Initial Study

Water Right Application 29381 of Treasury Wine Estates

Prepared for:

State Water Resources Control Board
Division of Water Rights

AECOM

August 2023

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August 2023

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ACRONYMS AND OTHER ABBREVIATIONS

2008 WAA	Water Availability Analysis for Application 29381
AB	Assembly Bill
afa	acre-feet per annum
APN	Assessor's parcel number
Applicant	Treasury Wine Estates
B & M	Baseline and meridian
BMPs	best management practices
CAAQS	California ambient air quality standards
CALFIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation.
CARB	California Air Resources Control Board
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission.
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFCs	chlorofluorocarbons
CFII	Cumulative Flow Impairment Index
cfs	cubic feet per second
CH_4	methane
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO2	carbon dioxide
Corps	U.S. Army Corps of Engineers
CrA	Cortina very gravelly sandy loam, 0 to 2% slopes
CRHR	California Register of Historical Resources
CRPRs	California Rare Plant Ranks
CsA	Cortina very gravelly loam, 0 to 2% slopes
CWA	Clean Water Act
Division	Division of Water Rights
DPS, formerly ESU	steelhead distinct population segment
Draft Guidelines	Draft Guidelines for Maintaining Instream Flows to Protect Fisheries Resources Downstream of Water Diversions in Mid-California Coastal Stream
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
FESA	Federal Endangered Species Act
FR	Federal Register
GHG	greenhouse gas
gpm	gallons per minute
GPS	global positioning system
HcC	Haire clay loam, 0 to 9% slopes

LEA	Land Extensive Agriculture
MBTA	Migratory Bird Treaty Act
MD	Mt. Diablo
msl	mean sea level
N_2O	nitrous oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
NOAA Fisheries	National Oceanic and Atmospheric Administration Fisheries Service
NRCS	Natural Resources Conservation Service, United States Department of Agriculture.
NSAPCD	Northern Sonoma Air Pollution Control District
NWIC	Northwest Information Center
Ozone	photochemical smog
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter of 10 micrometers or less
$PM_{2.5}$	fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less
POD	point of diversion
POI	point of interest
POU	place of use
proposed project	Water Right Application 29381
RWQCB	Regional Water Quality Control Board
SCC	Sonoma County Code
SO2	sulfur dioxide
State Water Board	State Water Resources Control Board
SFA	State Filed Application
TAC	toxic air contaminant
UCMP	University of California, Berkeley Museum of Paleontology
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VESCO	Vineyard Erosion and Sediment Control Ordinance
W&B	Wagner & Bonsignore Consulting Civil Engineers
WAA	water availability analysis
WRCC	Western Regional Climate Center

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

INITIAL STUDY

I. BACKGROUND

PROJECT TITLE: Water Right Application 29381 (A029381) of Treasury Wine Estates
APPLICANT: Treasury Wine Estates Americas
555 Gateway Drive
Napa, CA 94558

APPLICANT'S REPRESENTATIVE: Anne M. Williams, P.E.
MBK Engineers
455 University Avenue, Suite 100
Sacramento, CA 95825
(916) 456-4400

GENERAL PLAN DESIGNATION: Land Extensive Agriculture
ZONING: Land Extensive Agriculture

INTRODUCTION

The project site is located immediately south of State Route 128 and approximately 8 miles northwest of the town of Calistoga in Sonoma County, California (Exhibit 1). This location is within Township 9N, Range 7W and 8W of the "Mount St. Helena, California" U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (Exhibit 2). The project includes a point of diversion (POD) on Redwood Creek, an offstream reservoir (Reservoir 3, also referred to as Knights Valley Reservoir 3[1]), and 479 gross acres of vineyard (Exhibit 3).

Water Right Application 29381 (proposed project) was filed with the State Water Resources Control Board (State Water Board), Division of Water Rights (Division) on December 14, 1988 and accepted on December 20, 1988. The application would allow for the diversion of up to 30 acre-feet per annum (afa) of surface water from Redwood Creek, tributary to Maacama Creek thence the Russian River, to storage in an offstream reservoir (Reservoir 3). The POD and 479 gross acres of vineyard are authorized under Permits 18564 and 20619 (Applications 26402 and 29267, respectively).

[1] Reservoir 1 is located north of the project site and is not part of this project, and Reservoir 2 is a permitted offstream reservoir (see Permits 18564 and 20619) that will also serve as a point of conveyance (not a place of storage or a point of diversion) for water diverted pursuant to Application 29381.

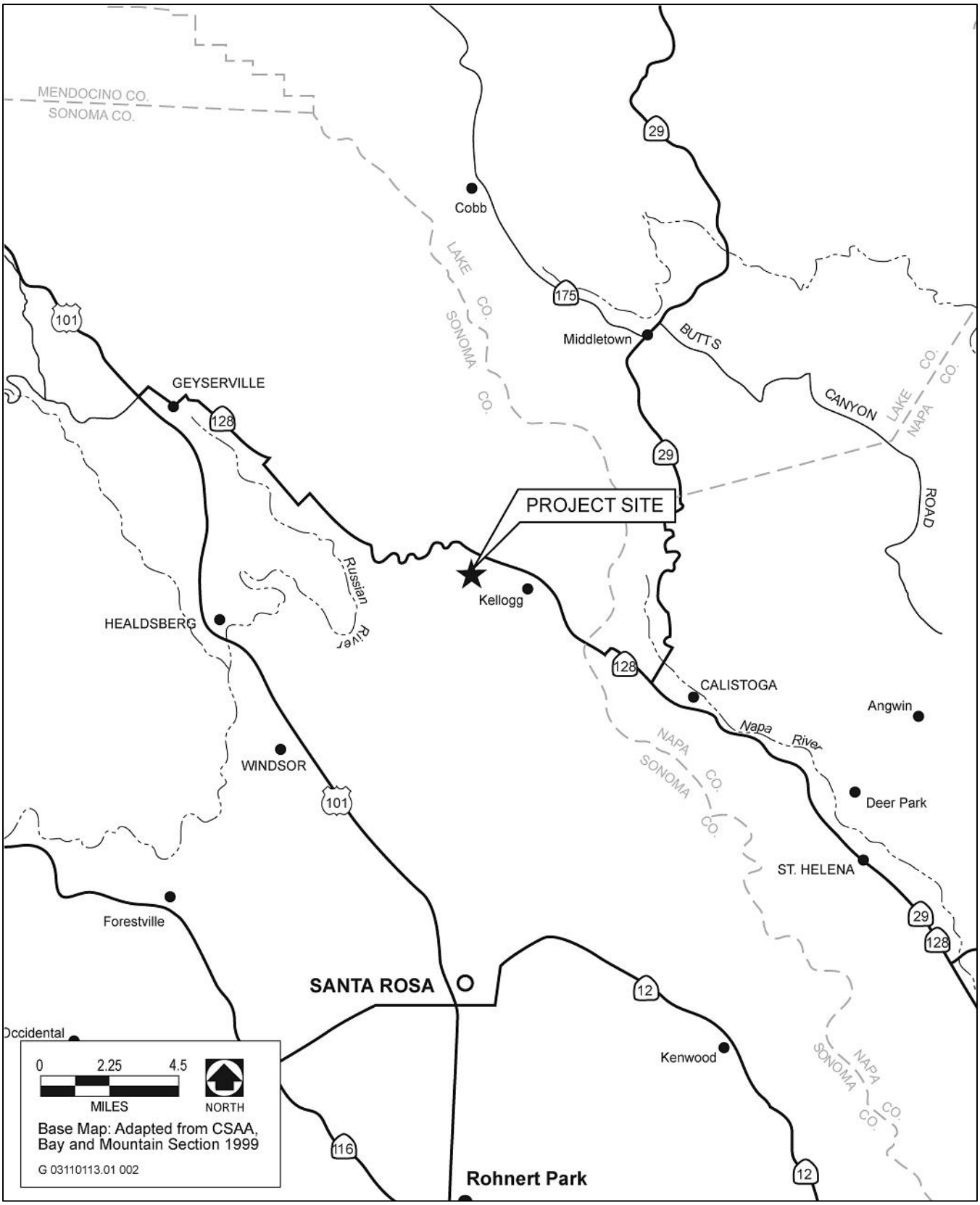

Exhibit 1 **Project Vicinity**

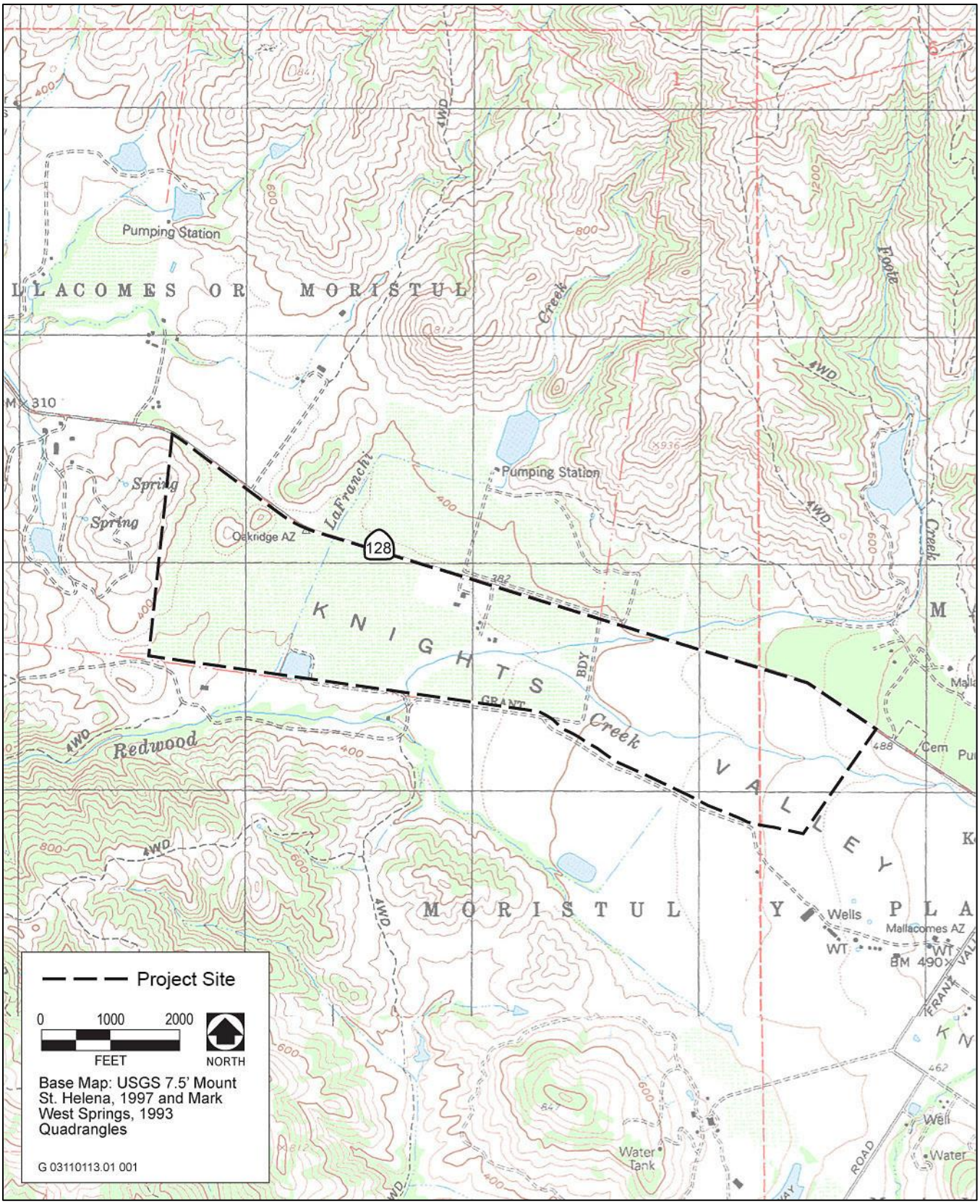

Exhibit 2 **Project Location and Topography**

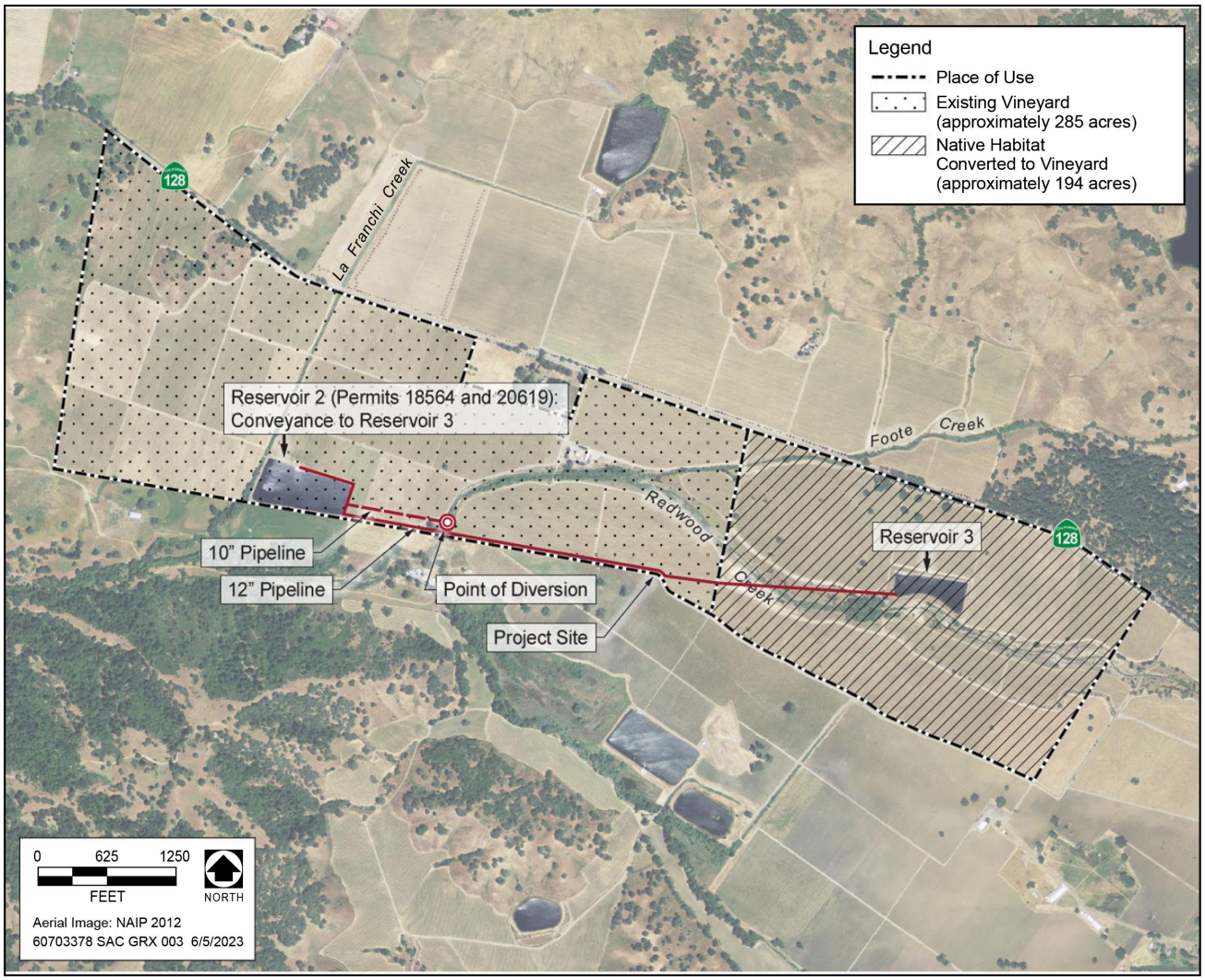

Exhibit 3 **Project Components**

PROJECT DESCRIPTION

APPLICATION 29381 PROPOSES:

- The seasonal diversion to storage of up to 30 acre-feet from one POD located on Redwood Creek. The POD is a Ranney-type collector–a type of radial well used to extract water from an aquifer with direct connection to a surface water–beneath the invert of Redwood Creek.
- Water diversion from the POD at a maximum rate of diversion to offstream storage of 3.0 cubic feet per second (cfs). Water diverted at the POD would be conveyed through infrastructure (including a buried 10-inch water conveyance pipeline between the POD and Reservoir 2 and a buried 12-inch water conveyance pipeline between Reservoir 2[2] and

[2] Reservoir 2 is a permitted offstream reservoir (also known as Knights Valley Reservoir 2: see Permits 18564 and 20619) that will also serve as a point of conveyance (not a place of storage or a point of diversion) for water diverted pursuant to Application 29381.

Reservoir 3) and would be stored in Reservoir 3, which would have an estimated capacity of 51 acre-feet (Brooks 1989).

- A diversion season of December 15 of each year to March 31 of the succeeding year.
- Irrigation and frost protection of an existing 479-gross acre place of use (POU) (see Tables 1 through 4 and Exhibit 3).

