

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

**INITIAL STUDY /  
MITIGATED NEGATIVE DECLARATION**

**I. BACKGROUND**

PROJECT TITLE: Marino Water Right Project

APPLICATION: 30384

APPLICANT: Gerald J. Marino, Joseph C. Nichelini, and Christopher J. Harney  
2300 Lower Chiles Valley Road  
St. Helena, CA 94574

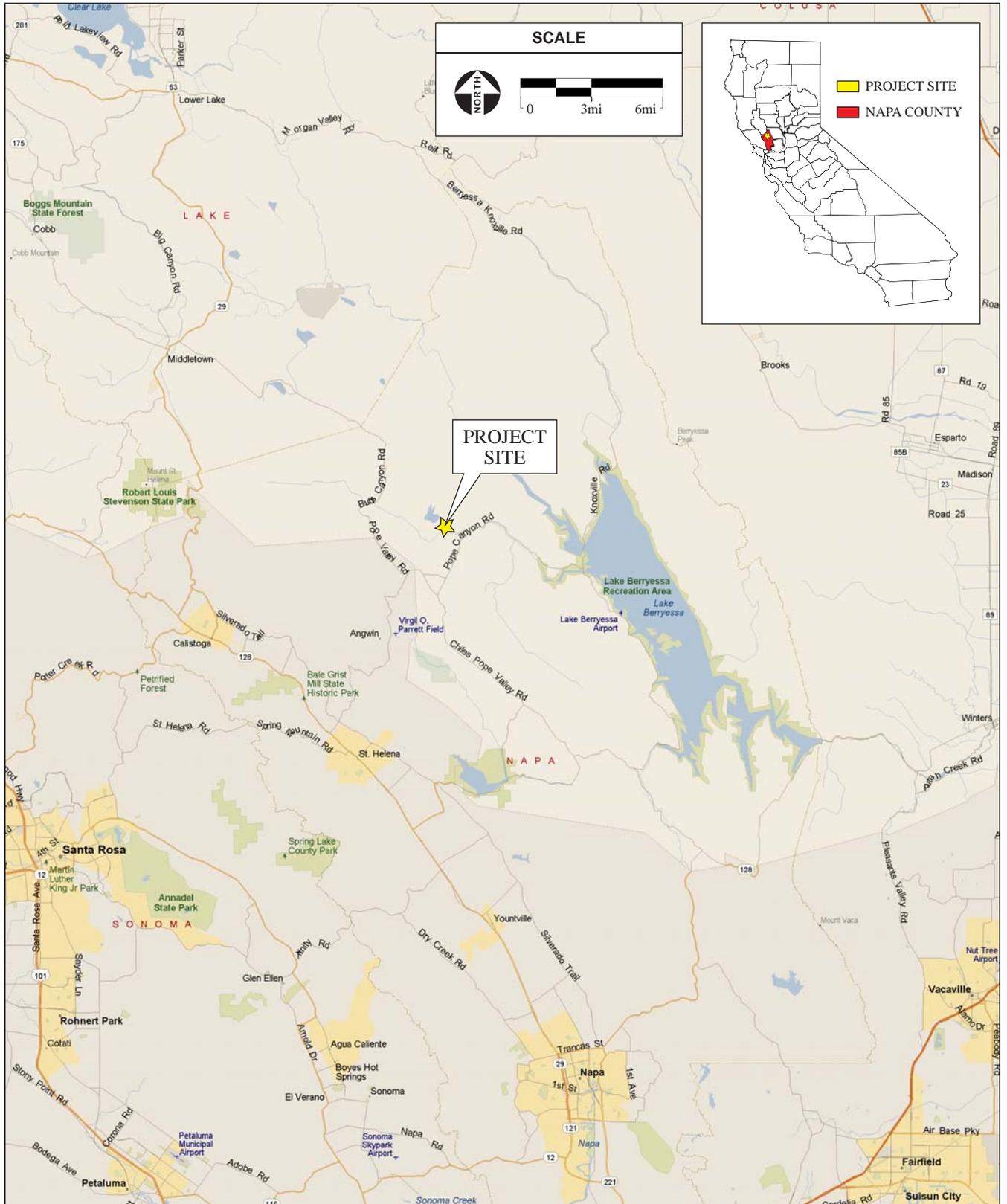
APPLICANT'S CONTACT PERSON: Emily MacDonald  
Wagner & Bonsignore  
Consulting Civil Engineers  
2151 River Plaza Drive, Suite 100  
Sacramento, CA 95833

GENERAL PLAN DESIGNATION: Agriculture, Watershed, and Open Space

ZONING: Agricultural Watershed

**Introduction**

The 455-acre subject property is located approximately six miles northeast of Angwin in Napa County, California (**Figure 1**). This location can be found within Township 9N, Range 5W of the "Aetna Springs, California" and "Walter Springs, California" U.S. Geological Survey (USGS) 7.5 minute topographic quadrangles (**Figure 2**). Water Right Application 30384 (proposed project) was filed on July 21, 1994 with the State Water Resources Control Board (State Water Board), Division of Water Rights (Division), and a Petition for Change on Application 30384 was filed on May 16, 2008 for the diversion of a total of 245 acre-feet per annum of water to storage, the enlargement of an existing onstream reservoir that stores water pursuant to License 10101 (Application 20370), and the construction of a new offstream reservoir.



SOURCE: Microsoft Streets and Trips, 2003; AES, 2012

Marino Water Right Application Project Initial Study / 203537 ■

**Figure 1**  
Regional Location



## Project Description

Application 30384 proposes the diversion to storage of a total of 245 acre-feet of water per year. The collection season would be from December 15 through March 31 of the following year. Two reservoirs would store the collected water. An existing 46.8 acre-foot capacity onstream reservoir would be increased in capacity to 196 acre-feet. The enlarged reservoir would include the 35 acre-foot capacity licensed pursuant to License 10101 for stockwatering and recreational purposes; no changes in the purposes of use under License 10101 would occur. Diversion to the reservoir would be from Point of Diversion 1 (POD 1) located at the dam of the enlarged reservoir, on an Unnamed Stream tributary to Pope Creek thence Putah Creek at Lake Berryessa thence the Yolo Bypass, as well as from Pope Creek at POD 2 (**Tables 1 and 2** and **Figure 3**). A copy of the water right application and petition are on file with the Division.

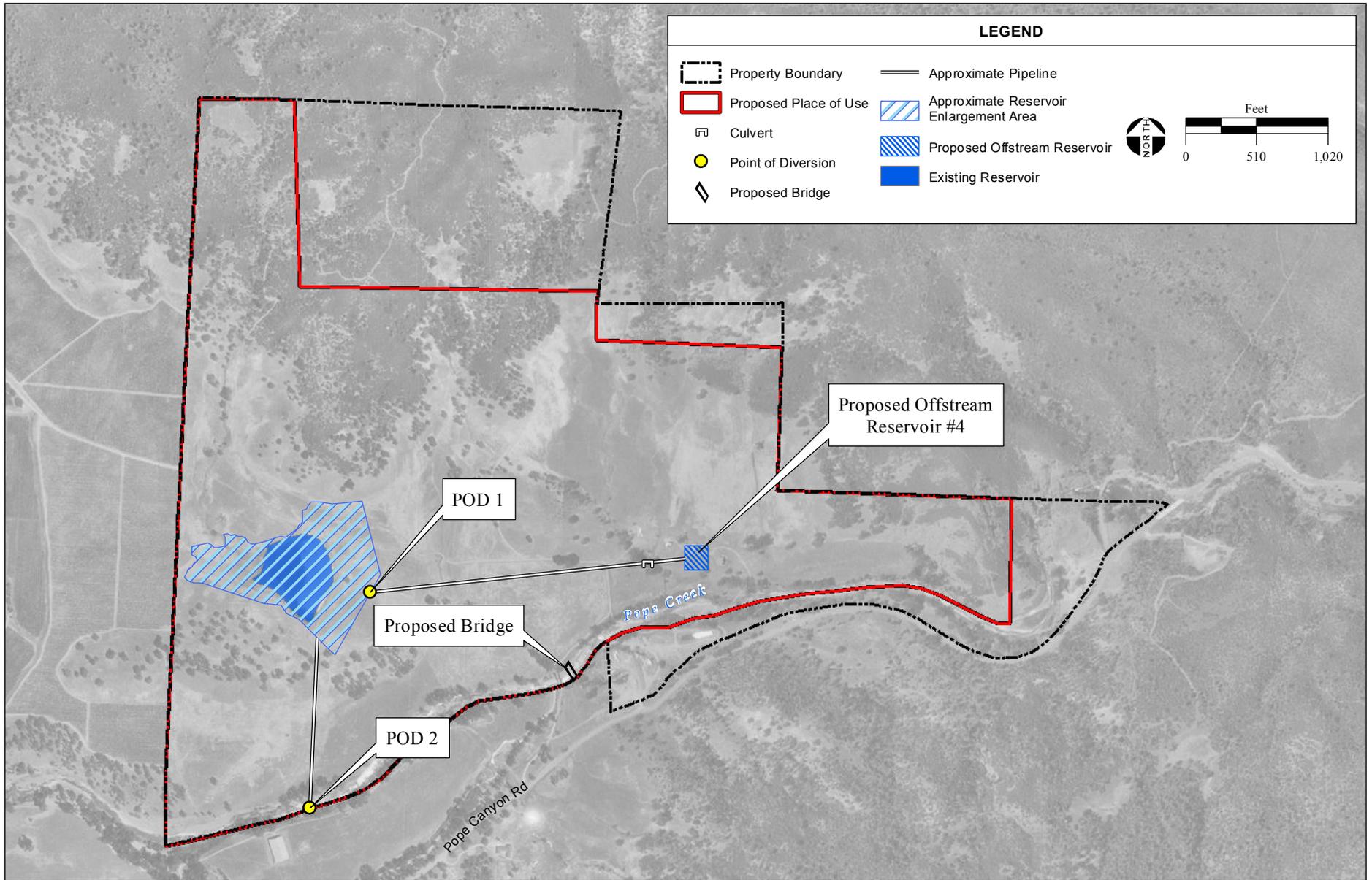
**TABLE 1: PROPOSED PROJECT<sup>1</sup>**

Application	Diversion	Diversion Amount (acre-feet)	Diversion Season	Purposes of Use	Proposed Place of Use (acres)
30384	To Storage	245	December 15 to March 31	Irrigation, frost protection, heat control, recreation, fire protection, and wildlife enhancement	305

**TABLE 2: POINTS OF DIVERSION<sup>2</sup>**

POD	Location	Within	Section	Township	Range	B & M
1; POD to Offstream Storage	Unnamed Stream tributary to Pope Creek thence Putah Creek thence the Yolo Bypass	NE ¼ of SW ¼	11	9N	5W	MD
2; POD to Offstream Storage	Pope Creek tributary to Putah Creek thence the Yolo Bypass	SE ¼ of SW ¼	11	9N	5W	MD

One offstream reservoir (Reservoir 4) would also be constructed with a 49 acre-foot storage capacity. Water would be diverted to storage in Reservoir 4 from PODs 1 and 2 via proposed pipelines between POD 1 and POD 2 and between POD 1 and the offstream reservoir. Earthwork would be required for installation of a stationary pump at POD 2. The pump would be screened to Department of Fish and Game standards. Water would be used for purposes of irrigation, frost protection, heat control, recreation, fire protection, and wildlife enhancement for a proposed 305-acre vineyard (**Table 3**) within a gross of 455 acres. The project would comply with Napa County stream setback requirements which are based on slope (shown on **Figure 4** with 55 foot setbacks which are required on 5 to 15 percent slopes; discussed in the Land Use and Planning section), would maintain minimum setbacks of 50 feet from wetlands (shown on **Figure 4**; discussed in the Biological Resources section), would avoid slopes over 30 percent, and would maintain minimum bypass flows of 0.5 cubic feet per second from POD 1 and 45 cubic feet per second from POD 2 during the diversion season (discussed in the Hydrology and Water Quality section).



To allow access to the site, a bridge across Pope Creek would be installed, and a culvert on an Unnamed Stream would be installed within the proposed place of use. The bridge would be located immediately east of the confluence of the Unnamed Stream downstream of POD 1 and Pope Creek at the site of a previous bridge that was destroyed by flooding. The final bridge design has not been determined, however, it is estimated that the structure would be approximately 10 feet wide and 103 to 145 feet long. The culvert would be located on an Unnamed Stream tributary to Pope Creek, which outlets downstream of the proposed bridge location. The culvert design has also not been finalized; however, ADS pipe size would be less than 24 inches.

The proposed place of use is shown in **Figure 3** and is described in **Table 3**.

**TABLE 3: PROPOSED PLACE OF USE<sup>3</sup>**

Use Within	Section	Township	Range	B & M	Acres	Cultivated
NW¼ of NW¼	11	9N	5W	MD	25	No
SW¼ of NW¼	11	9N	5W	MD	30	No
SE¼ of NW¼	11	9N	5W	MD	40	No
NW¼ of SW¼	11	9N	5W	MD	25	No
SW¼ of SW¼	11	9N	5W	MD	20	No
NE¼ of SW¼	11	9N	5W	MD	30	No
SW¼ of NE¼	11	9N	5W	MD	35	No
NW¼ of SE¼	11	9N	5W	MD	40	No
NE¼ of SE¼	11	9N	5W	MD	20	No
SE¼ of NE¼	11	9N	5W	MD	30	No
NW¼ of SW¼	12	9N	5W	MD	10	No
				<b>Total</b>	<b>305</b>	

### Project Background and Environmental Setting

Application 30384 was filed with the State Water Board on July 21, 1994 and an amendment to Application 30384 was filed on July 30, 2003. Public notice of the amended application was given on November 18, 2005. The Division received protests on the application from the United States Bureau of Reclamation, Department of Fish and Game, Solano County Water Agency, Living Rivers Counsel, and Narsai David. The protest from Living Rivers Counsel was not timely filed and not accepted. The application was subsequently amended to identify three points of diversion on Pope Creek within and in lieu of a moveable point of diversion on Pope Creek that was described in the Notice. Application 30384 originally proposed the diversion of 245 acre-feet per annum from three points of division on Pope Creek, as well as the point of diversion at the existing reservoir, to storage in five reservoirs. The five reservoirs included the existing reservoir that would have been enlarged to 49 acre-feet and four proposed offstream pit reservoirs that would have each been constructed with a capacity of 49 acre-feet. A Petition for Change filed with the State Water Board on May 16, 2008 resulted in the abandonment of proposed offstream reservoirs 1, 2, and 3; instead the existing reservoir is proposed for enlargement to 196 acre-feet to accommodate the capacity that would have otherwise resulted from construction of offstream reservoirs 1, 2, and 3 (147 acre-feet + 49 acre-feet from the enlarged onstream reservoir). One offstream reservoir remains proposed with the petition. The petition also removed two of the three previously proposed points of diversion on Pope Creek.

Protests were submitted by Department of Fish and Game (DFG) and the Living Rivers Council. The protests have not yet been resolved.

The California Environmental Quality Act (CEQA) baseline for this project is considered July 21, 1994, the date the application to appropriate water was filed with the Division. At the time the application for the proposed project was filed, the project site included an existing reservoir used for stockwatering and recreational purposes. Thirty-five acre-feet of water storage in the reservoir is licensed under License 10101. Water is diverted from Point of Diversion 1 (POD 1) located at the dam of the existing reservoir on an Unnamed Stream tributary to Pope Creek. There are no proposed changes to the diversion or purposes of use authorized under License 10101. Additional water requested for diversion under Application 30384 would be used for consumptive purposes.

This Initial Study/Mitigated Negative Declaration assesses impacts involved with the following: enlargement of the existing 46.8 acre-foot reservoir to a capacity of 196 acre-feet; the construction of a 49 af capacity offstream reservoir; development of up to 305 net acres of vineyard within 455 gross acres; installation of a stationary pump in Pope Creek at POD 2 and associated pipelines; construction of a bridge over Pope Creek to allow access to the project site and one culvert; and the diversion to storage of 245 acre-feet per annum from Pope Creek and an unnamed tributary to Pope Creek.

**Table 4** provides an overview of project components in relation to the CEQA baseline date.

**TABLE 4: CEQA BASELINE AND PROJECT COMPONENTS**

Existing Project Components at CEQA Baseline	CEQA Baseline Date	Project Components
<ul style="list-style-type: none"> <li>• 46.8 acre-foot capacity reservoir</li> </ul>	<p>July 21, 1994</p>	<ul style="list-style-type: none"> <li>• 305 acres of vineyard</li> <li>• 196 acre-foot enlarged onstream reservoir</li> <li>• 49 acre-foot offstream reservoir</li> <li>• POD 1 and 2 and associated pipelines</li> <li>• Bridge over Pope Creek and one culvert</li> <li>• Diversion of 245 acre-feet per year from Pope Creek and a tributary to Pope Creek</li> <li>• Use of water on 305-acre proposed place of use</li> </ul>

Napa County has a Mediterranean climate with cool winters and hot, dry summers. The County is located within the Inner North Coast Range Mountains, which is a geographic subdivision of the larger California Floristic Province, and has a strong influence from the coastal environment<sup>4</sup>. The average annual temperature for the valley is highly variable, 45 to 90° F with average annual precipitation of approximately 41 inches per year. The region is in climate Zone 14 – “Ocean Influenced Northern and Central California,” characterized as an inland area with ocean or cold air influence. Land use in the vicinity of the study area is agricultural and rural housing.

