

COUNTY OF NAPA
DEPARTMENT OF PLANNING, BUILDING AND ENVIRONMENTAL SERVICES
1195 THIRD STREET, SUITE 210
NAPA, CA 94559
(707) 253-4416

Initial Study Checklist
(Reference Napa County's Procedures for Implementing CEQA, Appendix C)

1. **Project Title:** Metamorphosis Wines LLC Ovid Vineyards Erosion Control Plan Application (ECPA) #P18-00275-ECPA
 2. **Property Owner(s):** Metamorphosis Wines LLC
 3. **Contact Person, Phone Number and Email:** Donald Barrella, Planner III, (707) 299-1338, Donald.Barrella@countyofnapa.org
 4. **Project Location and APN:** 255 Long Ranch Road, St. Helena, CA 94574, APN 032-030-065 and -066 (**Figures 1 and 2**)
 5. **Project Sponsor:** Metamorphosis Wines LLC
255 Long Ranch Road
St. Helena, CA 94574
- Agent:** James R. Bushey (Registered Professional Engineer No. 49931)
PPI Engineering
2800 Jefferson Street
Napa, CA 94558
6. **General Plan Description:** Agriculture, Watershed and Open Space (AWOS)
 7. **Zoning:** Agricultural Watershed (AW)
 8. **Description of Project:**

The project involves the clearing of vegetation, earthmoving, and installation and maintenance of erosion control measures associated with the development of approximately 38.9 acres of vineyard (approximately 31.5 net planted acres) within five vineyard blocks located on two parcels totaling approximately 73.6 acres (**Figure 3**). Vineyard is proposed to be developed in two phases: Phase I consisting of approximately 23.5 planted acres and Phase II consisting of approximately 8 planted acres. Average slopes within the project area range from 9% to 24% with approximately 0.2 acre on slopes over 30%. Approximately 280 to 300 native trees and approximately 90 to 100 olive/orchard trees are proposed for removal. Rock generated from vineyard development would be utilized in the construction of erosion and runoff control measures and road base; therefore, no transport of spoils off-site is anticipated. Any rock not used immediately would be stockpiled for future use inside the proposed clearing limits. The vineyard would be irrigated via a drip irrigation system with water from the existing agricultural/vineyard wells on the project site. The project site is currently deer fenced and realignment of some deer fencing is proposed. No frost protection is proposed as part of the project.

Erosion Control Measures: Temporary erosion control measures include water bars, straw wattles, and the application of straw mulch at a rate of 3,000 pounds per acre. Permanent erosion control measures include rock-filled avenue/level spreaders, rock crossing, and a permanent no-till cover crop maintained at a minimum vegetation cover density of 75%. Vineyard avenues that are not rock covered would also maintain a minimum vegetative cover density of 75%. Details of the proposed erosion control measures are provided in the Metamorphosis Wines LLC Ovid Vineyards Erosion Control Plan (ECP) #P18-00275-ECPA, dated December 2018, prepared by James R. Bushey (Registered Professional Engineer No. 49931) of PPI Engineering, Napa, California (**Exhibit A**).

Earthmoving: Earthmoving and grading activities associated with the installation of erosion control measures and subsequent vineyard operation include, but are not limited to vegetation and tree removal, soil ripping, blasting, rock removal, disking, the development of erosion control measures, and potential rock storage.

Other Activities and Features: Other activities and features of the proposed project and subsequent vineyard development and operation include:

- a. Installation of vineyard trellis and drip irrigation systems, and planting rootstock in a 3-foot by 7-foot spacing pattern for an approximate vine density of $\pm 2,074$ vines per acre (or approximately 65,331 vines within the 31.5 net acres of proposed planted vineyard).
- b. Ongoing inspection and maintenance of temporary and permanent erosion and runoff control measures.
- c. Ongoing operation and maintenance of the vineyard, which includes: vine management (pruning, fertilization, pest, and disease control), weed control, cover crop mowing, irrigation and trellis system maintenance, and fruit harvesting. Weed control of the cover

crop would be mechanical (e.g., mower or weed trimmer) and through maintaining 18 inch wide spray strips at the base of vines with post-emergent herbicides.

Table 1 lists a general schedule for the construction of the proposed project as identified in #P18-00275-ECPA and **Table 2** outlines typical general ongoing vineyard operations. The final implementation schedule is pending action on # P18-00275-ECPA.

Table 1 – Implementation Schedule

April 1	Commence clearing and tillage operations
September 1 ¹	All tillage and erosion control complete in Block 5
September 15	All winterization complete in Block 5, including seeding, straw mulching, and straw wattle installation
October 1	All tillage and erosion control complete in Blocks 1-4, including construction of rock-filled avenue/level spreaders and rocked crossing.
October 15 ²	All winterization complete in Blocks 1-4, including seeding, straw mulching, and straw wattle installation

¹ During the winter months in municipal watersheds (September 1 to April 1 of the succeeding year), no earthmoving work is allowed by the Napa County Code Sections 18.108.027(C) and 18.108.070(L).

² During the winter months (October 15 to April 1 of the succeeding year), no earthmoving work is allowed by the Napa County Code (NCC) Sections 18.108.027(C) and 18.108.070(L).

Table 2 – Annual Operations Schedule

January to March	a. Prune vines. b. Weed control.
April to August	a. Sulfur application to protect against mildew. b. Mow cover crop.
September to October	a. Harvest. b. Winterize vineyard and vineyard avenues.
November to April	a. Monitor and maintain erosion control measures and repair as necessary during rain events.

Implementation of the proposed project will be in accordance with the Metamorphosis Wines LLC Ovid Vineyards prepared by PPI Engineering. The proposed project is further described in the application materials including the Supplemental Project Information sheets. All documents are incorporated herein by reference and available for review in the Napa County Department of Planning, Building and Environmental Services (PBES).

9. Describe the environmental setting and surrounding land uses.

The proposed project would occur two parcels totaling approximately 73.6 acres located at 255 Long Ranch Road in St. Helena, California (**Figures 1-3**). An existing network of dirt and paved private roads provides access to the project area from Long Ranch Road. Surrounding land uses consist predominantly of vineyards and undeveloped chaparral.

The project parcels are located approximately 3.5 miles south of the Town of Yountville and approximately 5.5 miles southeast of the City of St. Helena, within both the Vinehill Creek and Lake Hennessey drainages: the Lake Hennessey drainage is located within the larger Lake Hennessey Sensitive Domestic Water Supply Drainage. Lake Hennessey is located approximately 1.5 miles to the northwest of the project site. An unnamed blue-line stream is mapped in the northeast corner of the project parcels, and two ephemeral streams are mapped in the north-central and south-central portions of the project parcels. The project area drainage typically flows overland to the southwest, with a small portion of the site draining to the north towards Lake Hennessey.

General topography of the area consists of the flats of Napa Valley to the west and south and rolling mountains to the east and north. Typical slopes within the project area range from 9% to 24% with approximately 0.2 acres on slopes over 30%. The project parcels are on generally southwest-facing foot-slopes, with elevations within the project area ranging from approximately 1,150 to 1,332 feet above mean sea level (msl).

Two splays of an unnamed ancient fault are mapped crossing proposed vineyard Block 5 on the volcanic plateau near the northeast property corner; the nearest active faults are the West Napa and Hunting Creek-Berryessa Fault, approximately 3.7 miles southwest of the project site and 6.8 miles east of the site, respectively. No landslides or areas of instability have been identified within the project site. Several queried landslides have been mapped on the canyon wall, approximately 350 to 400 vertical feet below proposed vineyard Blocks 2B and 2C. Soils on the project site have been classified according to the USDA Soil Conservation Service Soil Survey as Rock outcrop-Hambright complex (Gilpin Geosciences 2018 - **Exhibit F**).

The vegetation types in the area generally consists primarily of California annual grassland, chamise and manzanita chaparral (i.e. shrubland), oak and bay woodland, and vineyards and other developed lands. Vegetation types occurring within the project parcels consist of approximately 20.45 acres of existing vineyards/agriculture, 20.22 acres of chamise chaparral, 7.66 acres of California bay forest, 6.69 acres of California annual grassland, 2.17 acres of interior live oak woodland, 1.89 acres of leather oak chaparral, 1.71 acres of Eastwood manzanita chaparral, 1.06 acres of broom patch, and 0.25 acres of water features including a pond, seasonal wetland, and ephemeral stream. The remaining 11.54 acres are built-up, developed, or has otherwise been previously disturbed due to past agricultural and winery development activities occurring on the project parcels (WRA 2018 - **Exhibit B-1**).

The project parcels are currently developed with approximately 20.45 acres of agriculture (± 17 acres vineyard and ± 3.5 acres orchard), a winery facility, access roads, a septic system and associated leach field, a winery process wastewater hold and haul storage system, and four groundwater wells including one domestic water supply well. Irrigation needs of the existing vineyard are provided by the groundwater wells.

Adjacent land uses consist generally of undeveloped chaparral interspersed with vineyards, agricultural processing facilities, and rural residences located predominantly to the west/northwest and east. The David Arthur Winery is located approximately one half mile to the northwest and the Continuum Winery is located approximately one mile to the east/northeast.

10. **Other agencies whose approval may be required** (e.g., permits, financing approval, or participation agreement that may potentially be required from the identified permitting authority/agency).

