emissions, principally PM10 emissions due to dirt moving activities. For proposed projects involving less than four acres of disturbance, the 1999 update of the BAAQMD CEQA guidelines¹⁴ emphasizes the implementation of effective and comprehensive control measures rather than detailed analysis. To protect air quality, the following mitigation measure, substantially as written, will be included in any water right issued pursuant to Application 31501:

Mitigation Measure AQ-1: Implement Feasible Control Measures for Construction Emissions of PM₁₀

During construction of the project, right holder shall implement the following required control measures recommended in the Bay Area Air Quality Management District California Environmental Quality Act: Air Quality Guidelines¹⁵ pertinent to the proposed project[‡]:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

[‡] While the thresholds and methods from the 1999 Guidelines were used, the recommended BMPs from 2012 were used, as reflecting most current BAAQMD recommendations. One measure from the 2012 BAAQMD Guidelines was not included, because it pertained to the paving of surfaces, which the proposed project does not include.

- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.

Right holder shall compile evidence of this compliance and shall provide evidence to the Deputy Director for Water Rights to verify implementation of all measures within 30 days of completion of construction work. Evidence may consist of, but is not limited to, photographs and construction records.

c) 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 which exceed quantitative threshold for ozone precursors)?

Less-Than-Significant Impact with Mitigation Incorporated

With the adoption of **Mitigation Measure AQ-1**, described above, the emissions of pollutants would be less than significant. All emissions would be associated with project construction, and would occur during a very short period of time (approximately three months).

d) Expose sensitive receptors to substantial pollutant concentrations?

Less-Than-Significant Impact with Mitigation Incorporated

The proposed project is in a rural portion of Sonoma County, in an area containing a substantial amount of agricultural land uses. There is a residence located on the proposed project site and others within ¼ mile of the proposed project site. However, the types of activities associated with construction of the proposed project would be similar to the kinds of activities typically occurring on the project site and in the surrounding areas, and with the adoption of **Mitigation Measure AQ-1**, the impacts would be reduced to less than significant.

e) Create objectionable odors affecting a substantial number of people?

No impact

Neither the construction nor operation of the proposed project would create any objectionable odors. The proposed project is in a rural portion of Sonoma County, and there are no population centers in the vicinity of the site.

3.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		<input checked="" type="checkbox"/>		
i) Result in a substantial increase or threat from invasive, non-native plants and wildlife?			<input checked="" type="checkbox"/>	
b) 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, hydrologic interruption, or other means?		<input checked="" type="checkbox"/>		
c) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		<input checked="" type="checkbox"/>		
d) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				<input checked="" type="checkbox"/>
e) 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 checked="" type="checkbox"/>

ENVIRONMENTAL SETTING AND METHODOLOGY

The project site consists of 11 acres of vineyards on a 235-acre estate. The site is located in the Mark West Creek hydrologic sub-basin along Spring Mountain Road in the mountains between Santa Rosa and St. Helena in Sonoma County, California. The topography consists of moderately steep, hilly terrain and is situated at approximately 1,700 feet above sea level.

The project site consists of a combination of mixed chaparral and Douglas fir-mixed hardwood forest. Surrounding vegetation consists of vineyards, ruderal, mixed chaparral, and Douglas fir-mixed hardwood forest. Dominant shrubs in the mixed chaparral habitat include Eastwood manzanita (*Arctostaphylos glandulosa* ssp. *glandulosa*), common manzanita (*Arctostaphylos manzanita* ssp. *manzanita*), hoary manzanita (*Arctostaphylos canescens* ssp. *canescens*), chamise (*Adenostoma fasciculatum*), scrub oak (*Quercus berberidifolia*), and toyon (*Heteromeles arbutifolia*). Other associate species include buckbrush (*Ceanothus cuneatus* var. *cuneatus*), wavyleaf ceanothus (*Ceanothus foliosus* var. *foliosus*), poison oak (*Toxicodendron diversilobum*), and deerweed (*Lotus scoparius*). Dominant trees in the Douglas fir-mixed hardwood forest include Douglas fir (*Pseudotsuga menziesii*), canyon live oak (*Quercus chrysolepis*), bay laurel (*Umbellularia californica*), and black oak (*Quercus kelloggii*). Other associate species include interior live oak (*Quercus wislizenii* var. *wislizenii*), poison oak, California coffeeberry (*Rhamnus californica* var. *californica*), blue blossom (*Ceanothus thyrsiflorus*), and ocean spray (*Holodiscus discolor*).

The project site is drained by several steep gradient, generally intermittent streams. Virtually all of the runoff from the site flows to one unnamed tributary (the Unnamed Stream) that exits the southwestern corner of the site

Three technical studies were prepared for this project: Terrestrial Biological Resources Assessment for the Pride[§] Mountain Vineyards Property, Sonoma County, California¹⁶ (Terrestrial Biological Resources Assessment); Preliminary Delineation of Waters of the United States, Including Wetlands, of the Pride Mountain Vineyards Project Site, Sonoma And Napa Counties, California¹⁷ (Preliminary Wetland Delineation); and Aquatic Biological Resources Assessment for the Pride Mountain Vineyards Project Site¹⁸ (Aquatic Biological Resources Assessment). More detailed background information and analysis are provided in these documents, which are located in the Division's project file for Application 31501.

Terrestrial Biological Resources Assessment

In preparation of the Terrestrial Biological Resources Assessment, biological surveys were conducted on April 28 and June 18, 2008, by John Hale, M.S., Botany and Miriam Green, M.S., Wildlife Biology. Focused surveys were conducted for potentially occurring species by walking appropriate habitat areas. The entire project site was surveyed except for some dense areas of poison oak along the stream. Botanical surveys were floristic in nature whereby all plants encountered were identified to species (or subspecies/variety as appropriate).

Prior to conducting field surveys an inventory of regionally occurring special status species was generated following a computer search of the CNDDDB¹⁹ and the California Native Plant Society (CNPS) Online Inventory²⁰ (See Appendices A and B) to identify potentially-occurring species. The CNDDDB search encompassed a 5-mile radius around the project site, which included USGS 7.5-minute topographic quadrangles for Calistoga, Mark West Springs, Santa Rosa, Rutherford, St. Helena, and Kenwood. It produced a list of 15 plants, six animals, and one sensitive plant community – Coastal and Valley Freshwater Marsh. Additional species that had the potential to occur in this area but were not on the CNDDDB search were added from the CNPS online inventory and the Sonoma County Breeding Bird Atlas²¹ and Birds of Sonoma

[§] On March 8, 2013, Pride Mountain Vineyards changed its name to County Line Vineyard, LLC.

County, California - An Annotated Checklist and Birding Gazetteer²². Appendix A includes the CNDDB and CNPS list for each special-status plant species: the legal status; habitat, elevation, and bloom time; an analysis of each plant's potential to occur on the project site and the results of 2008 biological surveys. A list of vascular plants observed during 2008 surveys is included in Appendix C. Taxonomic nomenclature is in accordance with the Jepson Manual²³. A list of all wildlife species observed during field surveys is included in Appendix D. Appendix B provides for each special-status animal (terrestrial and aquatic) species: the legal status, habitat requirements, an analysis of each animal's potential to occur on the project site, and the results of the biological survey and the aquatic assessments.

No special-status wildlife animal species were observed during the field surveys although some suitable habitat is present in the forested areas, such as the Douglas-fir woodland. Many of the target species require habitats that are not present on the project site or are present at elevations different from that of the project site. Some of the target avian or bat species may occasionally pass through the project site during migration; however, none of the target species were observed during the surveys.

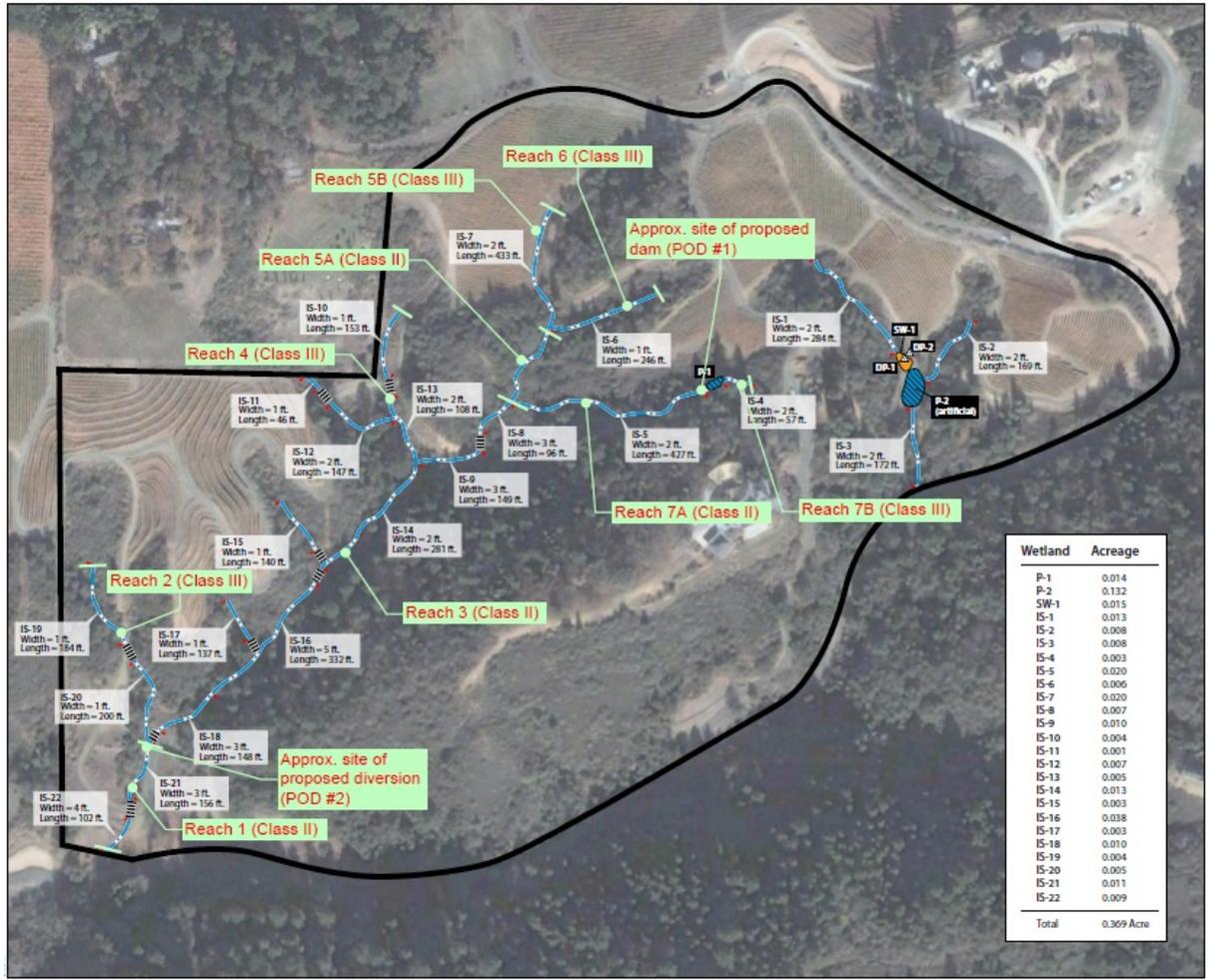
One special-status plant species, Napa false indigo (*Amorpha californica* var. *napensis*) was located during the surveys. Napa false indigo is a shrub in the pea family that is endemic to California and is found in Marin, Monterey, Napa, and Sonoma counties. It differs from the more widespread var. *californica* in that the plant is glabrous, or without hairs. This special-status plant species has no federal or state status, but is included on CNPS 1B.2, which means it is fairly rare in California.

Several shrubs of Napa false indigo were located outside of the project footprint along the south side of the access road, on the hillside leading up to the residence and staging area. One shrub was located between the staging area and the proposed reservoir along the north side of the road and one shrub was located above the stream channel.

Preliminary Delineation of Waters of the United States

An informal field assessment of potential waters of the United States occurring in the immediate vicinity of the project footprint was conducted on April 28, 2008, by Joel Butterworth, M.S., Geography. All features appearing to meet the definition of wetlands or other waters were mapped on an aerial photograph. The widths of "other waters" features (i.e., stream channels) were visually estimated. In addition, a field survey in support of a formal delineation of waters of the United States, including wetlands, was conducted in the project area on February 19, 2009,²⁴ by Valley Environmental Consulting. All features appearing to meet the definition of wetlands or other waters were mapped on an aerial photograph (Figure 6). A field determination was conducted on July 14, 2009, by the Corps, and a Preliminary Jurisdictional Determination was completed by Corps on September 14, 2009²⁵.

The preliminary wetland delineation survey identified seven stream reaches, all of which support more than an ephemeral flow but well less than a perennial flow, making them intermittent streams. At least the steeper of these streams appear to have cut to bedrock. The delineation also noted a small (0.014 acre) seasonal on-stream pond (identified as "P-1" on Figure 6) located at the upstream end of Reach 7A. The December 4, 2012, amendment to Application 31501 identifies this site as the current location for the proposed onstream reservoir. Valley Environmental Consulting²⁶ initially described the "P-1" pond as a natural, bowl-like area that "appears to be supported by flow from the channel, but seasonal high groundwater may



Source: Valley Environmental Consulting

Figure 6. Project Area Wetlands Identification and Reach Designations

contribute to its hydrology during the dry months. It is assumed that the pond is seasonal.” On January 14, 2011, this pond contained standing water, but no aquatic or wetland vegetation. No amphibian calls were heard and potential invertebrate use of this habitat would likely be limited to lotic species such as mosquito and midge larvae (i.e., chironomids). A subsequent visit to the site with CDFW staff on October 17, 2012, revealed the presence of an existing earthen dam creating the pond that was previously assumed to be a natural seasonal feature. The existing earthen dam is approximately 3-4 foot high on the upstream side and contains an overflow pipe. The dam is overgrown with brush and the surrounding slopes do not contain any evidence of recent construction-related disturbance. As such, the dam may have been in existence for many years, but its construction date is unknown.

Aquatic Biological Resources Assessment

CNDDDB²⁷ reports three aquatic special-status species within a 5-miles radius of the project site: California freshwater shrimp (*Syncaris pacifica*), foothill yellow-legged frog (*Rana boylei*), and western pond turtle (*Actinemys marmorata*). In addition to species reported by CNDDDB, five special-status fish species are known to occur within the Mark West Creek watershed downstream of the proposed project site: steelhead, coho salmon (*O. kisutch*), Chinook salmon (*O. tshawytscha*), river lamprey (*Lampetra fluviatilis*), and Russian River tule perch (*Hysterocarpus traskii pomos*). Although absent from the proposed project site, these fish species are included in the analysis herein because water diversions have the potential to affect downstream aquatic resources. Furthermore, although not reported by CNDDDB, CDFW staff notes that California red-legged frog (*Rana draytonii*) occurrences have recently been observed in the vicinity of the project site²⁸.

In preparation of the Aquatic Resources Assessment, comprehensive aquatic surveys were conducted on September 1, 2009, January 14, 2011, and October 17, 2012. During the first two surveys, attempts were made to assess all channel reaches upstream and downstream of the proposed PODs, as well as select reaches of Mark West Creek. The biological and physical conditions of the channel(s), including habitat types, instream cover, riparian vegetation, and coarse sediment supply, were recorded qualitatively, and photo documentation of all significant and/or representative sites was collected. Where applicable, channels were classified according to the State Water Board’s watercourse classification system (using the 2014 Policy for Maintaining Instream Flows in Northern California Coastal Streams²⁹ (Policy), section A.1.6 as a guide). The watercourse classifications are as follows:

- Class I: Fish are always or seasonally present, either currently or historically; and habitat to sustain fish exists.
- Class II: Seasonal or year-round habitat exists for aquatic non-fish vertebrates and/or aquatic benthic macroinvertebrates.
- Class III: An intermittent or ephemeral stream exists that has a defined channel with a defined bank (slope break) that shows evidence of periodic scour and sediment transport.

The three stream reaches potentially affected by the proposed project are described below. Information on all other reaches can be found in the Aquatic Resources Assessment³⁰.