The geology of the surrounding area is 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 underlie the highly varied topography. Elevation at the project site is approximately 600 to 1,050 feet above mean sea level (msl). Characteristic vegetation communities occurring within this region include vineyard,

annual grassland, oak savanna, oak woodland, pine-oak woodland, chaparral, and riparian woodland. Aquatic habitats in the project region include seasonal and perennial drainages, seasonal wetlands, wetland swales, groundwater seeps, and man-made reservoirs. During field surveys by Analytical Environmental Services (AES) biologists, the project site was determined to consist of riparian/wetland, annual grassland, chaparral, and oak woodland/savanna habitat types. The project site contains suitable habitat for 17 special-status plants, one special-status invertebrate, two special-status amphibians, one special-status reptile, three special-status birds, and two special-status mammals (discussed further in the Biological Resources section). Two special-status wildlife species were observed during the field surveys: Western pond turtles were observed (one in the existing reservoir and another along Pope Creek), and three colonies of bank swallows were seen offsite along Pope Creek. No other special-status wildlife species were observed on or in the vicinity of the project site. No special-status plant species were observed in the project site.

### **Regulatory Environment**

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

- Napa County – Erosion Control Plan approval and Grading Permit
- San Francisco Bay Regional Water Quality Board – Section 401 Water Quality Certification or State Water Board, Division of Water Rights
- California Department of Fish and Game – California Endangered Species Act (CESA) Compliance, Streambed Alteration Agreement
- Division of Safety of Dams – Reservoir enlargement approval
- U.S. Fish and Wildlife Service (USFWS) – Federal Endangered Species Act (FESA) Compliance
- U.S. Army Corps of Engineers (USACE) – Section 404 Permit

## **II. ENVIRONMENTAL IMPACTS**

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

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

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

Napa County is part of the hilly to steep mountains of the California Coast Range. The county is characterized by a number of northwesterly parallel mountain ridges and intervening valleys of varying widths<sup>5</sup>.

The project site contains the following soils and respective characteristics:

- Bressa-Dibble complex, 5 to 15 percent slopes. This complex is comprised of approximately 60 percent Bressa soils, 25 percent Dibble soils, and 15 percent Contra Costa, Maymen, Millsholm, and Sobrante soils, and an inextensive clayey soil. Runoff on this complex is medium and the hazard of erosion is slight.
- Yolo loam, 2 to 5 percent slopes. Runoff on this soil is slow and the hazard of erosion is slight.

- Maxwell clay, 2 to 9 percent slopes and Contra Costa gravelly loam, 5 to 15 percent slopes are found on the subject property. Runoff on Maxwell Clay is slow and the hazard of erosion is slight. Runoff on Contra Costa gravelly loam is medium and the hazard of erosion is slight.
- Bressa-Dibble complex, 15 to 30 percent slopes. This complex is comprised of approximately 70 percent Bressa soils, 20 percent Dibble soils, and 10 percent Maymen, Contra Costa, Lodo, Millsholm, and Sobrante soils. Runoff on this complex is medium and the hazard of erosion is slight to moderate<sup>6</sup>.

The northern portion of the property, outside of the proposed place of use, includes Henneke gravelly loam, 30 to 75 percent slopes. Runoff on this soil is rapid to very rapid and the hazard of erosion is moderate to high<sup>7</sup>.

Soil along Pope Creek, along the southern boundary of the property, contains riverwash, which consists of erratically stratified layers of water-deposited sand, gravel, stones, and cobbles. Runoff on riverwash is slow and the hazard of erosion is slight to very severe, depending on water velocity. The eastern boundary of the project site near Pope Creek contains rock outcrop. Runoff on rock outcrop is very rapid and the hazard of erosion is high<sup>8</sup>.

Suspected faults in Napa County roughly parallel the northwest-southwest course of the San Andreas Fault, which, at its closest point, is about 30 miles southwest of the City of Napa. Three main active faults have been identified within Napa County. From east to west they are the Cordelia and Green Valley faults (approximately 42 miles southeast of the project site) and the West Napa fault (approximately 27 miles south of the project site). The Hunting Creek Fault, approximately 13 miles north of the project site, is a possible northward extension of the Green Valley Fault<sup>9</sup>. The Hunting Creek Fault is identified by the Alquist-Priolo Earthquake Fault Zone Map<sup>10</sup>. The project site is not located in a fault-rupture hazard zone. The primary seismic hazards in the project area are considered to be ground shaking and ground failure.

Ground shaking occurs as energy, which is released as the earth's crust moves at the earthquake focus, is transmitted as elastic waves up through the bedrock to become a series of complex waves or oscillations in the ground surface. Such ground shaking is one of the main causes of earthquake damage. Based on fault length, it is estimated that the three main faults in Napa County are capable of producing earthquakes with a Richter Magnitude of up to 6.75. Such an earthquake would be considered a moderate-sized event and would be capable of producing a substantial amount of damage, even to wood framed structures<sup>11</sup>.

Ground failure occurs as the result of ground instability and takes on many forms including landslides, ground cracking, subsidence, and liquefaction. Landslides are considered to be the most important seismic hazard within Napa County as many areas within the county are susceptible. The project site is located within an area of Napa County identified as having moderate to high slide risk<sup>12</sup>. The project area is not located within an area mapped by Napa County as being prone to liquefaction<sup>13</sup>.

#### *Question A*

The project site is not located in a fault-rupture hazard zone. Primary seismic hazards in the project area are considered to be ground shaking and ground failure. The project site is located within an area of Napa County identified as having moderate to high slide risk. Development of the proposed project does not include the development of housing, but does include an increase

in existing reservoir capacity to 196 acre-feet, and the development of a 49 acre-foot capacity offstream reservoir, which could be impacted by ground shaking or ground failure. The onstream dam would be under the jurisdiction of the Department of Water Resources, Division of Safety of Dams, and both reservoirs would be constructed according to plans and specifications prepared by a civil engineer registered in California. Additionally, in compliance with Napa County requirements, the Applicant has committed to not developing slopes greater than 30 percent.

The following permit terms, substantially as follows, shall be included in any permit or license issued pursuant to Application 30384:

- *If the storage dam will be of a size as to be within the jurisdiction of the Division of Safety of Dams as to safety, construction under this permit shall not be commenced until the Division of Safety of Dams has approved the plans and specifications for the dam.*
- *In accordance with the requirements of Water Code section 1393, Permittee shall clear the area covered by the proposed reservoir enlargement of all structures, trees, and other vegetation which would interfere with the use of the reservoir for water storage and recreational purposes.*

Impacts to people or structures from geologic hazards such as landslides or ground failure are considered less than significant with the incorporation of the above term.

#### *Questions B-D*

Soils in the project area have a runoff potential that ranges from slow to rapid and a hazard of erosion that ranges from slight to high. The southern portion of the proposed place of use, east of the existing onstream reservoir, also contains an area of Maxwell Clay, an expansive soil.

Due to the soil types present within the project area and soil-disturbing activities (e.g. vegetation removal, excavation, and grading) associated with construction, the proposed project could result in unstable soil conditions, potentially resulting in significant soil erosion or slope failure.

To prevent substantial erosion from construction activities, the following permit terms, substantially as follows, shall be included in any water right permit or license issued pursuant to Application 30384:

- *In order to minimize potential erosion impacts from construction activities, Best Management Practices (BMPs) for any disturbed areas should be included in any plan to control erosion for the proposed project. At a minimum, BMPs should include, but not be limited to the following measures:*
  - a. *Vegetation removal shall be limited to the minimum amount necessary to accommodate the proposed project. As the permanent vegetation cover is maturing, temporary vegetation or other erosion control measures sufficient to stabilize the soil shall be established on all disturbed areas. New plantings shall be protected by using such measures as jute netting, straw mulching, and fertilizing;*
  - b. *Temporary erosion control measures, such as silt fences, staked straw bales, and temporary revegetation, shall be installed in disturbed areas;*

- c. *No disturbed surfaces shall be left without erosion control measures in place during the winter and spring months; and*
- d. *Sediment shall be retained onsite by a system of sediment basins, traps, or other appropriate measures.*
- *Prior to the start of construction or diversion or use of water under this permit, Permittee shall obtain a grading permit and approval of an Erosion Control Plan prepared in accordance with Napa County's Conservation Regulations from the County of Napa. The Napa County Erosion Control Plan shall be consistent with the Napa County use requirements in areas with slopes greater than five percent. Copies of the approved grading permit and Erosion Control Plan from the County of Napa shall be submitted to the Deputy Director for Water Rights for approval prior to starting construction. If an Erosion Control Plan is not required, Permittee shall provide the Division a copy of a waiver from Napa County prior to any project construction activity in the place of use.*
- *No construction shall be commenced and no water shall be used under this permit until all necessary federal, state, and local approvals have been obtained.*

**Question E**

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

**Findings**

With the above terms, the proposed project is expected to result in less than significant impact with regards to geology and soils.

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

- |   |                          |                          |                                     |                          |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant effect on the environment?       | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

The proposed project is located within a mountainous region of the Coast Ranges within the San Francisco Bay Air Basin, falling under the jurisdiction of the San Francisco Bay Area Air Quality Management District (BAAQMD). The climate of the region is Mediterranean in character, with mild, rainy winter weather from November through April, and warm to hot, sub-humid weather from May through October. The San Francisco Bay Air Basin is generally affected by regionally high pollution emissions.

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

**Regulations**

The 1977 Federal Clean Air Act (CAA) required the United States Environmental Protection Agency (EPA) to identify National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. NAAQS have been established for the six “criteria” air pollutants: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, respirable particulate matter, and lead. Pursuant to the 1990 CAA Amendments (CAAA), the EPA has classified air basins (or portions thereof) as either “attainment” or “non-attainment” for each criteria air pollutant, based on whether or not the NAAQS have been achieved. Under the NAAQS, the Bay Area is currently a non-attainment area for 8-hour ozone (O<sub>3</sub>) and is designated maintenance for carbon monoxide (CO).

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

California has adopted ambient standards that are more stringent than the Federal standards for the criteria air pollutants. Under the California Clean Air Act (CCAA), patterned after the Federal CAA, areas have been designated as attainment or non-attainment with respect to SAAQS. Under the CAAQS, the Bay Area is a non-attainment area for O<sub>3</sub> and particulate matter (PM<sub>10</sub>, and PM<sub>2.5</sub>)<sup>14</sup>.

**Ozone (O<sub>3</sub>)**

O<sub>3</sub> is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere. Through a complex series of photochemical reactions, in the presence of strong sunlight and ozone precursors (nitrogen oxides [NO<sub>x</sub>] and reactive organic gases [ROG]), O<sub>3</sub> is created. Motor vehicles are a major source of O<sub>3</sub> precursors. O<sub>3</sub> causes eye and respiratory irritation, reduces resistance to lung infection, and may aggravate pulmonary conditions in persons with lung disease.

### **Carbon Monoxide (CO)**

CO is an odorless, invisible gas usually formed as the result of incomplete combustion of organic substances and is primarily a winter pollution problem. CO concentrations are influenced by the spatial and temporal distributions of vehicular traffic, wind speed, and atmospheric mixing. 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 (PM<sub>10</sub>)**

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

### **Greenhouse Gas (GHG) Emissions**

California has been a leader among the states in outlining and aggressively implementing a comprehensive climate change strategy that is designed to result in a substantial reduction in total statewide GHG emissions in the future. California's climate change strategy is multifaceted and involves a number of state agencies that are in the process of implementing a variety of state laws and policies. At the local level, the BAAQMD released draft CEQA thresholds on October 9, 2009, which included thresholds for criteria pollutants and GHGs<sup>15</sup>. These BAAQMD CEQA guidelines were adopted on June 2, 2010 and were effective as of the adoption date. However, as stated on the BAAQMD's website, it is the BAAQMD's policy that the adopted thresholds apply to projects for which environmental analysis begins on or after the applicable effective date<sup>16</sup>. As discussed under the Project Background section above, July 21, 1994 is considered the CEQA baseline date and the date that environmental review for the project began; as such, the proposed project is not subject to the thresholds identified in the recently adopted 2010 BAAQMD CEQA Guidelines. Napa County has prepared a draft Climate Action Plan (CAP), which has undergone public review and is currently being revised by the County. A GHG emissions threshold of significance pertinent to tree loss has not been adopted at the state or local level.

### *Questions A, B and D*

Potential air quality impacts associated with the proposed project are limited to those resulting from short-term construction activities involved with development of the project. The proposed project in combination with other emissions in the region has the potential to result in a cumulatively considerable increase in PM<sub>10</sub> emissions. Construction-related emissions could include exhaust from construction equipment and fugitive dust from land clearing, earthmoving, movement of vehicles, and wind erosion of exposed soil.

To protect air quality and the health of construction workers, permit terms, substantially as follows, will be included in any water right permit or license issued pursuant to Application 30384:

- *In order to minimize potential air quality impacts, a dust control plan shall be developed and implemented for the proposed project. At a minimum, the plan shall include, but not be limited to the following measures:*

- a. *Active construction areas shall be watered at least twice daily; all trucks hauling soil, sand, or other loose material shall be covered or required to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer);*
  - b. *Exposed stockpiles shall be covered or watered twice daily;*
  - c. *All construction vehicles and equipment shall be properly maintained and operated, and the use of construction equipment that meets the current emission standards for diesel engine-powered equipment shall be required; and*
  - d. *Traffic speeds on unpaved access roads shall be limited to 15 miles per hour.*
- *Prior to the start of construction, Permittee shall submit a detailed Emission Control and Mitigation Plan to the Deputy Director for Water Rights. Permittee shall also submit a copy of the plan to BAAQMD. The Emission Control and Mitigation Plan shall be consistent with BAAQMD's Air Quality Guidelines and include a monitoring and reporting component to ensure that mitigation measures identified in the Emission Control and Mitigation Plan are implemented. Permittee shall provide evidence to verify implementation of measures identified in the Emission Control and Mitigation Plan within 30 days of completion of construction work to the Deputy Director for Water Rights. Permittee shall also provide a copy of the evidence to BAAQMD upon request. Evidence may consist of, but is not limited to, photographs and construction records.*
  - *No work shall commence and no water shall be diverted, stored, or used under this permit until a signed copy of an Air Quality Permit from BAAQMD is filed with the State Water Board, Division of Water Rights. Compliance with the terms and conditions of the permit is the responsibility of the Permittee. If an Air Quality Permit is not necessary for this permitted project, the Permittee shall provide the Division of Water Rights a copy of a waiver signed by BAAQMD.*

#### *Questions C and E*

Application of agricultural chemicals during vineyard operation, such as sulfur products, has the potential to result in objectionable odors. The nearest sensitive receptors would be located at elementary schools located approximately four miles from the project site. Compliance with permit regulations from the Agricultural Commissioner's Office for the use of soil stabilizers, pesticides, herbicides, and other regulated chemicals would reduce potential impacts to a less than significant level.

#### *Questions F and G*

Construction and operational sources of GHG emissions include equipment use, vehicle travel, energy use, and water transport. With implementation of the emissions mitigation discussed above and the tree replacement mitigation discussed in the Biological Resources section, no significant GHG emissions would occur. The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Impacts are considered less than significant.

#### *Findings*

After the implementation of the permit terms outlined above, impacts to air quality as a result of the proposed project are considered less than significant.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>3. Hydrology and Water Quality.</b> Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) create or contribute runoff water that would exceed the capacity of existing or planned storm water discharge?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) result in substantial erosion or siltation on or offsite?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Place housing or other structures which would impede or re-direct flood flows within a 100-yr. flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Expose people or structures to a significant risk of loss, injury, or death involving flooding:				
i) as a result of the failure of a dam or levee?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) from inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Would the change in the water volume and/or the pattern of seasonal flows in the affected watercourse result in:				
i) a significant cumulative reduction in the water supply downstream of the diversion?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) a significant reduction in water supply, either on an annual or seasonal basis, to senior water right holders downstream of the diversion?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

iii)	a significant reduction in the available aquatic habitat or riparian habitat for native species of plants and animals?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv)	a significant change in seasonal water temperatures due to changes in the patterns of water flow in the stream?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
v)	a substantial increase or threat from invasive, non-native plants and wildlife	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Napa County is divided into three watersheds: Napa River, Putah Creek/Lake Berryessa, and Suisun Creek. The project site lies within the Putah Creek/Lake Berryessa watershed. A total of 13 stream/drainage features are located within the project site, including Pope Creek. Pope Creek is within the 100-year Federal Emergency Management Agency (FEMA) flood zone<sup>17</sup>. The project area is not located within a potentially affected coastal area, or located near a large body of water that may be affected by a tsunami or a seiche.