Responsible (R) and Trustee (T) Agencies

California Department of Fish and Wildlife (CDFW) (T)
Regional Water Quality Control Board (RWQCB) (R)
U.S. Army Corps of Engineers (R)

Other Agencies Contacted

Napa County Resource Conservation District (RCD)
Yocha Dehe Wintun Nation
Middletown Rancheria
Mishewal Wappo Tribe of Alexander Valley
City of Napa Public Works Department, Water Division

11. **California Native American Tribal Consultation:** Have tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?

Notice of the proposed project was sent to Yocha Dehe Wintun Nation, Middletown Rancheria, and Mishewal Wappo Tribe of Alexander Valley on July 17, 2018. Yocha Dehe requested consultation on August 7, 2018. Consultation with Yocha Dehe is ongoing as of the printing of this document. On July 25, 2018, the County received a response letter from the Middletown Rancheria indicating they have no specific comments at this time; on August 27, 2018 the County sent notification to the Middletown Rancheria acknowledging their response letter and closing the consultation invitation. The Mishewal Wappo Tribe of Alexander Valley did not request consultation within the 30-day notification period and on August 27, 2018, the County sent a consultation closure notice to the Tribe. This is discussed in detail in **Section XVII (Tribal Cultural Resources)**.

ENVIRONMENTAL IMPACTS AND BASIS OF CONCLUSIONS

The conclusions and recommendations contained herein are professional opinions derived in accordance with current standards of professional practice. They are based on a review of the Napa County Environmental Resource Maps, the other sources of information listed in the file, and the comments received, conversations with knowledgeable individuals, the preparer's personal knowledge of the area, and visit(s) to the project parcels and project site.

Other sources of information used in the preparation of this Initial Study include site-specific studies conducted by the applicant and filed by the applicant in conjunction with ECP #P18-00275-ECPA as listed below, and the environmental background information contained in the permanent file on this project. These documents and information sources are incorporated herein by reference and available for review at the Napa County Department of Planning, Building and Environmental Services located at 1195 Third Street, Suite 210, Napa, CA 94559:

- PPI Engineering, December 2018, Metamorphosis Wines LLC Ovid Vineyards Erosion Control Plan (**Exhibit A**)
- WRA, Inc., July 2018, Biological Resource Reconnaissance Survey Report Ovid Winery (**Exhibit B-1**)
- WRA, Inc., December 19, 2018, Ovid Vineyard, Napa County ECP – Response to Napa County Comments on Biological Resources (**Exhibit B-2**)
- PPI Engineering, July 11, 2018, Metamorphosis Wines LLC Ovid Vineyards Track I ECP Hydrologic Analysis (**Exhibit C**)
- Summit Engineering, Inc., June 2018 Revised October 2018, Water Availability Analysis Ovid Winery and November 5, 2018 response letter (**Exhibit D**)
- PPI Engineering, July 11, 2018, Metamorphosis Wines LLC Ovid Vineyards Track I ECP Soil Loss Analysis (**Exhibit E**)
- Gilpin Geosciences, Inc., June 12, 2018, Engineering Geological and Geotechnical Evaluation of Ovid Vineyards, Metamorphosis Wines, LLC (**Exhibit F**)
- Tom Origer and Associates, March 27, 2017, Historical Resources Study of APNs 032-030-065 and 032-030-066 near St. Helena, Napa County, California
- Site inspection conducted by Napa County Planning Division and Engineering Division staff on August 22, 2018.
- Napa County Geographic Information System (GIS) sensitivity maps/layers

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. Attached as **Exhibit G** is the signed Project Revision Statement.

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.



Signature

July 29, 2019

Date

Donald Barrella
Printed Name

Napa County Planning, Building and Environmental Services

ENVIRONMENTAL CHECKLIST FORM

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

Discussion

a-b. The project site is located on mostly gentle southwest-facing slopes, approximately 5.5 miles southeast of the City of St. Helena in an area dominated by vineyards and open space (see photographs in the ECP, **Exhibit A**, and in the Biological Resource Reconnaissance Survey Report, **Exhibit B-1**). The project site lies approximately 0.8 mile east of Silverado Trail, the closest County viewshed road, and approximately 0.8 mile from the scenic corridor associated with Silverado Trail. However, the topography is such that the project site is not visible from Silverado Trail; intervening hillsides block the sightline between this viewshed road and the project site. The site is neither located on a prominent hillside nor on a major or minor ridgeline (Napa County GIS, Ridgelines Layer) or is it located within a scenic corridor (Napa County GIS, Scenic Corridors Layer). There are no significant rock outcroppings or geologic features on the project site that would be impacted by the project. Although trees would be removed with the proposed project, the project site is not visible from a state scenic highway, as there are no scenic highways in the area (CA Department of Transportation website: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm).

Considering the location and scale of the proposed development, it is considered to have a less than significant impact on a scenic vista, scenic highway, historic buildings, scenic resource trees, or rock outcrops for the reasons described above.

- c. There are existing vineyards located on the project parcels as well as parcels immediately adjacent to the north and west, and on parcels in the vicinity to the east and south. Only minor topographic modifications would be necessary to install the vineyard. Given these factors, the proposed project would be consistent with the surrounding visual character of vineyards and rural residential uses, and therefore would not substantially degrade the existing visual character or quality of the site or its surroundings, resulting in a less than significant impact.
- d. Proposed agricultural operations on the property would require some lighted nighttime activities consistent with the level of nighttime activity already occurring on the project site. Lighting would be in the form of headlights or downward directional lights on equipment being used during nighttime harvest. The proposed project would include nighttime harvest (typically from 12 a.m. to 8 a.m.) during approximately 15 days per year. Although some nighttime activity would occur for limited periods, the project would not introduce a new source of substantial light or glare, and would therefore have a less than significant impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FOREST RESOURCES. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Important (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land as defined in Public Resource Code Section 12220(g), timberland as defined in Public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Resource Code Section 4526, or timberland zoned Timberland Production as defined in Government Code Section 51104(g)?

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| d) Result in the loss of forest land or conversion of forest land to non-forest use in a manner that will significantly affect timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, or other public benefits? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a. The Napa County Important Farmland 2016 map prepared by the California Department of Conservation, Division of Land Resource Protection identifies the project site as a combination of Unique Farmland (i.e. areas of existing vineyard), Grazing, and Other Land. Installation of vineyard is an agricultural use in keeping with the Unique Farmland designation. Vineyard development on areas designated Other Land and Grazing Lands would not be inconsistent with these designations and would not result in an impact to farmland within Napa County. Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, resulting in no impact.
- b. The project site has a General Plan designation of Agriculture, Watershed and Open Space (AWOS) and is zoned Agricultural Watershed (AW). Therefore, the establishment of vineyard totaling approximately 38.9 gross acres (31.5 net acres) is consistent with property's land use and zoning designations. The subject property does not have a Williamson Act contract associated with it. Therefore, the project would not conflict with its land use designation or a Williamson Act contract resulting in no impact.
- c-d. "Forest Land" is defined in California Public Resource Code Section 12220(g) as "land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." Neither the project parcels nor the project area contains forest land or coniferous forest (Napa County GIS, Vegetation and Sensitive Biotic Community layers: WRA Environmental Consultants July 2018). The project parcels and project area are not zoned forest land as defined in Public Resource Code Section 12220(g), timberland as defined in Public Resource Code Section 4526, or a Timberland Production Zone (TPZ) as defined in Government Code Section 51104(g). Therefore, no impacts to forest land are anticipated as a result of the project.
- e. The proposed project does not include the construction of roadways or other infrastructure that would result in the conversion of existing farmland or forestland in the area to non-agricultural or non-forestland uses. As such, the proposed project would not have an impact on the agricultural or forest resources of Napa County.

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

Discussion

See **Section VII (Greenhouse Gas Emissions)** for the greenhouse gas (GHG) emissions disclosure and impact assessment.

On June 2, 2010, the Bay Area Air Quality Management District (BAAQMD) Board of Directors unanimously adopted thresholds of significance to assist in the review of projects under the California Environmental Quality Act (CEQA). These guidelines were updated in May 2017 to

address the California Supreme Court's 2015 opinion in *Cal. Bkdg. Indus. Ass'n vs. Bay Area Air Quality Mgmt. Dist.*, 62 Ca 4th 369. These thresholds are designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA, and were posted on the BAAQMD website and included in the BAAQMD updated CEQA Guidelines (May 2012). The thresholds are advisory and may be followed by local agencies at their own discretion.

The thresholds were challenged in court. Following litigation in the trial court, the court of appeal, and the California Supreme Court, all of the thresholds were upheld. However, in an opinion issued on December 17, 2015, the California Supreme Court held that CEQA does not generally require an analysis of the impacts of locating development in areas subject to environmental hazards unless the project would exacerbate existing environmental hazards. The Supreme Court also found that CEQA requires the analysis of exposing people to environmental hazards in specific circumstances, including the location of development near airports, schools near sources of toxic contamination, and certain exemptions for infill and workforce housing. The Supreme Court also held that public agencies remain free to conduct this analysis regardless of whether it is required by CEQA.

In view of the Supreme Court's opinion, local agencies may rely on thresholds designed to reflect the impact of locating development near areas of toxic air contamination where such an analysis is required by CEQA or where the agency has determined that such an analysis would assist in making a decision about the project. However, the thresholds are not mandatory and agencies should apply them only after determining that they reflect an appropriate measure of a project's impacts. The Guidelines may inform environmental review for development projects in the Bay Area, but do not commit local governments or BAAQMD to any specific course of regulatory action.