Reach 1

Reach 1 of the assessed on-site drainages is approximately 260 feet long and is located in the southwestern, downstream-most project site boundary (**Figure 6**). This reach is characterized by average channel widths of 3-4 feet. The channel gradient in Reach 1 is approximately 2%. The channel bottom and banks were vegetated with annual grasses at the time of the September 2009 reconnaissance-level assessment. By the time the January 2011 survey was conducted, grasses had been scoured from the channel bottom, which is dominated by silt and medium-sized (1-2 inch) gravel. The angular shape of the materials suggests that these are recently-eroded sediments that have not been exposed to extended contact with flowing water. Sparse upland vegetation borders the reach. Overall, Reach 1 consists of a swale-like channel that appears to experience intermittent flashy flows. The reach does not support habitat for fish species. Seasonal use of the reach by benthic macroinvertebrates was documented in January 2011, and habitat to support seasonal use by amphibians appears to be present. Thus, Reach 1 is classified as a Class II watercourse.

Reach 3

Reach 3 is the 750-foot main stem of the Unnamed Stream, from the confluence of Reaches 1 and 2 upstream to the confluence of Reaches 5A and 7A (**Figure 6**). Channel widths in this reach vary between 2 and 5 feet and the overall slope of the reach is approximately 6.5%, although higher gradients are present within the upper portions of the reach. Channel characteristics in the lower parts of Reach 3 consist of 3-5 foot wide channel with small riffles and shallow pools. Average water depths on January 14, 2011 were about 3 inches, with maximum depths of about 6 inches. Channel substrates are dominated by cobble and fine sediments with minor amounts of small gravel mixed in. Channel banks are moderately incised and steep. Approximately 100 feet upstream, the banks in Reach 3 are poorly defined. Moss was observed growing on cobbles within the actively flowing channel in January 2011, suggesting that even during the heavy rainfall the project area received in late December 2010, recent streamflows within the unnamed subject drainage were insufficient to scour moss off of the channel bottom.

Further upstream, Reach 3 continues to be characterized by small riffle sections with shallow (<6 inch-deep) pools. Small gravel accumulations are present, but the channel continues to be dominated by cobble and fine sediment. Overall, fisheries habitat features such as spawning gravels, instream cover, and pools are absent from Reach 3, and use of this reach by fish is considered highly unlikely. Seasonal use of the reach by benthic macroinvertebrates was documented in January 2011, and habitat to support limited seasonal use by amphibians appears to be present. Thus, Reach 3 is classified as a Class II watercourse.

Reaches 7A and 7B

Access to Reach 7A is limited by steep slopes and dense vegetation. However, the slope, aspect, geomorphology and hydrology of the flowing channel in Reach 7A appear to be similar to those observed in Reach 5A, and thus limited seasonal use of Reach 7A by benthic macroinvertebrates is presumed to occur. Although it is unlikely that Reach 7A provides habitat for a significant aquatic invertebrate population due to its limited hydrology, Reach 7A is conservatively classified as a Class II watercourse.

Reach 7B (upstream of the proposed onstream reservoir location) is located within steep canyons densely vegetated with drought-tolerant upland vegetation. Channel characteristics in these top-of-the-watershed reaches are similar to those present in the Reach 2 and 4 tributary drainages, and thus Reach 7B is classified as a Class III drainage.

The originally proposed onstream reservoir site was located at the upstream extent of Reach 3 (a Class II stream). In order to avoid and minimize impacts to aquatic resources, the Applicant identified the currently proposed reservoir site (as described in the Introduction / Project Description) as an alternative. The Stevens Consulting aquatic ecologist and a representative from the CDFW visited this alternative site on October 17, 2012 and determined that it was a more appropriate site for an onstream reservoir. The Applicant filed a Petition for Change³¹ with the State Water Board on December 4, 2012, to modify Application 31501 to move the location of the proposed pond to the alternative site.

Mark West Creek

Approximately 0.6 miles downstream of the proposed project site, the Unnamed Stream flows into the upper reaches of Mark West Creek. Due to the known and extensively documented aquatic habitat values of Mark West Creek, this stream was not assessed. Merritt Smith Consulting³² describes the section of upper reaches of Mark West Creek between Alpine Road and St. Helena Road (i.e., downstream of Mark West Falls) as providing “structurally complete habitat for juvenile salmonids, including a rocky streambed, diverse riffles, pools, and glides, dense riparian cover, rootwads, cutbanks, and downed trees.” The hydrology of upper Mark West Creek is seasonal³³ and a barrier that serves as the upper limit to anadromy (ULA) at Mark West Falls blocks access to upper Mark West Creek approximately 2.5 miles downstream of the proposed project area³⁴. Thus, Mark West Creek is classified as a Class I drainage.

REGULATORY SETTING

Federal

Federal Endangered Species Act

The United State Fish and Wildlife Service (USFWS) and NMFS implement the Federal Endangered Species Act (FESA) of 1973 (16 USC Section 1531 *et seq.*). Threatened and endangered species on the federal list (50 CFR Subsection 17.11, 17.12) are protected from “take” (direct or indirect harm), unless a Section 10 Permit is granted to an individual or a Section 7 consultation and a Biological Opinion with incidental take provisions are rendered to a lead federal agency. Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed species may be present in the project area and determine whether the proposed project would have a potentially significant impact upon such species.

Wetland Regulation (Section 404 of the Clean Water Act)

The Clean Water Act (CWA) was enacted as an amendment to the federal Water Pollution Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to

waters of the United States. The CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands.

Compliance with CWA Section 404 requires compliance with several other environmental laws and regulations. The U.S. Army Corps of Engineers (Corps) cannot issue an individual permit or verify the use of a general permit until the requirements of the National Environmental Policy Act (NEPA), FESA, and the National Historic Preservation Act have been met. In addition, the Corps cannot issue or verify any permit until a water quality certification or a waiver of certification has been issued pursuant to CWA Section 401.

State of California

California Endangered Species Act

CDFW implements state regulations pertaining to fish and wildlife and their habitat. The California Endangered Species Act (CESA) of 1970 (California Fish and Game (CFG) Code Section 2050 *et seq.*, and CCR Title 14, Subsection 670.2, 670.51) prohibits the take (interpreted to mean the direct killing of a species) of species listed under CESA (14 CCR Subsection 670.2, 670.5). A CESA permit must be obtained if a proposed project would result in the take of listed species, either during construction or over the life of the project. Under CESA, CDFW is responsible for maintaining a list of threatened and endangered species designated under state law (CFG Code Section 2070). CDFW also maintains lists of species of special concern, which serve as “watch lists.” Pursuant to requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state listed species may be present in the project area and determine whether the proposed project would have a potentially significant impact upon such species. Project-related impacts to species on the CESA list would be considered significant and require mitigation.

Section 1602—Lake and Streambed Alteration Agreements

Section 1602 of the CFG Code requires project proponents to notify CDFW before implementing any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Preliminary notification and project review generally occur during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable changes to the project to protect the resources. These modifications are formalized in a Streambed Alteration Agreement that becomes part of the plans, specifications, and bid documents for the project.

Water Rights Administration

Before the State Water Board can issue a water right permit, it must find that there is “unappropriated water available to supply the applicant.” (Wat. Code, §1375, subd. (d).) “In determining the amount of water available for appropriation for other beneficial uses, the [State Water Board] shall take into account, whenever it is in the public interest, the amounts of water required for recreation and the preservation and enhancement of fish and wildlife resources.” (Id., § 1243.) The Policy for Maintaining Instream Flows in Northern California Coastal Streams (Policy)³⁵ establishes principles and guidelines for maintaining instream flows in northern California coastal streams for the purposes of water right administration (Wat. Code, §1259.4, subd. (b).). The Policy contains guidelines for evaluating whether a proposed water diversion, in

combination with existing diversions in a watershed, may affect instream flows needed for the protection of fishery resources. Accordingly, the Policy prescribes protective measures regarding the season of diversion, minimum bypass flow, and maximum cumulative diversion. The Policy also contains limitations on the construction of new onstream dams and approval of existing onstream dams to ensure against adverse impacts to fishery resources.

Local

Sonoma County Tree Ordinance

Sonoma County has adopted a Tree Protection Ordinance³⁶. According to the ordinance, "Projects shall be designed to minimize the destruction of protected trees." Protected trees are defined to include: big leaf maple (*Acer macrophyllum*), black oak (*Quercus kelloggii*), blue oak (*Quercus douglasii*), coast live oak (*Quercus agrifolia*), interior live oak (*Quercus wislizenii*), madrone (*Arbutus menziesii*), oracle oak (*Quercus morehus*), Oregon oak (*Quercus garryana*), redwood (*Sequoia sempervirens*), valley oak (*Quercus lobata*), California bay (*Umbellularia California*) and their hybrids. However, the ordinance also states "Agricultural uses exempt from the tree protection ordinance are as follows: the raising, feeding, maintaining and breeding of confined and unconfined farm animals, commercial aquaculture, commercial mushroom farming, wholesale nurseries, greenhouses, wineries and agricultural cultivation." Therefore, the proposed project, which involves agricultural cultivation, is assumed to be exempt from this ordinance.

IMPACT ANALYSIS

- 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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

Less-Than-Significant Impact With Mitigation Incorporated

As discussed in the Aquatic Biological Resources Assessment and the Terrestrial Biological Resources Assessment, the proposed project may result in potentially significant impacts to Napa false indigo, western pond turtle, and anadromous fish.

Napa False Indigo

Although the Napa false indigo plants that were found on the project site were located outside of the actual construction footprint, these plants could be impacted by construction activities and inadvertent disturbance by heavy equipment. This impact would be a potentially significant impact. To reduce this impact to a less-than-significant level, the following permit term, substantially as follows, shall be included in any water right issued pursuant to Application 31501:

Mitigation Measure BIO-1: Avoid Inadvertent Impacts on Napa False Indigo Plants

For the protection of the rare Napa false indigo (*Amorpha californica* var. *napensis*) populations identified in the 2012 Terrestrial Biological Resources Assessment, the

following conditions shall apply to any activities authorized under a permit issued pursuant to this application:

- a. Right holder shall ensure that construction equipment and vehicles remain along the main access road and do not travel off road in the vicinity of either plant population;
- b. Right holder shall not allow any further land disturbance within 20 feet of either specified plant population;
- c. During project construction, right holder shall identify and protect both plant populations by surrounding each site with plastic construction fencing or flags to be spaced and maintained at a maximum distance of 3 feet apart; and
- d. Right holder shall allow representatives of the Division of Water Rights reasonable access upon notification of the right holder or the right holder's agent for the purpose of verifying these conditions of the permit.

These requirements shall remain in effect as long as water is being diverted by the right holder (or successors-in-interest) under any permit or license issued pursuant to Application 31501.

Western Pond Turtle

Marginal habitat for the western pond turtle is present near the proposed project area at a small existing pond. However, the existing pond lies approximately 800 feet east of the proposed construction area and is separated by steep canyon terrain. Moreover, the existing pond and surrounding upland areas are not located within the access route of construction equipment. Therefore, no construction-related impacts to western pond turtles are expected to occur at the project site.

However, ground-disturbance activities such as vegetation removal, soil disturbance, and soil compaction required for project construction could cause accelerated soil erosion rates, potentially resulting in increased turbidity and sedimentation in other aquatic habitats that may be downstream of the project area. This would be a potentially significant impact. To reduce this impact to a less-than-significant level the mitigation measure described in detail under *Geology and Soils (Mitigation Measure GS-2)*, which will minimize construction-related erosion and soil disturbances, shall be included in any water right issued pursuant to Application 31501.

Anadromous Fish

Onstream reservoirs have the potential to result in early and/or repeated depletion of streamflows in downstream reaches during the diversion season while the reservoir is being filled by natural runoff. Wagner & Bonsignore³⁷ estimated the drainage area upstream of POD 1 at 1.4 acres and the estimated unimpaired flow originating from this drainage during the diversions season at 1.5 acre-feet. The drainage area tributary to the ULA is approximately 2,335 acres. As such, the streamflow impairment created by diversions at POD 1 is expected to be a less than significant impact to anadromous fish.

Onstream reservoirs also have the potential to adversely affect fishery resources by interrupting downstream movement of gravel, woody debris, or benthic macroinvertebrates. However, due to the location of the proposed project, as described under *Hydrology and Water Quality* (section g (iii)), there would be little chance of significant cumulative impacts to these resources.

The proposed offset infiltration gallery well at POD 2 may also reduce stream flows. A requirement to bypass 0.11 cfs (equivalent to the February Median Flow (FMF) see discussion below in the *Hydrology and Water Quality* section) would prevent dewatering, maintain flows needed for aquatic biological process (including both invertebrate and vertebrate production), and minimize the potential for cumulative effects to flows needed for spawning, migration, and rearing of anadromous fish. Additionally, as further described under *Hydrology and Water Quality* (section g(i)), an analysis examined cumulative impacts from the project and found that with a bypass at POD 2, there would be little chance of significant cumulative impacts to anadromous fish due to the diversion.

Accordingly, to reduce this impact to a less-than-significant level, the following permit term, substantially as follows, shall be included in any water right issued pursuant to Application 31501.

Mitigation Measure BIO-2: Require Bypass of February Median Flow at POD 2

For the protection of fish and wildlife:

- a. No water shall be diverted under this right unless the flow in the Unnamed Stream is at or above 0.11 cubic foot per second, as determined at POD 2; and
- b. No water shall be diverted under this water right unless right holder is bypassing the flow required by this water right by use of a passive bypass device.

Right holder shall provide the Division of Water Rights with evidence that the device has been installed with the first annual report submitted after device installation. Right holder shall provide the Division of Water Rights with evidence that substantiates that the device is functioning properly every year after device installation as an enclosure to the current annual report or whenever requested by the Division of Water Rights. Evidence required by this condition shall include current photographs of the system in place and a statement, signed by the right holder, certifying that the system is still operating as designed.

No riparian or other sensitive plant communities are located within the construction footprint. However, the construction of the proposed reservoir would result in the loss of between 1 and 1.5 acres of mixed chaparral habitat. CDFW staff³⁸ considers this impact to be significant and the loss should be mitigated for within the Mark West Creek watershed. To reduce this impact to a less-than-significant level, the following permit term, substantially as follows, shall be included in any water right issued pursuant to Application 31501.

Mitigation Measure BIO-3: Prepare and Implement A CDFW-Approved Habitat Restoration Plan.

No water shall be diverted under this right unless right holder is operating in accordance with a habitat restoration plan satisfactory to the Deputy Director for Water Rights. Right holder shall submit a report on restoration plan activities in accordance with the time schedule contained in the restoration plan, and whenever requested by the Division of Water Rights. The Deputy Director for Water Rights may require modification of the restoration plan upon a determination that the plan is ineffective or unsuccessful, or provide relief from this term upon a determination that the restoration plan is no longer required. Prior to initiation of construction, right holder shall develop a habitat restoration plan in consultation with the California Department of Fish and Wildlife and submit a copy of the final plan to the Deputy Director for Water Rights. The plan shall:

- Characterize the type, species composition, spatial extent, and ecological functions and values of the chaparral habitat that will be removed, lost, or damaged by the onstream dam based on estimates provided by a qualified biologist.
- Describe the approach that will be used to replace the chaparral habitat removed, lost, or adversely impacted by the onstream dam, including a list of the soil, plants, and other materials that will be necessary for successful chaparral habitat replacement, and a description of planting methods, location, spacing, erosion protection, and irrigation measures that will be needed, if any. This mitigation shall be within the Mark West Creek watershed, and may be on the right holder's property, if approved by the California Department of Fish and Wildlife.
- Describe the mitigation ratio to be used in calculating the acreage of chaparral habitat to be planted.
- Describe the criteria that will be used to evaluate the effectiveness and success of the chaparral habitat replacement approach.
- Describe the program that will be used for monitoring the effectiveness and success of the chaparral habitat replacement approach.
- Describe how the chaparral habitat replacement approach will be supplemented or modified if the monitoring program indicates that the current approach is not effective or successful.
- Time schedule for the implementation and monitoring of the chaparral habitat replacement.

i) Result in a substantial increase or threat from invasive, non-native plants and wildlife?