**Questions A and D**

The project is not regulated, nor is it expected to be regulated, under Waste Discharge Requirements. The proposed project would include the conversion of up to 305 acres to vineyard. This development would involve ground-disturbing and earth moving activities, which would result in temporary soil disturbance, and potentially increased erosion. Increased erosion could result in increased sedimentation to drainages and impairment of these waters due to the effects of sedimentation.

To protect water quality, in addition to the terms and BMPs outlined in the Geology and Soils section, the following permit terms, substantially as follows, shall be included in any permit or license issued pursuant to Application 30384:

- *Construction activities within 100 feet of any drainage shall only occur between April 1 and October 15 to minimize the potential for rainfall events to mobilize and transport sediment to aquatic resources.*
- *Permittee shall prevent any debris, soil, silt, cement that has not set, oil, or other such foreign substance from entering into or being placed where it may be washed by rainfall runoff into the waters of the State.*
- *In order to prevent degradation of the quality of water during and after construction of the project, prior to commencement of construction, Permittee shall file a report pursuant to Water Code section 13260 and shall comply with all waste discharge requirements imposed by RWQCB, San Francisco Bay Region, or by the State Water Board.*

The above terms would reduce potential impacts to a less than significant level.

**Question B**

The proposed project does not involve the use of groundwater resources. No significant impacts to groundwater resources would occur.

**Question C**

The proposed project would include ground-disturbing and earth moving activities. These activities would alter the existing drainage pattern from planting of vine rows and removal of

vegetation. This change would be expected to result in only slight changes to the volume and rate of runoff as existing drainage facilities would not be significantly affected. No large structures or grades would be introduced that could redirect flood flows. During operation of the proposed project, water would be transported to the vineyard using pipelines and drip lines for irrigation. As discussed in the Geology and Soils section, the proposed project has the potential to result in erosion. The permit terms and BMPs outlined in the Geology and Soils section, would prevent substantial erosion from construction activities and would reduce potential impacts to a less than significant level.

#### *Question E*

The proposed project involves the construction of a bridge within the 100-year flood zone; however, the bridge would not impede or redirect flows. Impacts would be less than significant.

#### *Question F*

The enlargement of the existing reservoir is subject to jurisdiction of the Division of Safety of Dams. The permit term outlined in the Geology and Soils section would reduce potential impacts to a less than significant level. The proposed project would not result in any inundation due to a tsunami or a seiche since the project site is not located within a potentially affected coastal area, or located near a large body of water.

#### *Question G*

A Water Availability Analysis/Cumulative Flow Impairment Index (WAA/CFII) was prepared for the proposed project by Hanson Engineering. The WAA/CFII was based on the WAA dated November 21, 2005, which was accepted by the Division. **Table 5** summarizes the findings from the WAA/CFII. The CFII is an index that is used to evaluate the cumulative flow impairment demand of all existing and pending projects in a watershed of interest. As shown in **Table 5**, the CFII values for Points of Interest (POIs) 1 through 4 was between 17.8 and 20.7 percent for all water rights senior to Application 30384, and it was between 18.1 and 21.3 percent for all water rights senior to and including Application 30384. The CFII value at POI 4A, the point on the Unnamed Stream containing POD 1 for Application 30384, was 9.2 percent for all rights. Therefore, the incremental increase in the CFII values from the proposed project at all POIs was less than one percent. Given that the incremental increase in the CFII value from the proposed project was less than one percent, the proposed project would not result in a significant cumulative reduction in the downstream water supply. Based on these findings, the project would not significantly impact senior water right holders downstream or significantly change the patterns of water flow thereby affecting seasonal water temperatures. Measures to protect riparian habitat are discussed in the Biological Resources section, Question B.

The February median (FMF) flow for PODs 1 and 2 were calculated in supplemental analyses by Hanson Engineering. The FMF for POD 1 is 0.5 cubic feet per second and the FMF for POD 2 is 45 cubic feet per second<sup>18</sup>.

**TABLE 5: RESULTS OF WAA/CFII<sup>19</sup>**

Point of Interest	Description	Drainage Area (acres)	Mean Annual Precipitation (inches)	Estimated Unimpaired Seasonal Flow (acre-feet)	Water Rights Senior to and Including Application 30384 - CFII (%)	Resulting Increase in CFII (%)
1	The point on Pope Creek immediately above where it enters Lake Berryessa	50,083	35.3	67,865	18.1	0.3
2	The point on Pope Creek immediately below the confluence with Maxwell Creek	49,742	35.3	67,457	18.2	0.3
3	The point on Pope Creek immediately above the confluence with Maxwell Creek	27,323	36.8	38,543	20.1	0.5
4	The point on Pope Creek immediately below the confluence with the Unnamed Stream containing POD 1	25,424	37.2	36,313	21.3	0.6
4A	The point on the Unnamed Stream containing POD 1 immediately above the confluence with Pope Creek	312	31.6	379	9.2	0.0

To ensure that water is diverted in accordance with the project description and to minimize the project's potential to cause impacts to hydrology and water quality, in addition to the terms in the Geology and Soils section, the following permit terms, substantially as follows, shall be included in any permit or license issued pursuant to Application 30384:

- *The water appropriated shall be limited to the quantity which can be beneficially used and shall not exceed a total of 245 acre-feet per annum to be diverted from December 15 of each year to March 31 of the succeeding year.*
- *The total quantity of water diverted under this permit, together with that diverted under the license issued pursuant to Application 20370, shall not exceed 245 acre-feet per annum.*
- *Before storing water in the reservoirs, Permittee shall install a staff gage in each reservoir, satisfactory to the Deputy Director for Water Rights, for the purpose of determining water levels in the reservoirs. Each staff gage must be maintained in operating condition as long as water is being diverted or used under this permit. Permittee shall record the staff gage readings on the last day of each month and on December 15 annually. Permittee shall record the maximum and minimum water*

surface elevations and the dates that these water levels occur each water-year between October 1 and September 30. Permittee shall maintain a record of all staff gage readings and shall submit these records with annual progress reports, and whenever requested by the Division.

The State Water Board may require the release of water that cannot be verified as having been collected under a valid basis of right.

- Prior to diversion or use of water under this permit, Permittee shall install an in-line flow meter, satisfactory to the Deputy Director for Water Rights to measure the instantaneous rate and the cumulative amount of water withdrawn from Reservoir 4. The in-line flow meter must be maintained in operating condition as long as water is being diverted or used under this permit. Permittee shall maintain a record of the end-of-the-month meter readings and of the days of actual diversion, and shall submit these records with annual progress reports, and whenever requested by the Division.
- For the protection of fish and wildlife, under all bases of right, Permittee shall during the period from December 15 through March 31 maintain a minimum bypass of 0.5 cubic foot per second at POD 1 and 45 cubic feet per second at POD 2. Under all bases of right Permittee shall bypass the total streamflow from April 1 through December 14. The total streamflow at the onstream reservoir shall be bypassed whenever it is less than 0.5 cubic foot per second at POD 1.
- No water shall be diverted under this right unless, within six months of the date of this permit, right holder is monitoring the bypass flows required by this right in accordance with a compliance plan, satisfactory to the Deputy Director for Water Rights. Right holder shall submit a report on bypass flow compliance activities in accordance with the schedule contained in the compliance plan.
- Permittee shall report any non-compliance with the terms of the permit to the Deputy Director for Water Rights within three days of identification of the violation.

**Findings**

After the implementation of the permit terms outlined above, impacts to hydrology and water quality as a result of the proposed project are considered less than significant.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>4. Biological Resources.</b> Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the DFG or USFWS?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the DFG or USFWS?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- |   |                          |                                     |                          |                                     |
|---|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| c) Have a substantial adverse effect on Federally protected wetlands as defined by Section 404 of the Federal Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?  | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

### Biological Setting

In general, Napa County has a Mediterranean climate that is characterized by cool, moist winters and hot, dry summers. As such, most of the annual precipitation it receives falls during the months of November through March. The project site is located within the Inner North Coast Ranges (NCoRI) geographic subdivision of California. This district is characterized by chaparral and pine/oak woodland plant communities, with low rainfall and hot, dry summers. The NCoRI subdivision is part of the larger Northwestern (NW) geographic division and the NW division is a component of the even larger California Floristic Province. The region is within Climate Zone 14 “Ocean Influenced Northern and Central California,” which includes inland areas with oceanic or cold air influences<sup>20</sup>.

### Methodology

#### *Preliminary Research*

Prior to conducting the biological field surveys AES staff reviewed the following resources:

- Aerial photographs of the project site;
- USGS “Aetna Springs, CA” and “Walter Springs, CA” 7.5-minute topographic quadrangles<sup>21</sup>;
- Online Soil Survey of Napa County, California<sup>22</sup>;
- A USFWS list of federally listed special-status species with potential to occur within the “Aetna Springs, CA” and “Walter Springs, CA” 7.5-minute topographic quadrangles<sup>23</sup>;
- A California Natural Diversity Database (CNDDDB) list of state and federally listed special-status species with potential to occur within the “Aetna Springs, CA” and “Walter Springs, CA” 7.5-minute quadrangles and the ten adjacent quadrangles (Middletown, Jericho Valley, Knoxville, Detert Reservoir, Calistoga, Guinda, Brooks, Lake Berryessa, Saint Helena and Chiles Valley)<sup>24</sup>;
- A CNDDDB map of state and federally listed special-status species that have been documented within a five-mile radius of the project site<sup>25</sup>; and

- A California Native Plant Society (CNPS) list of special-status plant species with potential to occur within the “Aetna Springs, CA” and “Walter Springs, CA” 7.5-minute quadrangles and the ten adjacent quadrangles<sup>26</sup>.

### *Biological Field Surveys*

AES staff conducted the initial biological field surveys and comprehensive floristic (i.e., bloom period) surveys within the proposed place of use on April 20, 2004 (**Figure 4**). AES staff returned to the project site and conducted additional biological field surveys, an informal wetland assessment, and comprehensive floristic surveys within the entirety of the proposed place of use on June 20 and July 10, 2006. Supplemental information was requested by the State Water Board, so AES staff conducted additional survey efforts on April 29, June 18, and June 19, 2008. A total of 75 person hours have been spent surveying the project site.

All of the biological field surveys were conducted on foot. During the surveys, the habitat types onsite were classified and further evaluated for the occurrence of and the overall potential to support special-status plant and animal species. Habitat classification was based on the classification systems presented in *A Manual of California Vegetation* (MCV)<sup>27</sup>, *Preliminary Descriptions of the Terrestrial Communities of California*<sup>28</sup>, and *A Guide to Wildlife Habitats of California*<sup>29</sup>, but have been modified to reflect the existing site conditions. During the biological field surveys, AES staff noted all visible plant and wildlife species observed and identified them to the lowest possible taxonomic level, which is required for accurate identification and reporting. All tracks, scat, etc. observed onsite were also noted. Plant species identification, nomenclature, and taxonomy followed *The Jepson Manual: Higher Plants of California*<sup>30</sup>. Wildlife identification, nomenclature, and taxonomy followed standard reference texts including: *Inland Fishes of California*<sup>31</sup>, *Sibley Field Guide to Birds of Western North America*<sup>32</sup>, *Field Guide to Western Reptiles and Amphibians*<sup>33</sup>, and *Mammals of California*<sup>34</sup>.

The informal wetland assessments were conducted to examine the project site for the presence of potentially jurisdictional aquatic features (i.e., wetlands/ waters of the U.S.). The approximate locations of aquatic features onsite were recorded in the field with a handheld Trimble GeoXT GPS unit and digitized onto a color aerial photograph map. Wetlands and other aquatic habitats were classified using the *USFWS National Wetlands Inventory/Classification System for Wetland and Deepwater Habitats*<sup>35</sup> and criteria defined in the *USACE 1987 Wetland Delineation Manual*<sup>36</sup>. Given that a formal wetland delineation was not conducted within the project site; the shapes, total acreages, exact locations, and jurisdictional status of all potential waters of the U.S. identified onsite are approximate and intended for general project planning purposes *only*. A USACE verified wetland delineation is necessary to determine the *exact* shapes, total acreages, precise locations, and jurisdictional status of any potential waters of the U.S. within the project site. In order for these approximate wetland boundaries to be verified by the USACE, soil pits must be dug and the three-parameter criteria (vegetation, soils, and hydrology) must be evaluated, the formal wetland delineation report and map must be submitted to the USACE, and the results of the report must be ground-truthed and verified.

## **Results**

This section summarizes the results of the biological field surveys that were conducted within the project site and provides further analysis of the data collected.

### *Habitat Types*

AES staff identified five terrestrial habitat types and two aquatic habitat types within the project site. These include: annual grassland, chaparral, developed, oak woodland/savannah, riparian,

wetland, and stream/drainage, respectively. These habitat types are described below and a map that depicts the habitat types identified within the project site is presented as **Figure 4**. Representative photographs of several of the habitat types within the project site are included as **Figure 5**.

#### Annual Grassland

Annual grasses, both native and non-native, as well as forbs characterize the annual grassland habitat within the project site. Plant species observed within this habitat type include: slender wild oat (*Avena barbata*), soft chess (*Bromus hordeaceus*), ryegrass (*Lolium multiflorum*), and vulpia (*Vulpia microstachys*). Forbs observed during the site visit include: common monkeyflower (*Mimulus guttatus*), long-beaked filaree (*Erodium botrys*), hayfield tarplant (*Hemizonia* sp.), and winter vetch (*Vicia villosa*).

#### Chaparral

The chaparral community is located along the northern portions of the project site. The chaparral community is dry and is located on slopes that drain quickly due to the high grade of the underlying hills. It is very dense, difficult to penetrate, and has very little understory growth within it. Plant species observed within this habitat type include: chamise (*Adenostoma fasciculatum*), mountain mahogany (*Cercocarpus betuloides* var. *betuloides*), toyon (*Heteromeles arbutifolia*), and yerba santa (*Eriodictyon californicum*).

#### Developed

The areas classified as developed habitat within the project site include all existing buildings and structures, any residual landscaped areas, roads, and otherwise disturbed regions. Most of the species observed within this habitat type are weedy, non-native species including: shortpod mustard (*Hirschfeldia incana*), yellow star thistle (*Centaurea solstitialis*), prickly lettuce (*Lactuca serriola*), spotted spurge (*Chamaesyce maculata*), and bur clover (*Medicago polymorpha*).

#### Oak Woodland/Savannah

Oak woodland/savannah habitat is scattered throughout the project site. This community is dominated by mature trees that occur in varying densities. The dominant trees within this community include: blue oak (*Quercus douglasii*), black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizenii*), Valley oak (*Quercus lobata*), and gray pine (*Pinus sabiniana*).

#### Riparian

Riparian habitat occurs along most of Pope Creek and along several of the unnamed tributaries to Pope Creek. Plant species observed within this community include California buckeye (*Aesculus californica*), California bay (*Umbellularia californica*), willows (*Salix* sp.), mugwort (*Artemisa douglasiana*), broad-leaf water plantain (*Alisma plantago-aquatica*), pennyroyal (*Mentha pulegium*), and poison oak (*Toxicodendron diversilobum*).

#### Wetland

Six seasonal wetland features and the existing reservoir that is proposed for enlargement were mapped within the project site. The wetland features onsite have variable plant species composition. Several of the plant species observed within the wetlands mapped onsite include: ryegrass, tall flatsedge (*Cyperus eragrostis*), prairie bulrush (*Scirpus maritimus*), iris-leaf juncus (*Juncus xiphioides*), cattail (*Typha* sp.), rabbit's foot grass (*Polypogon monspeliensis*), and creeping spikerush (*Eleocharis macrostachya*).