Table 1
Water Right Application 29381

Diversion	Diversion Amount (acre-feet)	Diversion Season	Purpose of Use	Place of Use (gross acres)
To offstream storage	30	December 15 to March 31	Irrigation and frost protection	479

Source: Application 29381 to Appropriate Water 1988

Table 2
Point of Diversion

POD	Location (NAD 83)	Within	Projected Section	Township	Range	B & M
1	Redwood Creek East 6,360,072.5, North 1,994,974.5	SW ¼ of SW ¼	12	9N	8W	MD

B & M = Baseline and meridian
MD = Mt. Diablo
POD = point of diversion
Source: Application 29381 to Appropriate Water 1988

Table 3
Place of Storage (Reservoir 3)

Location (NAD 83)	Within	Projected Section	Township	Range	B & M
East 6,364,617.6, North 1,994,493.7	SE ¼ of SE ¼	12	9N	8W	MD

B & M = Baseline and meridian
MD = Mt. Diablo
Source: Application 29381 to Appropriate Water 1988

Table 4
Place of Use

Use Within	Projected Section	Township	Range	B & M	Acres (gross)
NW ¼ of SW ¼	7	9N	7W	MD	6.00
SW ¼ of SW ¼	7	9N	7W	MD	37.00
SE ¼ of SW ¼	7	9N	7W	MD	4.00
NW ¼ of NW ¼	18	9N	7W	MD	14.00
NE ¼ of NW ¼	11	9N	8W	MD	17.11
SE ¼ of NW ¼	11	9N	8W	MD	26.76
NW ¼ of NE ¼	11	9N	8W	MD	8.58
SW ¼ of NE ¼	11	9N	8W	MD	39.48
SE ¼ of NE ¼	11	9N	8W	MD	30.40
NE ¼ of SW ¼	11	9N	8W	MD	16.69
NW ¼ of SE ¼	11	9N	8W	MD	22.81
NE ¼ of SE ¼	11	9N	8W	MD	30.28
NW ¼ of SE ¼	12	9N	8W	MD	34.30
NE ¼ of SE ¼	12	9N	8W	MD	24.00
SW ¼ of SE ¼	12	9N	8W	MD	23.00
SE ¼ of SE ¼	12	9N	8W	MD	37.00
SE ¼ of SW ¼	12	9N	8W	MD	6.32
SW ¼ of NW ¼	12	9N	8W	MD	8.73
SE ¼ of NW ¼	12	9N	8W	MD	5.64
NW ¼ of SW ¼	12	9N	8W	MD	37.90
NE ¼ of SW ¼	12	9N	8W	MD	40.00
NE ¼ of NE ¼	13	9N	8W	MD	9.00
Total (gross)					**479**

B & M = Baseline and meridian
MD = Mt. Diablo
Source: Application 29381 to Appropriate Water 1988

PROJECT BACKGROUND

The place of use for Application 29381 is the same area as the 479-acre (gross) authorized place of use for Permits 18564 and 20619. Relevant summary information about these permits is provided in Table 5 below.[3] In addition, the place of use for Licenses 4316, 13438, and

[3] Petitions to change the place of use are pending for Licenses 13438 and 13442 to conform the existing place of use currently identified in the licenses to overlapping authorized places of use identified in other water rights held by Treasury Wine Estates. Petitions for distribution of storage are pending for License 13438 and Permits 18564 and 20619 to accurately identify existing facilities where water is stored.

13442 (Applications 13695, 26412, and 26413, respectively) overlaps a portion of the place of use requested under Application 29381. Treasury Wine Estates coordinates with the right holder of License 4316 (Rancho Mallacomes) for use of water on the place of use under the license. Under these rights water has been used for irrigation and frost protection upon the entire place of use identified in Application 29381. Application 29381 seeks to augment the current supply of surface water authorized for diversion and use under the existing rights up to an additional 30 acre-feet per year for irrigation and frost protection purposes within the place of use.

Table 5
Related Rights Serving Overlapping Place of Use

Water Right	Amount (afa)	Source(s)	Place of Storage	Season	POU (gross)	Use(s)
License 13438	163 afa to storage; 63 afa of replenishment	Lafranchi Creek tributary to Redwood Creek	Reservoir 1 (onstream)	November 1 to June 30	450 acres within a gross of 549 acres	Irrigation, frost protection
License 13442	1.01 cfs, not to exceed 60 afa	Lafranchi Creek tributary to Redwood Creek	N/A	March 15 to May 15	450 acres within a gross of 549 acres	Frost protection
Permit 18564	94 afa to storage: 45 afa in Reservoir 2[1], 49 afa of replenishment at a rate of 10 cfs from Redwood Creek and 100 gpm from La Franchi Creek	Redwood Creek (same POD as A029381); La Franchi Creek	Reservoir 2 (offstream)	November 1 to May 31	479 acres	Irrigation, frost protection
Permit 20619	35 afa to storage at a rate of 10 cfs from Redwood Creek and 100 gpm from La Franchi Creek	La Franchi Creek; Redwood Creek (same POD as A029381)	Reservoir 2 (offstream)	November 1 to May 15	479 acres	Irrigation, frost protection

[1] Reservoir 2 is also known as Knights Valley Reservoir 2.

afa = acre-feet per annum
cfs = cubic feet per second
gpm = gallons per minute
POD = point of diversion
POU = place of use

A public notice was issued for Application 29381 on May 26, 1989. One protest to the application was received from the California Department of Fish and Game (CDFG, now California Department of Fish and Wildlife [CDFW]). The protest stated that diversion of the proposed quantity of water could periodically diminish flow of Redwood Creek below that necessary for upstream and downstream migration of adult and juvenile steelhead trout, and that reduction or elimination of flow during critical low-flow periods could adversely affect survival of steelhead trout. The Applicant's representative responded to the protest on February 3, 1994, and the protest was dismissed by the Division with the addition of minimum bypass flow and fish screening permit terms; maintenance of minimum bypass flows have been incorporated into the project description and a fish screening permit term is included in the "Biological Resources" section in this Initial Study.

ENVIRONMENTAL SETTING

Sonoma County is characterized by a Mediterranean climate with cool winters and hot, dry summers. The project site is located in Knights Valley in the North Coast Range Mountains and is strongly influenced by the coastal environment. The average annual temperature for the valley varies from 44 to 74 degrees Fahrenheit with an average annual precipitation of 30 inches per year (WRCC 2014). Knights Valley is located in a basin with numerous streams, and surrounding mountains. Elevations onsite range from approximately 400 feet to approximately 460 feet above mean sea level (msl). Land uses in the vicinity of the project site include vineyards, rural residential, open space, and man-made reservoirs.

Redwood Creek flows through the project site in an east to west direction. Redwood Creek flows into Maacama Creek approximately 600 feet downstream of the project site, and Maacama Creek flows into the Russian River approximately 6.5 miles farther downstream. Onsite tributaries to Redwood Creek include La Franchi Creek and Foote Creek. La Franchi Creek flows from north to south through the western area of the vineyard and flows into Redwood Creek southwest of the POD. Foote Creek flows east to west across the northeastern area of the vineyard and converges with Redwood Creek northeast of the POD.

CALIFORNIA ENVIRONMENTAL QUALITY ACT BASELINE CONDITIONS

Water Right Application 29381 was filed on December 14, 1988; therefore, the California Environmental Quality Act (CEQA) baseline date for Application 29381 is December 14, 1988, as environmental review began at the time of filing. Project components that are subject to environmental review are limited to those that were undeveloped at the time of the CEQA baseline date.

A review of historic aerial photographs was conducted to determine the project components that were undeveloped at the time of the CEQA baseline date; aerial photographs from the years 1982 and 1993 were the closest available to the 1988 baseline date. Exhibit 4 shows the project site in 1982 and provides evidence of existing project components 6 years prior to the CEQA baseline date. As indicated in Exhibit 4, the eastern portion of the place of use totaling approximately 194 acres was undeveloped pasture in 1982. Based on historic aerial photography review, these areas were partially converted to vineyard by 1993 (Exhibit 5) and were fully converted to vineyard by 1998. Because the approximately 194 acres were not developed as vineyard at the baseline date for this application, the acreage will not be considered part of the CEQA baseline for the project. The majority of trees in the eastern portion of the place of use developed post-baseline were retained with the vineyard conversion. It is estimated that approximately 40 trees were removed: approximately 15 trees in northern area of the place of use developed post-baseline, approximately 10 trees west of Reservoir 3, and approximately 15 trees south of Redwood Creek (Exhibit 6). As indicated in Exhibit 4, the majority of the remaining 285 acres of the place of use were developed prior to 1988[4].

Reservoir 3 and the water conveyance system connecting Reservoir 2 to Reservoir 3 did not exist at the baseline date. Grading for Reservoir 3 began in May 1989 and Reservoir 3 was constructed by July 1989, as evidenced by an as-built map prepared by Michael W. Brooks and Associates (in file for Application 29381; Brooks 1989; Stoyka and Werner 1989). Based on the above discussion of project components, the CEQA baseline for the proposed project includes approximately 285 acres of existing vineyard, Reservoir 2, and the existing POD and the water conveyance system between the POD and Reservoir 2. The following project elements are not considered part of the CEQA baseline and will be evaluated under CEQA:

1) the conversion of approximately 194 acres of undeveloped pasture land to vineyard, including the removal of approximately 40 trees;

2) the construction of Reservoir 3 and associated water conveyance system from Reservoir 2;

3) diversion to storage of up to 30 afa from Redwood Creek; and

4) the use of the water for irrigation and frost protection.

[4] These 285 acres include the portion of the place of use covered by Licenses 4316, 13438, and 13442.

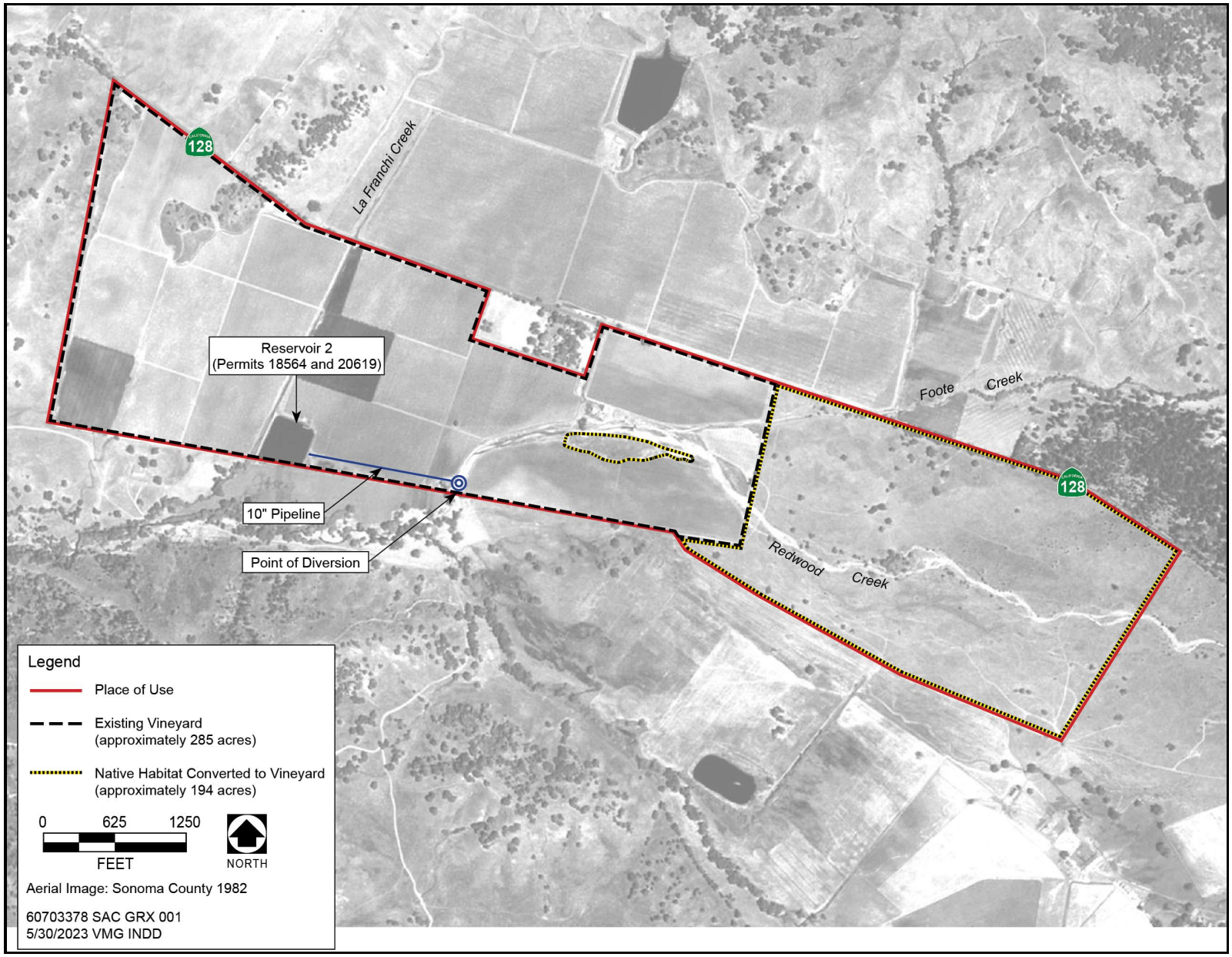

Exhibit 4 **Historic Aerial (1982)**

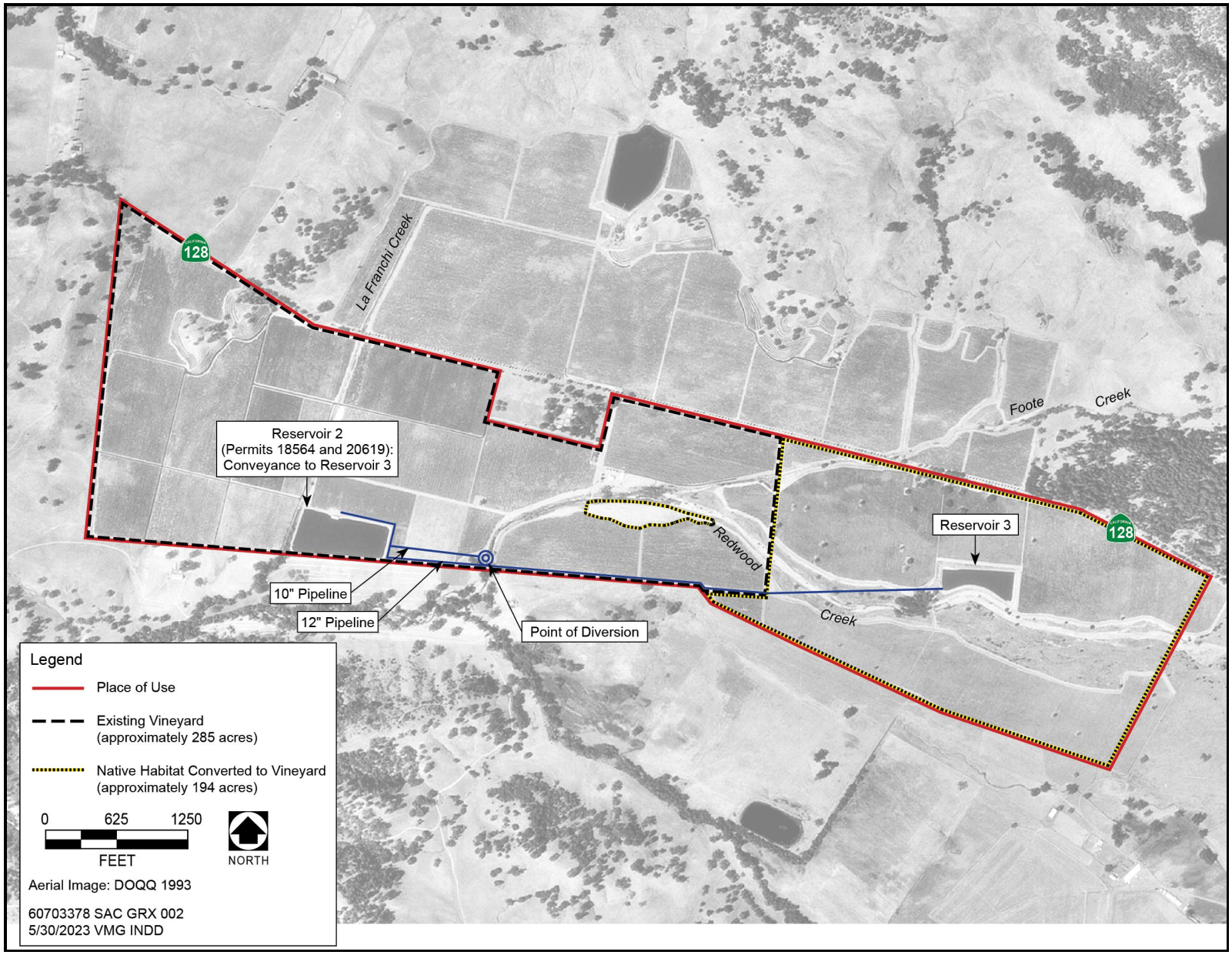

Exhibit 5 **Historic Aerial (1993)**

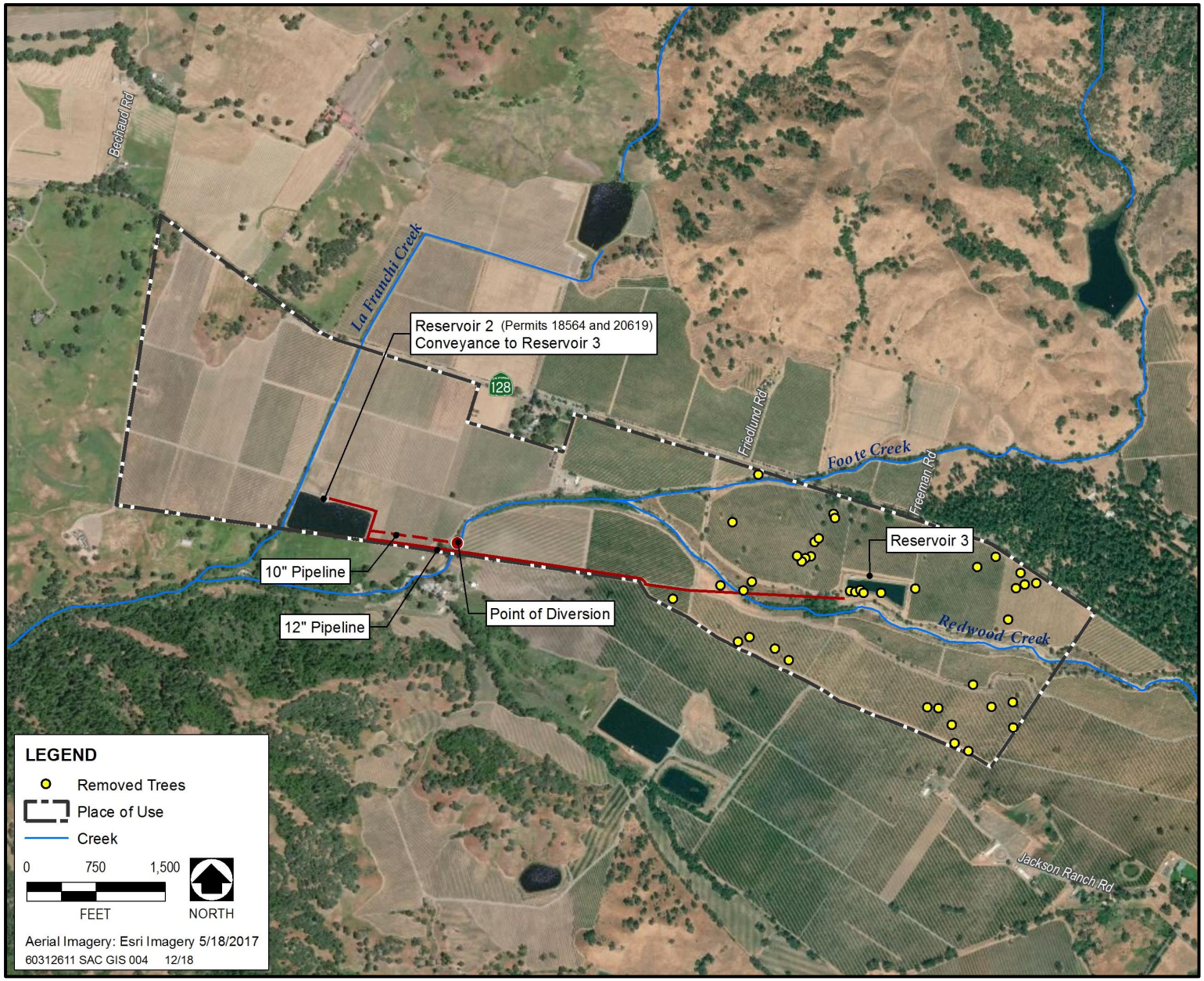

Exhibit 6 **Estimated Location of Trees Removed**

Table 6 provides an overview of project features in relation to the CEQA baseline date.