Less-Than-Significant Impact

Reservoirs typically provide suitable habitat for a number of non-native aquatic species, including predator species such as bullfrogs (*Rana catesbeiana*). No invasive species were observed during the reconnaissance-level survey, but may be present within the existing pond near the project site. Non-native bullfrogs may spread over land or through reservoir spills. Bullfrogs and other non-native aquatic species (e.g., warm water fish) have become thoroughly established in central California and control or eradication of these species is difficult if not impossible. Accordingly, an increase in the spread of non-native species would be considered a significant impact because bullfrogs are known predators of other amphibian species, including

red-legged frogs, which may become established at the project site. However, project operations (that will be included as permit terms associated with Application 31501) include annual draining of the reservoir after the conclusion of the irrigation season (typically mid to late October). The reservoir would remain empty until the commencement of the authorized diversion season; therefore, project operations would inherently prevent bullfrog populations from becoming established^{39,40}. Based on lack of existing bullfrogs at the project site and project operations that would prevent bullfrogs from becoming established, the impact is considered less than significant.

b) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less-Than-Significant Impact with Mitigation Incorporated

The preliminary delineation of waters of the United States within the project area determined that a small wetland exists on the site of the proposed reservoir (designated as P-1 on Figure 6). Although the ponding of water at this location is due to an old earthen dam on the Unnamed Stream, it will still likely be subject to Corps jurisdiction under Section 404 of the Clean Water Act. In addition, “other waters” of the United States exist as narrow, unvegetated drainageways/intermittent streams up-stream and downstream of the pond (Figure 6), which are probably also subject to Corps jurisdiction. The pond and these drainageways would probably also be subject to CDFW and Regional Board jurisdiction.

Construction of the reservoir would involve placement of fill material in roughly 0.014 acres of wetlands and an as yet undetermined area of non-wetland water of the United States at POD 1. Additionally, a very small amount of fill or temporary disturbance of two intermittent streams may be required in the vicinity of POD 2. These activities may require a Section 404 permit from the Corps and permits from both CDFW and Regional Board. This impact would be significant. To reduce this impact to a less-than-significant level, the following permit term, substantially as follows, shall be included in any water right issued pursuant to Application 31501.

Mitigation Measure BIO-4: Minimize Impacts on Waters of the United States

No water shall be diverted or used under this right, and no construction related to such diversion shall commence, unless right holder has obtained and is in compliance with all necessary permits or other approvals required by other agencies. If an amended right is issued, no new facilities shall be utilized, nor shall the amount of water diverted or used increase beyond the maximum amount diverted or used during the previously authorized development schedule, unless right holder has obtained and is in compliance with all necessary requirements, including but not limited to the permits and approvals listed in this term.

Within 90 days of the issuance of this right or any subsequent amendment, right holder shall prepare and submit to the Division of Water Rights a list of, or provide information that shows proof of attempts to solicit information regarding the need for, permits or

approvals that may be required for the project. At a minimum, right holder shall provide a list or other information pertaining to whether any of the following permits or approvals are required: (1) lake or streambed alteration agreement with the Department of Fish and Wildlife (Fish & G. Code, § 1600 et seq.); (2) Department of Water Resources, Division of Safety of Dams approval (Wat. Code, § 6002); (3) Regional Water Quality Control Board Waste Discharge Requirements (Wat. Code, § 13260 et seq.); (4) U.S. Army Corps of Engineers Clean Water Act section 404 permit (33 U.S.C. § 1344); and (5) local grading permits.

Right holder shall, within 30 days of issuance of any permits, approvals or waivers, transmit copies to the Division of Water Rights.

c) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of a native wildlife nursery site?

Less-Than-Significant Impact with Mitigation Incorporated

Anadromous salmonids are blocked from the project site by the natural barrier defining the ULA on Mark West Creek, and project area drainages do not provide habitat for non-anadromous fish species. Furthermore, the drainage above the proposed reservoir is classified as a Class III stream that does not provide habitat for aquatic species. As such, and with the implementation of a bypass at POD 2 as described in **Mitigation Measure Bio-2**, the proposed project would not impede the movement of any native resident or migratory fish or wildlife species. Therefore, this impact is considered less than significant.

d) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact

The botanical surveys did not identify any trees qualifying as heritage in areas that would be affected by the proposed project. Thus, the proposed project would not result in the removal of any trees protected by Sonoma County Ordinance or policy. Also, the proposed project involves agricultural cultivation, which is exempt from the ordinance.

e) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact

The proposed project area is not covered by a Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan. Therefore, the proposed project would not conflict with any such document.

3.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?		<input checked="" type="checkbox"/>		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		<input checked="" type="checkbox"/>		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			<input checked="" type="checkbox"/>	
d) Disturb any human remains, including those interred outside of formal cemeteries?		<input checked="" type="checkbox"/>		

REGULATORY SETTING

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.

CEQA also provides protection for unique paleontological resources and unique geologic features, and requires that planners consider impacts to such resources in the project review

process. CEQA distinguishes between ubiquitous fossils that are of little scientific consequence, and those, which are of some importance by providing protection for the latter. While CEQA does not precisely define unique paleontological resources, criteria established by the Society of Vertebrate Paleontology (SVP) provide guidance. The SVP defines a significant paleontological resource as one that meets one or more of the following criteria:

- Provides important information shedding light on evolutionary trends and/or helping to relate living organisms to extinct organisms;
- Provides important information regarding the development of biological communities;
- Demonstrates unusual circumstances in the history of life;
- Represents a rare taxon or a rare or unique occurrence, is in short supply and in danger of being destroyed or depleted;
- Has a special and particular quality, such as being the oldest of its type or the best available example of its type; or
- Provides important information used to correlate strata for which it may be difficult to obtain other types of age dates.

For the purpose of this analysis, a unique geologic feature is a resource or formation that:

- Is the best example locally or regionally;
- Embodies distinct characteristics of a geologic principal that is exclusive locally or regionally;
- Provides a key piece of geologic information important in geology or geologic history;
- Is a type locality of a geologic feature; or
- Contains a mineral not known to occur elsewhere locally or regionally; or is a common teaching tool.

ENVIRONMENTAL SETTING

Cultural History

The way of life of the earliest occupants in the Napa Valley is not known, but may have been a forager strategy based on considerable population movement, probably in an annual cycle. Proto-Miwok occupied the valley from roughly 3000-1000 B.C. before they were displaced by Wappo, a Yukian people who occupied Napa Valley in ethnographic times.

METHODOLOGY

Records Search

The project involved a record search through the Northwest Information Center on April 23, 2008; contact with the Native American Heritage Commission (NAHC), consultation with Native Americans, a complete field survey of the Area of Potential Effect (APE) on April 18, 2008, and preparation of a technical report in 2008, which was updated in 2012 to reflect the new location of the proposed reservoir⁴¹.

Northwest Information Center Results

According to the Northwest Information Center search, no portion of the APE had been previously inspected by archeologists and there are no known cultural resources within, or adjacent to, the APE. However, two prehistoric period sites are known to be located within a one-quarter mile radius of the APE.

Native American Consultation

The NAHC replied to a Peak & Associates request for a Sacred Lands file check on June 28, 2008. According to the NAHC, no cultural resources are known in the APE or immediate area. A list of individuals and organizations who may have knowledge of cultural resources in or near the APE was also provided by the NAHC. Letters with a map delineating the APE were sent August 1, 2008 by Peak & Associates to: Kathleen Smith; Dawn Getchell; Greg Sarris, Chairperson, The Federated Indians of Graton Rancheria; Gene Buvelot, The Federated Indians of Graton Rancheria; Frank Ross, the Federated Indians of Graton Rancheria, Ya-ka-Ama; Margie Mejia, Chairperson, Lytton Band of Pomo Indians; Lisa Miller, Tribal Administrator, Lytton Band of Pomo Indians; Cathy Lopez, Vice Chairperson, Lytton Band of Pomo Indians; Environmental Planner, Lytton Band of Pomo Indians; Scott Galbaldon, Chairperson, Mishewai-Wappo Tribe of Alexander Valley; and Earl Couey, Cultural Resources Manager, Mishewai-Wappo Tribe of Alexander Valley.

The Federated Indians of Graton Rancheria sent a letter on August 18, 2008 to Peak & Associates stating that there were many sacred sites and cultural gathering areas in close proximity to the project area.

Field Assessment

The APE was inspected for the presence of cultural resources on April 28, 2008 by Neal Neuenschwander, Staff Archeologist, Peak & Associates, Inc. In the developed vineyard portion of the APE, every other row was walked as the rows were contoured to the hillside (approximately 10 - 15 meter wide transects).

Within the proposed Reservoir portion of the APE, small stands of dense vegetation required flexibility in transect spacing so that a zigzag pattern was walked across the area, with transects averaging no more than 10 meters in width. Some limited vegetation removal (surface scraping) was done on terrace areas adjacent to the small, intermittent drainage in this area.

The six-inch proposed pipeline route corridor was located on existing roads, or cleared margins of the existing vineyard (Figure 1), so transects located on both margins of the proposed corridor were walked during the investigation. The proposed staging area portion of the APE was also located in previously disturbed ground, so parallel transects spaced at 10 meters were utilized.

Field Results

No evidence of prehistoric or historic period cultural resources was discovered within the APE.

IMPACT ANALYSIS

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Less-Than-Significant Impact with Mitigation Incorporated

No recorded historic resources are present on the APE, nor were any encountered during the field survey. Nevertheless, it is possible that previously undiscovered resources are present on the site but not visible at the surface and that subsurface construction activities such as trenching and grading associated with the proposed project could potentially damage or destroy them. Because no other historic resources have been identified in the vicinity of the proposed project, an impact is considered unlikely. However, although the cultural resource surveys indicate that the likelihood for subsurface resources is very small, to reduce any possible impacts to undiscovered subsurface historic resources to a less-than-significant level, the following permit term, substantially as follows, shall be included in any water right issued pursuant to Application 31501.

Mitigation Measure CR-1: Avoid Construction-Related Impacts to Cultural Resources.

Should any buried archeological materials be uncovered during project activities, such activities shall cease within 100 feet of the find. Prehistoric archeological indicators include: obsidian and chert flakes and chipped stone tools; bedrock outcrops and boulders with mortar cups; groundstone 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 of any cultural resources, and a professional archeologist shall be retained by the right holder 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.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less-Than-Significant Impact with Mitigation Incorporated

No recorded archaeological resources are present on the project site, nor were any encountered during the field survey. Nevertheless, it is possible that previously undiscovered resources are present on the site but not visible at the surface and that subsurface construction activities such as trenching and grading associated with the proposed project could potentially damage or destroy them. Although the cultural resource surveys indicate that the likelihood for subsurface resources is very small, the adoption of **Mitigation Measure CR-1** would reduce any possible impacts to undiscovered subsurface historic resources to a less-than-significant level.

c) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?

Less-Than-Significant Impact

Construction of the proposed project would not involve deep trenching or grading into bedrock, likely to unearth paleontological resources. Therefore this impact is less than significant.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less-Than-Significant Impact with Mitigation Incorporated

No human remains have been recorded at the project site, nor were any identified during the field surveys. Nevertheless, it is possible that previously undiscovered human remains are present on the site but not visible at the surface and that they may be unearthed during subsurface construction activities such as trenching and grading associated with the proposed project. Although the cultural resource surveys indicate that the likelihood for finding human remains is very small, to reduce this impact to a less-than-significant level, the following permit term, substantially as follows, shall be included in any water right issued pursuant to Application 31501.

Mitigation Measure CR-2: Report Any Human Remains Encountered During Construction.

If human remains are encountered, then right holder shall comply with Section 15064.5 (e) (1) of the California Environmental Quality Act Guidelines and Public Resources Code Section 7050.5. All project-related ground disturbance within 100 feet of the find shall be halted until the 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.

3.6 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</p> <p>i) Rupture of a known earthquake fault, as delineated on 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.</p> <p>ii) Strong seismic ground shaking?</p> <p>iii) Seismic-related ground failure, including liquefaction?</p> <p>iv) Landslides?</p>		☒		
b) Result in substantial soil erosion or the loss of topsoil?		☒		
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?		☒		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			☒	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				☒

ENVIRONMENTAL SETTING

Sonoma County is located within the California Coast Range geomorphic province. This province is a geologically complex and seismically active region characterized by sub-parallel, northwest-trending faults, mountain ranges and valleys. Extensive prehistoric folding and thrust

faulting have created the complex geologic conditions that have given rise to the highly varied topography.

The project area is located on the south flank of Diamond Mountain, which is part of the Mayacamas Mountains. All of the project components except the northern edge of the northern access road are underlain by rocks of the Jurassic or Cretaceous Franciscan Assemblage. In the project area these rocks consist of sheared shale and sandstone. The northern part of the northern access road is underlain by Pliocene pulmicitic ash-flow tuff of the Sonoma Volcanics⁴².

Based on reconnaissance-level mapping conducted in the mid-1970's⁴³, the project area has a moderately high hazard of slope instability (i.e., category "C", in which category "A" is the lowest relative hazard and category "D" the highest). However, no actual landslides are mapped within the project area.

Faults in Sonoma County are part of the San Andreas Fault system, which extends along the California coast. The Mayacamas Fault is the nearest active fault to the project area (i.e., a fault that shows evidence of displacement during the Holocene epoch [the last 11,000 years]), located approximately 4.5 miles to the northwest. In addition to the main trace of the San Andreas Fault, the other active faults in the county are the Healdsburg and Rodgers Creek Faults^{44,45}.

The project area is not located within an Alquist-Priolo Earthquake Fault Rupture Hazard Zone⁴⁶.

The project area is subject to earthquake-induced ground shaking from a number of regional faults. Based on California Geological Survey probabilistic seismic hazards mapping, the peak ground acceleration (%g, with g equal to the force of gravity) with a 10% probability of being exceeded in 50 years at the project area is 70 to 80%⁴⁷.

The last major earthquake in Sonoma County since the 1906 earthquake along the San Andreas Fault was a 5.7 magnitude event on the Healdsburg fault in Santa Rosa in 1969. Analysis of seismic data indicates that 7.5 to 8.5 magnitude earthquakes can be expected for the San Andreas and the Healdsburg-Rodgers Creek faults, respectively. Earthquakes of magnitude 8.0 or more on the San Andreas Fault can be expected every 50 to 200 years. Ground shaking similar to that which took place in Santa Rosa during the 1969 earthquake can be expected somewhere in Sonoma County once every 20 to 30 years⁴⁸.

Liquefaction is the temporary loss of soil strength due to earthquake-induced ground shaking. Soils and sediments most susceptible to liquefaction are low-cohesion silts, sands, and fine gravels that are saturated within 50 feet of the surface. Liquefaction can cause structures to settle into the ground, tilt, or rupture; slopes to fail; and gently sloping ground to move laterally (i.e., lateral spreading). The susceptibility of the project area to liquefaction is very low⁴⁹.

Soil survey mapping of the project area is available from the USDA Soil Conservation Service (SCS) Soil Survey of Sonoma County⁵⁰. However, more detailed soil mapping of the winery on an adjacent parcel conducted by Terra Spase⁵¹ and provided on the winery's website shows different soil map units occurring in the project area. The Terra Spase mapping is more accurate than the SCS soil survey because it was done specifically for the project site for

Application 31501. For this reason, the Terra Spase mapping is used here as the primary source for information on soils in the proposed project area. **Table 5** provides a summary of the soil characteristics that are most relevant to the proposed project.

Table 5. Summary of Soil Characteristics in the Project Area

Soil Series	Profile	Shrink-Swell Potential	Slope (%)	Runoff Rate	Erosion Hazard
Reservoir, Access Road, POD 1, and Pipeline					
Maymen	gravelly sandy loam over sandstone and shale	low	5-30	rapid	High
Lodo	loam over sandstone	moderate	5-30	rapid ^a	high ^a
POD 2					
Goulding	cobbly clay loam over fractured volcanic rock	moderate	15-30	medium to rapid	moderate to high

^a Inferred based on professional judgment.

Sources: Terra Spase⁵², Miller⁵³, Lambert and Kashiwagi⁵⁴.

REGULATORY SETTING

State

Because the dam creating the proposed reservoir would have a storage capacity of less than 15 acre-feet, it would not be subject to regulation by the state Division of Safety of Dams under California Water Code Division 3, Dams and Reservoirs.