BAAQMD published a new version of the CEQA Guidelines dated May 2017, which includes revisions made to address the Supreme Court's opinion. The May 2017 CEQA Guidelines update does not address outdated references, links, analytical methodologies, or other technical information that may be in the Guidelines or Thresholds Justification Report. BAAQMD is currently working to revise any outdated information in the Guidelines as part of its update to the CEQA Guidelines and thresholds of significance.

a-c. The project site is generally located in the hills bordering the eastern side of the Napa Valley southeast of the City of St. Helena, within the Napa County climatological subregion of the San Francisco Bay Area Air Basin, which is under the jurisdiction of BAAQMD. The topographical and meteorological features of the Napa Valley subregion create the potential for air pollution. In the short term, potential air quality impacts are most likely to result from construction activities. Construction-related emissions, which are temporary in nature, mainly consist of particulate matter (PM) generated from fugitive dust during grading or other earthmoving activities and other criteria pollutants generated through the exhaust from construction equipment, and vehicular haul and worker trips. In the long term, potential air quality impacts would likely result from ongoing activities associated with the operation and maintenance of the proposed vineyard. Operational-related emissions, which are seasonal in nature, are primarily generated from vehicular trips associated with workers going to and from the site and equipment necessary for ongoing vineyard maintenance. Refer to **Section XVI (Transportation/Traffic)** for the anticipated number of construction- and operation-related trips.

The impacts associated with implementation of the project were evaluated consistent with guidance provided by BAAQMD. Ambient air quality standards have been established by state and federal environmental agencies for specific air pollutants most pervasive in urban environments. These pollutants are referred to as criteria air pollutants because the standards established for them were developed to meet specific health and welfare criteria set forth in the enabling legislation. The criteria air pollutants emitted by development, traffic, and other activities anticipated under the proposed development include ozone (O₃), ozone precursors oxides of nitrogen and reactive organic gases (NO_x and ROG), carbon monoxide (CO), nitrogen dioxide (NO₂), and suspended particulate matter of ten micrometers or less and two and a half micrometers or less (PM₁₀ and PM_{2.5}). Other criteria pollutants, such as lead (Pb) and sulfur dioxide (SO₂), would not be substantially emitted by the proposed development or associated traffic, and air quality standards for them are being met throughout the Bay Area.

BAAQMD has not officially recommended the use of its thresholds in CEQA analyses and CEQA ultimately gives lead agencies the discretion to determine whether a particular environmental impact would be considered significant, as evidenced by scientific or other factual data. BAAQMD also states that lead agencies need to determine appropriate air quality thresholds to use for each project they review based on substantial evidence that they include in the administrative record of the CEQA document. One resource BAAQMD provides as a reference for determining appropriate thresholds is the Guidelines described above. These Guidelines outline substantial evidence supporting a variety of thresholds of significance.

The thresholds of significance identified in **Table 3** are consistent with the BAAQMD 2017 CEQA Air Quality Guidelines, and are used to determine if an air quality impact would be significant.

In order to assess potential air quality and GHG emissions, a review of the emissions analysis associated with vineyard development/construction and operations performed for three certified Environmental Impact Reports (EIR) in Napa County was

completed: Suscol Mountain Vineyards¹ for an approximately 560-acre vineyard development, Walt Ranch Vineyard² for an approximately 507-acre vineyard development, and Circle-S Ranch Vineyards³ for an approximately 400-acre vineyard development.⁴

The analysis within the Circle-S EIR anticipated construction in phases of approximately 150 acres, which would generate approximately 100 15-mile one-way trips per day (75 worker trips and 25 truck trips). The analysis anticipated that maximum operational emissions, occurring during harvest, of an approximately 400-acre vineyard would generate approximately 170 15-mile one-way trips per day (approximately 160 worker trips and eight grape haul truck trips). The Walt Ranch EIR analysis anticipated vineyard development in phases of approximately 127 acres, which would generate approximately 160 15-mile one-way trips per day, and annual vineyard operations generating up to approximately 160 one-way trips of approximately 15 miles per day occurring during harvest. The Suscol Mountain EIR analysis anticipated vineyard development in phases of either approximately 150 or 250 acres, which would generate approximately 50 to 60 15-mile one-way trips per day, and annual vineyard operations generating up to approximately 116 15-mile one-way trips occurring during harvest.

Table 3 shows the approximate anticipated construction emissions associated with the development of vineyards of the sizes described above. Also shown in **Table 3** are the BAAQMD CEQA Guidelines draft thresholds of significance for emission of the following criteria pollutants: ROG, NO_x, PM₁₀, and PM_{2.5}.

Variations or similarities in emissions modeling results between the three projects can be attributed to the modeling platform and version used, and differences in modeling assumptions and inputs such as quantities and types of vegetation to be removed, construction trips, construction equipment and duration of use/operation, and operational equipment operation and trips.

Table 3 – Emissions from Vineyard Development and Operation

Emissions and Thresholds	Criteria Pollutants – Constituents			
	ROG	NO _x	PM _{2.5}	PM ₁₀
	Construction Emissions			
Pounds per day: 150-acre vineyard development ¹	8.43 to 11.39	34.39 to 52.16	3.93 to 4.47	13.93 to 14.53
Pounds per day: 150- to 250-acre vineyard development ²	9.43 to 11.03	43.85 to 53.16	3.91 to 4.62	12.87 to 17.22
Pounds per day: 127-acre vineyard development ^{3,4}	4.6	42.3	5.21 ⁴	24.21 ⁴
Construction threshold	54	54	54	82
Operational Emissions				
Pounds per day: 400-acre vineyard operation ¹	7.78	2.85	0.80	4.22
Pounds per day: 560-acre vineyard operation ²	6.58	1.84	0.75	3.91
Pounds per day: 507-acre vineyard operation ³	4.3	22.3	1.4	2.3
Operational threshold (lbs/day)	54	54	54	82
Tons per year (Metric) ^{1,5}	0.78	0.35	0.11	0.58
Operational threshold (tons per year)	10	10	10	15

¹ As identified in Circle-S EIR; ² As identified in Suscol Mountain EIR; ³ As identified in Walt Ranch EIR; ⁴ Includes dust and exhaust emissions; ⁵ Calculation based on 365 days of operation. Project emissions are anticipated to be less than identified as vineyard operations are seasonal in nature.

Sources: Circle-S Ranch Vineyard EIR 2011; Suscol Mountain Vineyard EIR 2013; Walt Ranch Vineyard EIR 2016; BAAQMD CEQA Guidelines May 2017.

Because this project's proposed 38.9-acre vineyard (approximately 31.5 net-planted acres) is smaller than any of the projects presented above, construction and operational emissions from the proposed project that could negatively affect air quality are expected to be less than those identified in **Table 3** and therefore below identified thresholds. Additionally, project approval, if granted, would be subject to the standard Air Quality condition described below, which includes standard air quality and construction best management practices (BMPs) consistent with BAAQMD measures identified in Table 8-1 of the CEQA Guidelines that would further reduce potential air quality impacts associated with construction and ongoing operation of the proposed project.

Air Quality – Conditions of Approval:

The owner/permittee shall implement the following air quality BMPs during construction activities and vineyard maintenance and operations:

- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. The BAAQMD's phone number shall also be visible.
- Water all exposed surfaces (e.g., parking areas, staging areas, soil piles, grading areas, and unpaved access roads) two times per day.

¹ #P09-00176-ECPA, Analytical Environmental Services (AES) March 2012, SCH #2009102079 certified February 3, 2013

² #P11-00205-ECPA, AES March 2016, SCH #2008052075 certified August 1, 2016

³ #P06-01508-ECPA, AES April 2011, SCH #2007062069 certified December 22, 2011

⁴ These EIRs are incorporated herein by reference and available for review in the Napa County Department of Planning, Building and Environmental Services permanent files.

- Cover all haul trucks transporting soil, sand, or other loose material offsite.
- Remove all visible mud or dirt tracked onto adjacent public roads by using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- Idling times shall be minimized either by shutting off equipment when not in use or reducing the maximum idling time to five (5) minutes (as required by state regulations). Clear signage shall be provided for construction workers at all access points.
- Water and/or dust palliatives shall be applied in sufficient quantities during grading and other ground disturbing activities onsite to minimize the amount of dust produced. Outdoor construction activities shall not occur when average wind speeds exceed 20 mph.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator. Any portable engines greater than 50 horsepower or associated equipment operated within the BAAQMD's jurisdiction shall have either a California Air Resources Board (ARB) registration Portable Equipment Registration Program (PERP) or a BAAQMD permit. For general information regarding the certified visible emissions evaluator or the registration program, visit the ARB FAQ⁵ or the PERP website⁶.

Given that installation of the proposed project is expected to generate emissions that are below identified thresholds and result in less temporary construction emissions than those identified in **Table 3**, in addition given that the proposed project would contain other features that minimize fugitive dust (such as vineyard cover crop) and introduce fewer new vehicle trips than the projects shown in **Table 3** during both installation and operation (see **Section XVI [Transportation/Traffic]** for anticipated project trips), the implementation of the proposed project would result in less than significant air quality impacts, and would not violate air quality standards or result in cumulatively considerable effects. Additionally, the implementation of Air Quality BMPs identified in the conditions of approval above is anticipated to further reduce any adverse air quality effects associated with construction and operation of the proposed project.