Table 6
CEQA Baseline and Project Components

Existing Project Components at CEQA Baseline	CEQA Baseline Date	Project Components to be Evaluated under CEQA
▸ Approximately 285 acres of vineyard ▸ Reservoir 2 ▸ POD on Redwood Creek ▸ Water conveyance system from the POD to Reservoir 2	December 14, 1988	▸ Conversion of approximately 194 acres of undeveloped pasture land to vineyard, including the removal of approximately 40 trees ▸ Construction of Reservoir 3 ▸ Water conveyance system from Reservoir 2 to Reservoir 3 ▸ Water conveyance system from Reservoir 3 to the POU ▸ Diversion to storage of up to 30 afa from Redwood Creek ▸ Use of the water for irrigation and frost protection purposes

afa = acre-feet per annum
CEQA = California Environmental Quality Act
POD = point of diversion
POU = place of use
Source: Application 29381 to Appropriate Water 1988

RESPONSIBLE, TRUSTEE, AND FEDERAL AGENCIES

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

- U.S. Fish and Wildlife Service – Federal Endangered Species Act (ESA) Compliance
- National Marine Fisheries Service (NMFS) – ESA Compliance
- CDFW – Streambed Alteration Agreement, California Endangered Species Act (CESA) Compliance
- County of Sonoma Erosion and Sediment Control Plan
- Regional Water Board Clean Water Act 401 Water Quality Certification
- Regional Water Board National Pollutant Discharge Elimination System (NPDES) Permit.
- U.S. Army Corps of Engineers Clean Water Act 404 Permit
- County of Sonoma – Grading Permit

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II. ENVIRONMENTAL IMPACTS

The environmental factors checked below could be potentially affected by this project and are discussed in detail in the following analysis.

☐	Aesthetics	☐	Agriculture and Forestry Resources	☐	Air Quality
☒	Biological Resources	☒	Cultural Resources	☐	Energy
☐	Greenhouse Gas Emissions	☐	Hazards and Hazardous Materials	☒	Geology and Soils
☐	Land Use and Planning	☐	Mineral Resources	☒	Hydrology and Water Quality
☐	Population and Housing	☐	Public Services	☐	Noise
☐	Transportation and Traffic	☒	Tribal Cultural Resources	☐	Utilities and Service Systems
☐	Recreation	☐	Wildfire	☒	Mandatory Findings of Significance

1. AESTHETICS

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

ENVIRONMENTAL SETTING

The project site is located in the Coastal Mountain Range of Sonoma County. Primary views of the project site originate from Highway 128, which is located adjacent and immediately north of the site. Highway 128 provides direct views of the project site to passing motorists. In addition, some rural residences located at higher elevations and within visual range of the project site also have potentially unimpeded views. The 194 acres of vineyard developed post-baseline at the eastern end of the project site and Reservoir 3 are subject to the same views.

DISCUSSION

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

The project site is not within a designated scenic resource area (Sonoma County 2008a). Scenic vistas in the vicinity of the project site consist of undeveloped pasture land, neighboring vineyards, and rolling hills interspersed with oak trees. Conversion of pasture land to vineyard increased views of vineyards and would not have created an obtuse visual element or visibly stand out from surrounding land uses. Likewise, Reservoir 3 is low-profile and the water conveyance system to Reservoir 2 is buried, and construction would not have adversely

affected the scenic vista. No future development is proposed that would result in other physical changes. For these reasons, the proposed project would have a less-than-significant impact on a scenic vista.

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

Based on historic aerial review, post-baseline vineyard conversion and Reservoir 3 construction resulted in the removal of approximately 40 trees; this would not have substantially damaged overall scenic resources at the site or in the vicinity of the site. No future development is proposed that would result in additional physical changes to the environment and potentially adversely affect scenic resources. The project site is not located within a state scenic highway (Caltrans 2014). For these reasons, the proposed project would have a less-than-significant impact on scenic resources.

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

The visual character in the vicinity of the project site includes views of Highway 128, undeveloped land, oak trees, rural residences, vineyards, and man-made reservoirs. Conversion of pasture land to vineyard would not have created an obtuse visual element or visibly stand out from surrounding land uses. Construction of Reservoir 3 and the water conveyance system to Reservoir 2 would not have degraded the existing visual character. No future development is proposed that would result in physical changes to the environment (i.e., visual character). For these reasons, the proposed project would have a less-than-significant impact on the existing visual character or quality of the site and its surroundings.

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

Development of the project site did not create a new source of nighttime light or daytime glare. No changes would occur with project operation and no impacts affecting day or nighttime views would occur. No impact would occur.

2. AGRICULTURAL AND FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) 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.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☒	☐
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The project site consists of land mapped by the California Department of Conservation's Farmland Mapping and Monitoring Program as Farmland of Statewide Importance and Unique Farmland (California Department of Conservation 2023). In addition, areas of Prime Farmland are located to the south of the project site. The project site is zoned as Land Extensive Agriculture (LEA) by Sonoma County for the purpose of agricultural land use and is currently in

agricultural production with vineyards, along with rural residences, farm-related structures, and open space (Sonoma County 2023a). The project site is under active Williamson Act contracts (Sonoma County 2019).

DISCUSSION

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Post-baseline development of the project occurred on land designated as Important Farmland. The project is agricultural in nature, and no future development is proposed that could result in additional physical changes to the environment (i.e., conversion of Important Farmland). The proposed project would not convert Important Farmland to a non-agricultural use. No impact would occur.

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

The project site is under active Williamson Act contracts. Given that the purpose of the Williamson Act is to preserve agricultural and open space lands, the proposed project would not conflict with the goals of the Williamson Act and is consistent with the existing agricultural zoning for the project site. Therefore, the impact would be less than significant.

c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

The project site is not zoned for forest land, timberland, or timberland-zoned Timberland Production. There would be no conflict with existing, or cause rezoning of any, forest land, timberland, or timberland-zoned Timberland Production.

There is no substantial forest land within the project site that was impacted by post-baseline development. Based on historic aerial review, it is estimated that approximately 40 trees in remnant stands of coast live oak woodland were removed during project development (see “Biological Resources” section). No future development is proposed that would affect forest land or conversion of forest land to non-forest use.

The post-baseline development of the project involved planting vineyard within approximately 194 acres and constructing a water storage reservoir and conveyance facilities; these are considered agricultural uses similar in type to surrounding agricultural land uses. Activities associated with the project would not have resulted in physical changes to the environment that would have promoted the conversion of adjacent or nearby farmland to a non-agricultural use. No impact would occur.

3. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

REGULATORY SETTING

The project site is located in the North Coast Air Basin, which falls under the jurisdiction of the Northern Sonoma Air Pollution Control District (NSAPCD). The NSAPCD was created by the California Air Resources Control Board (CARB) to monitor air quality and have permit authority over certain types of facilities or activities. The Sonoma County Department of Transportation administers the NSAPCD.

The NSAPCD seeks to improve air quality conditions in northern Sonoma County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of NSAPCD includes

preparing plans and programs for the attainment of ambient air quality standards, adopting and enforcing rules and regulations, and issuing permits for stationary sources. The NSAPCD regulates and minimizes air quality emissions from stationary sources, responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the Federal Clean Air Act, Clean Air Act Amendments, and California Clean Air Act. At the time of this writing, NSAPCD has not established quantitative thresholds of significance for construction or operational emissions. Therefore, the State CEQA Guidelines Appendix G Checklist is used to evaluate the project's air quality impacts.

The U.S. Environmental Protection Agency (EPA) and CARB focus on the following air pollutants as indicators of ambient air quality: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM), and lead. Because these are the most prevalent air pollutants known to be deleterious to human health and extensive health-effects criteria documents are available, they are commonly referred to as "criteria air pollutants."

The EPA has established primary and secondary national ambient air quality standards (NAAQS) for the following criteria air pollutants: ozone, CO, NO_2, SO_2, respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead. The primary standards protect the public health of the most sensitive populations (e.g., children, elderly, and asthmatics) and the secondary standards protect public welfare (e.g., visibility, vegetation damage) (CARB 2023). In addition to the NAAQS, CARB has established California ambient air quality standards (CAAQS) for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. In most cases, the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health-effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate an additional margin of safety to protect sensitive receptors, particularly children and infants (CARB 2023).

Regulation of air quality is achieved through both federal and state ambient air quality standards and emission limits for individual sources of air pollutants as described in Table 7.

ENVIRONMENTAL SETTING

Sonoma County is characterized by a Mediterranean climate with cool winters and hot, dry summers. The project site is located in Knights Valley of the North Coast Range Mountains and has a strong influence from the coastal environment. The average annual temperature for the valley varies from 44 to 74 degrees Fahrenheit with an average annual precipitation of 30 inches per year (WRCC 2014).

Under the NAAQS, Sonoma County is designated as non-attainment for ozone, and the southern half of Sonoma County (south of the project site) is designated as non-attainment for

PM_{10}. Sonoma County is designated as non-attainment for ozone, PM_{10}, and $PM_{2.5}$ under the CAAQS (CARB 2023a).

DISCUSSION

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

Project development has not involved any activities that would have generated substantial air emissions. Although project development activities in the late 1980s/early 1990s would have involved the use of construction equipment, construction activities were temporary and short-term, and equipment used for construction is regulated by State and federal regulations. Operations associated with the vineyard could generate small amounts of harmful air emissions (e.g., open burning) regulated by an applicable air quality plan; however, these activities are regulated by the NSAPCD. For these reasons, past construction and ongoing operation of the project would not conflict with or obstruct implementation of an applicable air quality plan. This impact would be less than significant.

Table 7
National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [a]	National Standards [b]	
		Concentration [c]	Primary [c,d]	Secondary [c,e]
Ozone [k]	1 hour	0.09 ppm (180 µg/m^3)	–	Same as primary standard
	8 hours	0.070 ppm (137 µg/m^3)	0.070 ppm (147 µg/m^3)	
Respirable particulate matter (PM_{10})[f]	24 hours	50 µg/m^3	150 µg/m^3	Same as primary standard
	Annual arithmetic mean	20 µg/m^3	–	
Fine particulate matter ($PM_{2.5}$) [f]	24 hours	–	35 µg/m^3	Same as primary standard
	Annual arithmetic mean	12 µg/m^3	12 µg/m^3	15 µg/m
Carbon monoxide (CO)	8 hours	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	None
	1 hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	
	8 hours (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–

Pollutant	Averaging Time	California Standards [a]	National Standards [b]	
		Concentration [c]	Primary [c,d]	Secondary [c,e]
Nitrogen dioxide (NO_2) [g]	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as primary standard
	1 hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	None
Sulfur dioxide (SO_2) [h]	Annual Arithmetic Mean	–	0.030 ppm (for certain areas) [h]	–
	24 hours	0.04 ppm (105 µg/m^3)	0.14 ppm (for certain areas) [h]	–
	3 hours	—	–	0.5 ppm (1,300 µg/m^3)
	1 hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	–
Lead [i, j]	30-day average	1.5 µg/m^3	–	–
	Calendar quarter	–	1.5 µg/m^3 (for certain areas) [j]	Same as primary standard
	Rolling 3-month average	–	0.15 µg/m^3	
Visibility-reducing particles [k]	8 hours	See footnote j	No national standards	
Sulfates	24 hours	25 µg/m^3		
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m^3)		
Vinyl chloride [i]	24 hours	0.01 ppm (26 µg/m^3)		

Notes: mg/m3 = milligrams per cubic meter; ppb = parts per billion; ppm = parts per million; µg/m^3 = micrograms per cubic meter

[a] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility-reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when

98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standards.

[c] Concentration expressed first in the units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25 degrees Celsius and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and reference pressure of 760 torr; (ppm) in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[e] National Secondary Standards: The levels of air quality necessary to protect public welfare from any known or anticipated adverse effects of a pollutant.

[f] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[g] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. California standards are in units of ppm. To directly
compare the national 1-hour standard to the California standards the units can be converted from 100 ppb to 0.100 ppm.

[h] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. To directly compare the 1-hour national standard to the California standard, the units can be converted to ppm. In this case, the national standard of 75 ppb is identical of 0.075 ppm.

[i] CARB has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[j] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standards are approved.

[k] In 1989, ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and the “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.

[k] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

Source: CARB 2023b

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

Please refer to the discussion under question 3(a) above. Past construction and ongoing operation of the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. This impact would be less than significant.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Please refer to the discussion under question 3(a) above. Past construction and ongoing operation of the project would not generate substantial amount of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. The project would not cause a cumulatively considerable net increase of any criteria pollutant. This impact would be less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations?

Please refer to the discussion under question 3(a) above. Past construction and ongoing operation of the project would not generate substantial air pollutants that would be considered obtrusive to sensitive receptors (e.g., residences). This impact would be less than significant.

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

Project operations have the potential to create objectionable odors, for example, through the application of agricultural chemicals to the vineyard. However, any odors would not affect a substantial number of people given the rural nature of the project. This impact would be less than significant.

4. BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	☐	☒	☐	☐
i) substantial increase or threat from invasive, nonnative plants and wildlife?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

To gain insight into the baseline conditions, AECOM (formerly EDAW) biologists conducted reconnaissance-level field surveys of the approximately 194 acres of vineyard developed post-baseline, including Reservoir 3, the pipeline routes, the Redwood Creek corridor (including the POD location), and Foote Creek within the 194-acre development area, on July 15, 2004 and July 21, 2009. The goal of the surveys was to characterize the general biological resources present at the time, to enable a comparison of information on current conditions to those likely present at the 1988 baseline, and to determine the potential for sensitive biological resources to occur. Searches of CDFW's California Natural Diversity Database (CNDDB) and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants were conducted prior to the field surveys to identify sensitive biological resources that had previously been documented in the project area. Updated database searches were conducted in December 2018, including: CNDDB, CNPS, and U.S. Fish and Wildlife Service (USFWS) species searches for the nine quadrangles containing and including the project site (Mount Saint Helena, The Geysers, Whispering Pines, Middletown, Detert Reservoir, Calistoga, Mark West Springs, Healdsburg, and Jimtown), as well as a search for known occurrences of special-status species within 5 miles of the project site. In addition to the field surveys and database searches, information to support the analysis in this biological resources section was also obtained through historic aerial photograph interpretation.

Habitat Types

Historically, the project site and most of the surrounding lands were used as pasture for grazing cattle and were characterized by annual grassland habitat. Based on remnant stands of native vegetation on the project site and the vegetation observed in undeveloped areas adjacent to the project site, the historic vegetation within the place of use was likely characterized by coast live

oak woodland and valley oak woodland with Douglas fir, madrone, and foothill pine overtopping the oaks in some areas. Redwood Creek and Foote Creek likely supported riparian woodland vegetation similar to the remnant riparian woodland that exists on the site today. Habitat types present within the 479-acre surveyed place of use include: vineyard, annual grassland, coast live oak woodland, riparian woodland, freshwater marsh/lacustrine (reservoir), and creek (Redwood, Foote, and La Franchi Creeks). A habitat map is presented in Exhibit 7. Developed areas include facilities and surrounding unimproved gravel or dirt lots as well as dirt roads that are also present throughout the place of use. Dirt roads are not delineated on the exhibit. The ornamental habitat type consists of planted windrow trees along the north boundary. Ornamental habitat typically comprises non-native and/or horticultural species in landscaped areas. Developed and ornamental areas do not provide sufficient resources to support special-status wildlife or plant species and are not discussed further in this section.

Annual Grassland

Annual grassland is present on the upper banks of Redwood and Foote Creeks, in areas adjacent to oak woodland in the west, and along the dirt roads that traverse the project site. This habitat type is characterized by non-native annual grasses and weedy forbs, as well as some native wildflowers. The annual grassland is subject to periodic disturbance from mowing except in the very rocky areas along Redwood Creek. Characteristic species observed in the annual grassland include bromes (*Bromus diandrus*, *B. hordeaceus*, and *B. sterilis*), wild oat (*Avena fatua*), dogtail grass (*Cynosurus echinatus*), rattail fescue (*Festuca myuros*), rose clover (*Trifolium hirtum*), yellow starthistle (*Centaurea solstitialis*), panicled willowherb (*Epilobium brachycarpum*), bicolored lupine (*Lupinus bicolor*), and Spanish lotus (*Acmispon americanus* var. *americanus*). Small stands of native purple needlegrass (*Stipa pulchra*) are scattered in the annual grassland community, particularly along the south bank of Redwood Creek.

Vineyard

The majority of the place of use has been cultivated as vineyard. Small patches of ruderal annual grassland are present between the rows of grapes and are characterized by non-native annual grasses and weedy forbs such as filaree (*Erodium botrys* and *E. cicutarium*), prickly lettuce (*Lactuca serriola*), yellow starthistle, and red sand spurry (*Spergularia rubra*).

Coast Live Oak Woodland

Remnant stands of live oak woodland are scattered throughout the project site and adjacent to Highway 128. Coast live oak woodland habitat is characterized by coast live oak (*Quercus agrifolia*) and includes other trees such as gray pine (*Pinus sabiniana*), Douglas fir (*Pseudotsuga menziesii*), madrone (*Arbutus mensiesii*), and California bay (*Umbellularia californica*). Poison oak (*Toxicodendron diversilobum*) and annual grasses are present in the understory.