In 2009, the State Water Board issued the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ) (General Permit). The General Permit requires implementation of erosion control, sediment control, and storm water Best Management Practices (BMPs) during and following construction activities. The BMPs are intended to ensure that accelerated erosion and loss of topsoil are minimized.

The General Permit represents a significant expansion of the previous general permit and entails a more detailed Storm Water Pollution Prevention Plan (SWPPP) and rigorous site monitoring and reporting requirements. The first step in obtaining coverage under the General Permit is preparation of a project SWPPP containing site-specific best management practice (BMP) recommendations and monitoring protocols tailored to the individual project features within the landscape context.

The General Permit also requires that SWPPPs be prepared by Qualified SWPPP Developers (QSDs) and implemented by Qualified SWPPP Practitioners (QSPs) certified by the State Water Board.

Local

The Sonoma County Agricultural Commission's Agricultural Division administers the Sonoma County Vineyard Erosion and Sediment Control Ordinance (VESCO) (Ord. No. 5216 § 2, 2000)

passed by the Board of Supervisors on February 8, 2000. However, because the project would not entail planting of new grapevines, it would be exempt from the requirements of the VESCO⁵⁵.

The Sonoma County Permit & Resource Management Department requires grading permits for projects that involve more than 50 cubic yards of fill on any lot or projects that include an excavation or fill that alters or obstructs a drainage course. Consequently the proposed project would be subject to County grading permit requirements.

IMPACT ANALYSIS

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zone 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,
- Strong seismic ground shaking,
- Seismic-related ground failure, including liquefaction, and
- Landslides.

Less-Than-Significant Impact with Mitigation Incorporated

The proposed project would not expose people or structures to the hazard of ground rupture because there are no known active faults in the project area. However, the project area is subject to moderately strong earthquake-induced ground shaking from a number of faults in the region. Unless the proposed dam is properly engineered such shaking could damage it and cause the uncontrolled release of stored water. The uncontrolled release of water could cause secondary adverse effects downstream, such as threats to public safety, streambank scour, and sedimentation of receiving waters. Ground shaking could also cause shallow soil sloughing along the reservoir shoreline. The hazard of seismic-induced liquefaction and related ground failures is low. Due to increased pore-water pressures, some soil mass movement along the wetted perimeter of the reservoir could occur, particularly in response to earthquake-induced ground shaking. However, the depth of the slope failure would probably be low because of the shallow soils in the project area. Such areas of mass movement would probably amount to occasional shallow sloughing of the soil along the reservoir shoreline. Nevertheless, this impact is considered significant. To reduce this impact to less than significant, the following permit term, substantially as follows, should be included in any water right issued pursuant to Application 31501.

Mitigation Measure GS-1: Design Dam and Pipeline Trench to Withstand Maximum Credible Earthquake.

Construction of the reservoir shall not commence until a Geotechnical Engineer or Engineering Geologist registered by the State of California has approved the plans and specifications for the dam. Prior to the start of construction, right holder shall submit the

approved plan to the Deputy Director for Water Rights. Construction of the dam shall be under the direction of a qualified Civil Engineer, Geotechnical Engineer or Engineering Geologist, and should be designed with the following parameters:

- The dam and reservoir side slopes should be designed and constructed to withstand ground shaking caused by the maximum credible earthquake.
- The dam and reservoir slopes should be designed such that they do not fail as a result of the maximum credible earthquake in the project area.
- The geologist/engineer should review drainage conditions along the pipeline route from POD 2 to POD 1 to ensure that runoff water is not introduced into a slope such that it increases the potential for a landslide.

b) Result in substantial soil erosion or the loss of topsoil?

Less-Than-Significant Impact with Mitigation Incorporated

Vegetation removal, soil disturbance, and soil compaction required for construction of the reservoir could cause accelerated soil erosion rates. The eroded soil could adversely affect downstream receiving waters. The project would involve disturbance of at least one acre and would be regarded as a construction project by the Regional Board⁵⁶. As such, the Applicant will be required to comply with the statewide General Permit (General Permit Order No. 2009-0009-DWQ). The General Permit requires implementation of erosion control, sediment control, and storm water BMPs during and following construction activities. The BMPs are intended to ensure that accelerated erosion and loss of topsoil are minimized. The terms of the General Permit pertinent to the proposed project are expected to include:

- The Applicant will hire a Qualified SWPPP Developer to prepare the SWPPP, and a Qualified SWPPP Practitioner to implement the provisions of the SWPPP.
- The SWPPP will contain BMPs designed to stabilize disturbed soils, minimize erosion, and capture and remove sediment suspended in runoff before it flows off of the project site. This would ensure that the project will not directly or indirectly discharge sediments into downstream receiving waters as a result of construction activities, and that water quality protection measures will be implemented by the construction contractor during construction.
- The SWPPP will be based on the California Storm Water Quality Association (CASQA) SWPPP template and will contain sections that detail: the SWPPP requirements; project information; proposed BMPs; BMP inspection, maintenance, and rain event action plans; training requirements; responsible parties and operators; and a construction site monitoring plan. The document will contain project-specific CAD-based BMP maps showing the location of proposed BMPs within the project site and maps showing preliminary water quality sampling locations.
- During construction of the proposed project, the QSD will amend or revise the SWPPP as necessary throughout project construction. Potential changes to the SWPPP include completing any information not known at the time of SWPPP submittal, such as: the

name of the QSP and laboratory for sample analysis; changes in BMPs; and changes in project components, such as project area and design.

- The QSP staff will monitor the construction site on a weekly basis, or as needed during qualifying rain events. The QSP will test site run-on and run-off for turbidity and pH at the sampling sites indicated in the SWPPP, collect non-visible pollutant water samples as required and follow all necessary protocols in submitting them to the laboratory for testing, and inspect the construction site to ensure that site housekeeping practices are implemented and that all necessary BMPs are in place and functioning. The QSP will document all of their findings and follow-up on any deficiencies noted to ensure they are corrected. Reports will be prepared and submitted to the State Water Board or the Regional Board on a quarterly and annual basis.

In order to reduce impacts to soil erosion and loss of topsoil as a result of construction of the reservoir, the Applicant will also be required to obtain and implement a grading permit from the Sonoma County Permit & Resource Management Department. Accordingly, the permit term in **Mitigation Measure BIO-5**, as well as the following permit term, substantially as follows, should be included in any water right issued pursuant to Application 31501.

Mitigation Measure GS-2: Complete Measures to Minimize Construction-Related Erosion

No water shall be diverted or used under this right, and no construction related to such diversion shall commence, unless right holder has obtained and/or complied with the identified permits required by the following agencies:

- Regional Board: General Permit for Discharges of Storm Water Associated with Construction Activity and Land Disturbance Activities (General Permit Order 2009-0009-DWQ).
- Sonoma County Permit and Resource Management Department: Grading Permit.

Within 30 days of issuance, right holder will transmit copies of any permits, approvals or waivers issued for the project to the Division of Water Rights.

Accordingly, compliance with the General Permit for erosion control, sediment control, and storm water BMPs and compliance with conditions of the Sonoma County grading permit will reduce potential soil erosion impacts associated with construction of the reservoir to a less-than-significant level.

c) Be located on a geological 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?

Less-Than-Significant Impact with Mitigation Incorporated

As previously discussed, the susceptibility of the project area to liquefaction or lateral spreading is very low; however, the project components are located on geologic substrates and slopes that have a moderately high potential for landslides. Changes in slope drainage characteristics and the presence of the reservoir water could increase the hazard of slope failure if these

components are not properly engineered. This impact is considered significant. Implementing **Mitigation Measures Bio-5, GS-1, and GS-2** will mitigate the hazard of soil movement along the reservoir shoreline by ensuring that the facility is properly designed and constructed to minimize soil movement.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less-Than-Significant Impact

Expansive soils are those soils typically containing high proportions of clays minerals, which expand in volume in the presence of water, and shrink when the water is removed. If not properly addressed during the design of a structure, construction on these soils may lead to damage of that structure over time. Nearly all the project components appear to be underlain by soils that would not be defined as expansive by the Uniform Building Code (UBC). The soils (Goulding series) at POD 2⁵⁷ may qualify as expansive as defined by the UBC, but no structure is being constructed at this site, only an offset well, so this impact would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact

No septic tanks or alternative wastewater disposal systems are included as part of the proposed project. There would be no impact.

3.7 GREENHOUSE GAS EMISSIONS

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

ENVIRONMENTAL SETTING

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHG) because they capture heat radiated from the sun as it is reflected back into the atmosphere, similar to a greenhouse. Both natural processes and human activities result in the generation of GHG emissions that alter the composition of the global atmosphere.

GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), perfluorocarbons (PFCs), and hydrofluorocarbons. CO₂ is the reference gas for climate change because it gets the most attention and is considered the most important GHG. To account for the warming potential of GHGs, GHG emissions are often quantified and reported as CO₂ equivalents (CO₂e). The effects of GHG emission sources (i.e., individual projects) are reported in metric tons per year of CO₂e.

In 2006, the Legislature passed and Governor Schwarzenegger signed AB 32, the Global Warming Solutions Act of 2006, which set 2020 greenhouse gas emissions reduction goals into law. It directed ARB to begin developing discrete early actions to reduce greenhouse gases while also preparing a scoping plan to identify how best to reach the 2020 limit.⁵⁸

The BAAQMD's *CEQA Air Quality Guidelines* identify qualitative and quantitative operational-related thresholds of significance for GHGs. For land use development projects, the qualitative threshold is noncompliance with a qualified climate action plan or qualified general plan. The quantitative threshold is annual operational emissions of more than 1,100 metric tons CO₂e. There is no threshold established for emission of GHGs during project construction. Although the vast majority of GHG emissions that would be associated with the proposed project would be related to short-term construction activities, the analysis below applies the BAAQMD's threshold for annual operational emissions of 1,100 metric tons of CO₂e per project to assess project-related construction and operational emissions.

IMPACT ANALYSIS

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less-Than-Significant Impact

Using the URBEMIS 2007 emissions model (URBAn EMISsions 2007: a model released by the California Air Resources Board that estimates air emissions from various land uses), it was determined that approximately 153 metric tons of CO₂ would be generated during the 3-month construction period. Although URBEMIS does not directly estimate CO₂e emissions, the difference between CO₂ and CO₂e emissions in this case would be negligible. Short-term construction emissions would be substantially less than the BAAQMD significance threshold of 1,100 metric tons, therefore, short-term construction activities would result in an impact that would be less than significant.

Regarding project operations, there would be no emissions of GHG directly emitted by the project. However, it is anticipated that the project would require the seasonal use of a 7.5 horsepower electric pump. It is assumed that the pump would operate for up to 16 hours a week for a period of up to 18 weeks. This would equal approximately 2 megawatt hours of electricity usage per year, which would result in the indirect generation of approximately 0.4 metric ton of CO₂e each year. Long-term indirect operational emissions would be substantially less than the BAAQMD significance threshold of 1,100 metric tons, therefore, operations would result in a less-than-significant impact.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less-Than-Significant Impact

In October 2008, the Climate Protection Campaign produced the Sonoma County Community Climate Action Plan⁵⁹. This Plan “presents a package of solutions that, when implemented as a large scale public works project, will meet Sonoma County’s bold goal for reducing greenhouse gas (GHG) emissions —25 percent below 1990 levels by 2015. All nine Sonoma cities and the County established this goal in 2005.” The types of actions in the Plan include: investments in urban energy and water efficiency; shifting transportation away from fossil fuel-burning vehicles; investing in local renewable energy sources; and protecting farmland, sequestering carbon, and converting waste into energy. This plan does not identify any proposed actions to reduce GHG emissions that would be directly applicable to the proposed project. Therefore, the proposed project would not conflict with the plan, and the impact would be less than significant.

3.8 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 checked="" 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 checked="" type="checkbox"/>	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				<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 Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				<input checked="" 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 result in a safety hazard for people residing or working in the project area?				<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 checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				<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 checked="" type="checkbox"/>	

ENVIRONMENTAL SETTING

No hazardous materials or hazardous wastes were observed to exist within the project area during the site visit on May 28, 2008. However, hazardous materials, such as petroleum products, are assumed to be used within the overall property (which includes property outside of the project described in Application 31501) as part of routine vineyard management operations. A search of government environmental records did not reveal any known hazardous material sites within the overall property; the property is not listed pursuant to Government Code §65962.5⁶⁰.

IMPACT ANALYSIS

a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?

Less-Than-Significant Impact With Mitigation Incorporated

Hazardous materials used during the construction of the proposed project would likely be limited to common petroleum products associated with construction equipment, such as diesel fuel, lubricants, antifreeze, and solvents. Concrete may also be used. However, when properly stored and used, these products and materials do not present a significant hazard. Hazardous materials that would be used during the operation of the proposed project probably would be limited to common petroleum and agricultural products. Herbicides presumably may be used to control excessive vegetation growth along the reservoir shoreline. Thus, the potential for the spill of hazardous materials would still exist and this impact would be considered significant. However, implementation of **Mitigation Measures BIO-5, HHM-1** (below) and **GS-2** (described above under *Geology and Soils* and which requires the preparation and implementation of a SWPPP as part of the requirements under the General Permit from the Regional Board) would reduce this impact to less than significant by ensuring that any hazardous materials needed for construction of the proposed project are properly handled and disposed. The following permit term, substantially as follows, should be included in any water right issued pursuant to Application 31501.

Mitigation Measure HHM-1: Prevent Construction-Related Debris Runoff

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.

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?

Less-Than-Significant Impact

As described in item a) above, when properly used, the materials used during construction and operation of the proposed project would not create a significant hazard to the public or the environment. Certain ultramafic rocks such as serpentinite (which may contain naturally-occurring asbestos such as chrysotile or tremolite-actinolite) may present a health hazard if these rocks or the soils formed from such rocks are disturbed during earthwork activities.

Based on a generalized map of known areas of ultramafic rocks, no occurrences of such rocks occur within or in the immediate vicinity of the project area⁶¹. Therefore, the risk of asbestos fibers being released into the air during grading operations appears to be low.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact

The proposed project is not located within 0.25 mile of any existing or proposed schools. The nearest school is located in Calistoga, approximately four miles northwest of the project area.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact

Neither the proposed project area nor the vicinity of the proposed project area includes a hazardous materials site contained on a list compiled pursuant to Government Code Section 65962.5⁶².

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 result in a safety hazard for people residing or working in the project area?

No Impact

The proposed project is not located near a public airport or public use airport. The nearest public airport is Charles M. Schultz – Sonoma County Airport is located in Santa Rosa, approximately 11 miles west of the project site. The nearest airstrip/airport of any kind is Calistoga Gliderport, a small airfield in Calistoga, located approximately four miles northwest of the project area.

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?

No Impact

The proposed project is not located in the vicinity of a private airstrip.

g) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?

No Impact

The proposed project is located on private property. Other than during transport of construction equipment to the site at the beginning of construction, and from the site after construction is completed, no activities on public roadways would result from construction or operation of the proposed project. There would be no impact on an adopted emergency response plan or an emergency evacuation plan.

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?

Less-Than-Significant Impact

The proposed project is located in a rural area with residences and agriculture-related business intermixed with wildlands. The proposed project site contains fuels (e.g. grasses and dense vegetation) that are susceptible to wildland fires during the dry season (usually during the summer and fall). The equipment used during construction of the proposed reservoir may create sparks, which could ignite dry grass or vegetation and start a wildland fire. However, similar types of equipment are currently used on the proposed project site as part of routine maintenance activities. In order to minimize the potential for fires to occur as a result of project construction, the Applicant will ensure that the contractor hired to complete the work will implement BMPs such as: clear all construction areas of combustible materials not required for construction; install spark arresters and ensure that they are in good working order on all equipment used during project construction; and have appropriate and adequate fire-fighting tools available on-site during project construction. Therefore, potential impacts are considered less than significant.