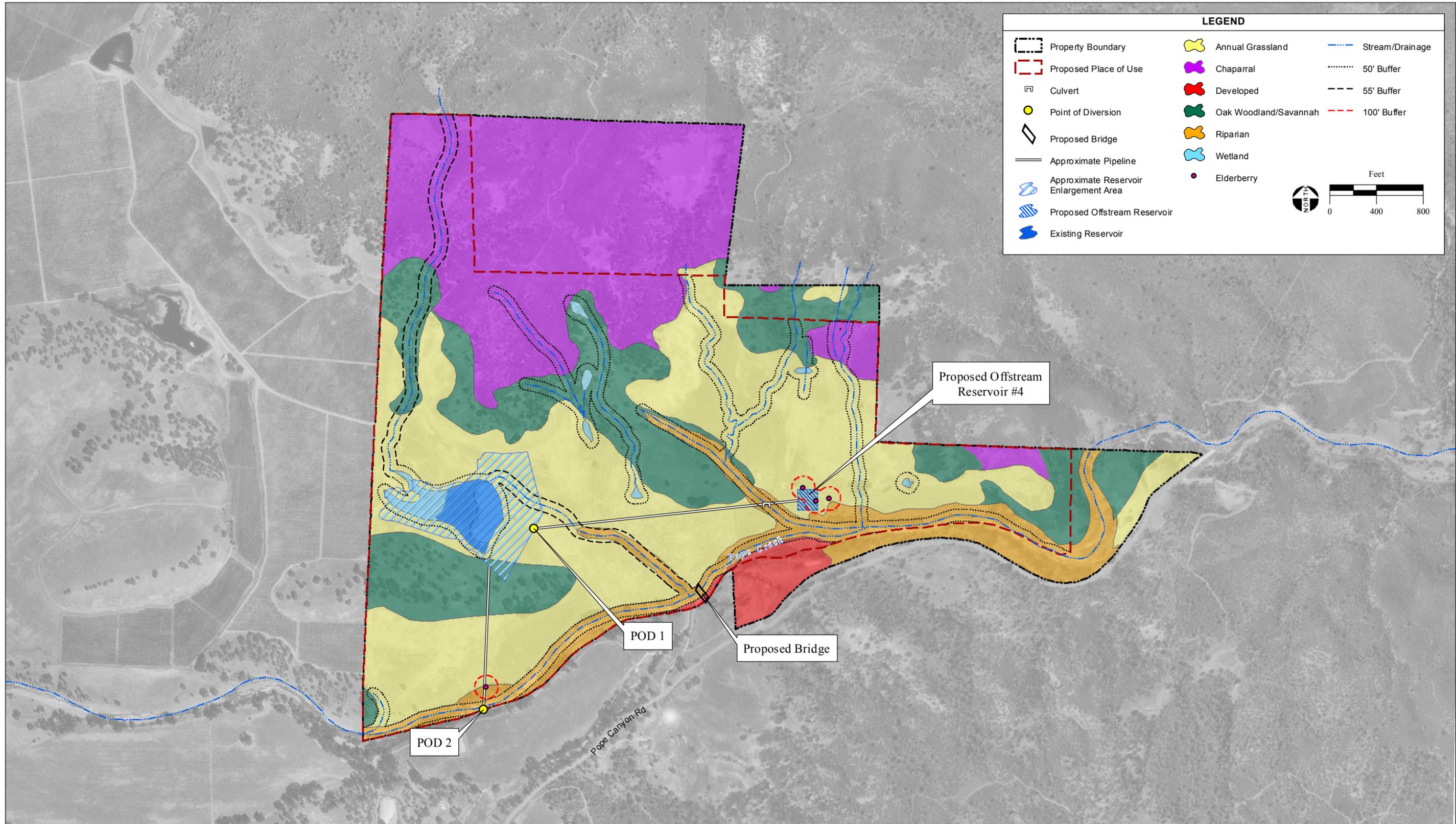




PHOTO 1: A picture of the existing onstream reservoir.



PHOTO 2: One of the wetlands on the project site, bordered by annual grassland.



PHOTO 3: A picture of the annual grassland habitat on the project site with one of the perennial drainages in the center of the photo and the existing reservoir in the distance on the right.



PHOTO 4: The chaparral habitat on the northeastern part of the project site.



PHOTO 5: This photo shows the oak woodland along a perennial drainage transitioning into chaparral on the steeper slopes.



PHOTO 6: A photo showing the annual grassland habitat in the southwestern corner of the project site. The oak woodland habitat occurs on the hills to the north.

### Stream/Drainage

A total of 13 stream/drainage features were mapped within the project site, including Pope Creek. The size, period of inundation, and substrates within the stream/drainages mapped onsite were highly variable. Several drainages have a clearly defined bed and bank, while others do not. Several of these features are completely scoured of vegetation, while others have variable amounts of emergent/hydrophytic vegetation within them. Plant species observed along the stream/drainages within the project site include: pennyroyal, ryegrass, cattail, dense-flowered willow herb (*Epilobium densiflorum*), joint paspalum (*Paspalum distichum*), tall flatsedge, and curly dock (*Rumex crispus*).

### Wildlife

Wildlife observed in the project site during the field surveys include: mule deer (*Odocoileus hemionus*), California quail (*Callipepla californica*), red-winged blackbird (*Agelaius phoeniceus*), red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), American crow (*Corvus brachyrhynchos*), mallard duck (*Anas platyrhynchos*), American coot (*Fulica americana*), killdeer (*Charadrius vociferous*), bluebird (*Sialia mexicana*), bank swallow (*Riparia riparia*), green heron (*Butorides virescens*), Western pond turtle (*Actinemys marmorata marmorata*), Canada goose (*Branta canadensis*), osprey (*Pandion haliaetus*), California toad (*Bufo boreas*), and bullfrogs (*Rana catesbeiana*).

### Plant Species Observed Onsite

A complete list of all the plant species observed within the project site during the biological field surveys is included in the Biological Resources Technical Memorandum prepared for the project and on file with the Division.

### Special-Status Species

For the purposes of this Initial Study, “special-status” is defined as species that are of management concern to state and/or federal resource agencies, and includes those species that are:

- Listed as endangered, threatened, or candidate for listing under the Federal Endangered Species Act (FESA);
- Listed as endangered, threatened, rare, or proposed for listing, under the California Endangered Species Act (CESA);
- Designated as endangered or rare, pursuant to California Fish and Game Code (Section 1901);
- Designated as fully protected, pursuant to California Fish and Game Code (Section 3511, Section 4700, or Section 5050);
- Designated as species of special concern by DFG; and
- Plants or animals that meet the definitions of rare, threatened, or endangered under the California Environmental Quality Act (CEQA), including plants listed by CNPS to be “rare, threatened, or endangered in California” (Lists 1A, 1B, and 2). Local or regional agencies may consider plant species that CNPS believes require additional information (List 3) and plant species that have been placed on a watch list (List 4) by CNPS.

AES staff compiled a list of regionally occurring special-status species reported from the results of the scientific database queries that were conducted for the project site. As mentioned in the Methodology-Preliminary Research Section above, the following sources were queried: the USFWS species list for the “Aetna Springs, California” and “Walter Springs, California” 7.5-minute topographic quadrangles and the adjacent ten quadrangles, the CNDDDB list for the same 12 quadrangles, and the CNPS list for the same 12 quadrangles. AES staff then conducted an analysis to determine which of the regionally occurring special-status species has the potential to occur within the project site based on habitat requirements, as well as the known elevational and geographic range for the project site. AES staff determined that the proposed project may affect and/or that the project site contains suitable habitat for 17 special-status plants, one special-status invertebrate, two special-status amphibians, one special-status reptile, three special-status birds, and two special-status mammals. The name, regulatory status, distribution, habitat requirements, and period of identification for these species are identified in **Table 6** below. More detailed descriptions of the special-status species with potential to occur within the project site or that warrant further discussion are provided below.

As discussed in the Hydrology and Water Quality section, the project site lies within the Putah Creek/Lake Berryessa watershed. A total of 13 stream/drainage features are located within the project site, including Pope Creek. The smaller drainages are tributary to Pope Creek, which runs through the center of Pope Valley and is a main tributary to Lake Berryessa. Monticello Dam impounds the waters of Lake Berryessa. With the construction of Monticello Dam, the contiguous hydrology required to support the life history requirements of resident anadromous salmonids in the Pope Creek watershed was cut off<sup>37</sup>. There are currently 14 identified species of fish in the lake<sup>38</sup>, of which only two are considered native: rainbow trout (*Oncorhynchus mykiss*) and Sacramento pikeminnow (*Ptychocheilus grandis*)<sup>39</sup>. Pope Creek is known to support these natives as well as two other native fish species, the California roach (*Lavinia symmetricus*) and Sacramento sucker (*Catostomus occidentalis*)<sup>40</sup>.

TABLE 6: TARGET SPECIAL-STATUS SPECIES LIST<sup>41</sup>

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE/ CNPS- OTHER STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION
<b>Plants</b>				
<i>Amorpha californica</i> var. <i>napensis</i> Napa false indigo	--/--/1B	Occurs in Monterey, Marin, Napa, and Sonoma counties.	Occurs in broadleaved upland forest (openings), chaparral, and cismontane woodland. Elevations: 120-2,000 meters.	April-July
<i>Amsinckia lunaris</i> Bent-flowered fiddleneck	--/--/1B	Occurs in Alameda, Contra Costa, Colusa, Lake, Marin, Napa, San Benito, Santa Clara, Santa Cruz, San Mateo, and Yolo counties.	Occurs in coastal bluff scrub, cismontane woodland, and Valley and foothill grassland. Elevations: 3-500 meters.	March-June
<i>Astragalus rattanii</i> var. <i>jepsonianus</i> Jepson's milk-vetch	--/--/1B	Occurs in Colusa, Glenn, Lake, Napa, Tehama, and Yolo counties.	Occurs in chaparral, cismontane woodland, and Valley and foothill grassland/often serpeninite. Elevations: 320-700 meters.	March-June
<i>Brodiaea californica</i> var. <i>leptandra</i> narrow-anthered California brodiaea	--/--/1B	Known to occur in Lake, Napa, and Sonoma counties.	Occurs in broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and Valley and foothill grassland/volcanic. Elevations: 110-915 meters.	May-July
<i>Ceanothus purpureus</i> Holly-leaved ceanothus	--/--/1B	Occurs in Napa, Shasta, Solano, Sonoma, and Trinity counties.	Occurs in chaparral and cismontane woodland/volcanic, rocky. Elevations: 120-640 meters.	February-June
<i>Centromadia parryi</i> ssp. <i>parryi</i> Pappose tarplant	--/--/1B	Occurs in Butte, Colusa, Glenn, Lake, Napa, San Mateo, Solano, and Sonoma counties.	Occurs in marshes and swamps (coastal salt) and Valley and foothill grassland (vernally mesic)/often alkaline. Elevations: 2-420 meters.	May-November
<i>Fritillaria pluriflora</i> Adobe-lily	--/--/1B	Occurs in Butte, Colusa, Glenn, Lake, Napa, Solano, Tehama, and Yolo counties.	Occurs in chaparral, cismontane woodland, and Valley and foothill grassland/often adobe. Elevations: 60-705 meters.	February-April
<i>Hesperolinon bicarpellatum</i> Two-carpellate western flax	--/--/1B	Known to occur in Lake, Napa, and Sonoma counties.	Occurs in chaparral (serpentine). Elevations: 60-1,005 meters.	May-July
<i>Hesperolinon serpentinum</i> Napa western flax	--/--/1B	Occurs in Alameda, Lake, Napa, and Stanislaus counties.	Occurs in chaparral (serpentine). Elevations: 50-800 meters.	May-July
<i>Layia septentrionalis</i> Colusa layia	--/--/1B	Occurs in Colusa, Glenn, Lake, Mendocino, Napa, Sonoma, Sutter, Tehama, and Yolo counties.	Occurs in chaparral, cismontane woodland, and Valley and foothill grassland/sandy, serpentine. Elevations: 100-1,095 meters.	April-May
<i>Leptosiphon jepsonii</i> Jepson's leptosiphon	--/--/1B	Known to occur in Lake, Napa, and Sonoma counties.	Occurs in chaparral and cismontane woodland/usually volcanic. Elevations: 100-500 meters.	March-May
<i>Lupinus sericatus</i> Cobb Mountain lupine	--/--/1B	Occurs in Colusa, Lake, Napa, and Sonoma counties.	Occurs in broadleaved upland forest, chaparral, cismontane woodland, and lower montane coniferous forest. Elevations: 275-1,525 meters.	March-June
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i> Baker's navarretia	--/--/1B	Occurs in Colusa, Glenn, Lake, Mendocino, Marin, Napa, Solano, Sonoma, Sutter, Tehama, and Yolo counties.	Occurs in cismontane woodland, lower montane coniferous forest, meadows and seeps, Valley and foothill grassland, and vernal pools/mesic. Elevations: 5-1,740 meters.	April-July

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE/ CNPS- OTHER STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION
<i>Navarretia rosulata</i> Marin County navarretia	--/--/1B	Occurs in Marin and Napa counties.	Occurs in closed-cone coniferous forest and chaparral/serpentinite, rocky. Elevations: 200-635 meters.	May-July
<i>Sidalcea oregana</i> ssp. <i>hydrophila</i> Marsh checkerbloom	--/--/1B	Occurs in Glenn, Lake, Mendocino, Lake, and Napa counties.	Occurs in meadows and seeps and riparian forest/mesic. Elevations: 1,100-2,300 meters.	July-August
<i>Streptanthus breweri</i> var. <i>hesperidis</i> Green jewel-flower	--/--/1B	Occurs in Glenn, Lake, Napa, and Sonoma counties.	Occurs in chaparral and cismontane woodland/serpentinite, rocky. Elevations: 130-760 meters.	May-July
<i>Streptanthus morrisonii</i> ssp. <i>elatus</i> Three Peaks jewel-flower	--/--/1B	Occurs in Lake, Napa, and Sonoma counties.	Occurs in chaparral (serpentinite). Elevations: 90-815 meters.	June-September
<b>Animals</b>				
<b>Invertebrates</b>				
<i>Desmocerus californicus dimorphus</i> Valley elderberry longhorn beetle	FT/--/--	Known throughout the riparian forests of the Central Valley from Redding to Bakersfield. Counties include Amador, Butte, Calaveras, Colusa, El Dorado, Fresno, Glenn, Kern, Madera, Mariposa, Merced, Napa, Placer, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Yolo, and Yuba.	Riparian forest communities. Exclusive host plant is elderberry ( <i>Sambucus</i> species), which must have stems $\geq$ 1-inch diameter for the beetle. Elevations: 0-762 meters.	All Year
<b>Amphibians</b>				
<i>Rana draytonii</i> California red- legged frog	FT/CSC/--	Known to occur along the Coast from Mendocino County to Baja California, and inland through the northern Sacramento Valley into the foothills of the Sierra Nevada mountains, south to eastern Tulare County, and possibly eastern Kern County. Currently accepted range excludes the Central Valley.	Occurs in permanent and temporary pools of streams, marshes, and ponds with dense grassy and/or shrubby vegetation. Elevations: 0-1160 meters.	June-November
<i>Rana boylei</i> foothill yellow- legged frog	--/CSC/--	Known to occur in the coast Ranges from the Oregon border south to the Transverse Mountains in Los Angeles County, throughout most of northern California west of the Cascade crest, and along the western portion of the Sierra south to Kern County, with a few isolated populations in the Central Valley.	Occurs in shallow flowing streams with some cobble in a variety of habitats including woodlands, riparian forest, coastal scrub, chaparral, and wet meadows. Rarely encountered far from permanent water sources. Elevations: 0-1830 meters.	March - June

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE/ CNPS- OTHER STATUS	DISTRIBUTION	HABITAT REQUIREMENTS	PERIOD OF IDENTIFICATION
<b>Reptiles</b>				
<i>Actinemys marmorata</i> Western pond turtle	--/CSC/--	In California, primarily north of the San Francisco Bay area and west of the Sierra Nevada Range.	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires basking sites and suitable upland habitat for egg laying. Nest sites most often characterized as having gentle slopes (<15%) with little vegetation or sandy banks. Elevations range from 0 to approximately 1,525 meters.	March - October
<b>Birds</b>				
<i>Agelaius tricolor</i> Tricolored blackbird	--/CSC/--	Restricted to the Central Valley and surrounding foothills, throughout coastal and some inland localities in southern California, and scattered sites in Oregon, western Nevada, central Washington, and western coastal Baja California.	Nests in dense thickets of cattails, tules, willow, blackberry, wild rose, and other tall herbs near fresh water.	All Year
<i>Haliaeetus leucocephalus</i> Bald eagle	FD/CE/--	Nests in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, Humboldt, and Trinity Counties. Winters throughout most of California.	Found near ocean shorelines, lakes, reservoirs, river systems, and coastal wetlands. Usually less than 2 km to water that offers foraging opportunities. Suitable foraging habitat consists of large bodies of water or rivers with abundant fish and adjacent perching sites such as snags or large trees.	All Year
<i>Riparia riparia</i> Bank swallow	--/CT/--	In California, primarily nests from Siskiyou, Shasta and Lassen Counties, south along the Sacramento River to Yolo County. Also nests locally across much of state.	Found primarily in riparian and other lowland habitats west of the deserts during the spring-fall period. In summer, restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine-textured or sandy soils, into which it digs nesting holes.	April - July
<b>Mammals</b>				
<i>Antrozous pallidus</i> Pallid bat	--/CSC/--	Locally common species at low elevations. It occurs throughout California except for the high Sierra Nevada from Shasta to Kern counties and the northwestern corner of the state from Del Norte and western Siskiyou counties to northern Mendocino County.	Habitats occupied include grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests, generally below 2,000 meters. The species is most common in open, dry habitats with rocky areas for roosting. Roosts also include cliffs, abandoned buildings, bird boxes, and under bridges.	All Year
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	--/CSC/--	Occurs throughout California, excluding subalpine and alpine habitats. Its range extends through Mexico to British Columbia and the Rocky Mountain states. Also occurs in several regions of the central Appalachians.	Requires caves, mines, tunnels, buildings, or other human-made structures for roosting. Hibernation sites must be cool and cold, but above freezing.	All year

**STATUS CODES****FEDERAL: United States Fish and Wildlife Service**

FT Federally Threatened

FD Federally Delisted

**STATE: California Department of Fish and Game**

CE California Listed Endangered

CSC California Species of Special Concern

**CNPS: California Native Plant Society**

List 1B Plants Rare, Threatened, or Endangered in California and Elsewhere

Months in parenthesis are uncommon.