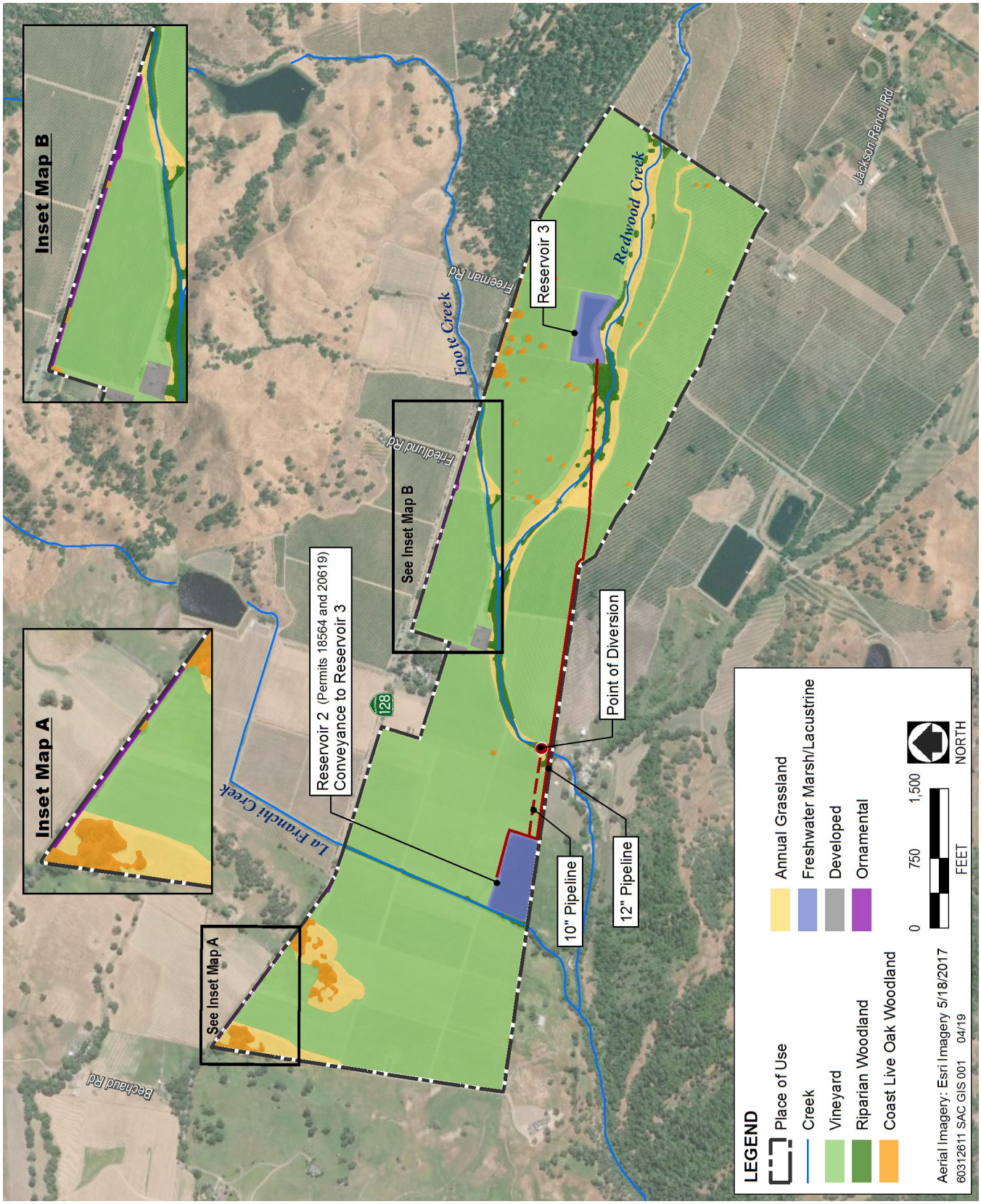

Exhibit 7 **Habitat Map**

Riparian Woodland

A stand of mixed riparian woodland is present on the banks of Redwood Creek in the center of the 194 acres developed post-baseline. Narrower bands of riparian vegetation are present along Foote Creek and further downstream on Redwood Creek in the 285-acre POU. These woodlands are characterized by sandbar willow (*Salix exigua*), red willow (*Salix laevigata*), Oregon ash (*Fraxinus latifolia*), valley oak (*Quercus lobata*), red alder (*Alnus rubra*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), and California wild grape (*Vitis californica*). The understory includes common horsetail (*Equisetum arvense*), scarlet monkeyflower (*Mimulus cardinalis*), and giant ragweed (*Ambrosia trifida*).

Freshwater Marsh/Lacustrine

Reservoir 3 is a lacustrine habitat. Lacustrine habitats are characterized by open water with suspended organisms dominated by phytoplankton such as diatoms and filamentous green algae. Submerged plants such as algae and pondweed are also characteristic of lacustrine habitats. Rooted, floating plants such as smartweeds and water lilies are typically present closer to the shore. Reservoir 3 supports a narrow fringe of freshwater marsh vegetation characterized by common cattail (*Typha latifolia*), water plantain (*Alisma lanceolatum*), common spikerush (*Eleocharis macrostachya*), and tall flatsedge (*Cyperus eragrostis*). Other aquatic plant species observed in the reservoir include long-leaved pondweed (*Potamogeton nodosus*) and spike watermilfoil (*Myriophyllum spicatum*).

Creeks

There are three creeks within the 479-acre POU. La Franchi, the smallest of the three, crosses the western portion of the 285-acre POU from north to south and ranges from 5 to 10 feet in width within an approximately 30-foot wide, straight corridor. Foote Creek crosses the northern corner of the 194-acre POU from the northeast and continues southeast into the eastern portion of the 285-acre POU. Both creeks are tributaries to Redwood Creek, with similarly composed cobble and gravel beds, though no boulders. Redwood Creek traverses the 194-acre POU in an east to west direction and exits the project site at the central south portion of the 285-acre POU at the POD. Redwood Creek is a tributary to Maacama Creek, which flows into the Russian River. Within the project site, Redwood Creek has a broad, shallow, and very rocky low-flow channel ranging in width from approximately 50 to 100 feet. The low flow channel is contained within a larger corridor that appears to range from approximately 120 to 300 feet. In some sections the channel banks contain high scour marks from high winter flows. The only portion of Redwood Creek that was inundated within the project site at the time of the July 2004 and 2009 surveys was an area on either side of a concrete low flow stream crossing in the riparian woodland area southwest of Reservoir 3 and near the center of the vineyard developed post-baseline. The vegetation within the channels is generally sparse with individual plants finding refuge from scouring winter flows behind cobble and boulders that characterize the channel.

Special-Status Species

Special-status plant and wildlife species include those that are legally protected or otherwise considered sensitive by federal, state, or local resource conservation agencies and organizations. These include:

- species listed, proposed for listing, or considered candidates for listing as threatened or endangered under the federal ESA and/or CESA;
- all native bird species covered under the federal Migratory Bird Treaty Act (MBTA);
- species identified by CDFW as California species of special concern;
- animals fully protected under the California Fish and Game Code (Sections 3511, 4700, 5050, and 5515);
- nesting raptors protected under the California Fish and Game Code (Section 3503.5);
- plants listed as endangered or rare under the California Native Plant Protection Act (California Fish and Game Code Sections 1900-1913); and/or
- plants ranked by CDFW as rare, threatened, or endangered in California. CDFW recognizes California Rare Plant Ranks (CRPRs):
  - CRPR 1A—plants presumed to be extinct or extirpated in California, and rare elsewhere;
  - CRPR 1B—plants that are rare, threatened, or endangered in California and elsewhere;
  - CRPR 2A—plants that are presumed extirpated in California, but more common elsewhere;
  - CRPR 2B—plants that are rare, threatened, or endangered in California but more common elsewhere;
  - CRPR 3—plants about which more information is needed (a review list); and
  - CRPR 4—plants of limited distribution (a watch list).

All plants with a CRPR are considered “special plants” by CDFW. The term “special plants” is a broad term used by CDFW to refer to all of the plant taxa inventoried in CDFW’s CNDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, or 2 may qualify as endangered, rare, or threatened species within the definition of State CEQA Guidelines Section 15380. CDFW recommends, and local governments may require, that CRPR 1A, 1B, and 2 species be addressed in CEQA documents. In general, CRPR 3 and 4 species do not meet the definition of endangered, rare, or threatened pursuant to State CEQA Guidelines Section 15380; however, these species may be evaluated by the lead agency on a case-by-case basis to determine significance criteria under CEQA. For the purposes of this analysis, only CRPR 1A, 1B, 2A, and 2B were evaluated.

Special-Status Plants

All special-status plant species documented within the nine quadrangles containing and surrounding the project site were evaluated for their potential to currently occur on the project site or to have occurred on the project site at the time of the 1988 baseline. Species with no potential to occur on the project site because specific habitat elements (such as serpentine soils, thermal springs, and vernal pools) or plant communities (such as coastal sand dune, chaparral, broadleaved upland forest, and lower montane coniferous forest communities) that support the species do not exist in the project vicinity are not included in Table 8 and are not discussed further in this document. Species documented in the CNPS and CNDDB inventories that are restricted to higher elevations than the project site (700 feet or above; species that have an elevation range within 300 feet of the project site were evaluated further) and do not meet the definition of special-status as applied in this document (i.e., species that are CRPR 3 or 4) also are not included in Table 8 or discussed further in this document.

Table 8
Special-Status Plant Species with Potential to Occur on the Project Site or in the Vicinity

Species	Status			Habitat Description
	Federal	State	CRPR	
Napa false indigo *Amorpha aequalis* var. *sonomensis*	FE	–	1B.2	Broadleaved upland forest, chaparral, cismontane woodland; 390–6500 feet elevation. Bloom period April–May.
Bent-flowered lunaria *Amsinckia lunaris*	–	–	1B	Valley and foothill grassland, cismontane woodland, coastal bluff scrub; 10–1,600 feet elevation. Bloom period March–June.
Sonoma sunshine *Blennosperma bakeri*	E	E	1B	Valley and foothill grassland (mesic), vernal pools; 3–360 feet elevation. Bloom period March–May
Narrow-anthered brodiaea *Brodiaea californica* var. *leptandra*	–	–	1B	Broadleaved upland forest, lower montane coniferous forest, chaparral, valley and foothill grassland; 300–3,000 feet elevation. Bloom period May–July
Dwarf downingia *Downingia pusilla*	–	–	1B	Valley and foothill grassland (mesic), vernal pools; 3–1,450 feet elevation. Bloom period March–May
Pale yellow hayfield tarplant *Hemizonia congesta* ssp. *congesta*	–	–	1B	Valley and foothill grassland; sometimes on roadsides; 50–2,000 feet elevation. Bloom period April–November.
California satintail *Imperata brevifolia*	–	–	1B	Mesic sites in chaparral, coastal scrub, Mojavean Desert scrub, meadows and seeps, and riparian scrub; 0–1,500 feet elevation. Bloom period September–May.

Species	Status			Habitat Description
	Federal	State	CRPR	
Colusa layia *Layia septentrionalis*	–	–	1B	Chaparral, cismontane woodland, valley and foothill grassland; serpentinite or sandy soils; 325–3,600 feet elevation. Bloom period April–May.
Jepson's leptosiphon *Leptosiphon jepsonii*	–	–	1B	Chaparral or cismontane woodland, usually in volcanic soils; 325–1,600 feet elevation. Bloom period March–May.
Sebastopol meadowfoam *Limnanthes vinculans*	FE	CE	1B.1	Vernally mesic meadows and seeps, valley and foothill grassland, and vernal pools. 45–1000 feet elevation. Bloom period April–May.
Marsh microseris *Microseris paludosa*	–	–	1B	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland; 15–1,000 feet elevation. Bloom period April–June.
Baker's navarretia *Navarretia leucocephala* ssp. *bakeri*	–	–	1B	Mesic, cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools; 15–5,700 feet elevation. Bloom period May–July.
Napa bluecurls *Trichostema ruygtii*	–	–	1B	Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland, vernal pools; 100–200 feet elevation. Bloom period June–October.

USFWS:
E Endangered (legally protected)
CDFW:
E Endangered (legally protected)
T Threatened (legally protected)
CNPS:
1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
Sources: CNDDB 2014; CNPS 2023; USFWS 2014; data compiled by AECOM in 2014.

Based on the habitat and elevation range of the project site, it was determined that 12 special-status plant species have at least some potential to occur. These species are included in Table 8 along with their listing status and habitat description. No special-status plant species were observed during the field surveys in 2004 or 2009.

Special-Status Wildlife

All special-status wildlife species documented within the nine quadrangles containing and surrounding the project site were evaluated for their potential to occur on the project site. Species with no potential to occur on the project site because specific habitat types or plant communities that support the species (such as vernal pools, chaparral, broadleaved upland

forest, and lower montane coniferous forest communities) do not exist in the project vicinity are not included in Table 9 and are not discussed further in this document. Six special-status wildlife species that have potential to occur on the project site are listed in Table 9, along with their listing status and habitat description. No special-status wildlife species were observed during the field surveys in 2004 or 2009.

Table 9
Special-Status Wildlife with Potential to Occur on the Project Site or in the Vicinity

Species	Listing Status		Habitat
	USFWS	CDFW	
California freshwater shrimp *Syncaris pacifica*	E	E	Shallow pools away from stream flow in low elevation, low gradient streams.
Western pond turtle *Emys marmorata*	–	SC	Forage in ponds, marshes, slow-moving streams, sloughs with permanent, or nearly permanent, water; nest in nearby uplands with low, sparse vegetation.
California red-legged frog *Rana aurora draytonii*	T	SC	Lowlands and foothills in or near permanent sources of deep cool water with dense, shrubby, or emergent riparian vegetation.
Foothill yellow-legged frog *Rana boylii*	–	SC	Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.
Purple Martin *Progne subis*	–	SC	Inhabits woodlands and low-elevation conifer forests. Nests mostly in old woodpecker cavities, often located in tall, old, isolated tree or snags; occasionally nests in human-made structures, nesting boxes, under bridges or in culverts.
White-tailed kite *Elanus leucurus* (nesting)	–	FP	Forages in grasslands and agricultural fields; nests in riparian zones, oak woodlands, and isolated trees.
American Badger *Taxidea taxus*	–	SC	Dry, open grasslands, fields, and pastures; from high alpine meadows to sea level.

Notes for Table 9
USFWS:
E Endangered (legally protected)
T Threatened
CDFW:
C Candidate for listing (legally protected)
E Endangered (legally protected)
FP Fully protected (legally protected)
SC Species of special concern (no formal protection other than CEQA consideration)
Sources: CNDDB 2014; CNPS 2014; USFWS 2014; data compiled by AECOM in 2014.

As Redwood Creek flows west through the project site, the channel becomes narrower and passes through a stand of mixed riparian woodland immediately southwest of Reservoir 3. Below the low flow stream crossing in this area there is a deep in channel pool that is mostly shaded. The pool is approximately 50 feet long, 30 feet wide, and 3 to 4 feet deep and was inundated during the surveys conducted in July 2004 and 2009. This pool supports suitable habitat for California freshwater shrimp, California red-legged frog, foothill yellow-legged frog, and western pond turtle because it is inundated during the summer. Foote Creek and La Franchi Creek are both considered critical habitat for Central California Coast steelhead, but steelhead use of these creeks is not currently known. Special-status fish species are discussed in detail below. The grassland area adjacent to Redwood Creek and the prior-converted vineyard could provide suitable burrowing habitat for American badger. White-tailed kite and purple martin could nest in medium to large trees in the riparian habitat along the creeks or in live oak trees scattered throughout the project site.

Reservoir 3 provides potentially suitable habitat for California red-legged frog and western pond turtle. During the 2004 field survey, several bullfrogs and juvenile and adult green sunfish were observed along the shoreline of the reservoir. The coast live oak woodland, riparian woodland, and associated grassland located approximately 100 feet west of the reservoir could provide suitable nesting habitat for western pond turtle.

All raptors, including common species not considered special-status species, are protected under Section 3503.5 of the California Fish and Game Code, which prohibits take or destruction of raptors, including their nests and eggs. Common raptor species, such as barn owl, red-tailed hawk, and American kestrel, may forage on the project site and could nest in trees in the riparian habitat along the creeks or in remnant stands of live oak woodland.

Special-Status Fish

All special-status fish species documented within the nine quadrangles containing and surrounding the project site were evaluated for their potential to occur on the project site. A total of six special-status fish species have the potential to occur on or adjacent to the project site. These species are listed in Table 10, along with their listing status and habitat description.

The Central California Coast coho salmon Evolutionarily Significant Unit (ESU) was listed as a threatened species on October 31, 1996 (61 Federal Register [FR] 56138) and upgraded to endangered on June 28, 2005 (70 FR 37160). On April 2, 2012, NMFS redefined the geographic range of the ESU (77 FR 19552), which includes all naturally spawned populations of coho salmon from Punta Gorda in northern California south to and including the Aptos Creek in central California, as well as populations in tributaries to San Francisco Bay, excluding the Sacramento-San Joaquin River system. Critical habitat for coho salmon was designated on May 5, 1999 (64 FR 24049) to include all riverine reaches accessible to Coho Salmon in the Russian River drainage, which includes Redwood and Foote creeks. Central California Coast

Coho Salmon could potentially occur within the reaches of Redwood Creek and Foote Creek on and adjacent (upstream and downstream) to the project site.

Table 10
Special-Status Fish with Potential to Occur on the Project Site and in the Vicinity

Species	Listing Status		Habitat
	Federal	State	
Coho salmon, Central California Coast ESU *Oncorhyncus kisutch*	E	E	Require cold, freshwater streams with suitable gravel for spawning; generally, spawn from late fall into early winter
Steelhead, Central California Coast DPS *Oncorhyncus mykiss*	T	–	Require cold, freshwater streams with suitable gravel for spawning; generally, spawn from winter into early spring
Chinook salmon, California Coastal ESU *Oncorhyncus tshawytscha*	T	_	Require cold, freshwater streams with suitable gravel for spawning; spawn during the fall
Navarro roach *Lavinia symmetricus navarroensis*	–	SC	Habitat generalists, found in warm intermittent streams and cold, well-aerated streams
Hardhead *Mylopharodon conocephalus*	–	SC	Undisturbed habitats of larger streams with high water quality; known to occur in the Russian River
Russian River tule perch *Hysterocarpus traski pomo*	–	SC	Require clear flowing water with abundant cover in low elevation streams

Federal:
E Endangered (legally protected)
T Threatened (legally protected)
State:
E Endangered (legally protected)
SC Species of Special Concern (no formal protection other than CEQA consideration)
Sources: CNDDB 2014; CNPS 2014; USFWS 2014; data compiled by AECOM in 2014.