Furthermore, with the implementation of **Mitigating Measure BR-1** the project would be reduced by approximately 13 acres, thereby further reducing anticipated air quality impacts associated with vineyard development and ongoing vineyard operations.

d-e. Land uses such as schools, playgrounds, child care centers, hospitals and convalescent homes are considered sensitive to poor air quality, because infants and children, the elderly, and people with health afflictions, especially respiratory ailments, are more susceptible to respiratory infections and other air quality related health problems than the general public. Residential areas are also considered to be sensitive to air pollution because residents, which include children and the elderly, tend to be at home for extended periods of time. Land uses adjacent to the project parcels include vineyards, undeveloped land, and rural residential. The closest offsite residences are located approximately 800 feet to the west and north and approximately 1,200 feet to the south of the project site. The closest school (Yountville Elementary School) is located approximately four miles to the south of the project site in Yountville (Napa County GIS, Schools Layer). The closest residential area (the City of Yountville) is approximately 3.5 miles south of the project site.

During installation of the ECP, vineyard planting, and subsequent vineyard operations, airborne pollutants and odors would be created through the use of grading and farm equipment (e.g., tractors, trucks, and ATV's). These sources would be temporary and/or seasonal in nature and would occur a minimum of four miles from the closest school and residential neighborhood, providing dilution of pollutants and odors. For the reasons identified above, the proposed project would not expose sensitive receptors or a substantial number of people to pollutants or objectionable odors, resulting in a less than significant impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

⁵ http://www.arb.ca.gov/portable/perp/perpfaq_04-16-15.pdf

⁶ <http://www.arb.ca.gov/portable/portable.htm>

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

The following were utilized in this analysis and are incorporated herein by reference and available in the project file for review.

- WRA, July 2018, Biological Resources Reconnaissance Survey Report Ovid Winery (**Exhibit B-1**)
- WRA, December 19, 2018, Ovid Vineyards, Napa County ECP – Response to Napa County Comments on Biological Resources (**Exhibit B-2**)

Additionally, the following Napa County Geographic Information System (GIS) Sensitivity Maps/layers were utilized in this biological resources assessment: Sensitive biotic vegetation groups, US Fish and Wildlife Critical Habitat, California Natural Diversity Database (CNDDB), Owl Habitat, Wetlands and Vernal Pools, Vegetation, Soil types, US Geological Survey Quadrangle (DRG), and Aerial Photos.

WRA conducted protocol level special-status plant surveys on March 16, April 11, and June 15, 2017 and March 12 and June 6, 2018. The surveys correspond to blooming periods sufficient to observe and identify special-status plant species determined to have the potential to occur in the project area. The field surveys were conducted by botanists familiar with the flora of Napa County and surrounding counties. The surveys followed the protocol for plant surveys described by resource agency guidelines (CNPS, 2001; CDFG, 2009; USFWS, 1996). Plants were identified using Baldwin et al. (2012) and Jepson Flora Project (Jepson eFlora, 2017) to the taxonomic level necessary to determine whether they were rare. The wildlife surveys were conducted concurrently with the rare plant surveys.

The list of special-status plant and animal species that have the potential to occur within the vicinity of the project area was updated on March 1, 2019 because the previous list was older than six months. The list was compiled based on data in the California Natural Diversity Database (CNDDB) (CDFW, 2019), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS, 2019), and the USFWS List of Federal Endangered and Threatened Species that may be Affected by projects in the St. Helena, Chiles Valley, Lake Berryessa, Rutherford, Yountville, Capell Valley, Sonoma, Napa, and Mt. George Quads (USFWS, 2019). No new species were added to the list since WRA's 2018 Biological Resources Reconnaissance Survey Report.

The property consists of the following upland biological communities (or habitat types): agriculture, annual brome grassland, broom patch, chamise chaparral, developed/landscaped, Eastwood manzanita chaparral, interior live oak chaparral, California bay forest, and leather oak chaparral. The property consists of the following aquatic habitats: ephemeral streams, pond, and seasonal wetland. Leather oak chaparral, ephemeral streams, and seasonal wetland are considered sensitive habitat types. The habitats and their acreages are shown in **Table 4**.

Table 4 – Biological Communities and Habitat Types on the Project Parcels

Biological Communities or Habitat Type	Pre-Project Conditions (acres)
California Bay Forest	7.66
Ephemeral Streams	0.05
Pond	0.19
Seasonal Wetland	0.01
Leather Oak Chaparral	1.89
Agriculture	20.45
Annual Brome Grassland	6.69
Broom Patch	1.06
Chamise Chaparral	20.22
Developed/Landscaped	11.54
Eastwood Manzanita Chaparral	1.71
Interior Live Oak Chaparral	2.17

Source: WRA, July 2018

a. Special-Status Plants:

Based upon a review of the resources databases listed in **Exhibit B-1**, 79 special-status plant species have been documented in the vicinity of the project area. Occurrence records of these species in CNDDDB within a five-mile radius of the project area are depicted in **Exhibit B-1** Figure 3. Nine special-status plant species have a moderate to high potential to occur in the project area (**Exhibit B-1**). Results of a protocol-level plant survey determined that five special-status plants were present within the project area: narrow-anthered brodiaea (*Brodiaea leptandra*), holly-leaved ceanothus (*Ceanothus purpureus*), Sharsmith's western flax (*Hesperolinon sharsmithiae*), Napa lomatium (*Lomatium repostum*), and green monardella (*Monardella viridis*). Three of these plant species (narrow-anthered brodiaea, holly-leaved ceanothus, and Sharsmith's western flax) are CNPS California Rare Plant Rank (CRPR) List 1B.2 species, which are considered "Rare, Threatened, or Endangered in California and Elsewhere" and are fairly threatened in California (i.e., moderate degree/immediacy of threat). Two additional species (Napa lomatium and green monardella) are CRPR 4, which are not considered under CEQA, but impacts to these species may be considered sensitive by Napa County.

CRPR List 1B species meet the definition of Section 1901, Chapter 10 of the Native Plant Protection Act, or Sections 2062 and 2067 of the California Endangered Species Act of the California Fish and Game Code (CFG), and are eligible for state listing. While holly-leaved ceanothus, narrow-anthered brodiaea, and Sharsmith's western flax are not state or federally listed species at this time, these species and their associated habitat are of limited distribution locally within Napa County and warrant protection through applicable General Plan Goals and Policies. Protecting the continued presence of special-status species, including special-status plants, special-status wildlife, and their habitats is encouraged by Napa County General Plan Goal CON-3. Additionally, pursuant to Napa County General Plan Policy CON-13, the County shall require that all discretionary agricultural projects consider and address impacts to wildlife habitat and avoid impacts to habitat supporting special-status species to the extent feasible, and where impacts to special-status species and their habitat cannot be avoided. Projects shall include effective mitigation measures and management plans to provide protection for habitat supporting special-status species through buffering or other means, and enhance existing habitat values particularly for special-status species through restoration and replanting as part of the project or its mitigation.

Refer to **Exhibit B-1** (WRA, July 2018) for additional details regarding the following plant special-status plant species. Narrow-anthered brodiaea is a perennial herb in the brodiaea family that blooms from May to July. It typically occurs in broadleaf upland forest, chaparral, and lower montane coniferous forest habitat at elevations ranging from 360 to 3,000 feet above msl (WRA, July 2018). Soil survey data from documented locations suggest this species is associated with gravelly loam and clay loam substrates derived from rhyolites, metavolcanics, and serpentine. Approximately 524 individuals occur within 0.44 acre of the project parcels. Approximately 388 individuals occur within 0.32 acre of the project area (WRA, July 2018).

Holly-leaved ceanothus is an evergreen shrub in the buckhorn family that blooms from February to April, but is typically identifiable by vegetative structures throughout the year. It typically occurs on rocky slopes underlain by volcanic substrate in chaparral and cismontane woodland habitat at elevations ranging from 390 to 2,080 feet above msl. Approximately 2,316 individuals occur within 24.21 acres of the project parcels. Approximately 1,932 individuals occur within 20.16 acres of the project area (WRA, July 2018).

Sharsmith's western flax is an annual herb in the flax family that blooms from May through July. It typically occurs on serpentinite open chaparral habitat ranging in elevations from 884 to 1,000 feet above msl. Approximately 690 individuals occur within 0.11 acre of the project parcels. Approximately 563 individuals occur within 0.08 acre of the project area (WRA, July 2018).

Napa lomatium is a perennial herb in the carrot family that blooms March to June. It typically occurs in rocky areas within chaparral and cismontane woodland on volcanic or serpentine soils at elevations ranging from 300 to 2,720 feet above msl. Approximately 28 individuals occur within 0.02 acre of the project parcels. Approximately 18 individuals occur within 0.1 acre of the project area (WRA, July 2018).

Green monardella is a perennial rhizomatous herb in the mint family that blooms from June through September. It typically occurs in broadleaf upland forest, chaparral, and cismontane woodland habitat at elevations ranging from 300 to 3,100 feet above msl. This species is abundant in suitable habitat that overlaps entirely with the distribution of holly-leaved ceanothus, i.e., approximately 24.69 acres, of which 20.16 acres are located within the project area. In the context of the present analysis, due to both the abundance of this species and the size of the occupied areas, no attempt was made to estimate the number of individuals present (WRA, July 2018 - **Exhibit B-1**).

The Chamise Chaparral and Eastwood Manzanita Chaparral, and to a lesser extent the Interior Live Oak Chaparral and Leather Oak Chaparral Biological Communities, located within the project parcels' (especially those communities containing narrow-anthered brodiaea, holly-leaved ceanothus, Sharsmith's western flax, Napa lomatium and green monardella) are considered special-status species habitat because they contain the biological and ecological characteristics necessary to support these plant species, in addition to containing special-status plant species populations and individuals. The project as proposed would remove approximately 18.5 acres of the project parcels' ±26 acres (or 71%) of special-status plant species habitat, approximately 14 acres of which contains special-status plant populations and individuals, and would remove approximately 70% to 80% of the of the individual special-status plants and/or populations within the project parcels. The acreages of each Biological Community and the approximate number of each special-status plant species to be removed within the project area is listed in **Table 5**.