3.9 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?		<input checked="" 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 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 checked="" type="checkbox"/>	
ii) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater discharge?				<input checked="" type="checkbox"/>
iii) Provide substantial additional sources of polluted runoff?		<input checked="" type="checkbox"/>		
iv) Result in substantial erosion or siltation on or off site?		<input checked="" type="checkbox"/>		
d) Otherwise substantially degrade water quality?				<input checked="" 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 checked="" type="checkbox"/>
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 checked="" type="checkbox"/>		
ii) From inundation by seiche, tsunamis, or mudflow?			<input checked="" type="checkbox"/>	
g) Would the change in 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 checked="" 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 checked="" type="checkbox"/>	
iii) A significant reduction in the available aquatic habitat or riparian habitat for native species or plants and animals?			<input checked="" type="checkbox"/>	
iv) A significant change in seasonal water temperatures due to changes in the patterns of water flow in the stream?			<input checked="" type="checkbox"/>	

ENVIRONMENTAL SETTING

Surface Water Hydrology

The project site is in an area of mountainous terrain with slopes ranging from nearly level to approximately 50 percent. The site is drained by several steep gradient, generally intermittent streams that drain westerly. Virtually all of the runoff from the site flows to one Unnamed Stream that exits at the southwestern corner of the site. Based on field observations made on February 19, 2009 while conducting the preliminary wetland delineation survey for the site⁶³, it

appears that all of the stream channels on the site support more than an ephemeral flow but well less than a perennial flow, making them intermittent streams. At least the steeper of these streams appear to have cut to bedrock.

The project site is in the approximately 83 square mile Mark West Creek watershed. Approximately 27 miles of “blue line” streams occur in this watershed. The watershed areas above POD 1 and POD 2 are, respectively, 1.4 and 44 acres.

Runoff from the project site flows westerly to the Russian River as follows: just beyond the point at which the Unnamed Stream leaves the project site at St. Helena Road, it enters Mark West Creek (a perennial stream), which then flows roughly 24 creek miles to the confluence with Laguna de Santa Rosa. Laguna de Santa Rosa flows into the Russian River.

Most of the vineyards within the project site have been terraced. As described above in the *Geology and Soils* section, the soils on the site generally are subject to medium to rapid runoff rates and have a moderate to high hazard of erosion.

Mean annual precipitation at the site is approximately 39.8 inches above POD 1 (proposed reservoir location), and 40.8 above POD 2 (proposed offset well location), virtually all of it falling as rain.

Flood Hazards

There are no known areas subject to flooding on the site. However, it is expected that a minor amount of brief flooding may occur along the gentler gradient stream reaches during unusually intense storm events.

The site is shown as being in “Zone D” (i.e., “an area of undetermined but possible flood hazards”) on the latest Federal Emergency Management Agency⁶⁴ Flood Insurance Rate Map. Such a zone often includes areas with minimal flood hazard.

Groundwater Hydrology

Groundwater wells on the greater County Line Vineyards property supply part of the water used for vine irrigation, heat control, fire protection, and domestic use there.

The Water Resources Element of the 2020 Sonoma County General Plan⁶⁵ shows the project site being outside of any groundwater basin or subbasin, at least as identified by the Permit and Resource Management Department. Given the nature of the rocks underlying the site and the steep slopes, the amount of groundwater recharge that occurs beneath the project site is expected to be low. The nearest groundwater basin to the site is the Napa-Sonoma Volcanic Highlands basin, which is located just west of the site.

Water Quality

There are no known data on the water quality characteristics of the onsite streams and immediate downstream channels. However, given the nature of the land use on the site and the area, it is assumed that the primary pollutant in these streams is sediment.

In its Water Quality Control Plan (also referred to as Basin Plan), the North Coast Regional Water Quality Control Board established water quality standards that are required by Section

303 of the federal Clean Water Act and the state Porter-Cologne Water Quality Act. The Russian River, Mark West Springs Hydrologic Sub-Area segment (into which runoff and stream flow from the site flows), is listed as being impaired for sedimentation/siltation and for temperature by the State Water Board⁶⁶. None of the streams that are tributary to Mark West Creek are listed as impaired.

In 2009, the State Water Board issued the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ) (General Permit). The General Permit requires implementation of erosion control, sediment control, and storm water Best Management Practices (BMPs) during and following construction activities. The BMPs are intended to ensure that accelerated erosion and loss of topsoil are minimized. More information about the General Permit is provided above under *Soils and Geology*.

REGULATORY SETTING

Section 404 of the Clean Water Act

Clean Water Act Section 404 is discussed above under *Biological Resources*.

Water Quality Certification (Section 401)

Under CWA Section 401, applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the United States must obtain certification from the state in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate. Therefore, all projects that have a federal component and may affect state water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) also must comply with CWA Section 401.

Regulated Wetlands and Streams

Wetlands and other aquatic habitats are protected by Section 404 of the federal Clean Water Act and are regulated by the Corps. These habitats are termed “waters of the United States, and are defined as follows:

- 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 areas “inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3, 40 CFR 230.3). To be considered subject to federal jurisdiction, a wetland must normally exhibit positive indicators (parameters) of hydrophytic vegetation, wetland hydrology, and hydric soil⁶⁷.

Wetlands are a subset of waters of the United States. For practical purposes, non-wetland waters of the United States are commonly referred to as “other waters”.

Most wetlands and streams that are subject to Corps jurisdiction are also regulated by CDFW under Sections 1600-1603 of the state Fish and Game Code and by the Regional Board under the state Porter-Cologne Water Quality Control Act. Proposed “discharges” of dredged or fill material in wetlands and streams are usually subject to permitting and mitigation requirements by the Corps, CDFW, and Regional Board.

Porter-Cologne Water Quality Control Act

California Water Code Section 13260 requires “any person discharging waste, or proposing to discharge waste, in any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements [WDRs]).” Under the Porter-Cologne Water Quality Control Act definition, waters of the state are “any surface water or groundwater, including saline waters, within the boundaries of the state.” Although all waters of the United States that are within the borders of California are also waters of the state, the reverse is not true. Therefore, California retains authority to regulate discharges of waste into any waters of the state, regardless of whether the Corps has concurrent jurisdiction under CWA Section 404. If the Corps determines that a wetland is not subject to regulation under Section 404, CWA Section 401 water quality certification is not required. However, the Regional Board may impose Waste Discharge Requirements (WDRs) if fill material is placed into waters of the state.

Water Rights Administration

Before the State Water Board can issue a water right permit, it must find that there is “unappropriated water available to supply the applicant.” (Wat. Code, §1375, subd. (d).) “In determining the amount of water available for appropriation for other beneficial uses, the [State Water Board] shall take into account, whenever it is in the public interest, the amounts of water required for recreation and the preservation and enhancement of fish and wildlife resources.” (Id., § 1243.) The Policy for Maintaining Instream Flows in Northern California Coastal Streams (Policy)⁶⁸ establishes principles and guidelines for maintaining instream flows in northern California coastal streams for the purposes of water right administration (Wat. Code, §1259.4, subd. (b).). The Policy contains guidelines for evaluating whether a proposed water diversion, in combination with existing diversions in a watershed, may affect instream flows needed for the protection of fishery resources. Accordingly, the Policy prescribes protective measures regarding the season of diversion, minimum bypass flow, and maximum cumulative diversion. The Policy also contains limitations on the construction of new onstream dams and approval of existing onstream dams to ensure against adverse impacts to fishery resources.

IMPACT ANALYSIS

a) Violate any water quality standards or waste discharge requirements?

Less-Than-Significant Impact with Mitigation Incorporated

Vegetation removal, soil disturbance, and soil compaction required for project construction could cause accelerated soil erosion rates. The eroded soil could substantially degrade the water quality of downstream receiving waters by increasing turbidity and introducing adsorbed nutrients. This impact would be significant, but implementation of **Mitigation Measure GS-2** (described above under *Geology and Soils*) would reduce this impact to less than significant by requiring the Applicant to obtain a grading permit from the Sonoma County Permit & Resource Management Department, which requires that an erosion and sediment control plan be prepared and approved by the County, and by requiring the Applicant to comply with the General Permit from the Regional Board.

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)?

Less-Than-Significant Impact

A total of 10 acre-feet of water per year would be diverted at the proposed reservoir (POD 1) and at the proposed offset well (POD 2) on the Unnamed Stream. The diversion would occur from December 15 through March 15. The rate of withdrawal at the offset well would be one cubic foot per second, which would be accomplished using a 15 horsepower pump. The close proximity of the offset well is intended to allow diversion of underflow from within the known and definite channel of the Unnamed Stream. The proposed project is intended to substitute diverted and stored surface water runoff for use in supporting vineyard operations within the POU, which would decrease current use of groundwater for these purposes. Accordingly, the impact is less than significant.

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?

Less-Than-Significant Impact

Overall, the project would not substantially alter the course of the Unnamed Stream, nor increase the rate of runoff within the watershed. Part of a stream channel would be filled by the dam for the proposed reservoir and a portion of the runoff from the watershed above the reservoir would be stored.

The project would not cause a substantial increase in sheet flow runoff or stream runoff and therefore would not result in a substantial increase in flooding on the site or off the site. The proposed reservoir would slightly reduce the peak flows in the downstream reaches by capturing runoff from the watershed above and from POD 2 below the dam, thereby slightly reducing the potential for flooding downstream.

ii) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater discharge?

No Impact

The project site does not drain to an existing or planned stormwater drainage system. There would be no impact.

iii) Provide substantial additional sources of polluted runoff?

Less-Than-Significant Impact with Mitigation Incorporated

Vegetation removal, soil disturbance, and soil compaction required for project construction could cause accelerated runoff rates. The runoff would tend to carry sediments and adsorbed nutrients. Without proper erosion and sediment control BMPs, polluted runoff from the disturbed areas would enter receiving waters. The impact would be potentially significant, but implementation of **Mitigation Measure GS-2** (described above under *Geology and Soils*) would reduce this impact to less than significant by requiring the Applicant to obtain a grading permit from the Sonoma County Permit & Resource Management Department, which requires that an erosion and sediment control plan be prepared and approved by the County, and by requiring the Applicant to comply with the General Permit Regional Board.

iv) Result in substantial erosion or siltation on or off site?

Less-Than-Significant Impact with Mitigation Incorporated

Vegetation removal, soil disturbance, and soil compaction required for project construction could cause increased erosion from the construction site, which could carry sediments. Without proper erosion and sediment control BMPs, sediment runoff from the disturbed areas would enter receiving waters. Increased runoff from the outboard dam face and other graded or otherwise disturbed areas could occur until such areas become adequately revegetated. The increased runoff could slightly increase the potential for channel scour downstream of the dam, although this is expected to be minor given that the channels appear to have already cut to bedrock. The impact would be potentially significant, but implementation of **Mitigation Measure GS-2** (described above under *Geology and Soils*) would reduce this impact to less than significant by requiring the Applicant to obtain a grading permit from the Sonoma County Permit & Resource Management Department, which requires that an erosion and sediment control plan be prepared and approved by the County, and by requiring the Applicant to comply with the General Permit from the Regional Board.

d) Otherwise substantially degrade water quality?

No Impact

Other than potential impacts associated with grading and vegetation removal, the project would not cause degradation of water quality.

- 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?**

No Impact

The project would not involve construction of housing or other structures, nor are there any housing or other structures directly downstream of the proposed project. There would be 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?**

Less-Than-Significant Impact with Mitigation Incorporated

As described in the *Geology and Soils* section, earthquake-induced ground shaking could damage the proposed dam and cause the uncontrolled release of stored water unless the dam is properly engineered. The uncontrolled release of water could cause secondary adverse effects downstream, such as threats to public safety, stream channel scour, and sedimentation of receiving waters, including exposing people to a risk of loss, injury, or death. Although the amount of water stored in the reservoir would be relatively small (10 acre-feet), and there are no residential or other inhabited structures immediately downstream of the dam, this impact would be significant. However, implementation of **Mitigation Measure GS-1** (described above under *Geology and Soils*) would reduce this impact to less than significant by requiring that the Applicant design the dam to withstand the maximum credible earthquake.

- ii) From inundation by seiche, tsunami, or mudflow?**

Less-Than-Significant Impact

A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. Because the project site is subject to strong ground shaking caused by movement along regional earthquake faults, there is a potential for a small seiche to occur in the proposed reservoir. If the dam for the reservoir is not designed and constructed properly, the seiche could cause some of the oscillating water to pass over the dam. However, because the amount of water that would likely pass over the dam would be small, would only occur if an earthquake occurred during a time of the year when the reservoir was relatively full, and because no downstream structures would be subject to flooding, the impact would be less than significant.

- g) Would the change in 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?**

Less-Than-Significant Impact

The project site for Application 31501 is located in Sonoma County and is within the geographic area subject to the Policy for Maintaining Instream Flows in Northern California Coastal Streams (Policy)⁶⁹ that was adopted on October 22, 2013, and became effective on February 4, 2014.

The Policy establishes principles and guidelines for maintaining instream flows for the protection of fishery resources. Provided certain conditions are met, the Policy allows for continued processing of pending applications under the *Draft Guidelines for Maintaining Instream Flows to Protect Fisheries Resources Downstream of Water Diversions in Mid-California Coastal Stream* (Draft Guidelines) (Wat. Code, §1259.4, subd. (b)). The Draft Guidelines document provides recommended protective terms and conditions to be followed in the absence of site-specific, biological, and hydrological assessments.

Section 3.3.1 of the Policy states, “if prior to the 2010 policy adoption date or during the period when the policy was vacated [October 16, 2013, to February 3, 2014], the applicant has submitted a water availability analysis (WAA) and an analysis of cumulative flow-related impacts the State Water Board will process the WAA aspects of the application using the Draft Guidelines. Prior to processing the application using the Draft Guidelines the State Water Board must determine that the project is consistent with the recommendations contained therein pertaining to diversion season, onstream dams, minimum bypass flows, protection of the natural hydrograph and avoidance of cumulative impacts.”

Wagner & Bonsignore’s Cumulative Flow Impairment Index (CFII) calculation and Water Availability Analysis (WAA) report⁷⁰ for Application 31501 was submitted on January 8, 2009, which is before the Policy was adopted in 2010. Division staff agreed with the methodology used to estimate the unimpaired flow volume, watershed demand, February Median Flow, and the CFII calculations in the report. As discussed below, the project appears to be consistent with the Draft Guidelines’ recommendations; therefore, the State Water Board will process the WAA aspects of the application using the Draft Guidelines. All other aspects of the Policy will apply.

The analysis described in this section was drawn principally from the WAA prepared for the proposed project by Wagner & Bonsignore^{71,72,73,74}. The methodology used for the analysis was developed by CDFW and NOAA Fisheries in the Draft Guidelines. The Draft Guidelines provide a process for assessing the cumulative impacts of multiple diversion projects on downstream fisheries habitat by calculating CFII values to estimate the cumulative effects of existing and pending projects in a watershed of interest using a volumetric approach. The volume of water that is naturally available must be compared with the total volume of water that is, or can be, legally diverted from the watershed through existing or pending water rights. The potential level of impairment to a stream flow caused by these cumulative diversions can be evaluated by calculating the CFII at Points of Interest (POIs) as follows:

$$\text{CFII} = \text{Cumulative Diverted Volume (CDV)} / \text{Estimated Unimpaired Runoff (EUR)}$$

CDFW staff identified 15 POIs for the CFII analysis. As shown in **Table 6**, when considering all senior existing and proposed diversions to and including Application 31501, the CFII is less than 5 percent at POIs 3 through 14. According to the Draft Guidelines, if the CFII is less than 5% there is little chance of significant cumulative impacts due to the diversion and the project does not require additional studies to assess these impacts. The CFII at POIs 1 and 2 are greater than 10 percent, however, they are both located on either Class II or Class III streams and are above the ULA (see *Biological Resources* section for stream descriptions). Based on the Draft Guidelines and the Aquatic Resources Assessment discussed in *Biological Resources*, no further hydrological analysis is required for Application 31501.