The Central California Coast steelhead Distinct Population Segment (DPS) was federally listed by NMFS as threatened under the federal ESA (62 FR 43938, August 18, 1997). This species is not listed as threatened or endangered under CESA. The DPS includes river basins from the Russian River in Sonoma County to Aptos Creek in Santa Cruz County, including drainages of San Francisco and San Pablo Bays eastward to the Napa River in Napa County. Similarly, designated critical habitat for steelhead includes all river reaches accessible to listed steelhead

in coastal river basins from the Russian River to Aptos, including drainages of San Francisco and San Pablo Bays (65 FR 7764, February 16, 2000). The final rule designating critical habitat defined areas in the Geyserville Hydrologic Sub-area to include the Russian River upstream to endpoints in Maacama Creek and Redwood Creek, as well as Foote Creek and Kellogg Creek, which are tributary streams that flow into Redwood Creek (70 FR 52488, September 2, 2005). Central California Coast steelhead could potentially occur within the reaches of Redwood and Foote creeks on and adjacent to the project site.

The Chinook salmon California Coastal ESU was federally listed by NMFS in 1999 (64 FR50394) as threatened under the federal ESA. The California Coastal ESA includes all naturally spawned populations of Chinook salmon from Redwood Creek in Humboldt County, CA south through the Russian River. This species is not listed as threatened or endangered under CESA. Critical habitat for Chinook Salmon is designated in the Russian River, but no critical habitat is designated in Redwood or Foote creeks for the ESU.

Anadromous fish spend their adult lives in the ocean and return to freshwater to spawn. Adult steelhead and coho migrate through the Russian River to upstream spawning habitat in fall and spring to spawn. Juveniles spend variable amounts of time rearing in freshwater before returning to the ocean. For instance, juvenile steelhead can remain in freshwater streams for up to 3 years, while coho salmon move downstream to estuaries soon after emerging and usually migrate out to the ocean as 1-year old and occasionally as 2-year olds (Moyle 2002). California Coastal Chinook Salmon ascend spawning tributaries and spawn shortly after immigrating during the fall. Consequently, juvenile salmonids may be in the Russian River and its tributaries year-round. The greatest limiting factor to salmonid production in the Russian River basin and similar coastal watersheds is the low-flow period during summer and fall. During low flows, available habitat is substantially reduced, predation rates are high, competition for food and thermal stress from higher water temperatures increases, and habitat connectivity is lost.

Maacama Creek contains suitable habitat for Navarro Roach and Russian River Tule Perch due to its downstream confluence with the Russian River and the deep perennial pools present throughout the summer. Navarro Roach have the potential to occur through summer, while Russian River Tule Perch would likely only be present during winter and spring when deeper and more permanent water is available in the creek. When flowing and hydrologically connected to Maacama Creek and the Russian River, Redwood Creek and Foote Creek also provide potential habitat for Navarro Roach and Russian River Tule Perch.

During the reconnaissance-level survey conducted on July 21, 2009, an AECOM fisheries biologist observed several small fishes, including unidentified suckers, pikeminnows, and an unidentified juvenile salmonid species, likely steelhead or rainbow trout, in a pool that was present immediately below the low flow stream crossing in Redwood Creek, near the riparian

woodland immediately southwest of Reservoir 3. La Franchi Creek and Foote Creek were not flowing in any portions of the entire 479-acre project site during this survey.

REGULATORY SETTING

Federal Endangered Species Act

The United State Fish and Wildlife Service (USFWS) and NMFS implement the Federal Endangered Species Act (FESA) of 1973 (16 USC Section 1531 et seq.). Threatened and endangered species on the federal list (50 CFR Subsection 17.11, 17.12) are protected from "take" (direct or indirect harm), unless a Section 10 Permit is granted to an individual or a Section 7 consultation and a Biological Opinion with incidental take provisions are rendered to a lead federal agency. Pursuant to the requirements of FESA, an agency reviewing a proposed action within its jurisdiction must determine whether the proposed action is likely to adversely affect listed species or designated habitat, jeopardize the continued existence of species that are proposed for listing, or adversely modify proposed critical habitat.

Wetland Regulation (Section 404 of the Clean Water Act)

The Clean Water Act (CWA) was enacted as an amendment to the federal Water Pollution Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the United States. The CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands.

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

Porter-Cologne Water Quality Control Act and Section 401 of the CWA

Under Section 401 of the federal CWA, an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the state's water quality standards and criteria. In California, the State Water Board has delegated the authority to grant water quality certification to the nine Regional Water Quality Control Boards (RWQCBs).

The RWQCBs' jurisdiction includes federally protected waters under CWA Section 401 and state-protected waters under the Porter-Cologne Water Quality Control Act. A "water of the state" is defined as any surface water or groundwater, including saline waters, within the

boundaries of the state. The RWQCB has the discretion to take jurisdiction over areas not federally protected under Section 401 if they meet the definition of waters of the state.

California Endangered Species Act

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

Section 1602—Lake and Streambed Alteration Agreements

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

Water Rights Administration

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

Sonoma County Tree Ordinance

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

DISCUSSION

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

Special-Status Plants

Twelve special-status plant species have the potential to occur on the project site. Biological surveys of the project site took place after the vineyard conversion and reservoir development; no special-status plant species were observed in the unaffected areas of the site during the surveys in 2004 or 2009. It is unknown whether special-status plants may have been present in natural habitats on the project site at the time of the 1988 baseline prior to conversion of the approximately 194 acres to vineyard and prior to construction of the 12-inch pipeline. Because the presence and potential impacts prior to conversion and pipeline construction are unknown, it is not possible to conclude whether impacts to any populations, if present, would have occurred or would have been significant. No further ground-disturbing activities are proposed by the project that would impact habitat for potentially occurring special-status plant species.

The proposed diversion of up to 30 afa could affect the amount of water available to the riparian habitat on Redwood Creek and, therefore, impact special-status plant species that could be or become present in the riparian plant community or could have been present there prior to establishment of the pipeline that crosses Redwood Creek in two locations. However, given the relatively small riparian acreage disturbed during pipeline construction, it is unlikely construction would have amounted to a significant impact on special-status plant species, should they have been present. Furthermore, maintaining a diversion season of December 15 to March 31 when streamflow is generally higher in coastal streams and a minimum bypass flow of 56 cfs in Redwood Creek at the POD during the diversion season (or 266 cfs as measured at the USGS

gauge Maacama Creek Near Kellogg, CA [gauge No. 11463900]) (State Water Board 2009; MBK Engineers 2013), as discussed further below, would reduce future potential impacts on special-status plants associated with riparian habitat to a less-than-significant level.

Special-Status Wildlife

Six special-status wildlife species have the potential to occur on the project site. No special-status wildlife species were observed in the unaffected areas of the site during the surveys in 2004 or 2009. Presence of special-status wildlife at the time of the 1988 baseline is unknown, but given the presence of suitable habitat, they could have been present. The proposed diversion of up to 30 afa could affect the amount of water available downstream of the diversion and could result in drying of in-stream pools that could potentially support California freshwater shrimp, California red-legged frog, foothill yellow-legged frog, and western pond turtle. However, maintaining a diversion season of December 15 to March 31 and a minimum bypass flow of 56 cfs in Redwood Creek at the POD during the diversion season or 266 cfs as measured at the USGS gauge Maacama Creek Near Kellogg, CA [gauge No. 11463900], as included in the terms below, would reduce the potential impact on these species to a less-than-significant level because it would continue to support inundated pools in Redwood Creek downstream of the POD through summer. In addition, implementing riparian setbacks, as discussed in question 4(b) would also help maintain potential impacts to these species from the project at a less-than-significant level.

Reservoir 3 provides potentially suitable habitat for California red-legged frog and western pond turtle, which is a benefit from the construction of the offstream reservoir. Ongoing operation of the reservoir would not reduce the extent of aquatic habitat available to these species because historic fluctuations in water levels occurring since project construction would not change with approval of the water right application. However, ongoing operation provides habitat for invasive bullfrogs and green sunfish which prey on special-status species; this is addressed under question 4(a)(i) below. Inclusion of an invasive species management plan and eradication of non-native species from Reservoir 3 would reduce these potential impacts associated with predation of special-status species by invasive frogs and sunfish, as called for in Mitigation Measures BIO-3c and BIO-4 below to a less-than-significant level. Maintenance of a 50-foot setback around Reservoir 3, as called for in Mitigation Measure BIO-3a, would help to protect special-status species using the reservoir from adjacent land uses and/or potential sources of pollution.

Suitable nesting habitat for white-tailed kite and purple martin is present on and adjacent to the project site. Noise and added human presence during construction of the project and conversion of native habitat to vineyard may have resulted in short-term, temporary disturbance to potentially occurring white-tailed kite and purple martin, and tree removal associated with construction of the project removed potential suitable nest sites for white-tailed kite and purple

martin. However, numerous suitable nest trees were retained so that the project site continues to provide potential suitable nesting habitat and there is an abundance of potential nest trees in the project vicinity, so the removal is unlikely to have resulted in a potentially significant impact on these species. Operation of the proposed project would not result in adverse effects to these species because no further tree removal or construction activities that could cause nest abandonment are proposed. The majority of trees within the project are located adjacent to Highway 128 and therefore are already subject to regular noise disturbance from traffic and roadside maintenance (i.e., mowing). Potential impacts on white-tailed kite and purple martin resulting from the project would be less than significant.

A grassland area adjacent to Redwood Creek could provide suitable burrowing habitat for American badger; however, American badgers are not likely to occur given the limited grassland habitat available on the project site. Construction of the project resulted in loss of approximately 194 acres of grassland pasture that provided potentially suitable habitat for American badger. American badgers are territorial and have large home ranges that average 2,000 acres and vary by sex and season of use (Sargeant and Warner 1972); therefore, it is unlikely that 194 acres of pasture would have supported more than a single resident, non-breeding adult badger, likely only in the fall or winter season. If a badger had a den on the project site prior to conversion of the pasture to vineyard, this badger would have been displaced and the reduction of habitat in the project vicinity could have resulted in territorial conflicts; however, these conflicts and loss of habitat from the project site would not be expected to lead to a substantial decline in the number of American badgers or result in a trend toward this species becoming listed as threatened or endangered. The proposed project would not impact the remaining existing grassland. Therefore, potential impacts on American badger would be less than significant.

Special-Status Fish

Special-status fish have the potential to occur in Redwood, Foote, and La Franchi Creeks on the project site. During the 2009 field surveys, a juvenile salmonid was observed in Redwood Creek within the project site, but it could not be determined whether it was a resident rainbow trout or juvenile steelhead. Water diversion at the POD located on Redwood Creek could affect fish within and downstream of the project site and reducing flows could reduce or degrade suitable habitat in Redwood Creek. However, maintaining a minimum bypass flow of 56 cfs in Redwood Creek at the POD during the diversion season (December 15 to March 31) or 266 cfs as measured at the USGS gauge Maacama Creek Near Kellogg, CA [gauge No. 11463900], as included in Mitigation Measure BIO-1 below, would reduce the potential impact on these species to a less-than-significant level because sufficient flow would be maintained to allow for upstream passage, spawning, egg incubation, fry and juvenile rearing, and downstream movement and migration. Specifically, a Water Availability Analysis (WAA) conducted during 2008 and subsequent analysis conducted during 2009 showed that maintaining the minimum

bypass flow requirement would provide adequate instream flow protection for fish passage and spawning at the POD (State Water Board 2009; MBK Engineers 2013). In addition, channel maintenance flows were evaluated to ensure proper flows are maintained for the purposes of cleansing fine sediments from coarse substrates, removing encroaching vegetation, and contributing to deposition of instream woody cover. The subsequent analysis conducted concluded that diversions should not occur when flow in Redwood Creek is above 583 cfs. Therefore, restricting diversions to times when flows are between 56 cfs and 583 cfs in Redwood Creek at the POD (or 266 cfs and 2,790 cfs as measured at the USGS gauge Maacama Creek Near Kellogg, CA [gauge No. 11463900]) during the diversion season (Mitigation Measure BIO-1) by use of a passive bypass device (Mitigation Measure BIO-2) would reduce the potential impacts on special-status fish species to a less-than-significant level. Detailed discussion of the WAA is provided in Section 9, “Hydrology and Water Quality.”

The following terms (mitigation measures), substantially as follows, shall be included in any water right issued pursuant to Application 29381:

Mitigation Measure BIO-1

- No water shall be diverted under this water right unless the flow is between 56 cfs and 583 cfs in Redwood Creek at the POD during the diversion season or 266 cfs and 2,790 cfs as measured at the U.S. Geological Survey’s gauge Maacama Creek near Kellogg, CA (gauge No. 11463900). In the event that said monitoring device is no longer available for streamflow measurements, right holder shall within 15 days submit a plan, satisfactory to the Deputy Director for Water Rights, to install an equivalent monitoring device as near as practicable to the location of the current monitoring device.

Mitigation Measure BIO-2

- No water shall be diverted under this water right unless right holder is bypassing the flow required by this water right by use of a passive bypass device.

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

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

The offstream reservoir (Reservoir 3) provides potential habitat for western pond turtle and California red-legged frog. During biological surveys onsite, invasive species that prey on these native special-status species, specifically bullfrog and green sunfish, were observed in the offstream reservoir. The following mitigation measures BIO-3 and BIO-4, to be included in any water right to be issued, would reduce impacts to Western Pond turtle and California red-legged frog from non-native species to less than significant by providing protection of habitat for Western Pond turtle and California red-legged frog.

For the protection of California red-legged frog and western pond turtle, the following terms (mitigation measures), substantially as follows, will be included in any water right issued pursuant to Application 29381:

Mitigation Measure BIO-3

- To protect habitat for the California red-legged frog (*Rana aurora draytonii*) and western pond turtle (*Emys marmorata*) and to allow for the growth of riparian vegetation, right holder shall:

  a. Establish and maintain a 50-foot wide strip of natural upland vegetation around Reservoir 3 as shown on Exhibit 8 of this Initial Study for Application A029381. Right holder shall refrain from activities within the setback area, including, but not limited to, grading, herbicide spraying, fencing, cultivating crops or landscape areas, installing pipelines or increasing storage areas. Pre-existing features within the setback area that are excluded from the requirements of this term, include, but are not limited to: existing vineyard access roads and existing vineyard as shown in Exhibit 8. Planting and irrigation of native riparian vegetation within the setback area is allowed if the area is part of the authorized place of use and irrigation is conducted in compliance with the terms and conditions of this water right, or as authorized under another basis of right;

  b. Obtain approval of the Deputy Director for Water Rights prior to dredging the reservoir. As part of obtaining approval, right holder shall: (1) provide evidence of approval of dredging operation from the United States Fish and Wildlife Service, Sacramento Endangered Species Office, and the California Department of Fish and Wildlife; and (2) provide a plan to avoid disturbing the fringe of emergent (wetland) vegetation around the reservoir during dredging operations; and

  c. Make no introduction of non-native species into the reservoir.

Mitigation Measure BIO-4

- No water shall be diverted under this right unless right holder is operating in accordance with a mitigation plan satisfactory to the Deputy Director for Water Rights. The mitigation plan shall address eradication of non-native species. Right holder shall submit a report on mitigation plan activities in accordance with the time schedule contained in the mitigation plan, and whenever requested by the Division of Water Rights. The Deputy Director for Water Rights may require modification of the mitigation plan upon a determination that the plan is ineffective or unsuccessful or provide relief from this term upon a determination that the mitigation plan is no longer required.

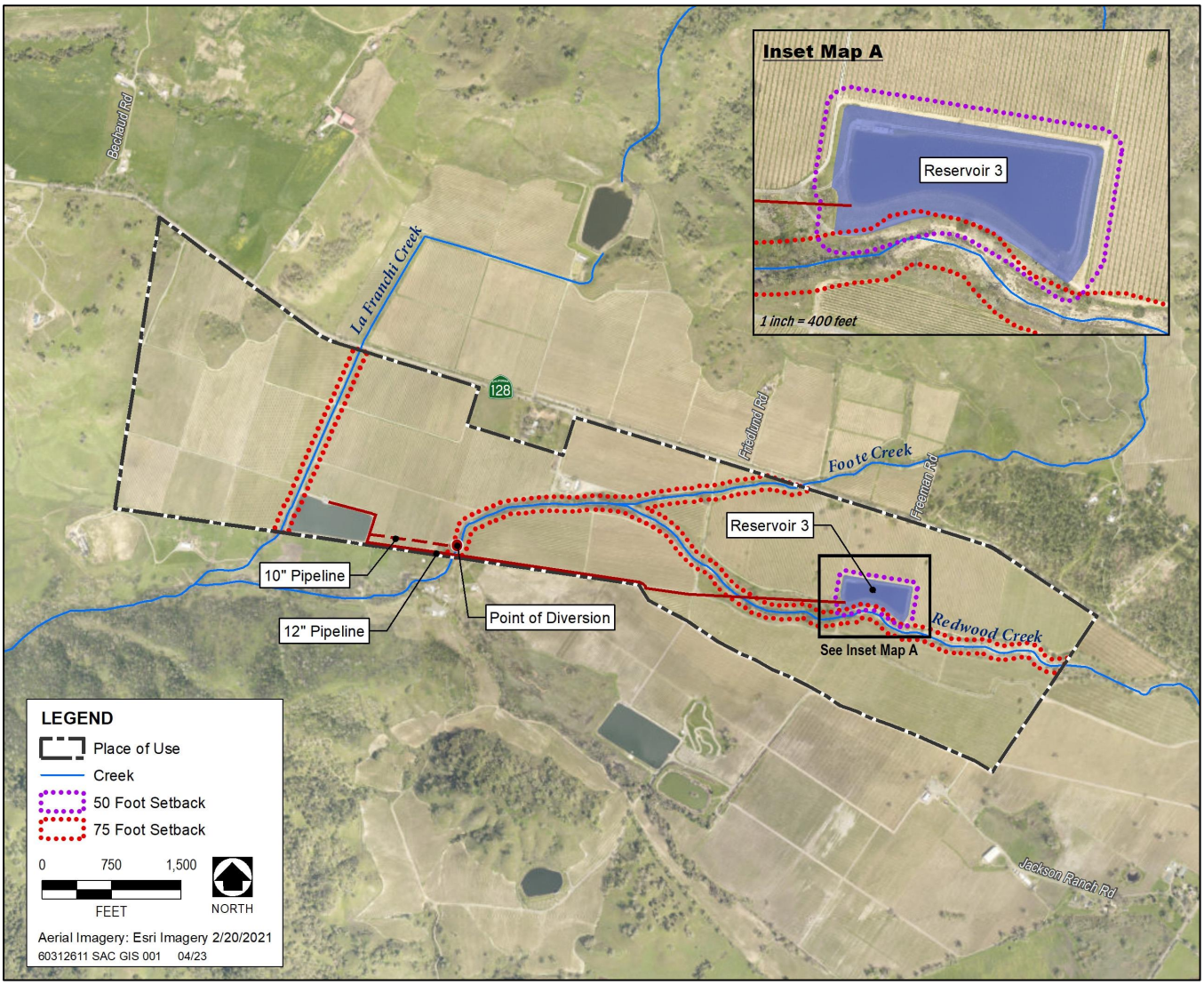

Exhibit 8 **Required Setback Areas**

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

The portions of Redwood Creek, Foote Creek, and La Franchi Creek that flow through the project site provide riparian woodland habitat important for many wildlife and plant species. Riparian vegetation also provides ecosystem functions and water quality benefits including shade and cover; inputs of large woody debris; minimization of erosion potential; filtration of sediment, nutrients, and pesticides; and maintenance of channel form and complexity.