The removal of these special-status plant species and their habitat would be inconsistent with the following Napa County General Plan Conservation Element Goals and Policies and Zoning Ordinance. General Plan Goal CON-3⁷ as it does not protect for the continued presence of special-status plant species or its habitat; Policy CON-13⁸ in that impacts to special-status habitat can be avoided while allowing for up to approximately 26 acres of agriculture on the project parcels (as further described below); Policy CON-17⁹ because the removal and disturbance of a sensitive natural plant community that contains special-status plant species is not prevented; and, the purpose and intent of the Conservation Regulations (NCC Chapter 18.108) in that it does not preserve natural habitat or existing vegetation, and adversely affects sensitive, rare, threatened or endangered plants.

The proposed project would have significant impacts on special-status plant species and habitat for these reasons: i) the removal of ± 18.5 acres (or $\pm 71\%$) of the project parcels' ± 26 acres of special-status plant species habitat, approximately 14 acres of which contain special-status plant populations and individuals, ii) the removal of approximately 70 to 80% of the of the project parcels' special-status plants and/or populations, and iii) the resulting inconsistencies with applicable General Plan Goals and Policies and County Conservation Regulations. This level of special-status plant species and habitat removal is also considered a potentially significant cumulative impact.

To reduce potential impacts to special-status plant species to a less than significant level, **Mitigation Measure BR-1** will be implemented to avoid and retain special-status plant species and associated habitat. The project shall be redesigned to avoid those areas supporting the highest density and diversity of special-status plant populations (as shown in **Exhibit B-2** Figure 2), with one exception; the entirety of the broom patch located in proposed Block 2A would be developed and the entirety of the leather oak chaparral in proposed Block 2C would be avoided because it is a sensitive community (as discussed in subsection [b] – and shown in **Exhibit B-3**), which would provide adequate and continued habitat for these (and other) native plant species. Implementation of this mitigation measure would reduce vineyard development acreage by approximately 13 acres, from 38.9 gross acres (inclusive of the maximum grading limits) to approximately 26 gross acres. A summary of the retention of special-status species and biological communities in both the original proposed project and revised project after implementation of **Mitigation Measure BR-1** is provided in **Table 5**. The mitigated proposed vineyard blocks overlap with special-status plant populations are shown in **Exhibit B-2** Figures 1 and 2, and the entirety of the mitigated project is shown in **Exhibit B-3**. Overall, implementation of **Mitigation Measure BR-1** would retain approximately 68% of the project parcels' special-status plant species habitat and approximately 73% to 100% of the project parcels' special-status plant populations/individuals.

A 50-foot setback from retained/avoided Napa lomatium, narrow-anthered brodiaea, and Sharsmith's western flax plants/populations would be adequate to provide continued buffering to these existing populations from grading effects, dust and sediment migration, and the presence of invasive species (WRA, December 2018). This provision has been incorporated into **Mitigation Measure BR-1** and accounted for in the discussion above. Holly-leaved ceanothus and green monardella are relatively tolerant of disturbance, and have been repeatedly observed by WRA on the edge of vineyard avenues as well as in other disturbed areas in Napa County; therefore peripheral remnant individuals/populations of these species located within 50 feet of development areas are unlikely to be negatively affected by the new vineyards, and a minimum 50 foot buffer from these avoided/retained plant species and/or populations is not necessary in this case. Furthermore, holly-leaved ceanothus and green monardella individuals/populations situated deeper within the avoided habitat resulting from implementation of **Mitigation Measure BR-1**, will be provided with the same buffering benefits as noted above (WRA, December 2018 - **Exhibit B-2**).

Implementation of **Mitigation Measure BR-1** would reduce impacts to special-status plant species and associated habitat to a less than significant level in that, it would: i) avoid and preserve approximately 68% of the of the project parcels special-status plant species habitat (i.e. Chamise Chaparral, Eastwood Manzanita Chaparral, Interior Live Oak Chaparral, and Leather Oak Chaparral Biological Communities); ii) avoid and preserve approximately 73% to 100% of the project parcels special-status plant populations/individuals; iii) result in consistency with General Plan Policy Goal CON-3 and Policies CON-13 and CON-17, and Conservation Regulations (NCC Chapter 18.108) through the preservation of special-status plants and their habitat; and iv) result in consistent with Goal CON-2¹⁰ in that it would assist in maintaining the existing level of biodiversity in the County as well as contribute to minimization of potential cumulative impacts associated with the loss of special-status plant species and associated habitat due to agricultural conversion projects. Implementation of this mitigation measure would also effectively offset the loss of special-status plants and habitat located within the mitigated project (+650 plants within approximately 6.8 acres of habitat); therefore, plant replacement is not included in this measure.

⁷ Goal CON-3: Protect the continued presence of special-status species, including special-status plants, special-status wildlife, and their habitats, and comply with all applicable state, federal, or local laws or regulations.

⁸ Policy CON-13: The County shall require that all discretionary residential, commercial, industrial, recreational, agricultural, and water development projects consider and address impacts to wildlife habitat and avoid impacts to fisheries and habitat supporting special-status species to the extent feasible. Where impacts to wildlife and special-status species cannot be avoided, projects shall include effective mitigation measures and management plans including provisions to: Provide protection for habitat supporting special-status species through buffering or other means.

⁹ Policy CON 17: Preserve and protect native grasslands, serpentine grasslands, mixed serpentine chaparral, and other sensitive biotic communities and habitats of limited distribution. The County, in its discretion, shall require mitigation that results in the following standards: Prevent removal or disturbance of sensitive natural plant communities that contain special-status plant species or provide critical habitat to special-status animal species.

¹⁰ Goal CON-2: Maintain and enhance the existing level of biodiversity.

Table 5 – Retention of Biological Communities and Special-Status Plants between the Original and Mitigated Proposed Projects¹¹

Biological Feature	Total Acres (and Individuals) in the Project Parcels	Original Proposed Vineyard Blocks			Mitigated Proposed Vineyard Blocks		
		Acres	Individual Count	% Retention	Acres	Individual Count	% Retention
Special-status plants							
Green monardella	24.69 acres (11,007 individuals)	20.16	not determined	18%	6.8	not determined	73%
Holly-leaved ceanothus	24.69 acres (2,316 individuals)	20.16	1,932	18%	6.8	601	73%
Napa lomatium	0.02 acre (28 individuals)	0.01	18	30%	0	0	100%
Narrow-anthered brodiaea	0.44 acre (524 individuals)	0.32	388	27%	0.02	21	96%
Sharsmith's western flax	0.11 acre (690 individuals)	0.08	563	27%	0.01	29	91%
Biological Communities		Acres		% Removed	Acres		% Removed
Agriculture	20.45	3.11		15.2%	3.11		15.2%
Annual Brome Grassland	6.69	6.18		92.4%	5.28		78.9%
Broom Patch	1.06	0.85		80.2%	1.06		100%
California Bay Forest	7.66	4.68		61.1%	2.90		37.9%
Chamise Chaparral	20.22	15.34		75.9%	7.34		36.3%
Developed/Landscaped	11.54	5.55		48.1%	5.30		45.9%
Eastwood Manzanita Chaparral	1.71	1.66		97.1%	0.49		28.7%
Interior Live Oak Chaparral	2.17	0.95		43.8%	0.48		22.1%
Leather Oak Chaparral*	1.89	0.61		32.3%	0		0%

* Considered sensitive by Napa County. Sources: WRA, July and December 2018, Napa County July 2019.

Implementation of **Mitigation Measure BR-1** would reduce impacts to special-status plant species and associated habitat to a less than significant level in that it would: i) avoid and preserve approximately 68% of the of the project parcels' special-status plant species habitat (i.e. Chamise Chaparral, Eastwood Manzanita Chaparral, Interior Live Oak Chaparral, and Leather Oak Chaparral Biological Communities, ii) avoid and preserve approximately 73% to 100% of the project parcels' special-status plant populations/individuals; iii) result in consistency with General Plan Policy Goal CON-3, Policy CON-13, Policy CON-17, and Conservation Regulations (NCC Chapter 18.108), through the preservation of special-status plants and their habitat; and iv) result in consistency with Goal CON-2¹² in that it would assist in maintaining the existing level of biodiversity in the County, as well as contribute to minimization of potential cumulative impacts associated with the loss of special-status plant species and associated habitat due to agricultural conversion projects. Implementation of this mitigation measure would also effectively offset the loss of special-status plants and habitat located within the mitigated project (+650 plants within approximately 6.8 acres of habitat); therefore, plant replacement is not included in this measure.

Furthermore, implementation of **Mitigation Measure BR-1** would not substantially affect the feasibility of the project or the continued viability of agricultural use of the project parcels, in that it would allow the owner/Permittee to develop approximately 26 acres of new vineyard on the 73.6-acre holding.