**Special-Status Plants****Napa false indigo (*Amorpha californica* var. *napensis*)**

Pea Family (Fabaceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Napa false indigo is a deciduous shrub found in cismontane woodland, chaparral, and openings of broadleaved upland forest from 120 to 2,000 meters. Blooming period is from April through July. Napa false indigo is known from Monterey, Marin, Napa, and Sonoma counties. The nearest occurrence is located approximately five miles southwest of the project site<sup>42</sup>. The project site provides potential habitat for Napa false indigo within the chaparral and oak woodland habitats. The biological surveys were conducted within the evident and identifiable period for Napa false indigo. Napa false indigo was not observed during the biological surveys of the project site.

**Bent-flowered fiddleneck (*Amsinckia lunaris*)**

Borage Family (Boraginaceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Bent-flowered fiddleneck is an annual herb found in coastal bluff scrub, cismontane woodland, and Valley and foothill grassland from 3 to 500 meters. Blooming period is from March through June. Bent-flowered fiddleneck is known from Alameda, Contra Costa, Colusa, Lake, Marin, Napa, San Benito, Santa Clara, Santa Cruz, San Mateo, and Yolo counties. The nearest occurrence of this species is located approximately 3.5 miles northwest of the project site<sup>43</sup>. The project site provides potential habitat for bent-flowered fiddleneck within the annual grassland and oak woodland habitats. The biological surveys were conducted within the evident and identifiable period for bent-flowered fiddleneck. Bent-flowered fiddleneck was not observed during the biological surveys of the project site.

**Jepson's milk-vetch (*Astragalus rattanii* var. *jepsonianus*)**

Pea Family (Fabaceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Jepson's milk-vetch is an annual herb found in chaparral, cismontane woodland, and Valley and foothill grassland from 320 to 700 meters. This species has an affinity for serpentine soils. Blooming period is from March through June. Jepson's milk-vetch is known from Colusa, Glenn, Lake, Napa, Tehama, and Yolo counties. The nearest occurrence of this species is

located approximately less than a quarter-mile east of the project site<sup>44</sup>. The project site provides potential habitat for Jepson's milk-vetch within the chaparral, annual grassland, and oak woodland habitats. The biological surveys were conducted within the evident and identifiable period for Jepson's milk-vetch. Jepson's milk-vetch was not observed during the biological surveys of the project site.

**Narrow-anthered California brodiaea (*Brodiaea californica* var. *leptandra*)**

Lily Family (Liliaceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Narrow-anthered California brodiaea typically occurs from 110 to 915 meters elevation in broadleaf upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and Valley and foothill grassland in volcanic and serpentinite soils. The ideal period of identification is from May through July. It is found in Lake, Napa and Sonoma counties. The nearest recorded occurrence of this species is located approximately 4.25 miles southwest of the project site<sup>45</sup>. The project site provides potential habitat for narrow-anthered California brodiaea within the chaparral, annual grassland, and oak woodland, habitats. The biological surveys were conducted within the evident and identifiable period for narrow-anthered California brodiaea. Narrow-anthered California brodiaea was not observed during the biological surveys of the project site.

**Hollyleaf ceanothus (*Ceanothus purpureus*)**

Buckthorn family (Rhamnaceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Hollyleaf ceanothus is an evergreen shrub found on dry, rocky volcanic slopes (chaparral and cismontane woodland communities), from 120 to 640 meters in elevation. It is an endemic shrub that can be locally abundant in Napa County. Hollyleaf ceanothus is known from Napa, Solano, and Sonoma counties. It blooms from February to June. The nearest recorded occurrence of this species is located approximately 4.75 miles southwest of the project site<sup>46</sup>. The project site provides potential habitat for hollyleaf ceanothus within the chaparral and oak woodland habitats. The biological surveys were conducted within the evident and identifiable period for hollyleaf ceanothus. Hollyleaf ceanothus was not observed within the project site during the biological surveys of the project site.

**Pappose tarplant (*Centromadia parryi* ssp. *parryi*)**

Sunflower Family (Asteraceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Pappose tarplant typically occurs in marshes and swamps (especially coastal salt), and Valley and foothill grassland habitats at elevations that range from 2 to 420 meters. This species has an affinity for mesic areas within grassland habitats and for alkaline soils. The ideal period of identification is from May through November. It is found in Butte, Colusa, Glenn, Lake, Napa, San Mateo, Solano, and Sonoma counties. The nearest recorded occurrence of this species is located approximately one mile west of the project site<sup>47</sup>. The project site provides potential

habitat for pappose tarplant within the annual grassland and wetland habitats. The biological surveys were conducted within the evident and identifiable period for pappose tarplant. Pappose tarplant was not observed during the biological surveys of the project site.

**Adobe lily (*Fritillaria pluriflora*)**

Lily family (Liliaceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Adobe lily is a bulbiferous herb often found on adobe soils in chaparral, cismontane woodland, and Valley and foothill grassland from 60 to 705 meters. Blooming period occurs from February through April. Adobe lily is known from Butte, Colusa, Glenn, Lake, Napa, Solano, Tehama, and Yolo counties. The nearest occurrence is located approximately four miles northwest of the project site<sup>48</sup>. The project site provides potential habitat for adobe lily within the chaparral, annual grassland, and oak woodland habitats. The biological surveys were conducted within the evident and identifiable period for adobe lily. Adobe lily was not observed during the biological surveys.

**Two-carpellate western flax (*Hesperolinon bicarpellatum*)**

Flax Family (Linaceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Two-carpellate western flax is found on serpentine soils in chaparral communities. This plant is known to occur in Lake, Napa, and Sonoma counties. The nearest documented occurrence of this species is located approximately 3.75 miles northwest of the project site<sup>49</sup>. The project site provides potential habitat for two-carpellate western flax within the chaparral habitat. The biological surveys were conducted within the evident and identifiable period for two-carpellate western flax. Two-carpellate western flax was not observed during the biological surveys.

**Napa western flax (*Hesperolinon serpentinum*)**

Flax Family (Linaceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Napa western flax is found on serpentine soils in chaparral communities at elevations that range from 50 to 800 meters. It occurs in Alameda, Lake, Napa, and Stanislaus counties. There are two documented occurrences of this species within less than one quarter mile from the project site. One occurs in an area mapped along the northern project boundary and the other occurs in an area mapped along the eastern project boundary. The project site provides potential habitat for Napa western flax within the chaparral habitat. The biological surveys were conducted within the evident and identifiable period for Napa western flax. Napa western flax was not observed during the biological surveys.

**Colusa layia (*Layia septentrionalis*)**

Sunflower Family (Asteraceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Colusa layia is found on serpentine or sandy soils in chaparral, cismontane woodland, and Valley and foothill grasslands. This species blooms from April to May. This species occurs in Colusa, Glenn, Lake, Mendocino, Napa, Sonoma, Sutter, Tehama and Yolo counties. The nearest documented occurrence of this species is located approximately four miles northwest of the project site<sup>50</sup>. The project site provides potential habitat for Colusa layia within the chaparral, oak woodland, and annual grassland habitats. The biological surveys were conducted within the evident and identifiable period for Colusa layia. Colusa layia was not observed during the biological surveys.

**Jepson's leptosiphon (*Leptosiphon jepsonii*)**

Phlox Family (Polemoniaceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Jepson's leptosiphon is an annual herb found in chaparral and cismontane woodland habitats. It has an affinity for volcanic soils. The blooming period ranges from March through May. Jepson's leptosiphon is known to occur in Lake, Napa and Sonoma counties. The nearest documented occurrence of this species is located approximately 3.75 miles south of the project site<sup>51</sup>. The project site provides potential habitat for Jepson's leptosiphon within the chaparral and cismontane woodland habitats. The biological surveys were conducted within the evident and identifiable period for Jepson's leptosiphon. Jepson's leptosiphon was not observed during the biological surveys.

**Cobb Mountain lupine (*Lupinus sericatus*)**

Pea Family (Fabaceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Cobb Mountain lupine is a perennial herb found in broadleafed upland forest, chaparral, cismontane woodland, and lower montane coniferous forest at elevations that range from 275 to 1,525 meters. The blooming period is from March through June. Cobb Mountain lupine is known from Colusa, Lake, Napa, and Sonoma counties. The nearest occurrence of this species is located approximately four miles southwest of the project site<sup>52</sup>. The project site provides potential habitat for Cobb Mountain lupine within the chaparral and oak woodland habitats. The biological surveys were conducted within the evident and identifiable period for Cobb Mountain lupine. Cobb Mountain lupine was not observed during the biological surveys.

**Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*)**

Phlox Family (Polemoniaceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Baker's navarretia is an annual herb found in cismontane woodland, lower montane coniferous forest, meadows and seeps, Valley and foothill grassland, and vernal pools from 5 to 1,740 meters. Blooming period is from April through July. Baker's navarretia is known from Colusa, Glenn, Lake, Mendocino, Marin, Napa, Solano, Sonoma, Sutter, Tehama, and Yolo counties. The nearest documented occurrence of this species is located approximately 2.25 miles southwest of the project site<sup>53</sup>. The project site provides potential habitat for Baker's navarretia within the wetland features, the annual grassland, and the oak woodland habitats. The biological surveys were conducted within the evident and identifiable period for Baker's navarretia. Baker's navarretia was not observed during the biological surveys.

**Marin County navarretia (*Navarretia rosulata*)**

Phlox Family (Polemoniaceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Marin County navarretia is an annual herb that is found in closed-cone coniferous forest and chaparral habitats at elevations that range from 200 to 635 meters. It has an affinity for rocky, serpentine soils and occurs in Napa and Marin counties. The bloom period is from May to July. The nearest documented occurrence of this species is located approximately five miles northwest of the project site<sup>54</sup>. The project site provides potential habitat for Marin County navarretia within the chaparral habitat. The biological surveys were conducted within the evident and identifiable period for Marin County navarretia. Marin County navarretia was not observed during the biological surveys.

**Sonoma beardtongue (*Penstemon newberryi* var. *sonomensis*)**

Figwort Family (Scrophulariaceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Sonoma beardtongue is a subshrub that is found in chaparral communities in Lake, Napa, and Sonoma counties. It has an affinity for rocky soils. The bloom period for this species is from April to August. The nearest documented occurrence of this species is located approximately 4.5 miles southwest of the project site<sup>55</sup>. The project site provides potential habitat for Sonoma beardtongue within the chaparral habitat. The biological surveys were conducted within the evident and identifiable period for Sonoma beardtongue. Sonoma beardtongue was not observed during the biological surveys.

**Marsh checkerbloom (*Sidalcea oregana* ssp. *hydrophila*)**

Marshmallow Family (Malvaceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Marsh checkerbloom is a perennial herb that is found in meadows, seeps, and riparian forest communities. It tends to occur in mesic areas within riparian habitats. This species occurs in Glenn, Lake, Mendocino, and Napa counties. The bloom period for this species is from July through August. The nearest documented occurrence of this species is located approximately 4.5 miles southwest of the project site<sup>56</sup>. The project site provides potential habitat for marsh checkerbloom within the wetland features and the riparian habitat. The biological surveys were

conducted within the evident and identifiable period for marsh checkerbloom. This species was not observed within the project site during the biological field surveys.

**Green jewel-flower (*Streptanthus breweri* var. *hesperidis*)**

Mustard Family (Brassicaceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Green jewel-flower is an annual herb that is found in chaparral and cismontane woodland habitats. This species has an affinity for serpentine and/or rocky soils. Green jewel-flower is known to occur in Glenn, Lake, Napa, and Sonoma counties. The nearest documented occurrence of this species is located approximately three miles northwest of the project site<sup>57</sup>. The biological surveys were conducted within the evident and identifiable period for green jewel-flower. Green-jewel flower was not observed during the biological surveys.

**Three Peaks jewel-flower (*Streptanthus morrisonii* var. *elatus*)**

Mustard Family (Brassicaceae)

Federal Status – None

State Status – None

Other – CNPS 1B

Three Peaks jewel-flower is a biennial herb that is found in chaparral habitat on serpentine soils. Three Peaks jewel-flower is known to occur in Lake, Napa, and Sonoma counties. The nearest documented occurrence of this species is located approximately 3.5 miles northwest of the project site<sup>58</sup>. The biological surveys were conducted within the evident and identifiable period for Three Peaks jewel-flower. This species was not observed during the biological field surveys.

*Special-Status Invertebrates*

**Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)**

Federal Status – Threatened

State Status – None

Other – None

The Valley elderberry longhorn beetle (VELB) is completely dependent on its host plant, elderberry (*Sambucus* sp.), in and around California's Central Valley during its entire life cycle. There are four stages in this species life: egg, larva, pupa, and adult. Females lay their eggs in the crevices of elderberry bark. Upon hatching, the larvae then burrow into shrub stems and feed for approximately two years. The larvae transform into the pupal stage and eventually transform into adults. Adults emerge from pupation inside the wood of elderberry shrubs during the spring as the elderberry shrubs begin to flower. The adults feed and mate on the elderberry foliage during their active phase, which typically lasts from March through June. VELB typically utilize stems that are greater than one inch in diameter at ground level. The current range of VELB includes the entire Central Valley, from Shasta County down to Fresno County. USFWS has designated Critical Habitat for this species (FR 45:52803, August 2006). The project site does not fall within the designated critical habitat for this species and it is located approximately 80 miles west of the nearest designated critical habitat unit. A recovery plan has been finalized for VELB<sup>59</sup>. The nearest documented occurrence of this species is located approximately 17 miles southeast of the project site<sup>60</sup>. The riparian habitat within the project site is suitable for this species and elderberry shrubs were observed within the riparian habitat onsite. Comprehensive (i.e., protocol-level/determinate) VELB surveys were not conducted by AES

staff within the project site, although the locations of the observed elderberry shrubs were recorded with GPS (**Figure 4**). Given that the project site is within the known range of this species and because elderberry shrubs were observed onsite, potential impacts to this species should be considered.

#### Special-Status Amphibians

##### **Foothill Yellow-legged frog (*Rana boylei*)**

Federal Status – None

State Status – Species of Special Concern

Other – None

The Foothill yellow-legged frog (FYLF) is named for its abdomen and hind legs, which are distinctively yellowish in color. This species occurs in partially shaded, rocky streams at low to moderate elevations in areas of chaparral, cismontane woodland, and broadleaf upland forest habitats. This species' ideal habitat consists of open slow-moving perennial streams with rocky or bedrock substrates and small deeper pools. However, it can also occur in smaller perennial streams that have cobble size rocks and riffles. FYLF breeds from March through May in pools within perennial streams and attaches its eggs to gravel or rocks at the edges or along the banks. This species range includes most of northern California, west of the Cascades and south along the coast to the San Gabriel Mountains, and south along the western side of the Sierra Nevada Mountains and into Kern County. The nearest documented occurrence of this species is located approximately four miles northwest of the project site<sup>61</sup>. The stream/drainage features within the project site (especially Pope Creek and the reservoirs) are suitable habitats for this species. FYLF was not observed within the project site during the biological field surveys; a focused FYLF survey was not conducted.

##### **California red-legged frog (*Rana draytonii*)**

Federal Status – Threatened

State Status – Species of Special Concern

Other – None

Like FYLF, the California red-legged frog (CRLF) is named for its abdomen and hind legs, which are distinctively reddish in color. This species is the largest native frog in the western U.S. and it requires relatively deep (i.e., greater than 70 cm) still or slow-moving aquatic habitats that contain dense, shrubby, and/or emergent riparian vegetation. Existing CRLF populations are associated with deeper pools and streams that have overhanging willows and are bordered by cattails and bulrush. This species seeks shelter during the winter months in densely vegetated upland areas within the riparian corridor and it is known to estivate (i.e., enter a dormant state) during the dry season in small mammal burrows and piles of moist leaf litter. CRLF has been found as far as 30 meters away from water in dense riparian vegetation. This species breeds March through November. The current range of this species includes 31 counties in California and basically extends from the Point Reyes National Seashore in Marin County, south to San Diego County and north and inland up to Shasta County (excluding the Central Valley) then back down to the foothill regions of as far south as Fresno County. USFWS critical habitat has been designated for this species and the critical habitat designation is proposed for revision. The project site does not fall within the USFWS designated critical habitat. Although, designated critical habitat unit NAP-1, Wragg Creek, (which is approximately 2,529 acres in size) occurs within Napa County and it is located approximately five miles east of Pope Valley (FR 71:19243, April 2006). A recovery plan has been finalized for CRLF<sup>62</sup>. The nearest documented occurrence of this species is located approximately 3.25 miles southwest of the project site<sup>63</sup>. Pope Creek, the streams/drainages that have riparian corridors associated with

them, and the reservoirs are considered suitable habitats within the project site for this species. CRLF was not observed within the project site during the biological field surveys; protocol-level CRLF surveys were not conducted.