Based on historic aerial review (i.e., comparing the area in Exhibits 4 and 5), the riparian habitat along Redwood Creek and Foote Creek was not significantly disturbed during construction of the offstream reservoir (Reservoir 3), water conveyance pipeline between Reservoir 2 and Reservoir 3, or post-baseline vineyard development, and no additional development activities are proposed that would impact the riparian habitat.

This analysis uses the State Water Board's stream classification definitions from the 2013 Policy (State Water Board 2013) and California Department of Forestry and Fire Protection's (CALFIRE) protective measures for watercourse and lake protection zones (CALFIRE 2015). CALFIRE's protective measures are based on stream classifications and slope ranges. Redwood Creek, La Franchi Creek, and Foote Creek are categorized as Class I streams, or streams in which fish are always or seasonally present (State Water Board 2013, CALFIRE 2015), with slopes less than 30%. Based on CALFIRE's stream classification system and slope classes, Class I streams with slopes less than 30% (like Redwood Creek, Foote Creek, and La Franchi Creek within the project site) should establish 75-foot setbacks to protect riparian habitat (CALFIRE 2015:75).

To protect the riparian habitat on the project site, the following term, substantially as follows, shall be included in any water right issued pursuant to Application 29381:

Mitigation Measure BIO-5

- For the protection of riparian habitat, right holder shall establish setbacks along the streams within the project site as shown on Exhibit 8 of this Initial Study for Application A029381. The stream setbacks shall be measured from the top of the bank on both sides of the stream and shall extend a minimum of 75 feet from Class 1 streams. No activity shall occur within the setback area, including, but not limited to grading, herbicide spraying, roads, fencing, and use or construction of storage areas. Right holder shall restrict cattle or other domestic stock access to the riparian area. Pre-existing features including features within the setback area for the vineyard that are excluded from the requirements of this term, include, but are not limited to: Reservoir 2, existing vineyard access roads, and existing vineyard as shown in Exhibit 8. Planting and irrigation of native riparian vegetation within the

setback area are allowed if within the place of use authorized by this water right and diversions are conducted in compliance with the terms and conditions of this water right, or as authorized under another basis of right; however, no plantings of non-native vegetation or new cropland shall occur. These requirements shall remain in effect as long as water is being diverted under any permit or license issued pursuant to Application A029381.

Operation of the POD may be subject to CDFW jurisdiction through a Streambed Alteration Agreement. The following term shall be included in any water right issued pursuant to Application 29381:

Mitigation Measure BIO-6

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

  Within 90 days of the issuance of this right or any subsequent amendment, right holder shall prepare and submit to the Division of Water Rights a list of or provide information that shows proof of attempts to solicit information regarding the need for, permits or approvals that may be required for the project. At a minimum, right holder shall provide a list or other information pertaining to whether any of the following permits or approvals are required: (1) lake or streambed alteration agreement with the Department of Fish and Wildlife (Fish & Game Code, § 1600 et seq.); (2) Department of Water Resources, Division of Safety of Dams approval (Wat. Code, § 6002); (3) Regional Water Quality Control Board Waste Discharge Requirements (Wat. Code, § 13260 et seq.); (4) U.S. Army Corps of Engineers Clean Water Act Section 404 permit (33 U.S.C. § 1344); and (5) local grading permits.

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

With implementation of the above mitigation measures, impacts to riparian habitat would be less than significant.

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

Construction of the POD in Redwood Creek occurred prior to the CEQA baseline date, therefore, effects to wetlands from constructing the POD are not assessed further in this Initial Study. The project site was surveyed for biological resources after development of the vineyard and offstream reservoir (Reservoir 3), and no wetlands were found other than small bands of cattails around the edge of the reservoir. Based on historic aerial review, the vineyard and offstream reservoir were created in upland pasture and there is no evidence that wetlands were present on the project site prior to conversion of the pasture land to vineyard. Therefore, no wetlands were impacted by project development. The 12-inch pipeline that was constructed to connect the POD to Reservoir 3 crosses Redwood Creek (a Water of the US) in two locations. Temporary impacts to this Water of the US may have occurred during construction of the pipeline, but no evidence of permanent impacts were observed during the field visit. The impact is less than significant.

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

Wildlife corridors are features that provide connections between two or more areas of habitat that would otherwise be isolated and unusable. Often drainages, creeks, or riparian areas are used by wildlife as movement corridors as these features can provide cover and access across a landscape. Redwood, Foote, and La Franchi Creeks provide dispersal opportunities for terrestrial and aquatic wildlife species. Only a few scattered trees were removed from the riparian corridor and would not substantially reduce cover or prevent continued wildlife use of the corridor. Water diversion at the POD located on Redwood Creek could affect the amount of water available downstream of the diversion, thereby impacting riparian vegetation and fish habitat. As noted in question 4(a) above and called for in Mitigation Measure BIO-1, diverting only when flows are between 56 cfs and 583 cfs in Redwood Creek at the POD during the diversion season (or 266 cfs and 2,790 cfs as measured at the U.S. Geological Survey's gauge Maacama Creek near Kellogg, CA ([gauge No. 11463900]) would reduce this potential impact to a less-than-significant level. In addition, riparian setbacks would be implemented, as discussed in question under 4(b) and called for in Mitigation Measure BIO-5.

Special-status fish could occur in Redwood Creek at the location of the diversion facility; therefore, juveniles could become entrained during diversions. Entrained special-status fish could be injured or killed in the diversion structure. This would be a potentially significant impact. As a result, a fish screen that complies with NMFS screening criteria would be required.

An appropriate fish screen permit term, as called for in Mitigation Measure BIO-7 below will ensure that harm to the special-status species from requested water diversions is prevented and would reduce this potential impact to a less-than-significant level. The concrete apron crossing Redwood Creek near Reservoir 3 could potentially create high velocity sheet flow during high flows, which could have resulted in a complete velocity barrier to immigrating adult steelhead and Coho Salmon. However, examination of recent publicly available aerial photographs indicates that the stream crossing is no longer utilized and that the concrete apron has been removed. Therefore, potential fish passage impediments resulting from the project no longer occur in the vicinity of the POD and fish passage facilities are not required.

The following term, substantially as follows, shall be included in any water right issued pursuant to Application 29381:

Mitigation Measure BIO-7

- No water shall be diverted under this right unless right holder is operating the water diversion facility for the POD with a fish screen satisfactory to the Deputy Director for Water Rights. The fish screen shall be designed and maintained in accordance with the screening criteria of the National Marine Fisheries Service. Right holder shall provide evidence that demonstrates that the fish screen is in good condition with the annual report and whenever requested by the Division of Water Rights.

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

Based on review of historic aerial photography of the project site in 1982 (Exhibit 4) compared with a 1993 aerial after the area was mostly converted to vineyard (Exhibit 5), it is estimated that approximately 15 trees were removed in the northern area of the project site developed post-baseline, approximately 10 trees were removed just west of Reservoir 3, and approximately 15 trees were also removed south of Redwood Creek (Exhibit 6). These trees were located within coast live oak woodland habitat and based on the observed species composition of this habitat type, the tree species may have included coast live oak, gray pine, Douglas fir, madrone, and California bay. Sonoma County has a tree protection ordinance; however, agricultural uses are exempt from the ordinance. Therefore, the proposed project, which involves agricultural cultivation, is assumed to be exempt from this ordinance. The proposed project would not conflict with any local policy or ordinance protecting biological resources. Therefore, no impact would occur.

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?

The project site is not within an area subject to an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Therefore, the project would not conflict with any such plans and no impact would occur.

5. CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

REGULATORY SETTING

For the purposes of CEQA, a historical resource is a resource listed in, or determined eligible for listing in, the California Register of Historical Resources (CRHR). This is defined as any site that:

(A) Is listed in or eligible for listing in the CRHR; listed in a local register of historical resources; or is historically or archeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California, retains a sufficient degree of integrity; and

(B) Meets any of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

2. Is associated with the lives of persons important in our past;

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

4. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, the State CEQA Guidelines require consideration of unique archeological sites (Section 15064.5). If an archeological site does not meet the criteria for inclusion on the CRHR but does meet the definition of a unique archeological resource as outlined in the PRC Section 21083.2, it may be treated as a significant historical resource.

CULTURAL RESOURCES STUDY

The 194-acre POU developed post-baseline was surveyed for cultural resources in 1991 (Stoyka and Werner 1991). During the survey, five prehistoric sites and one historic-period trash dump were recorded; these were located within developed vineyards and vineyard roads. Due to the amount of time which had passed from the previous survey, a record search for information on known cultural resources in the project area was performed by an EDAW archeologist at the Northwest Information Center (NWIC) of the California Historical Resources Information System in July 2009. The NWIC identified five previous cultural resources studies that were conducted within the project site and four studies within 0.25 mile of the project site. The previous investigations inventoried the entire project site; eight cultural resources were identified within the 194-acre POU developed post-baseline, including:

- CA-Son-1945H, a historic-period trash scatter
- CA-Son-1946, a small sparse lithic scatter including obsidian and chert debitage with possible stone tools
- CA-Son-1947, a sparse lithic scatter primarily composed of obsidian
- CA-Son-1948, a large sparse lithic scatter with obsidian and chert flakes
- CA-Son-1949, a small lithic scatter of almost entirely obsidian flakes and a biface fragment
- CA-Son-1950, a lithic scatter comprised of obsidian flakes
- CA-Son-1974, a lithic scatter comprised of obsidian and chert flakes and tools
- P-49-3335, an obsidian biface isolate

An EDAW archeologist performed a field examination of the project site on July 21, 2009. During this site visit, all of the above-mentioned sites, except for CA-Son-1945H which could not be found, were revisited to assess their current condition. The sites appeared unchanged from when they were previously recorded. At each location (except CA-Son-1945H), the space between vine rows was obscured, making direct observation of the mineral soil surface difficult;

the only consistently open areas were at the base of the vine stems themselves. Even with that hindrance, obsidian flakes, tool fragments, and chert flakes were noted at the site locations.

A contact letter was sent to the Native American Heritage Commission (NAHC) to request a search of the Sacred Lands Files and to ask for a list of individuals or groups who might have information regarding cultural resources within the project site. The NAHC response did not identify any Native American cultural resources in the project site. A list of three contacts who might have information regarding cultural resources within the project site was included with the response, and letters to those individuals were sent out on July 27, 2009; to date, no response has been received.

A paleontological resources search of the project area was completed on the University of California, Berkeley Museum of Paleontology (UCMP) website (UCMP 2018). No locations containing sensitive paleontological resources were identified in the project area. Furthermore, the project area is located exclusively on Holocene-age geologic deposits and sediments. Holocene deposits contain only the remains of extant, modern taxa (if any resources are present). Therefore, this formation is not considered to be paleontologically sensitive. As such, therefore it is extremely unlikely for the project site to contain significant paleontological resources.

DISCUSSION

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

There are no buildings or structures located within the project footprint. Therefore, no impact would occur to any buildings or structures listed on the State Office of Historic Preservation, California Register, or the National Register of Historic Places. No impact would occur.

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

The six locations of sparse lithic scatters found in the 194-acre POU developed post-baseline are in areas that have been disturbed by vineyard operations. These sites have not been formally tested; it is unknown if they retain sufficient integrity or include the data potential required for CRHR listing. Therefore, undiscovered subsurface cultural remains may be present in the area and could be disturbed by vineyard operations. In light of the potential to uncover unknown or undocumented subsurface cultural remains, this impact would be potentially significant. Implementation of the term below would reduce this potential impact to a less-than-significant level.

To protect the sites identified as CA-SON-1946, CA-SON-1947, CA-SON-1948, CA-SON-1949, CA-SON-1950, and CA-SON-1974, the following term, substantially as follows, shall be included in any water right issued pursuant to Application 29381:

Mitigation Measure CUL-1:

- The prehistoric sites identified as CA-SON-1946, CA-SON-1947, CA-SON-1948, CA-SON-1949, CA-SON-1950, and CA-SON-1974 (Stoyka and Werner 1991 on file with the Division of Water Rights) shall not be impacted by subsurface disturbances (e.g., ripping, trenching, grading, or installation of buried pipelines). Routine maintenance of existing vineyard, including shallow discing and weed mowing will continue to be allowed. When vine replacement is necessary, vine removal shall be done as non-invasively as possible, by pulling the vines vertically with a chain attached to the hydraulic system on a tractor. Vine removal shall occur only while the soil is moist down to 6 inches, and new vines shall be replanted in the same location as the vines which were removed. The right holder shall mark the locations of CA-SON-1946, CA-SON-1947, CA-SON-1948, CA-SON-1949, CA-SON-1950, and CA-SON-1974 with permanent line stakes extending a maximum of 2 feet above the height of the existing line stakes. The delineation of the site areas shall be determined by a qualified archeologist in consultation with the State Water Board. Global positioning system (GPS) coordinates shall be used to identify the boundaries of the sensitive areas and be submitted to the Deputy Director for Water Rights.Right holder shall be responsible for all costs associated with the cultural resource related work.

There is no data potential for the historic-period trash scatter (CA-Son-1945H) or the obsidian biface isolate (P-49-3335) so no mitigation is necessary for these areas.

There is the possibility that additional subsurface archeological deposits or human remains could be present and accidental discovery could occur. This is considered a potentially significant impact. Implementation of the term below would reduce this potential impact to a less-than-significant level.

The following term, substantially as follows, shall be included in any water right issued pursuant to Application 29381:

Mitigation Measure CUL-2:

- Should any buried archeological materials be uncovered during project activities, such activities shall cease within 100 feet of the find. Prehistoric archeological indicators include obsidian and chert flakes and chipped stone tools; bedrock outcrops and boulders with mortar cups; ground stone implements (grinding slabs, mortars, and pestles) and locally darkened midden soils containing some of the previously listed items plus fragments of bone and fire affected stones. Historic period site indicators generally include fragments of glass,

ceramic, and metal objects; milled and split lumber; and structure and feature remains such as building foundations, privy pits, wells and dumps; and old trails. The Deputy Director for Water Rights shall be notified of the discovery and a professional archeologist shall be retained by the right holder to evaluate the find and recommend appropriate mitigation measures. Proposed mitigation measures shall be submitted to the Deputy Director for Water Rights for approval. Project-related activities shall not resume within 100 feet of the find until all approved mitigation measures have been completed to the satisfaction of the Deputy Director for Water Rights.

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

The project site is located within Holocene-age (11,000 years before present and younger) alluvial deposits (Wagner and Bortugno 1999). To be considered a fossil, an object must be more than 11,000 years old. Therefore, the project would have no impact on unique paleontological resources.

d) Disturb any Human Remains

The record search conducted at the NWIC, and the various field surveys failed to identify any burial sites in the project site. The potential exists, however, for previously unknown human remains to be discovered during project operations. This is considered a potentially significant impact. Implementation of the term below would reduce this potential impact to a less-than-significant level.

The following term, substantially as follows, shall be included in any water right issued pursuant to Application 29381:

Mitigation Measure CUL-3:

- If human remains are encountered, then the right holder shall comply with the California Environmental Quality Act (CEQA) Guidelines Section 15064.5(e)(1) (Cal. Code Regs. tit. 14, § 15064.5(e)(1)) and the Health and Safety Code Section 7050.5 (Public Resources Code § 5097.99). All project-related ground disturbance within 100 feet of the find shall be halted until the county coroner has been notified. If the coroner determines that the remains are Native American, the coroner will notify the Native American heritage Commission to identify the most-likely descendants of the deceased Native Americans. Project-related ground disturbance in the vicinity of the find shall not resume until the process detailed under CEQA Guidelines Section 15064.5(e) has been completed and evidence of completion has been submitted to the Deputy Director for Water Rights.

6 ENERGY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The California Energy Commission (CEC) oversees rules and regulations related to California's energy uses and needs. Rules and regulations have been established for appliance efficiency and building energy efficiency. Additionally, the CEC oversees the Renewables Portfolio Standard (RPS), a program that sets energy procurement requirements for the state's energy providers (California Energy Commission, 2020). Electricity providers in the Proposed Project area include Pacific Gas & Electricity and Sonoma Clean Power.

DISCUSSION

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Past construction activities were short-term and temporary, would have required limited construction equipment, and were confined to the areas developed post-baseline (Table 6, CEQA Baseline and Project Components). Equipment used to operate the vineyard would consume fossil fuels (e.g., diesel and gasoline); however, these operations would only occur during periods of maintenance and seasonal harvesting and would be similar to existing conditions. It is therefore not anticipated that the project would result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. This impact would be less than significant.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The construction, operation, and maintenance of the proposed project would not have the potential to conflict with or obstruct a state or local plan for renewable energy or energy efficiency because there would not be a substantial increase in energy use above existing levels, and the project is not located on lands reserved for generation of renewable energy. No impact would occur.

7. GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

Sonoma County is within the complex “Coast Range” geological region of California, which is characterized by valleys and various mountain ranges that are parallel to fault lines. Two mountain ranges are located in Sonoma County; the Mayacamas Mountains and the Sonoma Mountains. Sonoma County is primarily underlain by a heterogeneous assemblage of rocks referred to as the Franciscan complex. The Franciscan Complex is primarily composed of cherts, greywacke sandstones, mafic volcanic rocks, shales, limestones, and high pressure metamorphic rock (USGS 2002).