Mitigation Measure BR-1: The owner/permittee shall implement to following measures to minimize potential impacts to special-status plant species (i.e., Napa lomatium, narrow-anthered brodiaea, Sharsmith's western flax, green monardella, and holly-leaved ceanothus) and their habitat:

¹¹ The acreages identified in **Table 5** may differ from acreages identified in the biological assessment (**Exhibit B-1**), response letter (**Exhibit B-2**), and mitigated project exhibit (**Exhibit B-3**) due to mapping platforms, spatial characters, and rounding. Because approximate biological/plant communities, special-status habitat and potential habitat, and project acreages have been corroborated through County GIS mapping, the values disclosed herein are considered by the County to be adequate for CEQA review and disclosure purposes of the subject application.

¹² Goal CON-2: Maintain and enhance the existing level of biodiversity.

- a. Revise Erosion Control Plan #P18-00275-ECPA prior to approval to: i) remove Vineyard Block 1, and ii) modify/adjust the boundaries of the Vineyard Block 2 complex (i.e., Blocks 2A, 2B, and 2C) and Vineyard Block 5 consistent with the modified block configurations as detailed and delineated in the WRA Biological Resources Response to Napa County Comments on Biological Resources (December 2018 - **Exhibit B-2**) and the Napa County Mitigated Project Exhibit (**Exhibit B-3**) that also provides a minimum 50 foot buffer from all avoided Napa lomatium, narrow-anthered brodiaea, and Sharsmith's western flax plants and/or populations. This configuration would avoid the entirety of the leather oak chaparral habitat on the project parcels, and allow the conversion of the entirety of the Scotch Broom Patch (an invasive and noxious plant species) to vineyard.
- b. Revise Erosion Control Plan #P18-00275-ECPA prior to approval to identify all areas removed from development pursuant to **Mitigation Measure BR-1(a)** and all areas containing special-status plant species (i.e. Napa lomatium, narrow-anthered brodiaea, Sharsmith's western flax, green monardella, and holly-leaved ceanothus) located outside of the mitigated vineyard blocks as shown in **Exhibit B-3**, as Preservation Areas. The Preservation Areas shall include a minimum of 13 acres.
- c. The owner/Permittee shall implement the following measure to permanently preserve special-status plant species and associated habitat within the project parcels. The Preservation Areas, totaling a minimum of 13 acres, as identified in approved #P18-00275-ECPA, shall be designated for preservation in a mitigation easement with an organization such as the Land Trust of Napa County as the grantee, or other means of permanent protection acceptable to the County. Land placed in protection shall be restricted from development and other uses that would degrade the quality of the habitat (including, but not limited to conversion to other land uses such as agriculture or urban development, and excessive off-road vehicle use that increases erosion) and should be otherwise restricted by the existing goals and policies of Napa County. The owner/Permittee shall record the mitigation easement within 60 days of approval of #P18-00275-ECPA by the County; however in no case shall the ECPA be initiated until said mitigation easement is recorded.
- d. Revise the proposed wildlife exclusion fencing layout prior to approval, to limit any new wildlife exclusion fencing to the periphery of proposed Vineyard Block 2 as modified by this mitigation measure.
- e. In accordance with Napa County Code Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) any Napa lomatium, narrow-anthered brodiaea, Sharsmith's western flax, green monardella, and holly-leaved ceanothus plants/populations inadvertently removed as part of development authorized under # P18-00275-ECPA shall be replaced on-site at a ratio of 2:1 at locations with similar habitat, as approved by the planning director. A mitigation plan shall be prepared. At a minimum, the mitigation plan shall include locations where the plants will be planted in suitable habitat within the project parcels, success criteria, and monitoring activities for the populations. The mitigation plan shall be finalized prior to planting and commencement of construction activities. Any replaced special-status plants shall be monitored for a period of at least three years to ensure an 80% survival rate.

Special-Status Animals: One wildlife species of special concern has the potential to occur within the project area (pallid bat; *Antrozous pallidus*) and one California fully protected special-status species is present (white-tailed kite; *Elanus leucurus*). Additionally, a variety of native bird species with baseline protections under the Migratory Bird Treaty Act (MBTA) and CFGC may use vegetation within the project area for nesting including Bell's sparrow (*Amphispiza belli*), oak titmouse (*Baeolophus inornatus*), and Nuttall's woodpecker (*Picoides nuttallii*).

Pallid bat is broadly distributed throughout much of western North America. This species occurs in a number of habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous forests. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of man-made structures, including vacant and occupied buildings. Tree roosting has been documented in large conifer snags, inside basal hollows of redwoods and giant sequoias, and within bole cavities in oak trees. Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight. Prey items include arthropods such as scorpions, ground crickets, and cicadas (WBWG, 2017). Trees within the project area provide potential roosting habitat, including for maternity (breeding) roosts. There are several documented occurrences within 10 miles (CDFW, 2019).

White-tailed kite is resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities (Dunk, 1995). Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk, 1995). This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates. A white-tailed kite was observed foraging over the southwestern portion of the project area during the site visit, and there are documented nesting occurrences within three miles (CDFW, 2019). The project area and adjacent areas provide suitable habitat, including for nesting.

Migratory birds and other birds of prey including Bell's sparrow, oak titmouse, and Nuttall's woodpecker have the potential to nest on the ground within the annual brome and agriculture and within the trees throughout the chamise chaparral, developed/landscaped, Eastwood manzanita chaparral, interior live oak chaparral, and California bay forest.

Potential indirect impacts resulting from temporary and intermittent increases in noise levels may cause nest and roost abandonment and death of young or loss of reproductive potential at active nests/roosts located near project activities. To reduce potentially direct and

indirect significant impacts to special-status bird and bat species as a result of the project to less than significant levels, **Mitigation Measure BR-2** and **Mitigation Measure BR-3** shall be implemented.

Mitigation Measure BR-2: The owner/permittee shall revise Erosion Control Plan # P18-00275-ECPA prior to approval to include the following measures to minimize impacts associated with the potential loss and disturbance of nesting birds consistent with and pursuant to CFGC Sections 3503 and 3503.5:

- a. For earth-disturbing activities occurring between February 1 and August 31 (which coincides with the grading season of April 1 through October 15 – NCC Section 18.108.070.L, and bird breeding and nesting seasons), a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local avian resources with the potential to occur at the project site) shall conduct a preconstruction surveys for nesting birds within all suitable habitat on the project site, and where there is potential for impacts adjacent to the project areas (typically within 500 feet of project activities). The preconstruction survey shall be conducted no earlier than 14 days prior to when vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than 14 days from the survey date, surveys shall be repeated. A copy of the survey shall be provided to the Napa County Conservation Division and the CDFW prior to commencement of work.
- b. After commencement of work if there is a period of no work activity of five days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.
- c. In the event that nesting birds are found, the owner/permittee shall identify appropriate avoidance methods and exclusion buffers in consultation with the County Conservation Division and the U.S. Fish and Wildlife Service (USFWS) and/or CDFW prior to initiation of project activities. Exclusion buffers may vary in size, depending on habitat characteristics, project activities/disturbance levels, and species as determined by a qualified biologist in consultation with County Conservation Division and the USFWS and/or CDFW.
- d. Exclusion buffers shall be fenced with temporary construction fencing (or the like), the installation of which shall be verified by Napa County prior to the commencement of any earthmoving and/or development activities. Exclusion buffers shall remain in effect until the young have fledged or nest(s) are otherwise determined inactive by a qualified biologist.
- e. Alternative methods aimed at flushing out nesting birds prior to pre-construction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or chemical (i.e., spraying nesting birds or their habitats) would be considered an impact to nesting birds and is prohibited. Any act associated with flushing birds from project areas should undergo consultation with the USFWS/CDFW prior to any activity that could disturb nesting birds.

Mitigation Measure BR-3: The owner/permittee shall revise Erosion Control Plan # P18-00275-ECPA prior to approval to include the following measures to reduce impacts to special-status bat species:

- a. A qualified biologist (defined as having demonstrable qualifications and experience with the particular species for which they are surveying) shall conduct a habitat assessment in order to identify suitable bat habitat trees within the project area(s), no more than 14 days and no less than seven days in advance of the planned tree removal. If the habitat assessment determines that trees proposed for removal contain suitable bat habitat, the following shall apply to potential bat habitat trees:
 - i. Tree trimming and/or tree removal should only be conducted during seasonal periods of bat activity (August 31 through October 15, when young would be self-sufficiently volant and prior to hibernation, and March 1 to April 15 to avoid hibernating bats and prior to formation of maternity colonies), under supervision of a qualified biologist. Note that these windows may shift with atypical temperatures or rainfall. Trees should be trimmed and/or removed in a two-phased removal system conducted over two consecutive days. The first day (in the afternoon), limbs and branches would be removed by a tree cutter using chainsaws only. Limbs with cavities, crevices and deep bark fissures would be avoided, and only branches or limbs without those features would be removed. On the second day, the entire tree would be removed.
 - ii. For removal of bat habit trees outside the seasonal activities identified above (between October 16 and February 28/29 of the following year or between April 16 and August 30), a qualified biologist shall conduct pre-construction survey within 14 days of project initiation and/or removal to determine absence/presence of special-status bat species. Survey methods, timing, duration, and species shall be provided for review and approval by Napa County prior to conducting pre-construction surveys. A copy of the survey shall be provided to the County Planning Division and CDFW prior to commencement of work. If special-status bat species are not present, removal can proceed. If bats are found to be present, a plan for removal or exclusion shall be developed by a qualified biologist in conjunction with the County Planning Division and CDFW. The removal or exclusion plan shall be implemented upon approval of the plan by the County Planning Division.

Therefore, the project as proposed with incorporation of **Mitigation Measures BR-2** and **BR-3** will result in less than significant impacts to special-status animal species and their habitats.