### Special-Status Reptiles

#### **Western pond turtle (*Actinemys marmorata*)**

Federal Status – None

State Status – Species of Special Concern

Other – None

The Western pond turtle (WPT) occurs in a variety of aquatic habitats including ponds, marshes, rivers, streams, and artificially created aquatic features (e.g., irrigation canals and reservoirs) that support riparian vegetation. Ideal habitats for this species include rocks, logs, mudflats, or other types of smooth substrates for basking and some type of accessible upland habitat for egg laying. WPT is typically active from February through November and hibernates in the mud, underwater during the coldest parts of the winter. The range of this species includes all of northern California west of the Cascade/Sierra Nevada crest with an intergraded region associated with the greater San Francisco Bay area down to Morrow Bay. The nearest documented occurrence of this species is located approximately 1.25 miles southeast of the project site<sup>64</sup>. Pope Creek, the streams/drainages, and the reservoirs are considered suitable habitats within the project site for this species. As such, the proposed project has the potential to significantly impact WPT. WPT was observed within the existing reservoir onsite and in Pope Creek along the southeastern boundary of the proposed place of use during the surveys that AES conducted in 2006<sup>65</sup>. This species was observed again by AES staff within the stream/drainage on the eastern side of the existing reservoir during the supplemental biological surveys conducted in June 2008<sup>66</sup>.

### Special-Status Fishes

Pope Creek and the drainages tributary to it do not provide suitable habitat for special-status fish species. The construction of Monticello Dam and inundation of Lake Berryessa in 1953 effectively cut off anadromous fish from the watershed above the dam. Currently, DFG maintains Lake Berryessa as a warm water game fishery. Lake Berryessa is annually stocked with over 100,000 rainbow trout of Eagle Lake and Coleman Kamloops strain<sup>67</sup>. It is possible that at some point in the past during high water years, the Pope Creek watershed could have supported some limited spawning activities for rainbow trout. However, the current annual DFG planting schedule indicates that this population is not self-sustaining based on the Pope Creek drainage's capacity to sustain the Berryessa recreational trout fishery. Pope Creek does provide habitat for other resident native fish and aquatic species such as WPT, FYLF, and CRLF, as described above.

### Special-Status Birds

#### **Tricolored blackbird (*Agelaius tricolor*)**

Federal Status – None

State Status – Species of Special Concern

Other – None

Tricolored blackbirds usually nest in large flocks, with greater than 50 breeding pairs, in dense vegetation near water or by emergent wetlands. Nesting sites are typically associated with cattails, tules, willows, blackberry, and wild rose. Nests can be built a few centimeters above the ground, at water level, or up to two meters high. Nesting typically occurs from April to July, though it may extend later into the year. During the non-breeding season, they can be found

foraging in open habitats such as croplands and grassy fields. In California, tricolored blackbird occurs predominantly within the Central Valley and west from Tehama County and south into Monterey and Kern counties. Throughout the rest of the state this species is patchily distributed, although it has been readily documented along the south coast from Ventura County into San Diego County. The nearest documented occurrence of this species is located approximately 1.5 miles west of the project site<sup>68</sup>. The riparian habitat within the project site is suitable for tricolored blackbird. This species was not observed within the project site during the biological field surveys.

**Bald eagle (*Haliaeetus leucocephalus*)**

Federal Status – Delisted

State Status – Endangered

Other – None

In 1995, the USFWS reclassified under the Endangered Species Act of 1973 (Act), as amended, the bald eagle from endangered to threatened in the contiguous 48 states, excluding Michigan, Minnesota, Wisconsin, Oregon and Washington where it had already been listed as threatened. In 2007, the Bald Eagle was federally delisted. In the mid-1970's the USFWS established five recovery programs based on geographical distribution of the species, with California located in the Pacific Recovery Region. Because recovery goals were met, the bald eagle was federally reclassified to threatened status and then delisted in California. In the Pacific Recovery Region, habitat conservation efforts, including laws and management practices at federal, state, and community levels have helped facilitate bald eagle population increases. Critical habitat for bald eagle was not designated as part of the Pacific Recovery Plan.

The bald eagle typically nests in forested areas, relatively close (usually less than 1.5 miles) to water that offers foraging opportunities. Nests are most often placed in large old growth trees and occasionally on cliff faces. Nests are often reused from year to year. In California, breeding takes place from February to July. While fishes make up a large portion of the Bald Eagle's diet, the bird will also feed opportunistically on a variety of mammals, birds, and carrion. The current range of bald eagle includes the lower 48 states, with the exception of Vermont. The largest North American breeding populations occur in Alaska and Canada, but there are also significant bald eagle populations in Florida, the Pacific Northwest, the Greater Yellowstone area, the Great Lakes States, and the Chesapeake Bay region. The nearest documented occurrence of bald eagles is located approximately five miles northeast of the project site<sup>69</sup>. Suitable nesting habitat for this species does not occur within the project site. However, this species is likely to forage throughout the habitats onsite because of the close proximity of the project site to Lake Berryessa.

**Bank swallow (*Riparia riparia*)**

Federal Status – Species of Concern

State Status – Threatened Species

Other – None

This species is found primarily in riparian and other lowland habitats west of the deserts during the spring-fall period. In the summer, bank swallows are restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine-textured or sandy soils. This species nests in colonies by digging nest holes in cliffs and river banks. Though this species was not directly observed onsite during the biological surveys, three separate colonies were identified on the banks of Pope Creek along the southwestern edge of the project site. The project has the

potential to impact this species if they utilize the nesting locations along Pope Creek, south of the proposed place of use and adjacent to the property boundary.

Special-Status Mammals

**Pallid bat (*Antrozous pallidus*)**

Federal Status – None

State Status – Species of Special Concern

Other – None

The pallid bat is a medium-sized bat with large wide ears that are clearly separated at the base. It is most commonly found in arid and semi-arid regions with open habitats and rocky areas for roosting. This species has three different roosts: the day roost is usually in a warm horizontal opening such as in attics or rock cracks; the night roost is usually in the open, near foliage; and the hibernation roost, which is often in buildings, caves, or cracks in rocks. This species occurs in a wide variety of habitats including grasslands, shrublands and chaparrals, woodlands, and forests. It is most abundant in open dry habitats that have abundant rocky areas for roosting. It forages over open ground and is mostly a nocturnal hunter. The pallid bat (like most bat species) is most active during the dawn and dusk hours. This species will establish daytime roosts in caves, crevices, mines, large hollow trees, and unoccupied buildings. The pallid bat mates during the months of October through February and most young are born from April through July. The range of the pallid bat includes most of California with the exception of the high Sierra Nevada from Shasta to Kern counties and the northwestern-most corner of the state. The nearest documented occurrence of this species is located approximately 3.5 miles southwest of the site<sup>70</sup>. The pallid bat will utilize most of the habitat types within the project site as foraging habitat. Pallid bats were not observed within the project site, although the field surveys were not conducted during their active periods (i.e., dawn and dusk). However, this species is likely to utilize the oak woodlands and chaparral habitats (especially where rock outcrops occur) and portions of the developed habitats (e.g., abandon structures) for breeding.

**Townsend's big-eared bat (*Corynorhinus townsendii*)**

Federal Status – None

State Status – Species of Special Concern

Other – None

Townsend's big-eared bat is found throughout California in a wide variety of habitats except for alpine and subalpine. This species prefers habitats near water and typically forages at night. Seasonal movement patterns of this species are not well understood and may be localized. The general distribution of this species is strongly correlated with availability of caves and cave-like roosting habitat (e.g., abandoned mines). However, this species is also known to roost in empty buildings, underneath bridges, and within rock crevices and hollow trees. Townsend's big-eared bats roost during the day and typically hibernate during the months of October to April. Females form maternity colonies with other females and their young and these groups will roost together in suitable habitats for added security and warmth. These colonies typically form in May or June when the young are born and remain in the roost until August, or until the young have been weaned and fledged. The nearest documented occurrence of this species is located approximately five miles west of the project site<sup>71</sup>. Townsend's big-eared bats will likely utilize all of the habitats within the project site for foraging. Townsend's big-eared bat was not observed within the project site, although the field surveys were not conducted during their active periods (i.e., dawn and dusk). However, this species is likely to utilize the oak woodlands and chaparral habitats (especially where rock outcrops occur) and portions of the developed habitats (e.g., abandon structures) for breeding.

### Question A

One special-status reptile, WPT was observed within the project site during the surveys. The project site contains suitable habitats for VELB, CRLF, FYLF, tricolored blackbird, bald eagle, bank swallow, pallid bat, and Townsend's big-eared bat, as discussed above. Development of the proposed project could result in potentially significant impacts to these species directly during construction activities (e.g., ground disturbance, vegetation removal, etc.) if the species are harmed, harassed, injured, or displaced. Habitat loss and/or modification of existing habitats resulting from the proposed project (e.g., conversion of existing habitats to vineyard, expansion of the reservoir, modification of the current hydrologic regime within the project site (discussed in the Hydrology and Water Quality section)) is also considered a potentially significant direct impact to these special-status species. Indirect and/or cumulative impacts to special-status species, such as increased human activity, elevated noise levels, and alteration of the current hydrologic regimes within the project site could result in potentially significant impacts to special-status species, should they occur within the vicinity of the project site. Examples of indirect and/or cumulative impacts that could result from the proposed project include (but are not limited to) impacts on birds that may be nesting within 500 feet of construction activities and downstream effects on potentially occurring special-status species (e.g., amphibians, reptiles, etc.) from water diversion.

Elderberry shrubs, host species for the federally threatened valley elderberry longhorn beetle, occur adjacent to several project components (proposed offstream Reservoir 4, and the pipeline from POD 2 to the onstream reservoir; refer to **Figure 4**). As designed, the project would directly impact (i.e., remove) four identified elderberry bushes. In order to achieve full avoidance of potential valley elderberry longhorn beetle habitat in accordance with the USFWS' Conservation Guidelines for the Valley Elderberry Longhorn Beetle (1999), the following permit terms, substantially as follows, shall be included in any permit or license issued pursuant to Application 30384:

- *Several elderberry shrubs have been observed on the property at separate locations along Pope Creek (see Figure 4 of the IS/MND for the Marino Water Rights Project). Prior to any construction activities in the place of use, Permittee shall consult with USFWS to establish a mitigation plan (Plan) for the elderberry shrubs. Permittee shall submit a plan approved by USFWS to the Deputy Director for Water Rights to protect valley elderberry longhorn beetle (VELB) prior to any project construction. If a plan is not required by USFWS, Permittee shall forward a statement from USFWS indicating that a plan is not required to the Deputy Director for Water Rights prior to any construction activities related to this project. If construction-related disturbance will occur within 100-feet of elderberry shrubs, USFWS shall be consulted to determine if an impact will occur. If VELB are determined to occupy the site, no activities determined to have a potential to adversely affect the shrubs or any VELB shall be conducted without a Biological Opinion, Incidental Take Permit, or other authorization from USFWS, and findings shall be provided to the Deputy Director for Water Rights for approval 10 days prior to any project construction. If required, transplanting of elderberry shrubs or planting additional seedlings or cuttings shall be conducted consistent with the USFWS Conservation Guidelines for the Valley Elderberry Longhorn Beetle (1999).*

The following permit terms pertaining to special status amphibians, substantially as follows, shall be included in any permit or license issued pursuant to Application 30384 to ensure that no take of these species occurs:

- *Within 14 days prior to the onset of construction activities within any and all areas that fall within 100 feet of suitable habitat for California red-legged frog and foothill yellow-legged frog (reservoirs and all drainages, as shown on Figure 4 of the IS/MND for the Marino Water Rights Project), a biologist, whose qualifications are acceptable to the Deputy Director for Water Rights (approved biologist), shall conduct a pre-construction survey for these species. If either of these species is observed within the project site during the pre-construction survey, USFWS and/or DFG must be contacted and any and all construction activities must be delayed until an appropriate course of action can be established and approved by USFWS and/or DFG. If no California red-legged frog and/or foothill yellow-legged frog are observed within the project site during the pre-construction survey, construction activities may begin. If construction is delayed or halted for more than 14 days, another pre-construction survey for California red-legged frog and foothill yellow-legged frog shall be conducted.*

*Prior to the onset of construction activities, the approved biologist shall develop a worker sensitivity training program that addresses all issues associated with the assumed presence of California red-legged frog and foothill yellow-legged frog within the project site; including recognition of these species and their habitat. Any and all personnel that will be working within the vicinity of suitable habitat for these species shall take the sensitivity training program and sign an acknowledgement that he or she has received the training, understands that take of these animals and destruction of their habitats is a violation of the FESA and/or the CESA, and fully understands the contents of the sensitivity training program. The signed acknowledgments by project personnel for the worker sensitivity training program shall be attached with a report of the pre-construction survey and shall be submitted to USFWS/DFG with a copy to the Division.*

- *Once construction of the proposed project is complete, permanent avoidance setbacks (i.e., buffers) of at least 50 feet shall be established around any and all suitable California red-legged frog and/or foothill yellow-legged frog habitats within the project site (reservoirs and all drainages). The areas within these avoidance setbacks may not be developed as long as this permit or license remains active unless a formal habitat assessment and protocol determinant-level surveys are conducted for California red-legged frog and a biological opinion from the USFWS has been issued. The Permittee may opt to proceed with a formal habitat assessment and protocol-level determinant surveys for special-status amphibians to avoid implementation of the permanent avoidance setbacks onsite; the results of the assessment and USFWS consultation shall be submitted to the Deputy Director for Water Rights.*

Suitable habitat for Western pond turtle is present onsite in the existing reservoir, along Pope Creek, and in the drainages directly tributary to Pope Creek. To protect Western pond turtle, the following permit terms, substantially as follows, shall be included in any permit or license issued pursuant to Application 30384 to ensure that no take of the species occurs and for the protection of habitat:

- *A biologist whose qualifications are acceptable to the Deputy Director for Water Rights (approved biologist) shall conduct a pre-construction survey for Western pond turtles no more than 30 days prior to construction in suitable aquatic habitats within all areas that fall within 100 feet of suitable aquatic habitat for this species as shown in the habitat map (Figure 4 of the IS/MND for the Marino Water Rights Project). A combination of visual and trapping surveys may be performed with authorization from DFG.*

*If Western pond turtle is found near any proposed construction areas, impacts on individuals and their habitat shall be avoided to the extent feasible. If avoidance of occupied habitat is feasible, an exclusion zone around the habitat shall be established using temporary plastic fencing with "Sensitive Habitat Area" signs posted and clearly visible on the outside of the fence. If avoidance of occupied habitat is not possible, the approved biologist, with approval from DFG, shall capture turtles prior to construction activities and relocate them to nearby, suitable habitat a minimum of 300 feet downstream from the work area. Exclusion fencing should then be installed if feasible to prevent turtles from reentering the work area. For the duration of work in these areas, the approved biologist shall conduct monthly follow-up visits to monitor the effectiveness of exclusionary measures.*

*Once construction of the proposed project is complete, permanent avoidance setbacks (i.e., buffers) shall be established around all suitable Western pond turtle habitats within the project site. These setbacks shall be 100 feet from the perimeter of the enlarged reservoir and the confluence of the Unnamed Stream with the reservoir. The areas within these avoidance setbacks may not be developed as long as water is being diverted/stored under this permit, unless approval from DFG has been issued and submitted to the Deputy Director of Water Rights.*

- *Prior to beginning construction or diversion or use of water under this permit, Permittee shall submit a Western pond turtle habitat enhancement plan for review and approval of the Deputy Director for Water Rights. The enhancement plan shall include the actions necessary to provide sufficient underwater refugia and basking habitat (e.g., submerged logs, downed trees and large rocks) for Western pond turtles. Permittee shall develop the enhancement plan in consultation with DFG. The approved Western pond turtle enhancement plan shall be implemented and Permittee shall provide photographic documentation that the plan has been implemented within one year of enlargement of the reservoir.*

To protect special-status birds, the following permit terms, substantially as follows, shall be included in any permit or license issued pursuant to Application 30384:

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

Special-status bat species are likely to use several habitat types within the proposed place of use; however, no roosting habitat would be impacted by the proposed project.