Table 6. Cumulative Flow Impairment Index Calculation Results

POI	Location	CFII (%)
1	The point on the unnamed stream immediately below point of diversion (POD) 1.	660.2 ^a
2	The point on the unnamed stream immediately below point of diversion (POD) 2.	20.2
3	The point on Mark West Creek immediately above the confluence with Weeks Creek.	1.0
4	The point on Mark West Creek immediately below the confluence with Weeks Creek.	0.9
6	The point on Mark West Creek immediately above the confluence with Porter Creek.	0.6
7	The point on Mark West Creek immediately below the confluence with Porter Creek.	0.8
8A	The point on Mark West Creek immediately below the confluence with an unnamed stream draining from the southeast.	1.3
8B	The point on Mark West Creek immediately above the confluence with an unnamed Stream draining from the southeast.	1.1
9	The point on Mark West Creek immediately above the confluence with an unnamed Stream draining from the southeast.	2.4
10	The point on Mark West Creek immediately below the confluence with an unnamed stream draining from the southeast.	2.3
11	The point on Mark West Creek immediately below the confluence with Laguna de Santa Rosa Creek.	2.3
12	The point on Mark West Creek immediately above the confluence with Windsor Creek.	2.4
13	The point on Mark West Creek immediately below the confluence with Windsor Creek.	2.9
14	The point on Mark West Creek immediately above the confluence with the Russian River.	3.2

Sources: Wagner & Bonsignore^{75,76}

^a The reservoir cannot be filled with water from the watershed above it, but will be supplemented with water from POD 2.

ii) A significant reduction in water supply, either on an annual or seasonal basis, to senior water right holders downstream of the diversion?

Less-Than-Significant Impact

The CFII is less than 5% for POIs 3 through 14. According to the DFG-NMFS Draft Guidelines, near natural hydrographs are “generally maintained when the natural volume of winter runoff is impaired (i.e., reduced) by less than 10%.” Additionally, in cases where the CFII is less than 5%, there is little chance of significant cumulative impacts due to the diversion and the project does not require additional studies to assess the impacts. The relatively low CFII values

indicate that there is sufficient water supply in the watershed for the proposed project and approval of the application should not adversely affect any senior water right holders.

iii) A significant reduction in the available aquatic habitat or riparian habitat for native species of plants and animals?

Less-Than-Significant Impact with Mitigation Incorporated

Project construction would not impact any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS. No riparian or other sensitive plant communities are located within the construction footprint.

Diversion of water at PODs 1 and 2 would not result in a significant reduction in the available aquatic habitat or riparian habitat. The Draft Guidelines recommend that terms and conditions be included in new water right permits to protect fishery resources in the absence of site-specific biologic and hydrologic assessments. The Draft Guidelines, in large part, recommend:

1. Limiting new water right permits to diversions during the winter period (December 15 through March 31) when stream flows are generally high,
2. Providing a minimum bypass flow downstream of diversions not less than the February Median Flow (FMF) as calculated at the points of diversion,
3. That new storage ponds be constructed offstream and that permitting of new or existing onstream storage ponds be avoided, and
4. Where appropriate, water diversions be screened in accordance with NMFS and DFW screening criteria.

As discussed below, the project, with specific modifications appears to be consistent with the Draft Guidelines' recommendations, based upon the following:

1. The season of diversion for Application 31501 is from December 15 through March 15 of each year.
2. **Mitigation Measure BIO-2** requires a bypass equivalent to the February Median Flow (0.11 cubic feet per second (cfs)) to be maintained at POD 2.
3. The Draft Guidelines indicate that the construction of new onstream reservoirs should be avoided unless three special circumstances apply. No stream flow or fish passage protection measures are required if a proposed diversion: (a) is located in a stream reach where fishes or non-fish aquatic species were not historically present upstream, (b) the project would not contribute to a cumulative reduction of more than 10% of the natural instantaneous flow in any reach where fish are at least seasonally present, and (c) the project would not cause the dewatering of any fishless stream reach supporting non-fish aquatic species.
 - a. As described in the Biological Resources Section, the drainage reach upstream of the proposed reservoir is a Class III stream. As such, the proposed project meets Condition (a) of the Draft Guidelines.

- b. The drainage area tributary to the ULA is about 2,335 acres. The sum of the drainage areas of all water rights (including the proposed project) is 82 acres, far less than 234 acres (10% of the 2,335 acres at the ULA), suggesting that the Condition (b) threshold would not be exceeded by adding the rights under Application 31501 to storage rights of record (Wagner & Bonsignore (2009)).

Division staff also completed a flow assessment to determine the maximum flow impairment at the ULA on a daily basis. The daily flow model was based on the model by Wagner & Bonsignore submitted on March 8, 2012 (revised January 31, 2013), with adjustments to reflect the ULA (see June 26, 2013 Staff Addendum). For all years evaluated, the maximum daily impairment calculated at the ULA, including other upstream diverters, was found to be 8% during the diversion season. The results of the daily flow model indicate that if the project was required to use the standard season of diversion, December 15 through March 15 and required to bypass the FMF at POD 2, the project would meet the Draft Guidelines Condition (b) for permitting an onstream dam.

- c. The proposed diversion at POD 1 would not cause downstream dewatering because: 1) the drainage area (1.4 acres) and streamflow volume (1.5 acre-feet) affected at POD 1 is small compared to the size of the watershed just downstream at POD 2 (44 acres); and 2) an additional tributary immediately downstream of POD 1 contributes unimpaired flows from a 15 acre watershed. As such, the proposed project meets Condition (c) for permitting an onstream dam.

Construction and operation of onstream dams also have the potential to adversely affect instream flows and fishery resources by interrupting downstream movement of gravel, woody debris, or benthic macroinvertebrates. Coarse substrate materials serve important ecological functions in aquatic habitats such as providing suitable spawning substrates for some native fish (e.g., rainbow trout) and oviposition sites for some amphibians (e.g., foothill yellow-legged frogs), while benthic invertebrate drift constitutes an important food source for many aquatic organisms. Woody debris within streams provides habitat complexity that supports fish and other aquatic organisms. The drainage upstream of the proposed reservoir has been determined to be a Class III watercourse and thus does not provide habitat for benthic macroinvertebrates. As such, the proposed dam would not interrupt downstream macroinvertebrate drift. Further, the reservoir's location on a small watershed (1.4 acres) would contribute an insignificant amount of gravel and wood to the nearest ULA, which is located in a large watershed of 2,335 acres. Additionally, whereas the proposed new reservoir would impede coarse substrate transport from the 1.4-acre watershed, the existing small earthen dam at that location (see Table 3 CEQA Baseline Conditions and Project Components) likely already blocks most, if any, coarse substrate material and woody debris transport. As such, the proposed project would not substantially interrupt coarse sediment transport or have much further effect on woody debris transport. Lastly, the location of the proposed dam was selected pursuant to informal discussions with CDFW⁷⁷ and is consistent with the Draft Guidelines' recommendations.

- 4. Water diversions for this project do not need to be screened in accordance with NMFS and DFW screening criteria because the PODs are located on Class II and Class III

stream channels. As discussed above, the ULA is located on Mark West Creek, approximately 2.5 miles downstream of the proposed project area.

iv) A significant change in seasonal water temperatures due to changes in the patterns of water flow in the stream?

Less-Than-Significant Impact

It is unlikely that the proposed project could cause an increase in water temperature in the Unnamed Stream for the following reasons: 1) the area in which vegetation would be removed to construct the new reservoir is very small in proportion to the total length of the Unnamed Stream (1.4 acres compared to approximately 240 acres) and 2) any water that spills would most likely occur during the winter and early spring when air and water temperatures are naturally low and solar heat input is limited. Therefore, this impact is considered less than significant.

3.10 LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				<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 checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The proposed project site has a General Plan designation of Resources and Rural Development (RRD) 100-acre minimum. The purpose of the RRD designation is to provide protection of lands needed for commercial timber production, geothermal production, aggregate resources production; lands needed for protection of watershed, fish and wildlife habitat, biotic resources, and for agricultural production activities that are not subject to all of the policies contained in the agricultural resources element of the general plan. The site is zoned as RRD B6 100, BR, SR. The biotic resource (BR) combining district represents protected biotic resource communities including; critical habitat areas (places that are natural for the life and growth of an organism); and riparian corridors (banks of a river or stream) both for their habitat and environmental values, and to implement the provisions of Section 3.1 Policy For Biotic Habitat Areas, and 3.2 Policy For Riparian Corridors of the general plan open space element (Ord. No. 4643, 1993.) The scenic resources (SR) combining district represents the preservation of the visual character and scenic resources of lands in the county and to implement the provisions of Sections 2.1, 2.2 and 2.3 of the general plan open space element (Ord. No. 4643, 1993.)⁷⁸

IMPACT ANALYSIS

a) Physically divide an established community?

No Impact

The proposed project is not located in any established community, and does not involve construction that would cause the division of a community.

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?

No Impact

The proposed project would not conflict with any applicable plans or policies, or any agency with jurisdiction over the project. Water storage is an activity ancillary to the agricultural uses ongoing on the project site.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact

The proposed project site is not within a habitat conservation plan or natural community conservation plan.

3.11 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 value to the region and the residents of the state?			<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 checked="" type="checkbox"/>	

ENVIRONMENTAL SETTING

Various minerals have been mined in Sonoma County during the past century. Sand, gravel, crushed rock, and building stone are considered the most valuable mineral resources in the county with 3.9 million tons of such materials mined in 2003⁷⁹. The Sonoma County Aggregate Resources Management Plan⁸⁰ currently serves as the regulatory document providing guidelines for sound management of aggregate mining in the county.

IMPACT ANALYSIS

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Less-Than-Significant Impact

The proposed project is not located in an area identified as a source of aggregate materials, which are concentrated along the Russian River⁸¹. While the proposed reservoir will reduce the flow of aggregate materials down the Unnamed Stream into Mark West Creek, and ultimately, the Russian River, the reservoir is located high in the watershed and its proposed location is on a very minor tributary to Mark West Creek. As further discussed under *Biological Resources* above, the proposed reservoir would impede coarse substrate transport from only a tiny 1.4-acre watershed, as compared to the approximately 124,000-acre downstream watershed of Mark West Creek (according to the WAA/CFII report), so the effect is likely to be very small.

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?

Less-Than Significant Impact

The proposed project site is not designated as a locally-important mineral resource in the Sonoma County General Plan⁸² and does not have a Mineral Resource Combining District zoning designation.

3.12 NOISE

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 checked="" type="checkbox"/>	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			<input checked="" type="checkbox"/>	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			<input checked="" type="checkbox"/>	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			<input checked="" 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 or working in the project area to excessive noise levels?				<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The proposed project site is located in a rural portion of Sonoma County with relatively quiet background noise levels. Noise sources in the area are dominated by traffic on nearby roadways and the activities of agricultural activities on and adjacent to the site.

Sonoma County does not yet have an adopted noise ordinance. The Sonoma County General Plan identifies agricultural operations as a potentially significant source of community noise in Sonoma County⁸³ (Sonoma County 2008).

IMPACT ANALYSIS

- a) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinances, or applicable standards of other agencies?**

Less-Than-Significant Impact

The only structures in the vicinity of the proposed project are the residence of the Applicant, a winery owned and operated by the Applicant, and the home/winery on an adjacent parcel, approximately 0.2 miles to the northeast. While construction of the proposed dam and reservoir at POD 1 would create significant amounts of noise, the effects on the neighbor would be ameliorated by the short duration of construction (estimated to be 3 months), and the terrain and intervening vegetation, which would attenuate the sound. Also, the equipment that would be used to construct the reservoir would be similar to the types of equipment used in daily agricultural operations both on the project site and on the neighbor's vineyard. In addition, per the Sonoma County General Plan Noise Element construction of the proposed project, including the reservoir (POD 1), the offset well diversion (POD 2), and ancillary facilities would only occur between the hours of 7 a.m. and 10 p.m.).

- b) Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?**

Less-Than-Significant Impact

Construction of the proposed dam and reservoir would generate groundborne vibration and noise, but the equipment used would be similar to those used in daily agricultural operations, would be temporary, and would be attenuated by distance, terrain, and vegetation.

- c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

Less-than-significant impact

The proposed project would not create any permanent sources of noise. The only noise would be associated with the construction of the proposed project and intermittent pump noises, which would be similar to existing pumps operating elsewhere on the property.

- d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

Less-Than-Significant Impact

See the response to question a) above.

- 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 or working in the project area to excessive noise levels?**

No impact

The proposed project is not located within 2 miles of an airport, nor does it involve creating any new residences.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No impact

The proposed project is not located within 2 miles of a private airstrip.

3.13 POPULATION AND HOUSING

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

ENVIRONMENTAL SETTING

The proposed project is located in a mountainous and rural portion of unincorporated Sonoma County. The closest population centers are Santa Rosa to the west, and Calistoga and St. Helena to the east.

IMPACT ANALYSIS

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and business) or indirectly (for example, through extension of roads or other infrastructure)?

No impact

The proposed project would not have any effects on population growth, as it would not involve any activities related to the creation of residences or employment opportunities.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No impact

The proposed project would not displace any existing housing or other urban land uses.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No impact

The proposed project would not displace any people.

3.14 PUBLIC SERVICES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for 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: Fire protection? Police protection? Schools? Parks? Other public facilities Other public facilities?				<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The Sonoma County Fire and Emergency Services Department provides fire protection to the proposed project site⁸⁴. The Sonoma County Sheriff's Department provides police protection⁸⁵. Parks are managed by Sonoma County Parks⁸⁶. The nearest park to the project site is Hood Mountain Regional Park & Open Space Preserve, located south of the project site. The project site is within the Rincon Valley Union School District and the Santa Rosa City High School District⁸⁷.

IMPACT ANALYSIS

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for 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: fire protection, police protection, schools, parks, or other public facilities?

No impact.

The proposed project would not change any land uses, or increase population or housing, and would, therefore, not increase the need for any public services.

3.15 RECREATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project 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 checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

Sonoma County has many types of recreational facilities, including federal recreation areas, state parks, regional parks, community parks, and neighborhood parks. Opportunities are also available for fishing, camping, picnicking, horseback riding, bicycling, hiking, and walking.

IMPACT ANALYSIS

a) Would the project 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?

No Impact

The proposed project would not involve the creation of any new housing or employment and would therefore not have any affect on either the demand for recreational facilities in Sonoma County or the use of these facilities.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact

The proposed project does not include recreational facilities, nor require the construction or expansion of recreational facilities.

3.16 TRANSPORTATION AND TRAFFIC

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?			<input checked="" type="checkbox"/>	
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?			<input checked="" 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 checked="" 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 checked="" type="checkbox"/>
e) Result in inadequate emergency access?				<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?				<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

Access to the proposed project site is provided by St. Helena Road and Spring Mountain Road. From the Napa Valley, to the east, access to St. Helena Road is provided by SR 29. From Santa Rosa, to the west, access to St. Helena Road is provided by SR 101, SR 12, and Calistoga Road.

The analysis of a project's impacts on traffic congestion or transportation facilities is often described using level of service (LOS), a measure of the traffic levels based on the ratio of the volume of traffic on a facility to its vehicle capacity. LOS is described using letters A through F, with A being the best and F being the worst. The level of service standard for roadways in Sonoma County is LOS C⁸⁸, which represents a stable flow condition.

IMPACT ANALYSIS

- a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?**

Less-Than-Significant Impact

Construction of the proposed project would result in a very small, temporary increase in traffic on St. Helena Road as the construction equipment is moved to and from the site (one time each way), and construction workers travel to and from the site on a daily basis (estimated to be fewer than 5 round trips per day). The current level of service on St. Helena Road and Spring Mountain Road are not known, but neither is identified in the Sonoma County General Plan⁸⁹ as a congested roadway. The small number of trips associated with construction of the proposed project would not change the level of service on this or any other road. Long-term travel volumes to and from the proposed project site would not change, as the long-term operation of the proposed project would not generate any additional traffic.

- b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?**

Less-Than-Significant Impact

As described in a) above, the proposed project would not generate an ongoing source of increased travel, and would therefore, not contribute to the exceedance of a level of service standard.

- 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?**

No Impact

The proposed project would not result in any changes to air travel.

- d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

No Impact

The proposed project would not involve the design or alteration of any roadway facilities.

- e) Result in inadequate emergency access?**

No Impact

The proposed project would not cause any alterations to the roadway system and thus would not affect emergency access.

f) Result in inadequate parking capacity?

No Impact

The proposed project would not generate the need for any additional parking at the proposed project site.

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

No Impact

The proposed project would not have any affect on alternative transportation modes, as it would not affect any public roadways, bicycle facilities, or transit facilities.