- b. The property contains chaparral, primarily chamise chaparral and leather oak chaparral, much of which supports both a diversity and high density of special-status plants. Leather oak chaparral typically occurs on varied topography where soils are shallow, rocky and derived

from ultramafic substrates. Leather oak is dominant or co-dominant in the open to continuous shrub layer (Sawyer et al., 2009). In Napa County, leather oak-California bay Alliance occurs throughout on rocky serpentine soils and is dominated by leather oak, chamise, or white leaf manzanita (*Arctostaphylos viscida*) (Napa County, 2005). Within the project area, leather oak chaparral is located on volcanic soils in the southwest corner. In this area, leather oak is dominant with interior live oak characteristically present in the continuous canopy. Associated shrub species include chaparral pea, chamise, holly-leaved ceanothus, and poison oak. Approximately 1.89 acres of leather oak chaparral is located in the project parcels. While this biological community is not considered sensitive by CDFW, it is considered sensitive by Napa County per the Napa County Baseline Report (WRA, July 2018 - **Exhibit B-1**). The Baseline Report notes that this community only occurs on serpentine soils; however, it can occur on rhyolite and other metavolcanic soils, as it does within the project area. As discussed above and shown in **Table 5**, 100% of the project parcels leather oak chaparral would be avoided with implementation of **Mitigation Measure BR-1**, which would avoid any potential impacts to this biological community.

California bay forests typically occur on terraces, canyon bottoms, north-facing slopes, and rock outcrops underlain by shallow to deep sand to loam substrates within the inner and outer Coast Ranges, Transverse Ranges, and Sierra Nevada Foothills from Del Norte County south to San Diego County (Sawyer et al., 2009). This community best fits the Sclerophyllous Shrubland NCLC Formation as it is dominated by a sclerophyllous species, has associated sclerophyllous species, and is located in very rocky areas with shallow soils (Napa County, 2005). Within the project area, California bay forest is located in the central and eastern portions. The canopy is continuous with interior live oak characteristically present. The majority of the trees are multi-trunked and average 25 to 30 feet in height. The understory is sparse and covered in leaf litter. Approximately 7.66 acres of California bay forests are located within project parcels. While this biological community can be considered sensitive by CDFW and Napa County, that designation is typically specific to bay forests located in valley floors/bottoms with stands composed of large individuals (Sawyer et al., 2009), which are not present in the project area. Furthermore, as discussed above and shown in **Table 5**, approximately 62% of the project parcels bay forest would be avoided (4.76 of 7.66 acres) with implementation of **Mitigation Measure BR-1**, which would reduce potential impacts to this biological community to a less than significant level.

Napa County Code Section 18.108.030 defines a stream as a watercourse designated by a solid line or dash and three dots symbol on the largest scale of the U.S. Geological Survey (USGS) maps most recently published (known as a blue-line stream), or any replacement to that symbol; any watercourse which has a well-defined channel with a depth greater than four feet and banks steeper than 3:1 and contains hydrophilic vegetation, riparian vegetation, or woody-vegetation including tree species greater than 10 feet in height; and those watercourses listed in Resolution No. 94-19. Three ephemeral streams, totaling approximately 0.05 acre (982 linear feet) are located within the project parcels. One of these streams, to the east of the project area, is a blue-line stream. The blue-line stream originates outside of the project parcels and terminates into a pond located within the project parcels but outside the project area (see **Figures 1 and 2**, and **Exhibits B-1 through B-3**). Although the pond is likely jurisdictional under Section 404 and 401 of the Clean Water Act (CWA) and Section 1600 of the CFGC, it is located outside of the project area and minimum 50-foot buffers, and is not expected to be impacted. While the stream is a USGS blue-line stream, it is highly ephemeral, shallow, poorly defined and lacks riparian vegetation. As this stream fits the requirements of the Napa County definition of a stream, setbacks shall be required from the top-of-bank (TOB). Drainages within the project area have been avoided in the design of the vineyard blocks and as such, there are no Napa County defined drainages in the proposed vineyard blocks (WRA, July 2018 - **Exhibit B-1**).

All drainages in the project parcels have been provided stream setbacks in accordance with NCC Chapter 18.108.025. For these reasons, the project will result in a less than significant impact to streams and drainage features including jurisdictional waters of the U.S. or State. Furthermore, with implementation of **Mitigation Measure BR-1**, setbacks from these drainages will be substantially increased, as shown in **Exhibit B-3**. Also see **Section IX.f (Hydrology and Water Quality)** for additional disclosure and analysis of potential impacts to Napa County streams.

Pursuant to Napa County General Plan Conservation Element Policy CON-17, projects shall be required to preserve and protect sensitive biotic communities and habitats of limited distribution through the following:

- a) Prevent removal or disturbance of sensitive natural plant communities that contain special-status plant species or provide critical habitat to special-status animal species.
- b) In other areas, avoid disturbances to or removal of sensitive natural plant communities and mitigate potentially significant impacts where avoidance is infeasible.
- e) Require no net loss of sensitive biotic communities and habitats of limited distribution through avoidance, restoration, or replacement where feasible. Where avoidance, restoration, or replacement is not feasible, preserve like habitat at a 2:1 ratio or greater within Napa County to avoid significant cumulative loss of valuable habitats.

With the implementation of **Mitigation Measure BR-1**, potential impacts to habitats associated with special-status plant species and sensitive natural communities will be reduced to a less than significant level. The project shall be redesigned to avoid those areas supporting the highest density and diversity of habitats associated with special-status plant populations, which would be maintained as open chaparral to provide continued habitat for these (and other) plants. Please refer to **Table 5** for a summary of the retention of habitats and biological communities in both the original and revised project after implementation of **Mitigation Measure BR-1**. The mitigated

proposed vineyard blocks overlap with on-site biological communities are shown in **Exhibit B-2** Figures 1 and 2 with one exception; the broom patch located in proposed Block 2A would be developed with the mitigated proposed project and the leather oak chaparral in proposed Block 2C would be avoided (also see **Exhibit B-3**).

- c. Seasonal wetland generally denotes areas where the soil is seasonally saturated and/or inundated by fresh water for a significant portion of the wet season, and then seasonally dry during the dry season. To be classified as “wetland,” the duration of saturation and/or inundation must be long enough to cause the soils and vegetation to become altered and adapted to the wetland conditions. Varying degrees of pooling or ponding, and saturation will produce different soil and vegetative responses. These soil and vegetative clues, as well as hydrological features, are used to define the wetland type. Seasonal wetlands typically take the form of shallow depressions and swales that may be intermixed with a variety of upland habitat types. No seasonal wetlands or vernal pools have been identified on the subject property or within the project area (WRA, July 2018 - **Exhibit B-1**). Therefore, no impacts to wetlands would occur.
- d. The project parcels (approximately 73.6 acres) are generally fenced along the property lines with deer fencing. Adjacent land uses consist predominantly of vineyard, undeveloped land, and rural residential. Parcels in the immediate vicinity currently contain fencing of various types located around the property perimeter or agricultural development. Therefore, there is a mix of existing fencing within the surrounding area associated with agricultural and residential uses, which has affected wildlife movement in the area. The existing vineyards are within the existing deer fencing that generally surrounds the property lines. Proposed deer fencing would be 8-foot-tall smooth wire with mesh spacing of approximately 4 inches by 4 inches, matching the existing fencing.

The project area is located within a mapped “Essential Connectivity Area,” specifically a large, north-south oriented tract of land east of Napa Valley (CDFW and Caltrans, 2010). The project area is located near the western edge of this mapped area, which is approximately 8.4 miles wide in that vicinity. At the scale of landscape linkages, this tract provides connectivity between baylands of San Pablo Bay and areas from northern Napa County northward. Given the relatively small size of the project area (relative to the width of the corridor tract) and the lack of apparent development impacts within the more central portion of this tract, agricultural expansion within the project area is in and of itself unlikely to result in any significant impacts to wildlife movement or migration at the landscape linkage scale. At a more local scale, the project area provides connectivity between a patchwork of undeveloped lands (primarily chaparral, grassland, and woodlands), and agricultural (vineyards) and low-density, rural developments. While the proposed project (vineyard blocks) would result in portions of the site having reduced potential for on-site wildlife movement, the retention of blocks of chaparral with direct connectivity with similar habitats on neighboring properties would allow for continued local wildlife movement. In addition, with the implementation of **Mitigation Measure BR-1**, the mitigated proposed vineyard blocks provide less fragmentation of on-site chaparral, and include connectivity to adjacent properties. Maintaining this connectivity should provide for continued cross-pollination and gene flow, as well as local wildlife movement. Furthermore, the adjacent properties are composed of the same habitats that support a similar suite of plants, presumably including those special-status plants documented on the property. Retention of the majority of the documented special-status plants in connected habitat blocks would provide the opportunity for these species to maintain viable populations both on the property and, more broadly, in the region.

Furthermore, it is important to note that a deer fence currently surrounds most of the property, and encloses neighboring properties to the east and west. The only proposed change to this fencing array would be the inclusion within the fenced area of an approximately 4.3-acre area along the southwestern boundary of the property, which consists primarily of chaparral. Though the subject area is currently unfenced, it effectively “dead ends” within the property, and does not function as a local movement corridor for wildlife already restricted by the deer fencing. As such, the proposed alterations to the deer fencing would not introduce any new movement barriers to wildlife and impacts to wildlife movement are expected to be less than significant. Because wildlife nursery sites were not identified in the project area or parcels, there would be no impacts to wildlife nursery sites. While the proposed fencing would not result in significant impacts to wildlife movement and use, in order to ensure that deer fencing is installed in a manner that is consistent with the biologist and CDFW recommendations to minimize impacts to wildlife movement, the following condition of approval shall be implemented, should the project be approved.