The following additional permit term, substantially as follows, shall be included in any permit or license issued pursuant to Application 30384:

- *This permit does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & Game Code, §§ 205-2097) or the federal Endangered Species Act (16 U.S.C.A. §§ 1531 - 1544). If a "take" will result from any act authorized under this water right, the Permittee shall obtain authorization for an incidental take prior to construction or operation of the project. Permittee shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this permit.*

Implementation of these measures would reduce project related impacts on special-status species to less than significant levels.

#### *Question B*

Riparian habitat is considered a sensitive natural community by the Department of Fish and Game. Riparian habitat occurs along Pope Creek and along several of the stream/drainage features within the project site (**Figure 4**). The proposed project would result in direct impacts to riparian habitat during construction activities because a portion of the riparian vegetation would be removed for reservoir enlargement and culvert and bridge construction. It is anticipated that the pipeline between the two reservoirs would be constructed to bridge over waters of the U.S., thereby avoiding impacts to jurisdictional features.

To avoid or minimize project related impacts to riparian habitat, the following permit terms, substantially as follows, shall be included in any permit or license issued pursuant to Application 30384:

- *No work shall commence and no water shall be diverted, stored, or used under this permit until a signed copy of a Streambed Alteration Agreement between DFG and the Permittee is filed with the Division. Compliance with the terms and conditions of the agreement is the responsibility of the Permittee. If a Streambed Alteration Agreement is not necessary for this permitted project, the Permittee shall provide the Division a copy of a waiver signed by DFG.*
- *For the protection of riparian habitat and mitigation of disturbed riparian habitat, Permittee shall establish minimum 50 foot setbacks from Pope Creek and the three Unnamed Streams on the property tributary to Pope Creek with riparian habitat (Figure 4 of the IS/MND for the Marino Water Rights Project). The setbacks shall be measured from the top of the bank of Pope Creek and the Unnamed Streams. No ground disturbing activities shall occur within the setback area, including, but not limited to, grading, herbicide spraying, roads, fencing, and use or construction of storage areas, with the exception of access roads and occasional equipment access reasonably necessary for continued operation of the vineyard and management of the setback area. Equipment access through the setback shall be limited to previously disturbed areas of the setback when possible and is only allowed when other means of access are not available. Equipment access through the setback area shall incorporate best management practices to minimize disturbance to water, soils, and vegetation. Planting of native riparian vegetation within the setback area is allowed. These requirements shall remain in effect as long as water is being diverted under this permit.*

- *For the protection of riparian habitat and mitigation of disturbed riparian habitat, Permittee shall implement a riparian enhancement plan. Prior to beginning construction or diversion or use of water under this permit, Permittee shall submit a riparian enhancement plan for review and approval by the Deputy Director for Water Rights. The riparian enhancement plan shall specify: (1) the location of areas to be planted; (2) the number and species of plants to be planted; (3) planting methods; (4) success criteria and monitoring methods; and (5) a description of the actions that will be taken if success criteria are not met. The riparian enhancement plan shall require at least five years of monitoring to ensure identified success criteria are met. The riparian enhancement plan shall be implemented within two years of approval of the plan.*

Implementation of these measures would reduce potential impacts to riparian habitat to less than significant levels.

#### *Question C*

As discussed previously, a total of 13 stream/drainage features, six seasonal wetland features, and the reservoir were identified within the project site. These features have the potential to be considered jurisdictional waters of the U.S. and as such, would be subject to regulation by the United States Army Corp of Engineers (USACE). The proposed project would impact potentially jurisdictional waters of the U.S. directly through expansion of the existing reservoir, installation of a bridge over Pope Creek, and construction of a culvert over the Unnamed Tributary to Pope Creek. Further development within the proposed POU could also directly impact potentially jurisdictional waters of the U.S. Any project related activities that involve alteration of the existing Ordinary High Water Mark (OHWM), discharge of dredge materials, or fill of jurisdictional waters of the U.S. are potentially significant impacts.

In addition to the terms in the Hydrology and Water Quality section, the following permit terms, substantially as follows, shall be included in any permit or license issued pursuant to Application 30384 to avoid or minimize project related impacts to potentially jurisdictional waters of the U.S.:

- *For the protection of wetlands, Permittee shall establish minimum 50 foot setbacks within the places of use from the edge of any wetland (Figure 4 of the IS/MND for the Marino Water Rights Project); these setbacks shall be mapped by a qualified biologist acceptable to the Deputy Director for Water Rights (qualified biologist) and approved by the Deputy Director for Water Rights prior to the start of construction or diversion of water under this permit. The 50 foot setback area shall be flagged by a qualified biologist prior to the start of construction activities. No ground disturbing activities shall occur within the setback area, including, but not limited to, grading, herbicide spraying, roads, fencing, and use or construction of storage areas. Planting, maintenance, and irrigation of native wetland vegetation within the setback area are allowed.*
- *For the mitigation of disturbed wetlands, mitigation shall be conducted in accordance with the provisions in a Mitigation and Monitoring Plan that shall be prepared for USACE in association with the 404 Permit Application process. Prior to licensing of this permit, Permittee shall submit evidence to the Deputy Director for Water Rights indicating that mitigation was completed in accordance with a USACE-approved mitigation plan. Evidence shall include confirmation by the USACE or submittal of a monitoring report verifying that required mitigation was completed.*

- *Prior to the start of construction, or diversion or use of water under this permit, Permittee shall obtain the appropriate permit from USACE and file a copy with the Division of Water Rights. If a permit from USACE is not necessary for this permitted project, the Permittee shall provide the Division of Water Rights with a letter from USACE affirming that a permit is not needed.*
- *Prior to the start of construction, or diversion or use of water under this permit, Permittee shall obtain Clean Water Act section 401 Water Quality Certification from the State Water Board or the San Francisco Bay RWQCB.*

Implementation of these terms would reduce potential impacts to potentially jurisdictional waters of the U.S. to less than significant levels.

#### *Question D*

The proposed project is not expected to substantially interfere with the movement of any native resident or migratory fish and/or wildlife species, etc. Some fencing currently exists on the project site, mostly in the flatter areas where active cattle grazing occurs. Currently, this fencing does not substantially interfere with the movements or migratory activities of any wildlife species. No new fencing is proposed as part of the project. The stream/drainages within the project site could provide movement and/or migratory corridors for fish and/or wildlife species. However, the proposed project would not impact these features to a degree that would substantially interfere with the movement of fish and/or wildlife because the proposed stationary pump on POD 2 will be screened to current DFG standards. Therefore, potential impacts of this nature are considered less than significant.

#### *Question E*

Oak woodland/savannah habitat was identified within the project site (**Figure 4**). Both the California Oak Woodlands Conservation Act and the Napa County General Plan assert protective measures on removal of oak trees and destruction of oak woodland habitats. As such, project related activities that result in removal of any oak trees would be considered a potentially significant impact.

A supplemental tree survey was conducted by AES staff in all areas that may be impacted by the proposed project (i.e., proposed place of use)<sup>72</sup>. During this survey, trees were identified to species-level taxonomy and diameter at breast height (DBH) data was recorded. The DBH of surveyed trees were then categorized by size classes. The tree survey of the proposed place of use identified four dominant tree species: blue oak (*Quercus douglasii*), Valley oak (*Quercus lobata*), interior live oak (*Quercus wislizenii*), and gray pine (*Pinus sabiniana*). A total of 1,106 trees were surveyed and 637 trees had a DBH of greater than six inches. The 637 trees included 88 blue oak, 232 Valley oak, 161 interior live oak, and 156 gray pine<sup>73</sup>.

Any removal of oak trees that have a DBH greater than six inches should be considered a significant impact. As such, the proposed project could result in significant impacts to oak trees and oak woodland habitat.

To minimize impacts to oak trees and oak woodland habitat, the following permit terms, substantially as follows, shall be included in any permit or license issued pursuant to Application 30384:

- *Prior to the onset of construction activities, a formal arborist survey shall be conducted by a certified arborist or registered forester. Appropriate data (e.g., position, height, drip-*

*line radius, diameter-at-breast-height (DBH), general health, etc.) shall be collected by the arborist for any potentially impacted trees and the data shall be submitted to Napa County and the Deputy Director for Water Rights prior to the onset of construction activities or diversion of water under this permit.*

- *Direct impacts to native oak trees shall be mitigated by the following: 1) An oak tree replacement program shall be implemented, which shall include the planting, irrigation, monitoring, and maintenance of replacement native oak trees at a minimum 2 to 1 ratio in areas not included in the proposed place of use; 2) A permit for removal of trees greater than six inches in diameter shall also be obtained from Napa County prior to any tree removal activities, unless specifically waived by Napa County, and; 3) A copy of the Napa County permit or waiver shall be submitted to the Deputy Director for Water Rights prior to the commencement of any construction activities.*

*Proposed replacement trees shall be planted with 35 feet of separation between trunks. Permittee shall provide a map showing the location of each replacement planting within one year of the date of permit issuance and provide updates to the map with subsequent monitoring reports if changes occur.*

*Replacement tree plantings for the mitigation area shall be obtained from a combination of nursery stock grown on site, direct planting in proposed mitigation area from acorns and seeds collected on site, and/or trees obtained from a local native plant nursery or supplier. Any trees obtained from nurseries or suppliers shall consist of propagules derived from locally collected stock (native of Napa County) having a similar genetic origin to indigenous species on site. Permittee shall provide a written statement within one year of permit issuance disclosing the origin of each of the replacement plantings and updates to the written statement with subsequent monitoring reports if failed plantings are replaced or relocated.*

*Permittee shall provide photographic evidence to document the tree replacement plantings within one year of the date of permit issuance and update photographs with subsequent reports if failed plantings are replaced or relocated.*

*Any diversion of water pursuant to this permit is unauthorized if survival of replacement tree plantings falls below 80%. Permittee shall maintain replacement plantings such that survival rate of trees is not less than the identified thresholds. Survival rate shall be documented and submitted by Permittee annually.*

*Annual monitoring reports shall be prepared by a biologist or certified arborist whose qualifications are acceptable to the Deputy Director for Water Rights. The initial monitoring report shall be submitted to the Deputy Director for Water Rights within one year of the date of permit issuance.*

*The initial monitoring report shall include documentation of:*

- *planting locations (map);*
- *species of each planting;*
- *size of each tree at planting (height and diameter at breast height (dbh), if applicable);*
- *statement identifying the origin of each replacement tree; and*
- *photographic evidence documenting planted replacement trees.*

*Subsequent annual reports shall be submitted annually to the Deputy Director for Water Rights and shall include documentation of:*

- size of each tree (height and dbh if applicable);*
- age of each tree;*
- health status of each tree;*
- photographic evidence documenting progress of replacement trees; and*
- locations (updated map), initial size measurement (height and dbh), photographic evidence and statement of origin for new plantings, if necessary to replace failed plantings.*

*These reports shall be filed annually for a minimum of five years or until at least 80% of replacement plantings has survived five years. At the time this success rate has been obtained, a final report shall be filed that provides written and photographic documentation of the following:*

- location of each tree;*
- size of each tree (height and dbh); and*
- age of each tree.*

*Permittee shall refrain from any activities which may impact the replacement plantings including but not limited to development and timber harvesting in the replanting area.*

*The requirements of this term may be modified based on Napa County oak tree mitigation requirements and if modifications are first approved by the Deputy Director for Water Rights prior to implementation of the plan.*

- To protect oak trees intended to remain undisturbed from project-related disturbance, construction fencing shall be installed outside the drip lines of oak trees within 100 feet of construction areas. No encroachment into the fenced areas shall be permitted and fencing shall remain in place until all construction activities have ceased. Where encroachment is necessary past the driplines, a certified arborist shall document compliance with the following: 1) At least 12 inches of mulch shall be temporarily placed to protect roots from compaction; 2) Any tree roots to be severed shall be the maximum feasible distance from the trunk; and 3) Any roots over one inch in diameter that are damaged as a result of construction activities shall be traced back and cleanly cut behind any damaged area, and exposed roots shall be kept moist or covered immediately.*

*Documentation that this mitigation measure has been completed shall be submitted to the Division within 180 days of project construction.*

Implementation of the permit terms above would reduce potential impacts to oak trees and oak woodland habitats to a less than significant level.

#### *Question F*

No Habitat Conservation Plan or Natural Community Conservation Plan has been adopted for the project site. The proposed project would not result in conflicts with any approved local, regional, state, or federal HCP. No project related impacts would occur.

*Findings*

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

**5. Agriculture and Forestry Resources.** In determining whether impacts to agricultural resources are significant environmental impacts, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

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

Agriculture and agricultural production are prevalent land uses in Napa County. Fertile valley and foothill areas have been identified by Napa County as areas where agriculture is and should continue to be the predominant land use. Urban-centered growth and agricultural preservation are objectives of the county<sup>74</sup>. The project site lies within an area zoned and designated as Agricultural Watershed (see the Land Use and Planning section below).

*Questions A-E*

The project site is designated within the Napa County General Plan as Agriculture, Watershed and Open Space. Under the proposed project, the project site would be used for agricultural purposes. The proposed project would not involve the conversion of forest land to non-forest use. The project site is zoned as Agricultural Watershed, and therefore would not conflict with existing zoning for forest land or timberland. No impact would occur.

*Findings*

No impacts would occur to agricultural or forestry resources as a result of the proposed project.

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

Major noise sources in Napa County consist of highway traffic, railroads, airports, industry/commerce, and agriculture.<sup>75</sup> Major noise sources in the rural/agricultural areas of Napa County consist primarily of agricultural noise and occasional construction noise. Agricultural noise includes general machinery use and pest control devices. Pest control devices often use noise to drive away birds from agricultural areas. Frost protection devices, which employ engine-driven propellers to move air in a frost-threatened field, may also create noise.

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

Noise sensitive areas identified within Napa County are those areas that are subject to noises that adversely affect what people are doing on the land.<sup>76</sup>

*Questions A-D*

The proposed project would result in seasonal and temporary noise generation related to construction and maintenance activities of the vineyard. At the project site, construction activities would require the use of heavy equipment. During construction and operation, work would typically be conducted during daylight hours. Given the existing rural and

agricultural/gravel mining nature of the project area, the proposed project would not expose sensitive receptors to substantial noise. A less than significant impact would occur.

**Questions E and F**

The project site is not in the vicinity of a private or public airstrip; the closest airport is approximately six miles from the project site. No impacts would occur.

**Findings**

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

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

**Napa County General Plan**

The project site lies within an area designated as Agriculture, Watershed and Open Space by the 2008 Napa County General Plan and the project site is zoned Agricultural Watershed. The Napa County Zoning Ordinance describes the intent of the Agricultural Watershed designation as follows:

The Agricultural Watershed district classification is intended to be applied in those areas of the county where the predominant use is agriculturally oriented, where watershed areas, reservoirs and floodplain tributaries are located, where development would adversely impact such uses, and where the protection of agriculture, watersheds and floodplain tributaries from fire, pollution and erosion is essential to the general health, safety and welfare<sup>77</sup>.

General uses of the Agricultural Watershed designation provided by the General Plan consist of agriculture, processing of agricultural products, and single-family dwellings.<sup>78</sup>

**Napa County Erosion Control Plans**

Erosion Control Plans are required for all agricultural developments which involve an earthmoving activity, grading, improvement, or construction of a structure on sites of 5 percent slope or greater. The Napa County Conservation, Development and Planning Department administer the ordinance and grants approvals. The Napa County Resource Conservation District reviews all erosion control plans for agriculture on slopes greater than 5 percent, and passes on its recommendations to Napa County Conservation, Development and Planning Department<sup>79</sup>.

With the exception of vineyard replants, no construction, improvement, grading, earthmoving activity or vegetation removal associated with the development or use of land shall take place on those parcels or portions thereof having a slope of 30 percent or greater.<sup>80</sup>

### **Napa County Stream Setbacks**

Section 18.108.025 of the Napa County Conservation Regulations states that no clearing of land for new agricultural uses shall take place within the following setbacks from Napa County definitional streams (measured from the top of the bank on both sides of the stream as it exists at the time of replanting, redevelopment, or new agricultural activity):

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

Uses permitted within required stream setbacks include:

1. Maintenance of existing vineyards or other agricultural crop, including the prudent use of fertilizers and such pesticides, herbicides, insecticides, fungicides or other techniques for the control of insects, weeds, diseases and pests that are necessary to maintain the productivity of croplands;
2. Use and maintenance of existing tractor turnaround areas, agricultural roads, recreational roads, trails and crossings;
3. Activities which are consistent with agricultural practices in the area and which are intended to protect the security and safety of the surrounding area including, but not limited to, fire, flood protection and bank stabilization, weed control, trespass and nuisance protection;
4. Development and maintenance of those water resources, including pumps, that are necessary for agricultural and domestic purposes;
5. Maintenance and replacement of existing public works facilities such as pipes, cables, culverts and the like;
6. Maintenance of existing or restoration of previously dredged depths in existing flood-control projects and navigational channels authorized by a permit issued by the director of public works pursuant to Title 16;
7. Construction of nonmotorized vehicular and pedestrian trails;
8. Construction of new public works projects such as drainage culverts, stream crossings when such projects are specifically authorized and permitted by existing State, Federal or local law;

9. Construction activities undertaken by or under the auspices of a Federal, State or local agency to preserve or restore existing habitat areas;
10. Removal of vegetation as authorized by the director or his designee to alleviate an existing hazardous condition;
11. Other uses similar to the foregoing found by the director or his designee to be consistent with the intent of this chapter;
12. Installation of stream crossings, recreational roads, and equestrian and nonmotorized trails in accordance with appropriate permits from other State, Federal and local use permit requirements when it can be determined by the director or his designee that the least environmentally damaging alternative has been selected as a part of an approved project<sup>81</sup>.