3.17 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				<input checked="" 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 effects?				<input checked="" type="checkbox"/>
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 effects?				<input checked="" 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 checked="" type="checkbox"/>	
e) Result in a determination by the wastewater treatment provider which 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 checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?				<input checked="" type="checkbox"/>

ENVIRONMENTAL SETTING

The proposed project site is near one residence, the home of the Applicant, but this home is not part of the proposed project. This project site is not served by public water or wastewater services. Water supply is currently provided by a well on the project site, and the agricultural uses that are part of Application 31501 do not generate wastewater. There are no formal stormwater conveyances on the property; all stormwater is conveyed via natural channels.

IMPACT ANALYSIS

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact

The proposed project would not involve any activities that would generate wastewater that would require treatment. Further, the proposed project site is not connected to a public wastewater conveyance system.

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 effects?

No Impact

The proposed project would not generate any wastewater requiring treatment. Further, the proposed project site is not connected to a public wastewater conveyance and treatment system.

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 effects?

No Impact

The proposed project is not connected to a public storm water conveyance system. Storm water is conveyed through natural channels to Mark West Creek, and then to the Russian River.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or, are new or expanded entitlements needed?

Less-Than-Significant Impact

The Applicant has no existing entitlements to surface water for the proposed project site. Available developed groundwater supplies on the project site are not sufficient for the irrigation needs of the vineyard, as the use of groundwater wells for irrigation affects the availability of groundwater for on-site domestic uses. The Applicant has applied to the State Water Board for a right to divert to storage 10 acre-feet per year of water from the Unnamed Stream. Please also see the discussion of water supply impacts and entitlements under *Hydrology and Water Quality*.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it had adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact

The proposed project would not generate any wastewater requiring treatment. Further, the proposed project site is not connected to a public wastewater conveyance system.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

No Impact

The proposed project would not generate any materials needing to be disposed of at a landfill. Cut and fill of dirt will be balanced on-site.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact

The proposed project would not generate any solid waste. Cut and fill of dirt will be balanced on-site.

3.18 MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 checked="" 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 checked="" type="checkbox"/>	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		<input checked="" type="checkbox"/>		

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, substantially 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?

Less-Than-Significant Impact with Mitigation Incorporated

With the recommended mitigation, the proposed project does not have the potential to degrade the quality of the environment or have significant impacts on plant or animal species, or cultural resources. The direct and cumulative impacts of the proposed project on biological and cultural resources are discussed above under *Biological Resources* and *Cultural Resources*, and mitigation measures have been recommended, where needed.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less-Than-Significant Impact

As described throughout this document, the impacts of the proposed project are generally very minor, and for those that are found to be significant, mitigation measures have been included to reduce impacts to less than significant. Further, the cumulative impacts of the proposed project related to changes in flows and impacts on fish and other aquatic species, as described in the

Biological Resources and *Hydrology and Water Quality* sections, were found to be less than significant.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less-Than-Significant Impact with Mitigation Incorporated

The proposed project would not create environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly, as mitigation measures are recommended to reduce all significant effects to less-than-significant levels.

4. DETERMINATION

DETERMINATION:

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	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 MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	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.
<input type="checkbox"/>	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:

ORIGINAL SIGNED BY CSTEVENSON

APR 02 2014

Craig Stevens
Stevens Consulting

Date

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APPENDIX A
SPECIAL-STATUS PLANTS
POTENTIALLY OCCURRING ON THE PRIDE MOUNTAIN
VINEYARDS PROJECT SITE

SPECIAL-STATUS PLANTS POTENTIALLY OCCURRING ON THE PRIDE MOUNTAIN VINEYARDS PROJECT SITE

Scientific Name Common Name	Status¹ Federal/State /CNPS	Habitat, Elevation, and Bloom Time	Potential for Occurrence/Survey Results
<i>Amorpha californica</i> var. <i>napensis</i> Napa false indigo	--/--/1B.2	Broad-leafed upland forest (openings), chaparral, cismontane woodland, 394 to 6,560 feet April-July	Reported from Calistoga and Rutherford quads, suitable habitat present on project site and several plants observed during 2008 surveys, but not within footprint of proposed project
<i>Astragalus claranus</i> Clara Hunt's milk-vetch	E/T/1B.1	Chaparral (openings), cismontane woodland, valley and foothill grassland/serpentinite or volcanic, rocky, clay, 246 to 902 feet March-May	Reported from Calistoga quad, no serpentinite or other suitable habitat present on project site, too high in elevation not observed during 2008 surveys
<i>Brodiaea leptandra</i> Narrow-anthered brodiaea	--/--/1B.2	Broad-leafed upland forest, chaparral, cismontane woodland, valley and foothill grassland, volcanic, lower montane coniferous forest, 360 to 3,000 feet May-July	Reported from Calistoga, Kenwood, Santa Rosa, and St. Helena quads, suitable habitat present on project site but not observed during 2008 surveys
<i>Ceanothus confusus</i> Rincon Ridge ceanothus	--/--/1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland/volcanic or serpentinite, 246 to 3,493 feet February-April	Reported from Santa Rosa, Kenwood, Mark West Springs, Rutherford, and Calistoga quads, no serpentinite or other suitable habitat present on project site; not observed during 2008 surveys
<i>Ceanothus divergens</i>	--/--/1B.2	Chaparral (serpentinite or volcanic, rocky), 558	Reported from Kenwood, Mark West Springs, St. Helena, Santa Rosa, and Calistoga quads, no

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Scientific Name Common Name	Status¹ Federal/State /CNPS	Habitat, Elevation, and Bloom Time	Potential for Occurrence/Survey Results
Calistoga ceanothus		to 3,116 feet February-March	serpentinite or other suitable habitat present on project site, not observed during 2008 surveys
<i>Centromadia parryi</i> ssp. <i>parryi</i> Pappose tarplant	--/--/1B.2	Chaparral, cismontane woodland, meadows and seeps, marshes and swamps (coastal salt), valley and foothill grassland (vernally mesic) / often alkaline, 7 to 1,378 feet May-November	Reported from Calistoga and Mark West Springs quads, no alkaline/vernally mesic habitat on project site, too high in elevation, not observed during 2008 surveys
<i>Erigeron biolettii</i> Streamside daisy	--/--/3	Broad-leaved upland forest, cismontane woodland, North Coast coniferous forest / rocky, mesic, 98 to 3,608 feet June-October	Reported from Calistoga, Kenwood, St. Helena, and Mark West Springs quads, no suitable rocky/mesic habitat present on project site, not observed during 2008 surveys
<i>Eryngium constancei</i> <i>Loch Lomond button-celery</i>	E/E/1B.1	Vernal pools, 1,508 to 2,804 feet April-June	Reported from Calistoga quad, no vernal pool habitat present on project site, therefore, no suitable habitat, not observed during 2008 surveys
<i>Eryngium pinnatisectum</i> <i>Tuolumne button-celery</i>	--/--/1B.2	Cismontane woodland, lower montane coniferous forest, vernal pools, 230 to 3,000 ft. June-August	Reported from Calistoga quad, no vernal pool habitat present on project site, therefore, no suitable habitat, not observed during 2008 surveys

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Scientific Name Common Name	Status¹ Federal/State /CNPS	Habitat, Elevation, and Bloom Time	Potential for Occurrence/Survey Results
<i>Leptosiphon jepsonii</i> <i>Jepson's leptosiphon</i>	--/--/1B.2	Chaparral, cismontane woodland/usually volcanic, 328 to 1,640 feet March-May	Reported from Calistoga, Rutherford, Santa Rosa, St. Helena, and Mark West Springs quads, too high in elevation, no suitable habitat present on project site, not observed during 2008 surveys
<i>Lessingia hololeuca</i> <i>Wooly-headed lessingia</i>	--/--/3	Broad-leaved upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland/clay, serpentinite, 50 to 1,000 feet June-October	Reported from Calistoga and Kenwood quads, no serpentinite present on project site, too high in elevation, no suitable habitat, not observed during 2008 surveys
<i>Lupinus sericatus</i> <i>Cobb Mountain lupine</i>	--/--/1B.2	Broad-leaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, 902 to 5,000 feet March-June	Reported from Calistoga, St. Helena, and Rutherford quads, suitable habitat present on project site; however, not observed during 2008 surveys
<i>Micropus amphibolus</i> <i>Mount Diablo cottonweed</i>	--/--/3.2	Broad-leaved upland forest, chaparral, cismontane woodland, valley and foothill grassland/rocky, 148 to 2,706 feet March-May	Reported from Calistoga, St. Helena, and Mark West Springs quads, no suitable rocky habitat present on project site; not observed during 2008 surveys
<i>Navarretia leucocephala ssp. bakeri</i>	--/--/1B.1	Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley	Reported from Calistoga, Santa Rosa, Kenwood, Mark West Springs, and St. Helena quads, no

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Scientific Name Common Name	Status¹ Federal/State /CNPS	Habitat, Elevation, and Bloom Time	Potential for Occurrence/Survey Results
<i>Baker's navarretia</i>		and foothill grassland, vernal pools/mesic, 16 to 5,707 feet April-July	vernal pool habitat present on project site; therefore, no suitable habitat, not observed during 2008 surveys
<i>Penstemon newberryi</i> var. <i>sonomensis</i> <i>Sonoma beardtongue</i>	--/--/1B.3	Chaparral (rocky), 2,296 to 4,494 feet April-August	Reported from Calistoga, Rutherford, and Kenwood quads, no suitable rocky chaparral habitat present on project site, too low in elevation, not observed during 2008 surveys
<i>Plagiobothrys strictus</i> <i>Calistoga popcornflower</i>	E/T/1B.1	Meadows and seeps, valley and foothill grassland, vernal pools/alkaline areas near thermal springs, 295 to 525 feet March-June	Reported from Calistoga quad, no vernal pool habitat present on project site; too high in elevation, not observed during 2008 surveys
<i>Poa napensis</i> <i>Napa blue grass</i>	E/E/1B.1	Meadows and seeps, valley and foothill grassland /alkaline areas near thermal springs, 328 to 656 feet May-August	Reported from Calistoga quad, no alkaline/ thermal springs habitat present on project site, too high in elevation, not observed during 2008 surveys

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Scientific Name Common Name	Status¹ Federal/State /CNPS	Habitat, Elevation, and Bloom Time	Potential for Occurrence/Survey Results
<i>Sidalcea hickmanii ssp. napensis</i> <i>Marin checkerbloom</i>	--/--/1B.1	Chaparral (serpentinite), 164 to 1,410 feet May-June	One historical occurrence [1942] reported from Calistoga quad, no serpentinite present on project site, too high in elevation, not observed during 2008 surveys
<i>Trifolium hydrophilum</i> <i>Saline clover</i>	--/--/1B.2	Marshes and swamps, valley and foothill grassland (mesic, alkaline), vernal pools, 3 to 984 feet April-June	Reported from Calistoga and Santa Rosa quads, no mesic/alkaline or vernal pool habitat present, too high in elevation, not observed during 2008 surveys

(¹) Legal Status Codes:

- E = Federally or State listed as Endangered
- T = Federally or State listed as Threatened
- R = State listed as Rare

CNPS Codes (updated in 2007)

SPECIAL-STATUS PLANTS POTENTIALLY OCCURRING ON THE PRIDE MOUNTAIN VINEYARDS PROJECT SITE

Scientific Name	Status¹	Habitat, Elevation, and Bloom Time	Potential for Occurrence/Survey Results
Common Name	Federal/State /CNPS		
<p>1B.1 = CNPS List 1B.1: Plants rare, threatened or endangered in California and elsewhere. The .1 threat code means the plant is seriously endangered in California.</p> <p>1B.2 = CNPS List 1B.2: Plants rare, threatened or endangered in California and elsewhere. The .2 threat code means the plant is fairly endangered in California.</p> <p>1B.3 = CNPS List 1B.3: Plants rare, threatened or endangered in California and elsewhere. The .3 threat code means the plant is not very endangered in California.</p> <p>3 = CNPS List 3: Plants about which we need more information – a review list.</p> <p>3.2 = CNPS List 3.2: Plants about which we need more information – a review list. The .2 threat code means the plant is fairly endangered in California.</p>			

APPENDIX B

SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING ON THE PRIDE MOUNTAIN VINEYARDS PROJECT SITE

SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING ON THE PRIDE MOUNTAIN VINEYARDS PROJECT SITE

Common Name (Scientific Name)	Legal Status* Federal/State	Habitat Requirements	Presence in Project Area/Survey Results
BIRDS			
Sharp-shinned hawk <i>(Accipiter striatus)</i>	-- /WL	Nests in coniferous and deciduous woodland edges and broken woodlands; prefers riparian areas; forages in many habitat types; requires plucking perches	Forest and woodland habitats on project site provide potential nesting and foraging habitat, however, no active nests were found during 2008 field survey; closest recorded nest site is approx. 1 mile SW of Calistoga near Fiege Reservoir. Unlikely to occur on the project site.
Cooper's hawk <i>(Accipiter cooperii)</i>	-- / WL	Nests in woodlands, often near water; usually nests in broken habitats; forages in many habitat types	No nesting records from general area although; forest and woodland habitats provide potential nesting and foraging habitat, no active nests found during 2008 field survey. Unlikely to occur on the project site.
Northern goshawk <i>(Accipiter gentiles)</i>	--/SSC	Nests in coniferous forests; forages in forests and woodlands	No nesting records in general area; project site is outside the species' current range; no active nests found during 2008 field survey.
Golden eagle <i>(Aquila chrysaetos)</i>	--/FP, WL	Nests in open or broken forests and woodlands; forages in open habitats	Forest and woodland habitats on project site provide potential nesting habitat; however, no individuals or active or old nests found on project site during 2008 survey. Unlikely to occur on the project site.

SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING ON THE PRIDE MOUNTAIN VINEYARDS PROJECT SITE

Common Name (Scientific Name)	Legal Status* Federal/State	Habitat Requirements	Presence in Project Area/Survey Results
American peregrine falcon <i>(Falco peregrinus anatum)</i>	D, BCC/FP	Nests in a scrape on cliffs, ridges, and rocky promontories within hunting range of avian prey, especially medium-sized birds such as waterfowl, shorebirds, doves, and seabirds; cliff nests are generally located under an overhang, on ledges with vegetation, and south-facing sites are favored; also nests on high bridges over water and skyscraper buildings	Individuals may occasionally pass through the project area; no records in immediate area, closest known nesting pair is near St. Helena; none observed during 2008 surveys
Prairie falcon <i>(Falco mexicanus)</i>	BCC/WL	Nests on cliffs; forages in open habitats	No records from general area; no suitable nesting habitat on project site; no nests observed during 2008 field survey
Flammulated owl <i>(Otus flammeolus)</i>	BCC/--	Yellow pine (Ponderosa and Jeffrey pine) forests often with black oak or Douglas-fir	No records from this area and project site is outside species' nesting range, Douglas-fir forest provides low quality habitat. Unlikely to occur on the project site.
Northern spotted owl <i>(Strix occidentalis caurina)</i>	T/SSC	Dense old-growth or mature dominated by conifers with topped trees or oaks available for nest sites	No CNDDDB occurrences from this area; year-round resident in Napa County; about 25 occupied territories in western portion of Napa County; Douglas-fir woodland represents low-quality nesting habitat and suitable foraging habitat. Unlikely to occur on the project site.
Long-eared owl <i>(Asio otus)</i>	-- / SSC	Riparian corridors and belts of trees in open county; nests in dense cover	No records; potential foraging habitat on project site, but no suitable riparian corridors for nesting; unlikely to nest in the project area

SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING ON THE PRIDE MOUNTAIN VINEYARDS PROJECT SITE

Common Name (Scientific Name)	Legal Status* Federal/State	Habitat Requirements	Presence in Project Area/Survey Results
Olive-sided flycatcher (Contopus cooperi)	BCC / SSC	Large coniferous forests and along forest edges where Douglas-fir is present	No CNDDDB occurrences; Douglas-fir woodland provides potential nesting habitat; none observed during field surveys. Unlikely to occur on the project site.
Purple martin (Progne subis)	-- / SSC	Nests in cavities in deciduous trees in woodlands and riparian forests; also nests in vertical drainage holes in elevated freeway and highway structures and bridges	No CNDDDB occurrences from this area; Douglas-fir habitat on project site provides potential nesting habitat although no individuals were observed during 2008 surveys. Unlikely to occur on the project site.
Yellow-breasted chat (Icteria virens)	-- / SSC	Dense riparian forest and scrub with willows, Oregon ash, alders, blackberries, and wild grapes; nests usually placed over or near moving water	No records from general area; insufficient suitable riparian habitat and no late spring or summer water; none observed during 2008 field surveys and unlikely to nest on project site
Yellow warbler (Dendroica petechia brewsteri)	-- / SSC	Typically nests in riparian forest and scrub habitats from lowlands to montane regions	No records from area; insufficient amount of riparian scrub for nesting, none observed during 2008 field surveys and unlikely to nest on project site
MAMMALS			
Pallid bat (Antrozous pallidus)	-- / SSC	Insectivorous, primarily feeding on crickets and scorpions; primarily roosts in rock crevices and buildings; skilled at climbing and crawling; occurs in a variety of habitats from lowland deserts to montane forest; closely associated with yellow pine, oak, redwood, and giant sequoia	Douglas-fir and oaks provide potential roosting habitat. Unlikely to occur on the project site. however, night surveys were not conducted

SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING ON THE PRIDE MOUNTAIN VINEYARDS PROJECT SITE

Common Name (Scientific Name)	Legal Status* Federal/State	Habitat Requirements	Presence in Project Area/Survey Results
Townsend's big-eared bat (Corynorhinus townsendii)	--/SSC	Roosts in caves, tunnels, mines, and dark attics of abandoned buildings	No suitable roosting sites on project site; not expected to roost or breed on project site. Night surveys were not conducted
Fringed myotis (Myotis thysanodes)	--/--	Found in a wide variety of habitats; uses caves, mines, buildings, or crevices for maternity colonies and roosts	No records; the project site is most likely unsuitable roosting or breeding habitat; unlikely to occur on project site; night surveys were not conducted
FISH			
California freshwater shrimp Syncaris pacifica	FE / CE	Low-elevation, low gradient perennial freshwater streams in Sonoma, Marin and Napa counties where banks are structurally diverse with undercut banks, exposed roots, woody debris or vegetation.	Absent. Reported 4.5 miles north of the project area in the Napa River. Project area does not provide suitable habitat for the species.
Central California coast coho salmon Oncorhynchus kisutch	FE / CE	Spawns in freshwater in areas with suitable spawning gravels; juveniles require cool, clean water, cover, and sufficient dissolved oxygen.	Absent. Known to occur in Mark West Creek downstream of project area. Natural barrier precludes species from accessing project area. Project area does not provide suitable habitat for the species.

SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING ON THE PRIDE MOUNTAIN VINEYARDS PROJECT SITE

Common Name (Scientific Name)	Legal Status* Federal/State	Habitat Requirements	Presence in Project Area/Survey Results
Central California coast steelhead Oncorhynchus mykiss	FT / CSC	Spawns in freshwater in areas with suitable spawning gravels; juveniles require cool, clean water, cover, and sufficient dissolved oxygen.	Absent. Known to occur in Mark West Creek downstream of project area. Natural barrier precludes species from accessing project area. Project area does not provide suitable habitat for the species.
California coastal Chinook salmon Oncorhynchus tshawytscha	FT / -	Spawns in freshwater in areas with suitable spawning gravels; juveniles require cool, clean water, cover, and sufficient dissolved oxygen.	Absent. Occasionally observed in Santa Rosa Creek, tributary to Mark West Creek. Natural barrier precludes species from accessing project area. Project area does not provide suitable habitat for the species.
California red-legged frog Rana draytonii.	T / CSC	Lowlands or foothills in or near sources of water with shrubby or emergent riparian vegetation.	Unlikely. Seasonal hydrology of project area is unlikely to support the species, but proposed reservoir may create suitable habitat.
River lamprey Lampetra ayresii	- / CSC	Spawns in freshwater in areas with suitable spawning gravels; juveniles require sandy/muddy substrate for burrowing.	Absent. Known to occur in Mark West Creek downstream of project area. Project area does not provide suitable habitat for the species.

SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING ON THE PRIDE MOUNTAIN VINEYARDS PROJECT SITE

Common Name (Scientific Name)	Legal Status* Federal/State	Habitat Requirements	Presence in Project Area/Survey Results
Russian River tule perch <i>Hysterocarpus traski pomu</i>	- / CSC	Clear, low-gradient channels with abundant cover such as beds of macrophytes, submerged tree branches, and overhanging vegetation.	Absent. Known to occur in Mark West Creek downstream of project area. Project area does not provide suitable habitat for the species.
Amphibians			
Foothill yellow-legged frog <i>Rana boylei</i>	FSC / CSC	Breeds in permanent or near-permanent creeks and rivers; uses both creeks and stream banks to forage.	Unlikely. Seasonal hydrology of project area is unlikely to support the species. Known to occur within the Mark West Creek watershed.
Western pond turtle <i>Actinemys marmorata</i>	- / CSC	Permanent ponds and slow-moving streams and rivers with open areas for basking.	Low. Existing on-site pond contains marginal habitat and appears to be seasonal. Known to occur within the Mark West Creek watershed.

SPECIAL-STATUS WILDLIFE SPECIES POTENTIALLY OCCURRING ON THE PRIDE MOUNTAIN VINEYARDS PROJECT SITE

Common Name (<i>Scientific Name</i>)	Legal Status* Federal/State	Habitat Requirements	Presence in Project Area/Survey Results
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*Legal Status Definitions

Federal

- E = listed as endangered under the federal Endangered Species Act
- T = listed as threatened under the federal Endangered Species Act
- D = delisted (removed) from the federal Endangered Species Act, status to be monitored for 5 years
- BCC = designated as a bird of conservation concern by USFWS
- = no designation

State

- E = listed as endangered under the California Endangered Species Act
- T = listed as threatened under the California Endangered Species Act
- SSC = California Species of Special Concern
- FP = fully protected under the California Fish and Game Code (fully protected species may not be taken or possessed without a permit from the Fish and Game Commission and/or the California Department of Fish and Wildlife [DFW])
- WL = DFW Watch List
- = no designation

APPENDIX C

PRIDE MOUNTAIN VINEYARDS VASCULAR PLANT LIST

Scientific Name	Common Name	Family
<i>Adenostoma fasciculatum</i>	Chamise	Asteraceae
<i>Agoseris retrorsa</i>	Retorse mountain dandelion	Asteraceae
<i>Amaranthus blitoides</i>	Mat amaranth	Amaranthaceae
<i>Amorpha californica</i> var. <i>napensis</i>	Napa false indigo	Fabaceae
<i>Anagallis arvensis</i>	Scarlet pimpernel	Primulaceae
<i>Angelica tomentosa</i>	California angelica	Apiaceae
<i>Anthemis cotula</i>	Mayweed	Asteraceae
<i>Aquilegia formosa</i>	Columbine	Ranunculaceae
<i>Arbutus menziesii</i>	Madrone	Ericaceae
<i>Arctostaphylos canescens</i> ssp. <i>canescens</i>	Hoary manzanita	Ericaceae
<i>Arctostaphylos glandulosa</i> ssp. <i>glandulosa</i>	Eastwood manzanita	Ericaceae
<i>Arctostaphylos manzanita</i> ssp. <i>manzanita</i>	Common manzanita	Ericaceae
<i>Baccharis pilularis</i>	Coyote brush	Asteraceae
<i>Brassica nigra</i>	Black mustard	Brassicaceae
<i>Bromus carinatus</i> var. <i>carinatus</i>	California brome	Poaceae
<i>Bromus diandrus</i>	Ripgut grass	Poaceae
<i>Bromus hordeaceus</i>	Soft chess	Poaceae
<i>Carduus pycnocephalus</i>	Italian thistle	Asteraceae
<i>Ceanothus cuneatus</i> var. <i>cuneatus</i>	Buck brush	Rhamnaceae

Scientific Name	Common Name	Family
<i>Ceanothus foliosus</i> var. <i>foliosus</i>	Wavyleaf ceanothus	Rhamnaceae
<i>Ceanothus thyrsiflorus</i> var. <i>thyrsiflorus</i>	Blue-blossom ceanothus	Rhamnaceae
<i>Centaurea solstitialis</i>	Yellow star-thistle	Asteraceae
<i>Cercocarpus betuloides</i>	Mountain mahogany	Rosaceae
<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	Common soap plant	Liliaceae
<i>Cirsium vulgare</i>	Bull thistle	Asteraceae
<i>Conyza canadensis</i>	Canadian horseweed	Asteraceae
<i>Cynoglossum grande</i>	Western houndstongue	Boraginaceae
<i>Cynosurus echinatus</i>	Hedgehog dogtail	Poaceae
<i>Dryopteris arguta</i>	Coastal wood fern	Dryopteridaceae
<i>Elymus glaucus</i> ssp. <i>glaucus</i>	Blue rye-grass	Poaceae
<i>Epilobium brachycarpum</i>	Tall annual willow-herb	Onagraceae
<i>Eriophyllum lanatum</i> var. <i>arachnoideum</i>	Woolly golden yarrow	Asteraceae
<i>Erodium botrys</i>	Broadleaf filaree	Geraniaceae
<i>Erodium brachycarpum</i>	Foothill filaree	Geraniaceae
<i>Erodium cicutarium</i>	Red-stemmed filaree	Geraniaceae
<i>Galium aparine</i>	Catchweed bedstraw	Rubiaceae
<i>Galium porrigens</i> var. <i>tenue</i>	Ovalleaf climbing bedstraw	Rubiaceae
<i>Geranium dissectum</i>	Dissected geranium	Geraniaceae
<i>Gnaphalium californicum</i>	California cudweed	Asteraceae
<i>Gnaphalium canescens</i> ssp. <i>beneolens</i>	Everlasting cudweed	Asteraceae
<i>Heteromeles arbutifolia</i>	Toyon	Rosaceae
<i>Hirschfeldia incana</i>	Summer mustard	Brassicaceae

Scientific Name	Common Name	Family
<i>Holodiscus discolor</i>	Ocean spray	Rosaceae
<i>Hypericum concinnum</i>	Goldwire	Hypericaceae
<i>Hypochaeris radicata</i>	Hairy cat's-ear	Asteraceae
<i>Iris fernaldii</i>	Fernald's iris	Iridaceae
<i>Juncus effusus</i> var. <i>pacificus</i>	Pacific rush	Juncaceae
<i>Juncus patens</i>	Spreading rush	Juncaceae
<i>Lactuca serriola</i>	Prickly lettuce	Asteraceae
<i>Lathyrus vestitus</i> ssp. <i>vestitus</i>	Pacific peavine	Fabaceae
<i>Lithocarpus densiflorus</i> var. <i>densiflorus</i>	Tanbark oak	Fagaceae
<i>Lolium multiflorum</i>	Italian ryegrass	Poaceae
<i>Lolium perenne</i>	Perennial ryegrass	Poaceae
<i>Lonicera hispidula</i> var. <i>vacillans</i>	California honeysuckle	Caprifoliaceae
<i>Lotus humistratus</i>	Short-podded lotus	Fabaceae
<i>Lotus purshianus</i>	Spanish lotus	Fabaceae
<i>Lotus scoparius</i>	Deerweed	Fabaceae
<i>Lotus wrangelianus</i>	Wrangel's lotus	Fabaceae
<i>Lupinus bicolor</i>	Bicolored lupine	Fabaceae
<i>Madia gracilis</i>	Slender madia	Asteraceae
<i>Mimulus aurantiacus</i>	Bush monkeyflower	Scrophulariaceae
<i>Pentagramma triangularis</i> var. <i>triangularis</i>	Goldenback fern	Pteridaceae
<i>Pickeringia montana</i> ssp. <i>montana</i>	Chaparral pea	Fabaceae
<i>Picris echioides</i>	Bristly ox-tongue	Asteraceae
<i>Plantago lanceolata</i>	Narrowleaf plantain	Plantaginaceae
<i>Polygala californica</i>	California milkwort	Polygalaceae

Scientific Name	Common Name	Family
<i>Pseudotsuga menziesii</i> var. <i>menziesii</i>	Douglas-fir	Pinaceae
<i>Quercus agrifolia</i> var. <i>agrifolia</i>	Coast live oak	Fagaceae
<i>Quercus berberidifolia</i>	Scrub oak	Fagaceae
<i>Quercus chrysolepis</i> var. <i>chrysolepis</i>	Canyon live oak	Fagaceae
<i>Quercus durata</i>	Leather oak	Fagaceae
<i>Quercus kelloggii</i>	Black oak	Fagaceae
<i>Quercus wislizenii</i> var. <i>frutescens</i>	Interior live oak	Fagaceae
<i>Rhamnus californica</i> var. <i>californica</i>	California coffeeberry	Rhamnaceae
<i>Rosa californica</i>	California rose	Rosaceae
<i>Sanicula crassicaulis</i>	Pacific sanicle	Apiaceae
<i>Silybum marianum</i>	Milk thistle	Asteraceae
<i>Sisyrinchium bellum</i>	Blue-eyed grass	Iridaceae
<i>Sonchus asper</i> ssp. <i>asper</i>	Spiny-leaved sow-thistle	Asteraceae
<i>Spergularia rubra</i>	Ruby sand-spurrey	Caryophyllaceae
<i>Stachys ajugoides</i> var. <i>rigida</i>	Hedge-nettle	Lamiaceae
<i>Stephanomeria virgata</i> ssp. <i>pleurocarpa</i>	Wand stephanomeria	Asteraceae
<i>Torilis arvensis</i>	Hedge-parsley	Apiaceae
<i>Torilis nodosa</i>	Rattlesnake weed	Apiaceae
<i>Toxicodendron diversilobum</i>	Poison oak	Anacardiaceae
<i>Trifolium hirtum</i>	Rose clover	Fabaceae
<i>Trifolium incarnatum</i>	Crimson clover	Fabaceae
<i>Triteleia laxa</i>	Ithuriel's spear	Liliaceae
<i>Umbellularia californica</i>	California bay	Lauraceae
<i>Vicia sativa</i> ssp. <i>nigra</i>	Spring vetch	Fabaceae
<i>Vicia villosa</i> ssp. <i>villosa</i>	Winter vetch	Fabaceae

Scientific Name	Common Name	Family
<i>Vulpia bromoides</i>	Slender fescue	Poaceae
<i>Whipplea modesta</i>	Yerba de selva	Philadelphaceae
<i>Wyethia angustifolia</i>	Narrowleaf mule-ear's	Asteraceae
<i>Zigadenus fremontii</i> var. <i>fremontii</i>	Fremont's zygadene	Liliaceae

APPENDIX D
WILDLIFE SPECIES OBSERVED
DURING THE APRIL 28, 2008 FIELD SURVEY

Scientific Name	Common Name
<i>Cathartes aura</i>	Turkey vulture
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Callipepla californica</i>	California quail
<i>Melanerpes formicivorus</i>	Acorn woodpecker
<i>Picoides nuttallii</i>	Nuttall's woodpecker
<i>Picoides villosus</i>	Hairy woodpecker
<i>Myiarchus cinerascens</i>	Ash-throated flycatcher
<i>Vireo huttoni</i>	Hutton's vireo
<i>Corvus corax</i>	Common raven
<i>Aphelocoma californiica</i>	Western scrub-jay
<i>Psaltriparus minimus</i>	Bushtit
<i>Sitta carolinensis</i>	White-breasted nuthatch
<i>Sitta pygmaea</i>	Pygmy nuthatch
<i>Sialia mexicana</i>	Western bluebird
<i>Turdus migratorius</i>	American robin
<i>Chamaea fasciata</i>	Wrentit
<i>Pipilo maculatus</i>	Spotted towhee
<i>Pipilo crissalis</i>	California towhee
<i>Junco hyemalis</i>	Dark-eyed junco

Scientific Name	Common Name
<i>Tachycineta bicolor</i>	Tree swallow
<i>Zonotrichia leucophrys</i>	White-crowned sparrow
<i>Carpodacus mexicanus</i>	House finch
<i>Carduelis tristis</i>	American goldfinch
<i>Carduelis psaltria</i>	Lesser goldfinch
<i>Sturnus vulgaris</i>	European starling
<i>Sciurus griseus</i>	Western gray squirrel
<i>Tamias sonomae</i>	Sonoma chipmunk
<i>Odocoileus hemionus</i>	Mule deer (tracks)
<i>Lepus californicus</i>	Black-tailed hare

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