As shown on USGS fault maps, the Maacama fault zone has the potential to extend across or is located near the project site (USGS 2014). In addition, the project site is located in an Alquist-Priolo fault-rupture hazard zone (California Department of Conservation 2023).

The topography of the eastern portion of the place of use planted after the baseline date is primarily flat. Soil types in this area include Cortina very gravelly loam, 0 to 2% slopes (CsA) and Cortina very gravelly sandy loam, 0 to 2% slopes (CrA). The soil type in the remainder of the project site is Haire clay loam, 0 to 9% slopes (HcC). Both the CsA and CrA soil types are rated as having a low erosion hazard, and the HcC soil type has a slight erosion hazard. The soil types are rated as having a low potential for expansive qualities (NRCS 2014).

Additionally, the POU is not located in a high risk area for landslides (Sonoma County 2011a).

REGULATORY SETTING

A grading permit is required from Sonoma County prior to commencing any grading or related work, including preparatory site clearing and soil disturbance, except where exempted from permit requirements by Section 11.04.020 of the Sonoma County Code. Since 2000, the Sonoma County Agricultural Commission’s Agricultural Division has administered the Sonoma County Grading, Drainage, and Vineyard and Orchard Site Development Ordinance, known as VESCO, which requires growers planting new vineyards and replanting vineyards to meet standards. VESCO was not being implemented at the baseline date.

Building and construction in Sonoma County must perform erosion prevention and sediment control in accordance with chapter 11 and 11a of the Sonoma County Code (SCC) and conform to erosion prevention and sediment control best management practices (BMPs), which includes installation of sod, straw bales and silt fence, and a 25-foot setback from riparian areas (Sonoma County 2016).

DISCUSSION

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 on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)

Although the project site is located in an Alquist-Priolo fault-rupture hazard zone, and the Maacama fault zone has the potential to extend across or is located near it, the proposed project does not involve the construction of housing or other habitable structures, and it does not involve any actions that would expose people or structures to substantial adverse effects from a rupture of a known earthquake fault. This impact would be less than significant.

ii) Strong seismic ground shaking?

Please refer to the discussion under question 7(a)(i) above. Given the agricultural nature of the proposed project, it would not expose people or structures to adverse effects of strong seismic ground shaking. This impact would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

Please refer to the discussion under question 7(a)(i) above. Given the agricultural nature of the proposed project, it would not expose people or structures to adverse effects from seismic-related ground failure. This impact would be less than significant.

iv) Landslides?

As discussed previously, the project site is located near a fault zone which could perpetuate a landslide. However, the project site is not located in an area with high potential for landslides (Sonoma County 2011a). Given the agricultural nature of the proposed project and the flat topography onsite, the proposed project would not expose people or structures to adverse effects of a landslide. This impact would be less than significant.

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

The Sonoma County Agricultural Commissioner office does not have permits on record for the post-baseline vineyard planted prior to 1999 (within Assessor's parcel number [APN] 120-110-014) as not all records have been maintained by the County (Casarez, pers. comm., 2014). Subsequent to 1999, there are several permits on record for vine removal and grape replanting, planting grasses, perimeter control, and winterizing the site, all on relatively flat ground.

Sonoma County issued final approval of a grading permit for Reservoir 3 construction on January 16, 1992 (Johnson 1992), so substantial soil erosion or the loss of topsoil from reservoir construction is not expected to have occurred. For projects developed with County permit requirements, BMPs for erosion control would be implemented. Minimum 25-foot setbacks from riparian areas per Sonoma County's requirements for erosion prevention and sediment control (Sonoma County 2016) have been maintained on the project site and will be extended to 75 feet within the 194-acres built post-baseline as required by Mitigation Measure BIO-5.

Given the flat terrain of the project site, onsite soil types, and implementation of BMPs, including the riparian setbacks throughout the site (discussed in the "Biological Resources" section), development of the vineyard, reservoir, and conveyance is not expected to have resulted in substantial soil erosion or the loss of topsoil.

A term to protect existing riparian corridors along Redwood Creek, Foote Creek, and La Franchi Creek in the vicinity of the place of use during project operations shall be included in any water right issued pursuant to Application 29381; see "Biological Resources" section question (b). This impact would be less than significant with mitigation.

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?

Please refer to the discussion under question 7(a)(iv) above. Activities associated with the proposed project would not expose people or structures to adverse effects from unstable soils. This impact would be less than significant.

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

Soil types within the project site, as described in question 7(b), are rated as having a low potential for expansive qualities. This impact would be less than significant.

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

The proposed project does not include any septic tanks or alternative wastewater disposal systems. No impact would occur.

8. GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

Constituent gases of the Earth's atmosphere called atmospheric greenhouse gases (GHGs) play a critical role in the Earth's radiation budget by trapping infrared radiation emitted from the Earth's surface, which would have otherwise escaped to space. Prominent GHGs contributing to this process include carbon dioxide (CO_2), methane (CH_4), ozone, water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. Anthropogenic emissions of these GHGs in excess of natural ambient concentrations are responsible for the enhancement of the greenhouse effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Global warming–inducing emissions of these gases are attributable to human activities associated with industrial/manufacturing, utilities, transportation, residential, and agricultural sectors (CARB 2023c).

Global warming is a global problem, and GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs), which are pollutants of regional and local concern. Worldwide, California is the 12th–16th largest emitter of CO_2, and is responsible for approximately 2% of the world's CO_2 emissions (CARB 2023, CEC 2018,). In 2004, California produced 492 million gross metric tons of carbon dioxide-equivalent (CEC 2006a).

In September 2006, California Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions, and is the first of its kind worldwide. AB 32 applies to major

stationary sources of emissions only, but acknowledges the urgency of this potential threat to the environment.

DISCUSSION

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

The proposed project would not involve any activities that generate substantial GHG emissions. Past construction activities were short-term and temporary, would have required limited construction equipment, and were confined to the areas developed post-baseline (Table 6).

Activities associated with operation of the vineyard would generate minimal GHG emissions; however, these operations would be similar to existing conditions and the additional grape vines that were planted would increase carbon sequestration. It is therefore not anticipated that the project would generate substantial harmful GHG emissions beyond baseline conditions. This impact would be less than significant.

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

The proposed project would not generate any long-term sources of substantial GHG beyond baseline conditions. As such, the proposed project would not conflict with the successful implementation of AB 32, the AB 32 Scoping Plan, and Executive Order S-14-08. Similarly, the proposed project would not conflict with any other applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Because the project would not conflict with any applicable plan, policy, or regulation for GHG reduction or managing global climate change, this impact would be less than significant.

9. HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
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?	☐	☐	☐	☒

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

A search of the EPA's EnviroMapper database (EPA 2014) and the California Department of Toxic Substances Control EnviroStor Data Management System database (California Department of Toxic Substances Control 2023) did not reveal any known hazardous materials sites within the project site. The project site is not listed pursuant to Government Code Section 65962.5.

DISCUSSION

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

Construction could have required the storage, use, and transport of small quantities of hazardous materials such as fuels, oils and lubricants, paints and paint thinners, glues, and cleaning fluids (e.g., solvents). Construction was required to comply with applicable hazardous materials, building, health, fire, and safety codes. Activities associated with vineyard operations could involve the use and storage of hazardous materials (e.g., fuels, fertilizers, insecticides). Use of agricultural chemicals including herbicides for vineyard operations would be required to comply with Sonoma County Agricultural Commissioner's Office requirements. Compliance with the usage, safe handling, and disposal requirements identified by the manufacturer along with compliance with applicable federal, state, and local regulations would limit the potential for an accident condition to occur that involves the release of hazardous materials into the environment. For these reasons, the proposed project would not create a significant hazard to the public related to hazardous materials. This potential impact would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?

Please refer to the discussion under question 9(a) above. The proposed project would not create a significant hazard to the public involving the release of hazardous materials. This potential impact would be less than significant.

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

Please refer to the discussion under question 9(a) above. The closest school to the project site (i.e., Alexander Valley Elementary School) is located more than 5 miles to the northwest. The proposed project would not create a hazard to a school. No impact would occur.

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 the environment?

The project site is not included on any list of hazardous materials sites. No impact would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No public airports are located within 2 miles of the project site; the closest airport to the project site (i.e., Healdsburg Municipal Airport) is located approximately 10 miles to the southwest. The proposed project would not create a hazard for people residing or working in the project area due to airport operations. No impact would occur.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No private airstrips are located in the vicinity of the project site; the closest private airstrip to the project site (i.e., Santa Rosa Memorial Hospital Heliport) is located approximately 13 miles to the south. The proposed project would not create a hazard for people residing or working in the project area due to airport operations. No impact would occur.

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

Past development and ongoing operation of the proposed project would not involve any activities that could impair implementation of or physically interfere with an adopted emergency

response plan or emergency evacuation plan. The limited past construction activities would have occurred on the project site and completely off of roadways that provide access to the area. Furthermore, operational traffic to and from the project site would be primarily seasonal, temporary, and minimal. No impact would occur.

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?

The proposed project is located in an area mapped with a moderate fire hazard severity zone by CALFIRE (CALFIRE 2007a). Although the project site is located in an area with vegetation that could pose a threat for wildland fires, the proposed project does not involve the construction of residences, and equipment used for the construction of the project would have been required to follow standard best construction practices, including use of spark arrestors. No additional construction activities are proposed that could spark a wildland fire. Therefore, the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. This potential impact would be less than significant.

10. HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
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 that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?	☐	☒	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Result in inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒
k) 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?	☐	☐	☒	☐
ii) a significant reduction in water supply, either on an annual or seasonal basis, to senior water right holders downstream of the diversion?	☐	☐	☒	☐
iii) a significant reduction in the available aquatic habitat or riparian habitat for native species of plants and animals?	☐	☒	☐	☐
iv) a significant change in seasonal water temperatures due to changes in the patterns of water flow in the stream?	☐	☒	☐	☐

ENVIRONMENTAL SETTING

The project site is located in the Russian River hydrologic unit “Middle Russian River.” The North Coast RWQCB lists sections of the Russian River as 303(d) impaired for sedimentation/siltation, temperature, chemicals, and bacteria caused by a variety of agricultural and residential/commercial development sources (North Coast RWQCB 2013). Project activities would occur in and near Redwood, La Franchi, and Foote Creeks located within the Maacama Creek subwatershed of the Russian River watershed.

REGULATORY SETTING

Information about Sections 401 and 404 of the CWA and the Porter-Cologne Water Quality Act is provided in the “Biological Resources” Regulatory Setting section above.

Water Rights Administration

State Filed Applications: Water Code section 10500 et seq. authorizes state agencies to file applications for the appropriation of water that may be required as part of implementation of a general or coordinated plan for the development of water resources of the state. These applications are referred to as State Filed Applications (SFAs) and are held in trust by the State Water Board pursuant to Water Code section 10504 until they are assigned.

A water right applicant proposing a project that is substantially different, but not in conflict with, the project described by an SFA, may request from the State Water Board a release from priority of an SFA. A release from priority operates as a limited exception to the rule of priority, precluding the eventual assignee of the SFA from asserting priority against the water right holder who obtained the release. The recipient of the release from priority does not acquire the priority of the SFA or any other priority date different from the priority of its date of filing.

The Board may assign or release from priority any portion of an SFA if the Board finds the assignment or release (1) is for the purpose of development not in conflict with a general or coordinated plan described in the SFA or with water quality objectives established pursuant to law and (2) does not deprive the county of origin with water necessary for its development. In accordance with Water Code section 10504.1, the State Water Board must also hold a public hearing before any portion of an SFA is assigned or released from priority.

Pursuant to Water Code section 1375, the State Water Board must find that there is “unappropriated water available to supply the applicant” before they can issue a water right permit. If there are any SFAs in a project’s watershed, along the flow path of the proposed project, or along the contributory flows from tributaries draining into the flow path, the demand of the SFA(s) needs to be considered when evaluating whether there is unappropriated water available for the proposed project. Division staff recommend applicants conduct a WAA evaluating their project under two scenarios, one with inclusion of the SFA(s) and one without.

The second scenario is useful to assess if the project is viable in the event a release from priority is granted, as in some watersheds sufficient water may not be available regardless of whether the SFA ultimately results in a perfected water right.

If consideration of SFAs in a project's WAA compels the conclusion that unappropriated water is not available for the project, applicants may wish to request from the State Water Board a release from priority of the SFA(s). If a project is granted a release from priority of an SFA, the application would no longer be subject to the senior water needs of that SFA. The project would not acquire the priority of the SFA, but because the application would be considered senior to the SFA, the WAA would no longer need to consider it. Consequently, a WAA without the senior demand of the SFA may then allow the State Water Board to find that there is unappropriated water available for the project.

As discussed further below, Application 29381 is currently subject to the senior demand of SFA 21181SF on Maacama Creek which has a priority date of March 7, 1963. The Applicant has chosen to submit a request for a release from priority of this SFA to facilitate a finding that there is unappropriated water available for the project.

North Coast Instream Flow Policy: The project site for Application 29381 is located in Sonoma County and is within the geographic area subject to the State Water Board's Policy that was adopted on October 22, 2013, and became effective on February 4, 2014. The Policy establishes principles and guidelines for maintaining instream flows for the protection of fishery resources. Prior to the State Water Board's development of the Policy, CDFW and NMFS developed a draft guidance document for conditioning water rights in certain areas to protect anadromous salmonids, which is entitled the *Draft Guidelines for Maintaining Instream Flows to Protect Fisheries Resources Downstream of Water Diversions in Mid-California Coastal Stream* (Draft Guidelines) (Wat. Code, §1259.4, subd. (b).). The Draft Guidelines provide procedures for estimating how the proposed project, cumulatively with other senior users, may impair flows necessary for anadromous salmonids and their habitat.

Section 3.3.1 of the Policy outlines the requirements for allowing the continued processing of water availability aspects of projects under the Draft Guidelines. To meet this requirement, Policy section 3.3.1, item 1 states that in addition to the timing of the submittal of the WAA, the project must be consistent with the Draft Guidelines recommendations pertaining to the diversion season, onstream dams, minimum bypass flows, protection of the natural hydrograph and avoidance of cumulative impacts. The project meets the criteria contained in Policy section 3.3.1, item 1, allowing the water availability aspects of the project to be processed under the Draft Guidelines.

DISCUSSION

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

The proposed project is not regulated, or expected to be regulated, under waste discharge requirements. Sonoma County issued final approval of a grading permit for Reservoir 3 construction on January 16, 1992 (Johnson 1992). Given the flat terrain of the project site, onsite soil types, and implementation of erosion prevention and sediment control BMPs described above, including the riparian setbacks throughout the site (discussed in the "Biological Resources" section), development of Reservoir 3 and the 194 gross acres of vineyard are not expected to have resulted in water quality violations. Activities associated with vineyard operations could involve the use and storage of hazardous materials (e.g., fuels, fertilizers, insecticides). Compliance with the usage, safe handling, and disposal requirements identified by the manufacturer along with compliance with applicable federal, state, and local regulations would limit the potential for an accident condition to occur that involves the release of hazardous materials into the environment. In addition, implementation of the term to establish riparian setbacks discussed in the "Biological Resources" section question (b) would be adequate to prevent runoff that may contain chemicals from the vineyards to be transported to the streams. Therefore, water quality impacts would be less than significant with this term.

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 that would not support existing land uses or planned uses for which permits have been granted)?

The proposed project does not involve the use of groundwater resources or include any activities that would directly affect groundwater or result in any substantial indirect effects on groundwater supplies or recharge. Use of surface water supplies would offset potential need for groundwater for irrigation and frost protection. The irrigation of vineyard areas with appropriated surface water would be expected to slightly increase the amount of water potentially percolating to groundwater. This impact would be less than significant.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?

The proposed project would not substantially alter the existing drainage pattern of the site. Given the flat terrain of the project site, onsite soil types, and implementation of erosion prevention and sediment control BMPs described above, including the riparian setbacks throughout the site (discussed in the "Biological Resources" section), development of the proposed project would not result in substantial soil erosion or the loss of topsoil.

A term to protect riparian corridors along Redwood Creek, Foote Creek, and La Franchi Creek in the vicinity of the place of use during project operations shall be included in any water right issued pursuant to Application 29381; see “Biological Resources” section question (b).

With implementation of the riparian setback term, this impact would be less than significant.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?

Please refer to the discussion under question 10(c) above. Implementation of the proposed project would not substantially alter drainage patterns. This impact would be less than significant.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Please refer to the discussion under question 10(c) above. Implementation of the proposed project would not substantially contribute runoff water. This impact would be less than significant.

f) Otherwise substantially degrade water quality?

Please refer to the discussion under question 10(a) above. The proposed project would not substantially degrade water quality. Water quality impacts would be less than significant.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

The proposed project does not involve housing and the project site is not located within a 100-year flood hazard area (Sonoma County 2011b). No impact would occur.

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?

Please refer to the discussion under question 10(g) above. Implementation of the proposed project would not place structures that would impede or redirect flood flows within a 100-year flood hazard area. No impact would occur.

i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

Please refer to the discussion under question 10(g) above. Implementation of the proposed project does not include any components or activities that would expose people or structures to a significant risk of loss, injury, or death from flooding. No impact would occur.

j) Result in inundation by seiche, tsunami, or mudflow?

The project site is relatively flat, and the proposed project would not result in inundation by seiche, tsunami, or mudflow because it is geographically isolated from areas where these types of events could occur. No impact would occur.

k) 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?

In February 2008, MBK Engineers prepared a WAA for Application 29381 (2008 WAA), in accordance with the Draft Guidelines. Data and assumptions in the 2008 WAA were based on findings from a Maacama Creek Watershed WAA and a WAA for upstream Application 30745 (Permit 21312) of Peter Michael Winery, both prepared by Wagner & Bonsignore Consulting Civil Engineers (W&B 2005 and 2007). The POD for Application 30745 is located on an Unnamed Stream tributary to Kellogg Creek thence Redwood Creek, approximately 1.8 miles upstream from the POD for Application 29381. The purposes of the WAA are to provide information about water availability for appropriation, which the State Water Board takes into account along with the amount of water needed to protect instream beneficial uses, and to demonstrate that there is unappropriated water available to supply the applicant, pursuant to Water Code Sections 1243 and 1375(d). The 2008 WAA analyzed the impairment of flows at seven POIs, as described in Table 11. The February Median Flow at point of interest (POI) 1 (at the POD) was calculated to be approximately 14 cfs.