*Question A*

The project site is located in a rural area of Napa County. Development of the proposed project would not result in physical barriers that would divide an established community. No impact would occur.

*Question B*

The proposed project is consistent with the General Plan and zoning designations for the property. The Applicant has agreed to maintain appropriate stream setbacks on the property, and would not develop on slopes greater than 30 percent. Development on slopes greater than five percent would require the approval of an Erosion Control Plan from Napa County prior to construction. The permit terms discussed in the Geology and Soils section above would reduce this impact to a less than significant level.

*Question C*

No Habitat Conservation Plan or Natural Community Conservation Plan currently exists for the proposed project area. Thus, the proposed project would not conflict with any existing habitat conservation plan or natural community conservation plan and no impact would occur.

*Findings*

The proposed project would not result in significant impacts to land use and planning with the implementation of the identified permit terms.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>8. Mineral Resources.</b> Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Napa County General Plan identifies sand, gravel and rock deposits within the property boundary of the proposed project.<sup>82</sup> The conservation policy for mineral deposits described in

the general plan include encouraging compatible use of resource areas and the conservation of areas containing significant mineral deposits.<sup>83</sup>

Approximately 10 acres on the subject property are part of a gravel mining operation that has been in existence for approximately 50 years. Statement 8023 documents the diversion of 1.34 cubic-feet of water per annum from Pope Creek tributary to Putah Creek for gravel mining.

*Questions A and B*

Sand, gravel and rock deposits are located within the property boundary of the proposed project. However, the proposed project would not impact the availability of these resources. No impact would occur.

*Findings*

The proposed project would not result in significant impacts to mineral resources.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>9. Hazards and Hazardous Materials. Would the project:</b>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Database searches were conducted for records of known storage tank sites and known sites of hazardous materials generation, storage, and/or contamination. Databases were searched for sites and listings up to 2 miles from a point roughly equivalent to the center of the project site. The environmental database review was accomplished by using the services of a computerized search firm Environmental Data Resources, Inc. (EDR). EDR uses a geographical information system to plot the locations of past and/or current hazardous materials involvement. The complete list of reviewed databases is provided in the EDR report. The project site was not listed on any database searched by EDR as having hazardous materials involvement. Additionally, no adjacent sites were identified within the applicable search radius as having current and/or past hazardous materials involvement.<sup>84</sup>

**Questions A-G**

Hazardous materials that would be used during the construction and operation of the proposed project would be limited to common petroleum and agricultural products. When properly used, these products do not present a significant hazard. The proposed project is approximately 4 miles from the nearest school, but the use of hazardous materials would be limited to the vineyard areas; the proposed project would not present a safety hazard to the school. A search of government environmental records did not reveal any known hazardous materials sites within the project site. The project site is located approximately six miles from the nearest airport, but the proposed project would not present a safety hazard to persons at the airport. The proposed project does not include components that would interfere with an adopted emergency plan.

**Question H**

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

**Findings**

Impacts to hazards and hazardous materials as a result of the proposed project are considered less than significant.

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

As discussed above, the project site is located in a relatively rural area of Napa County. Surrounding land uses consist of open space, agricultural vineyards, a gravel mining operation,

and rural residential. The City of St. Helena, located approximately 10 miles southwest of the project site, is the closest location for large-scale residential development identified in the Napa County General Plan.

**Questions A-C**

The proposed project does not involve the development of any homes or businesses. The proposed project would not generate commercial activities substantial enough to induce substantial growth in the project area. The proposed project does not involve the displacement of people or housing.

**Findings**

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

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>11. Transportation and Circulation.</b> Would the project:				
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system ( <i>i.e.</i> , result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially increase hazards due to a design feature ( <i>e.g.</i> , sharp curves or dangerous intersections) or incompatible uses ( <i>e.g.</i> , farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies supporting alternative transportation ( <i>e.g.</i> , bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Vehicular access to the project site is provided by Pope Canyon Road in northern Napa County. Pope Canyon Road turns into Pope Valley Road approximately 3.5 miles southwest of the project site. Pope Valley Road is a two-lane county road that connects the community of Pope Valley in the north with Angwin in the south.

**Questions A-G**

A slight increase in traffic is anticipated from the implementation of the proposed project. Vineyard construction and operation would require workers that would commute to the project site. Truck trips would occur during construction to transport materials to the project site, as well as during harvest. Trips during construction and vineyard operations would typically occur during non-peak hours. The proposed project would not generate a substantial or continuous

increase in traffic. No substantial new impediments to emergency access or incompatible uses are anticipated. The proposed project is not expected to result in inadequate parking capacity, or conflict with adopted alternative transportation policies, plans, or programs. Potential impacts are considered less than significant.

**Findings**

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

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>12. Public Services.</b> Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Public services include fire and police protection, schools, parks, and other public facilities. The project area is located within unincorporated Napa County and law enforcement services for this area are provided by the Napa County Sheriff’s Department. Fire protection services are provided by the Napa County Fire Department and the California Department of Forestry (CDF). Pope Valley Union Elementary provides K-8 grade public education in the project area and St. Helena Unified School District provides K-12 grade public education to the east and south of the project area.

**Questions A-E**

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

**Findings**

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

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>13. Utilities and Service Systems.</b> Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g) Comply with Federal, State, and local statutes and regulations related to solid waste?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

The project site is not served by public water or wastewater services. Residences in the project area rely on private wells for domestic water supply and private septic systems for wastewater treatment. The closest landfill is the Clover Flat Landfill located on Silverado Trail near Calistoga in Napa County, approximately 12 miles southwest of the project site.

**Questions A-G**

No additional wastewater generation would result as part of the proposed project. The project site is not connected to wastewater or storm water facilities. The proposed project, if approved, would result in the approval of additional surface water rights to support a proposed vineyard. An analysis of surface water supply is discussed in the Hydrology and Water Quality section above. Additional water supplies, such as connection to public water supply, would not be required. The proposed project would not generate substantial solid waste and would not conflict with government regulations concerning the generation, handling or disposal of solid waste. Impacts are considered to be less than significant.

**Findings**

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

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>14. Aesthetics.</b> Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

**Questions A-D**

The proposed project would result in the agricultural use of the project site. This use is consistent with the rural aesthetic quality of the project area. The project site is not located within a State scenic highway. The proposed project would not substantially degrade the existing visual character of the site or introduce a new source of substantial light or glare. Impacts are considered to be less than significant.

**Findings**

The proposed project would not result in significant aesthetic impacts.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>15. Cultural Resources.</b> Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Documentation of cultural resources within the subject property was achieved through review of pertinent anthropological literature, historic documents and maps, a records search at the Northwest Information Center (NWIC), Native American consultation, and a field examination of the subject property by archaeologists from Tom Origer and Associates. The documentation presented herein is derived primarily from the report *A Cultural Resources Survey for Nichelini Vineyard Water Right Application 30384, Pope Valley, Napa County, California*<sup>85</sup>. The field phase of the study included a pedestrian survey of approximately 300 acres place of use, one existing and four proposed reservoirs, and three points of diversion. A confidential cultural resources report, bound under separate cover, documents the scope and results of a cultural resources inventory and impact analysis for the proposed project and is on file with the Division of Water Rights.

Archival research conducted for the proposed project included examination of the library and project files at Tom Origer and Associates, as well as a records search conducted at the NWIC of the California Historical Resources Information System in the fall of 2006. Sources consulted included, but were not limited to: California Inventory of Historical Resources (California Office of Historic Preservation, 1976), California Historical Landmarks (1990), California Points of Historical Interest (1992), and the Historic Properties Directory Listing for Napa County (2006). The Historic Properties Directory includes the National Register of Historic Places, the California Register of Historical Resources, and the most recent listings of the California Historical Landmarks and California Points of Historical Interest. Additional sources referenced during the

study include ethnographic literature describing Native American occupation of the region, county histories, and other relevant primary and secondary sources. Historical maps reviewed include 19<sup>th</sup> century General Land Office (GLO) plats, county maps and atlases, and historic USGS topographic quadrangles.

The records search and literature review were done to: (1) determine whether known cultural resources had been recorded within or adjacent to the study area and to determine if the parcel was subject to surveys in the past; (2) assess the likelihood of unrecorded cultural resources based on archaeological, ethnographic, and historical documents and literature; and (3) to review the distribution of nearby archaeological sites in relation to their environmental setting.

The records search found that there are three known prehistoric sites within the area of potential effect (APE). Furthermore, the records search found that no previous cultural resources surveys have been conducted within the APE. A review of ethnographic sources failed to indicate the presence of any proto-historic or ethnographic villages in the APE or immediate vicinity. Examination of a historical GLO plat (1871) revealed the presence of at least one late 19<sup>th</sup> century building within the study area, identified as "Walter's House." Historic topographic quadrangles (1945, 1958) depict multiple structures at the approximate location of Walter's House, as well as a single structure located near the western boundary of the APE.

An intensive pedestrian survey of the study area, completed in September and October of 2006, resulted in the identification of three previously undocumented cultural resources (Valley View Site, West House Site, Walter's House Site). The Valley View site consists of a scatter of obsidian flakes and tools, as well as groundstone and fire affected rock. The West House Site is characterized by the presence of an abundance of historic-period metal objects, bricks, and other early to mid 20<sup>th</sup> century artifacts. Features noted at the site include a cement cellar and large concrete block. Walter's House Site is the plotted location of a residence indicated on the 1871 GLO plat. While surface examination of the mapped location failed to indicate the presence of any historic resources, Steen and Origer (2006:9) recorded the area depicted on the historic map and note the possibility of a historic archaeological site related to the former occupation.

The three previously recorded cultural resources (CA-NAP-254, CA-NAP-308, CA-NAP-463) were revisited and updated in 2006. All three previously recorded resources reflect prehistoric Native American occupation of the area and include a dance-house depression (CA-NAP-254), a habitation site with several features and lithic artifacts (CA-NAP-308), and a sparse lithic scatter (CA-NAP-436). **Table 7** summarizes the constituents of each resource, potential impacts, and recommended mitigation.

**TABLE 7: CULTURAL RESOURCES WITHIN THE PROJECT SITE**

Site	Description	Potential Impact	Mitigation
CA-NAP-254	Dance house pit	Within proposed POU	Avoidance by expanding wetland buffer or permanent fencing
CA-NAP-308	Lithic scatter and habitation debris	No impact - outside proposed POU	N/A
CA-NAP-436	Sparse lithic scatter	Within proposed POU	Avoidance by expanding wetland buffer, permanent fencing, or CARIDAP
Valley View Site	Lithic scatter and habitation debris	Within proposed POU	Avoidance by expanding wetland buffer or permanent fencing
West House Site	Historic-period foundation and debris	Within proposed POU	Avoidance by expanding wetland buffer or permanent fencing
Walter's House Site	Possible historic-period homestead	Within proposed POU and adjacent to proposed Reservoir 4	Avoidance by expanding elderberry buffer or construction monitoring

**Questions A-D**

Six potentially significant cultural resource sites have been documented within the project area. Site CA-NAP-308 is located well outside of the proposed place of use and other project components. Five of the resources (except CA-NAP-308) are within the proposed place of use. The following measures are based, in large part, on the recommendations provided in the Tom Origer and Associates report<sup>86</sup>. The following terms, substantially as follows, shall be included in any water right permit or license issued pursuant to Application 30384:

- The six locations designated as cultural sites identified by Tom Origer and Associates in the report titled "A Cultural Resources Survey for Nichelini Vineyard Water Right Application 30384" dated October 2006 shall be avoided during project construction, development, and operation. The sites shall not be impacted by any of the features of the proposed project (e.g., water diversion, storage reservoirs, and distribution facilities, including installation of buried pipelines; and ripping, trenching, grading, or planting related to conversion and maintenance of the place of use). If future project-related activities or developments at the locations are unavoidable, then an archaeologist who has been approved by the California Historical Information System to work in the area and who is acceptable to the staff of the Division of Water Rights shall determine the significance of the sites. If mitigation is determined to be necessary, then the archaeologist shall design an appropriate mitigation plan and submit the plan for approval by the Deputy Director for Water Rights. After the plan has been approved, the mitigation must be completed to the satisfaction of the Deputy Director for Water Rights prior to activities in the area of the site. Permittee shall be responsible for all costs associated with the cultural resource related work.*

There is also the possibility that buried archaeological deposits or human remains could be present in any part of the study area, and accidental discovery could occur through vineyard development and maintenance activities. To reduce potential impacts to subsurface cultural resources and human remains, the following permit terms, substantially as follows, shall be included in any water right permit or license issued pursuant to Application 30384:

- Should any buried archaeological materials be uncovered during project activities, such activities shall cease within 100 feet of the find. Prehistoric archaeological indicators include: obsidian and chert flakes and flaked stone tools; bedrock outcrops and boulders with mortar cups; ground stone implements (grinding slabs, mortars and pestles) and*

*locally darkened midden soils containing some of the previously listed items plus fragments of bone and fire affected stones. Historic period site indicators generally include: fragments of glass, ceramic and metal objects; milled and split lumber; and structure and feature remains such as building foundations, privy pits, wells and dumps; and old trails. The Deputy Director for Water Rights shall be notified of the discovery and a professional archaeologist shall be retained by the Permittee to evaluate the find and recommend appropriate mitigation measures. Proposed mitigation measures shall be submitted to the Deputy Director for Water Rights for approval. Project-related activities shall not resume within 100 feet of the find until all approved mitigation measures have been completed to the satisfaction of the Deputy Director for Water Rights.*

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

Since the time of Steen and Origer's 2006 study, an additional approximately 20 acres of place of use has been proposed in the south-central portion of the property that includes a possible crossing over Pope Creek. A permit term, substantially as follows, shall be included in any water right permit or license issued pursuant to Application 30384:

- *If current project design plans change to include any additional acreage or ground disturbing activities outside of the areas surveyed by Origer and Associates as identified in the report titled "A Cultural Resources Survey for Nichelini Vineyard Water Right Application 30384" dated October 2006, a cultural resources study shall be conducted of these areas. A report of findings shall be submitted to the Deputy Director for Water Rights for approval prior to construction of the project or diversion of water under this permit.*

#### *Findings*

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

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

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

*Question A*

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

*Question B*

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

*Findings*

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

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

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

**Questions A-C**

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

**III. DETERMINATION**

On the basis of this initial evaluation

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

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

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

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

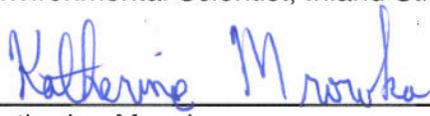
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that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

Prepared By:

 8-3-12  
\_\_\_\_\_  
Date  
David Zweig  
Analytical Environmental Services

Reviewed By:

 8-7-2012  
\_\_\_\_\_  
Date  
Greg Brown  
Environmental Scientist, Inland Streams Unit

 8-7-12  
\_\_\_\_\_  
Date  
Katherine Mrowka  
Senior, Inland Streams Unit

(Form updated 3/28/00)

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

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

#### IV. INFORMATION SOURCES

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- <sup>2</sup> Petition for Change Application 30384. 2008. On file with the Division of Water Rights.
- <sup>3</sup> Notice of Application to Appropriate Water by Permit. Application 31133. November 18, 2005. On file with the Division of Water Rights.
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- <sup>18</sup> February Median Flow Estimate for Application 30384 by Gerald Marino. Letters transmitted from Hanson Engineering to the Division of Water Rights on February 2, 2008 and March 3, 2008. On file with the Division of Water Rights.
- <sup>19</sup> Pope Creek Watershed – Water Availability Analysis and Cumulative Flow Impairment Index for Pending Water Right Application 30384 by Joseph Nichelini. Hanson Engineering. August 28, 2006.
- <sup>20</sup> Hickman, James C., (ed.), 1993. *The Jepson Manual: Higher Plants of California*. University of California Press. Berkeley, California.
- <sup>21</sup> United States Department of the Interior, Geological Survey, 1992. “Aetna Springs, California” and “Walter Springs, California” 7.5-minute Quadrangle. Geological Survey. Denver, Colorado.
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