The 2008 WAA for the proposed project was prepared in accordance with Division requirements and the Draft Guidelines (MBK Engineers 2008), and it was submitted before the Policy was adopted. Division staff agreed with the methodology used to estimate the unimpaired flow volume, watershed demand, February Median Flow, and the Cumulative Flow Impairment Index (CFII) calculations in the report.

Table 11
POIs and Associated CFII Values for Application 29381

Point of Interest (POI)	Description of POI	Diverters Senior to, and Including Application CFII (%)
1	The point immediately below the POD on Redwood Creek	6.1
2	The point immediately below the confluence of Redwood Creek and Foote Creek	6.1
3	The point on Redwood Creek immediately below La Franchi Creek	7.5
4	The point on Redwood Creek immediately above its confluence with Maacama Creek	6.8
5	The point immediately below the confluence of Maacama Creek with Redwood Creek	2.5
6	The point on Maacama Creek immediately below the confluence with Franz Creek	3.0
7	The point on Maacama Creek immediately above the confluence with the Russian River	3.0

Source: MBK Engineers 2008
CFII = Cumulative Flow Impairment Index

The purpose of the WAA is to evaluate the availability of water to satisfy the water right application and to investigate potential changes in stream flows attributable to diversions. Consistent with the requirements of the Draft Guidelines, a calculation of the CFII for POIs in Redwood Creek and Maacama Creek relative to the proposed project was completed (Table 11; also see discussion in the “Biological Resources” section). In the 2008 WAA, CFII values calculated for the seven POIs ranged from 2.5% to 7.5% for diverters senior to and including Application 29381 (Table 11). The CFII values at POIs 5 through 7 were under 5%; therefore, there is little chance of significant cumulative impacts (Draft Guidelines). The CFII values at POIs 1 through 4 (located on Class I streams) were between 5% and 10%; given these values, Division staff and MBK Engineers conducted an additional hydrologic analysis to calculate a minimum bypass flow that would provide minimum depth for fish passage and spawning in 2009. The analysis considered the minimum upstream passage and spawning depth requirements of 0.7 feet and 0.8 feet respectively, which is consistent with the recommendations made in the Policy sections C.1.1.2.1.1 and C.1.1.2.1.2. The analysis determined that 56 cfs in Redwood Creek at the POD during the diversion season would be protective of passage and spawning flows. These calculations are based on the minimum

bypass equation for computing regionally protective bypass flows from the 2010 Policy[5] (State Water Board 2010 and 2013). In addition to passage and spawning flows, the analysis evaluated channel maintenance flows by estimating the 2-year storm return flow at the POD by prorating historical gauge data from the Maacama Creek gauge calculating the 2-year return flow using a peaks-over-threshold method. The analysis concluded that the unimpaired 2-year storm return flow at the POD is 583 cfs. Therefore, to protect the frequency and magnitude of moderate and high flows used by migrating and spawning fishes and to protect the natural hydrograph, diversions should only occur when flow at the POD is between 56 cfs and 583 cfs.

In addition to the senior diverters analyzed in the 2008 WAA, Application 29381 is also subject to the senior demand of SFA 21181SF on Maacama Creek which has a priority date of March 7, 1963. SFA 21181SF is currently fully unassigned and held in trust by the State Water Board for 300,000 acre-feet per year for diversion to storage in Sonoma County from January 1 to December 31.

In March 2022, Division staff used the assumptions and calculations provided in the project's 2008 WAA to assess the potential cumulative impacts the water diversions will have on the stream hydrograph when SFA 21181SF is accounted for as a senior diverter. When the senior demand of SFA 21181SF is accounted for, the CFII values are greater than 10%, which would indicate a likelihood of significant cumulative impacts and preclude a finding that there is unappropriated water available to for the project under Water Code section 1375.

To avoid the need to account for the senior demand of SFA 21181SF, the Applicant has chosen to submit a request for a release from priority of the SFA from the State Water Board. A release from priority operates as a limited exception to the rule of priority, precluding any eventual assignee of the SFA from asserting priority against the water right holder who obtained the release. As discussed above in the Regulatory Setting section, the State Water Board must hold a public hearing and make certain findings before any application can be released from priority. If granted by the State Water Board, a release from priority would no longer subject Application 29381 to the senior demand of SFA 21181SF. Accordingly, the demand for SFA 21181SF could be removed from the CFII values calculated by Division staff in March 2022, and the project could proceed with the 2008 WAA and the 2009 bypass analysis.

As discussed above, the State Water Board cannot issue a water right permit absent a finding that there is unappropriated water available. Therefore, the impact conclusions in this section and in section 10(k)(ii) pertain to a scenario where a release from priority is granted and the State Water Board makes a finding that there is unappropriated water available.

5 The minimum bypass equation in the 2010 Policy is the same as in the 2013 Policy (see Policy Appendix B).

If the State Water Board makes such a finding, and the Applicant implements the bypass term discussed in the “Biological Resources” section question (a), the proposed project would not result in a significant cumulative reduction in the water supply downstream of the diversion. This impact would be less than significant.

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

As discussed in 10(k)(i) above, if the Applicant obtains a release from priority the proposed project would not result in a significant reduction in water supply, either on an annual or seasonal basis, to senior water right holders downstream of the diversion. This impact would be less than significant.

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

The Draft Guidelines provide procedures for estimating how a project may impair flows necessary for anadromous salmonids and their habitat. In general, conditions protective of anadromous salmonids will also ensure sufficient flows for native fish. As discussed in question 10(k)(i) above, Division staff and MBK Engineers conducted additional hydrologic analysis to calculate a minimum bypass flow that would provide minimum depth for fish passage and spawning. The analysis determined that 56 cfs in Redwood Creek at the POD during the diversion season would be protective of passage and spawning flows. In addition to evaluating passage and spawning flows, the analysis evaluated channel maintenance flows by estimating the 2-year storm return flow at the POD by prorating historical gauge data from the Maacama Creek gauge calculating the 2-year return flow using a peaks-over-threshold method. The analysis concluded that the unimpaired 2-year storm return flow at the POD is 583 cfs. Therefore, to protect the frequency and magnitude of moderate and high flows used by migrating and spawning fishes and to protect the natural hydrograph, diversions should only occur when flow at the POD is between 56 cfs and 583 cfs.

As discussed in the “Biological Resources” section above, implementing a minimum and maximum bypass flow of 56 cfs and 583 cfs in Redwood Creek at the POD during the diversion season (or 266 cfs and 2,790 cfs as measured at the USGS gauge Maacama Creek Near Kellogg, CA [gauge No. 11463900]) (MM BIO-1) would reduce potential impacts on aquatic and riparian habitat to a less-than-significant level.

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

Please refer to the discussion under question 10(k)(iii) above. Implementation of a term to maintain a minimum and maximum bypass flow at the POD during the diversion season would

reduce impacts to seasonal water temperatures due to changes in the patterns of water flow in the stream to less-than-significant levels.

11. LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The project site is zoned LEA (Sonoma County 2023). The Sonoma County General Plan Land Use Designation is also LEA, and the project site is currently in agricultural production as vineyard (Sonoma County 2008b).

DISCUSSION

a) – c) Physically divide an established community? Or
Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? Or
Conflict with any applicable habitat conservation plan or natural community conservation plan?

The proposed project would not change the agricultural land uses in the project area and would not conflict with any land use plan or policies. No impact would occur.

12. MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
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?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

Sand, gravel, crushed rock, and building stone are considered the most valuable mineral resources in Sonoma County. There are no known mineral resources on the project site. (DOC 2013).

DISCUSSION

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

There are no known mineral resources on the project site. The proposed project would have no direct or indirect effect on known mineral resources or any delineated mineral resource recovery sites. No impact would occur.

13. NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 in other applicable local, state, or federal standards?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

Major noise sources in Sonoma County include highways, freeways, and primary streets; railroad operations; aircraft and airport operations; local industrial facilities (including agricultural

and winery facilities); and recreational areas. Vehicular traffic is the largest contributor to noise levels in unincorporated Sonoma County (Sonoma County 2008c). The closest airport to the project site (i.e., Healdsburg Municipal Airport) is located approximately 11 miles to the southwest. Rural residences surround the project site and are located within 0.5 mile of the project site. The closest school to the project site (i.e., Alexander Valley Elementary School) is located more than 5 miles to the northwest.

The County's noise ordinance (Chapter 9.56) prohibits excessive, unnecessary and unreasonable noises from any and all sources in the community. However, construction is permitted between 8:00 a.m. and 6:00 p.m., Monday through Friday, between 9:00 a.m. and 6:00 p.m. on Saturday, and between 10:00 a.m. and 6:00 p.m. on Sundays and holidays.

DISCUSSION

a) – f) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards? Or,
Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? Or,
A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? Or,
A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? Or,
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? Or,
For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The project site is located adjacent to Highway 128, a major noise source in the area. Neighbors include other agricultural uses; the nearest sensitive receptor is an estimated 2,000 feet from the project site. Project construction would have generated temporary, short-term increases in noise levels at the project site from the use of heavy equipment and would not exceed standards set in the Sonoma County Noise Ordinance. Groundborne vibration would be below the human threshold for perception at the nearest sensitive receptor. Noise generated from project operations would be typical of the agricultural area and would not exceed standards set in the Sonoma County Noise Ordinance. No substantial permanent increase in ambient noise levels would occur. The project site is not located in the vicinity of a public airport or private airstrip. For these reasons, noise impacts from the proposed project would be less than significant.

14. POPULATION AND HOUSING

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

ENVIRONMENTAL SETTING

The project site is rural in nature, with scattered housing and low population density. The closest population center is the small town of Calistoga, located approximately 8 miles southeast.

DISCUSSION

a) – c) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? Or,
Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere? Or,
Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The proposed project would not induce substantial population growth in the area given the scale of the project. The project does not include a residential component or construction of roads that could induce population growth. No homes or people would be displaced with the proposed project. No impact would occur.

15. PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The project site is served by Sonoma County public services. The nearest fire station and police station to the project site are located an estimated 8 miles southeast in the town of Calistoga. The closest school to the project site (i.e., Alexander Valley Elementary School) is located more than 5 miles to the northwest. Robert Louis Stevenson State Park and Mt. St. Helena are located within 4 miles of the project site and provide public recreational opportunities.

DISCUSSION

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant

environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services.

The proposed project would not increase the population in the project vicinity as a result of new housing or employment opportunities. The proposed project would not provide any new housing that would generate new residents or increase the demand for services and facilities. Thus, the proposed project would not generate a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts. No impact would occur.

16. RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

There are no recreational facilities at the project site. The surrounding area is primarily private lands. Robert Louis Stevenson State Park and Mt. St. Helena are located within 4 miles of the project site and provide public recreational opportunities.

DISCUSSION

a) – b) 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? Or,
Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

The proposed project is not anticipated to induce population growth that would increase the use of existing neighborhood and regional parks or recreational facilities. It would not generate a need for new or an expansion of recreational facilities, which could have an adverse physical effect on the environment. No impact would occur.

17. TRANSPORTATION AND TRAFFIC

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

ENVIRONMENTAL SETTING

The project site is located along Highway 128 and near Blau, Friedlund, Freeman, and Foote Ranch Roads. Regional access to the project site is available from Highway 128, which is a rural, two-lane country road with a low traffic volume in the vicinity of the project site.

DISCUSSION

a) – g) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? Or,
Exceed, individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? Or,
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? Or,
Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? Or,
Result in inadequate emergency access? Or,
Result in inadequate parking capacity? Or,
Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Past project construction would not have resulted in a substantial increase in traffic given the scale of the project and the short-term, temporary nature of the construction activities. Ongoing routine vineyard operations could result in a temporary and seasonal minor increase in traffic volumes along Highway 128; however, this minor increase in traffic would not significantly affect roadway operations or level of service standards in the area because operations and harvest activities typically do not take place during peak traffic hours. This impact would be less than significant. The proposed project would not change air traffic patterns, substantially increase road hazards, result in inadequate emergency access, result in inadequate parking, or conflict with alternative transportation policies, plans, or programs; no impact would occur.

18. TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

REGULATORY SETTING

AB 52, signed into law in 2014, established a new category of resources in CEQA called “tribal cultural resources” that considers the tribal cultural values in addition to the scientific and

archeological values when determining impacts and mitigation. Pursuant to Public Resources Code, Division 13, Section 21074, tribal cultural resources can be either:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either:

    a. Included or determined to be eligible for inclusion in the California Register of Historical Resources (California Register); or

    b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to the eligibility criteria for the California Register (Pub. Resources Code, § 5024.1(c)). In applying these criteria, the lead agency must consider the significance of the resource to a California Native American Tribe.

Native American tribes traditionally and culturally affiliated with a geographic area may have expertise concerning their tribal cultural resources. In light of this, AB 52 requires that, within 14 days of a decision to undertake a project or determination that a project application is complete, a lead agency shall provide written notification to California Native American tribes that have requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe. Notice to tribes shall include brief project description, location, lead agency contact information, and statement that the tribe has 30 days to request consultation. The lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a tribe.

The application was determined to be complete prior to AB 52 going into effect. As described in the Cultural Resources section, however, general consultation letters were sent to individuals the NAHC identified might have information regarding cultural resources within the project site.

DISCUSSION

a) – b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)? Or, Would the project cause a substantial adverse change in the significance of a

tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?

The application was determined to be complete prior to AB 52 going into effect, and no tribal cultural resources have been identified. However, there is the possibility that unanticipated discoveries of subsurface archeological deposits or human remains may occur. Implementation of Mitigation Measures CUL-1, CUL-2, and CUL-3, identified in Section 5, Cultural Resources, would reduce impacts to tribal cultural resources to less than significant.

19. UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

ENVIRONMENTAL SETTING

The project site is not served by public water and wastewater services. Residences in the area rely on private wells for domestic water supply and private septic systems for wastewater treatment. Sonoma County's Central Landfill in Petaluma is located closest to the project site, approximately 20 miles to the south.

DISCUSSION

a) – g) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? Or,
Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? Or,
Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? Or,
Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? Or,
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? Or,
Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? Or,
Comply with federal, state, and local statutes and regulations related to solid waste?

No additional wastewater, stormwater drainage, or landfill facilities would be required with the proposed project. The proposed project, if approved, would result in the approval of additional surface water rights to support an existing agricultural operation. Additional water supplies, such as connection to public water supply, would not be required. Any waste generated from the proposed project would be disposed of properly and comply with all relevant federal, state, and local statutes and regulations related to solid waste. Therefore, no impact would occur.

20 WILDFIRE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

ENVIRONMENTAL SETTING

The California Department of Forestry and Fire Protection (CAL FIRE) is the primary emergency response agency for fire suppression and prevention within the State Responsibility Areas (SRA), which includes much of rural Sonoma County. CAL FIRE has rated the area around the project site as having moderate wildfire risk (CAL FIRE 2007b).

DISCUSSION

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Past development and ongoing operation of the proposed project would not involve any activities that could substantially impair an adopted emergency response plan or emergency evacuation plan. The limited past construction activities would have occurred on the project site and completely off of public roadways that provide access to the area. Furthermore, operational traffic to and from the project site would remain unchanged and primarily seasonal, temporary, and minimal. This impact would be less than significant.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The project site does not have a history of wildfire during previous development. The project site is generally flat, agricultural land that does not contain steep slopes and is generally unoccupied except when agricultural workers are on site for maintenance or harvesting activities. Therefore, operation of the project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Furthermore, developed vineyards often act as fire break and are less prone to catch and carry wildfire, compared to natural vegetation. No impact would occur.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The project site is an existing commercial vineyard operation, and past development did not involve installation or maintenance of infrastructure that would exacerbate fire risk. The project also does not involve installation or maintenance of infrastructure that would exacerbate fire risk, as no development (e.g., residential) would occur. No impact would occur.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project site is not occupied and contains no structures other than infrastructure related to agricultural production. CAL FIRE has rated the area around the project site as having a moderate wildfire risk. Because the terrain is generally flat, in the event of a fire, there would be no downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Therefore, this impact would be less than significant.

21. MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially 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 an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
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.)	☐	☒	☐	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Authority: Public Resources Code Sections 21083 and 21087.
Reference: Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21082.1, 21083, 21083.3, 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).

DISCUSSION

a) Does the project have the potential to substantially 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 an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?

With the mitigation measures proposed by the State Water Board and accepted by the Applicant, the proposed project would have less-than-significant impacts on the environment. Please refer to the earlier sections in this Initial Study for the full text of the mitigation measures that minimize potentially significant environmental impacts to less-than-significant levels.

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.)

The greatest potential for significant cumulative effects is related to impacts to biological resources, especially anadromous and other special-status fish. No current or probable future projects were identified in the project vicinity that would result in impacts on special-status fish. However, because of past development in the area resulting in adverse effects on special-status fish species, the cumulative impact on special-status fish species and their habitat is potentially significant. As discussed in the Biological Resources section of this Initial Study, implementation of the proposed project includes water diversion at the POD located on Redwood Creek that could affect special-status fish within and downstream of the project site. R educed flows in Redwood Creek could also reduce or degrade suitable habitat for special-status fish species in Redwood Creek. For this reason, the project's impact would potentially be cumulatively considerable. However, as also stated in the Biological Resources section, implementation of mitigation measure BIO-1 (limiting the allowed diversion time) and BIO-2 (use of a passive bypass device), the proposed project would not result in a cumulatively considerable incremental contribution to the significant cumulative impact on anadromous fisheries in this watershed or region.

Furthermore, the proposed project would not make a cumulatively considerable incremental contribution to any significant cumulative impacts for any resources affected by past, current, or probable future projects in the project vicinity.

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

With the mitigation measures proposed by the State Water Board and accepted by the Applicant, the proposed project would have less-than-significant impacts on the environment. The proposed project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. Please refer to the earlier sections

in this Initial Study for the full text of the mitigation measures that minimize potentially significant environmental impacts to less-than-significant levels.

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 MITIGATED 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:

David M. Rader — June 22, 2023

David Rader, Environmental Project Manager, AECOM — Date

Reviewed By:

Taylor Kunkel — August 18, 2023

Taylor Kunkel, Environmental Scientist — Date
North Coast Instream Flow Policy Permitting Unit
Division of Water Rights

Katy Lee — August 18, 2023

Katy Lee, Senior — Date
North Coast Instream Flow Policy Permitting Unit
Division of Water Rights

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

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