Fencing – Conditions of Approval:

The owner/permittee shall revise Erosion Control Plan # P18-00275-ECPA prior to approval to include a Vineyard Fencing Plan. The Vineyard Fencing Plan shall be submitted to the Planning Department for review and approval prior to its incorporation into # P18-00275-ECPA, and include the following components:

- New fencing shall use a design that has 6-inch square gaps at the base (instead of the typical 3-inch by 6-inch rectangular openings) to allow small mammals to move through the fence.
- Exit gates shall be installed at the corners of deer fencing to allow trapped wildlife to escape.
- Any modifications to the location of deer fencing as specified in Erosion Control Plan # P18-00275-ECPA pursuant to the Vineyard Fencing Plan required by this condition shall be strictly prohibited, and would require County review and approval to ensure the modified deer fencing location/plan would not result in potential impacts to wildlife movement.

- e. Because a portion of the project site is located in the Lake Hennessey Sensitive Domestic Water Supply Drainage, a minimum of 60% of the tree canopy and a minimum of 40% of the grassland and shrub cover existing on the parcel within the Lake Hennessey Water Supply Drainage in 1993 is required to be retained as part of the project ((NCC Section 18.108.027(B): Sensitive domestic water supply drainages – Vegetation Clearing)). Based on information provided by the applicant and review of historical aerial imagery, the portion of APN 032-030-066 (381.6 acres) within the Lake Hennessey Water Supply Drainage contained 68.5 acres of tree canopy cover and 116.9 acres of brush/shrub cover in 1993. The project would not remove any tree canopy cover and would remove approximately 9.2 acres of the grass/shrub cover as it existed in this Drainage in 1993. Resulting in the retention of approximately 81% of the tree canopy cover and 50% of the grass/shrub cover as it existed in 1993 within this Drainage.

This retention is within the minimum tree canopy and grass/shrub retention requirements for projects located within Sensitive Domestic Water Supply Drainages ((NCC Section 18.108.027(B)). Furthermore, with implementation of **Mitigation Measure BR-1**, the boundaries of Vineyard Block 5, which fall within the Lake Hennessey Sensitive Domestic Water Supply Drainage, would be reduced to avoid special-status plant species habitat, thereby further reducing conversion of grass/shrub cover areas within the Lake Hennessey Water Supply Drainage. Therefore, the project would be in compliance with Section 18.108.027(B). See the discussion below for an analysis of vegetation removal and retention based on current conditions.

Based on the Biological Resources Reconnaissance Survey, plant communities or alliances occurring within the project parcels include agriculture (20.45 acres), annual brome grassland (6.69), broom patch (1.06 acre), California bay forest (7.66 acres), chamise chaparral (20.22 acres), developed/landscaped (11.54 acres), Eastwood manzanita chaparral (1.71 acres), interior live oak chaparral (2.17 acres), and leather oak chaparral (1.89 acres) (**Table 4**). The mitigated proposed project would result in the removal of 3.11 acres (15.2% removed) of agriculture, 5.28 acres (78.9% removed) of annual brome grassland, 1.06 acres (100% removed) of broom patch, 2.90 acres (37.9% removed) of California bay forest, 7.34 acres (36.3% removed) of chamise chaparral, 5.30 acres (45.9% removed) of developed/landscaped, 0.49 acre (28.7% removed) of Eastwood manzanita chaparral, 0.48 acre (22.1% removed) of interior live oak chaparral, and 0 acres (0% removal) of leather oak chaparral (**Table 5**).

In terms of numbers of trees to be removed as part of the proposed project, approximately 280 to 300 trees with a 6-inch diameter breast height (dbh) or greater located within chaparral or bay forest biological communities would be removed. With implementation of **Mitigation Measure BR-1** that would reduce the proposed vineyard acreage from ±38.9 gross acres to ±26 gross acres, the number of trees to be removed would be reduced to approximately 165 to 185 trees, which also would not result in the loss of oak woodland.

Oak woodland is the most common land cover in the county occurring on approximately 167,000 acres (33% of the County's area). Approximately 733 acres of oak woodland or 0.5% of the total area of oak woodland in the county has been cleared for residential and agricultural purposes between 1993 and 2002 (Napa County Baseline Date Report, Biological Resources Section, pages 4-22 and 4-25, Version 1, November 2005). While oak woodlands may be one of the most common land covers within the County, their past conversion to residential and agricultural uses in conjunction with foreseeable oak woodland conversion to agricultural use is considered a potentially significant impact on both a project-specific level and a cumulative level (Napa County General Plan, Draft Environmental Impact Report, Volume 1, Section 5.4 Biological Resources, Pacific Municipal Corporation, February 2007).

Napa County General Plan Conservation Element Policy CON-24 requires that oak woodland be maintained and/or improved to the extent feasible to provide for oak woodland and wildlife habitat, slope stabilization and soil protection, and species diversity. General Plan Conservation Element Policy CON-24c specifically provides for the preservation of oak woodland (on an acreage basis) at a 2:1 ratio where feasible, where preservation/avoidance of oak woodland is not feasible replacement of oak woodland at a 2:1 ratio is required. As proposed, no oak woodland would be removed as part of the proposed project. As such, the project would be consistent with Conservation Goal CON-6. Because the proposed project would not remove trees within oak woodland habitats or biological communities, impacts to oak woodlands would be less than significant.

To ensure that no oak trees are inadvertently removed as part of the project, and because the project will also be subject to the provisions of Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement), the following provisions will be included as conditions of approval should the proposed project be approved:

Tree/Woodland Protection – Conditions of Approval:

- Prior to any earthmoving activities temporary fencing shall be placed at the edge of the dripline of trees to be retained that are located adjacent to the project area (typically within approximately 50-feet of the project area). The precise locations of said fences shall be inspected and approved by the Planning Division prior to the commencement of any earthmoving activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated protection areas for the duration of erosion control plan and vineyard installation.
- Trees removed that are not within the boundary of the project and/or not identified for removal as part of # P18-00275-ECPA shall be replaced onsite with fifteen-gallon trees at a ratio of 2:1 at locations approved by the director.
- The owner/permittee shall refrain from severely trimming the trees and vegetation to be retained adjacent to the vineyard conversion area.

Additionally, as discussed in subsections (a) through (c) above, the proposed project is designed to generally avoid the streams and drainages, and with incorporated mitigation measures and conditions of approval, impacts to sensitive natural communities and special-status species would be less than significant. Therefore, the proposed project with conditions incorporated is consistent with applicable Napa County General Plan Policies and NCC Chapter 18.108.

- f. There are no Habitat Conservation Plans, Natural Community Conservation Plans, or other similar plans applicable to the project site. There would be no impact.

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

Discussion

See **Section XVII (Tribal Cultural Resources)** for disclosures and impact assessment pursuant to Pursuant to Public Resources Code 21080.3.1. (Assembly Bill 52 - Gatto).

The following was utilized in this analysis and is incorporated herein by reference, in addition to Napa County GIS Archeological sensitive areas and Archeological sites layers:

- Tom Origer and Associates, March 27, 2017, Historical Resources Study of APNs 032-030-065 and 032-030-066 near St Helena, Napa County, California.

a-b. The Historical Resources Study (Tom Origer and Associates, March 2017) conducted for the project area identified two isolated obsidian flakes and a lithic scatter found during the survey.

The lithic scatter site, which is near one of the isolates, is in the south-central portion of the property on the southern property boundary and consisted of two obsidian flakes and three bifacial tool fragments. Materials were found in an area measuring approximately 25 feet by 33 feet. The other isolate is located in the northeast corner of the project parcels in the proximity of pond and road. All of the specimens were from the Napa Valley obsidian source. The project has been designed to avoid these sites/areas. While the project has been designed to avoid these cultural sites there is the potential for these sites to be inadvertently disturbed during project development and subsequent vineyard operations, which is considered a potential significant indirect impact. To ensure potentially significant indirect impacts to cultural resources are reduced to a less than significant level, **Mitigation Measure CUL-1** shall be implemented to identify these resources in the field and provide them with a protective buffer. Additionally, it should be noted that with implementation of **Mitigation Measure BR-1** buffers from these resources, in particular the resources located along the southern property boundary in the proximity of Vineyard Block 2C, would be increased which would further reduce potential impacts to these resources.

Mitigation Measure CUL-1:

The owner/permittee shall implement the following measures to avoid and minimize indirect impacts to cultural resources:

- a. Prior to the commencement of grading and/or earthmoving activities associated with the development of #P18-00275-ECPA, all identified cultural resources shall be flagged in the field by a qualified archeologist and a permanent 10-foot buffer around the perimeter of the resource areas shall be established. Protective construction fencing shall be installed along cultural resource buffers, for County inspection and approval prior to the commencement of grading and/or earthmoving activities. The protective construction fencing shall be maintained and remain in place until all grading, erosion control measure installation, and vineyard installation are completed.

- b. No vineyard development and operations, including vineyard avenues and tractor turnaround areas, shall occur with the buffer areas.
- c. Should vineyard block boundaries need to be revised to provide cultural resources with a 10 foot buffer, the owner/permittee shall provide the County with an as-built plan as necessary showing the revised block boundaries.

Furthermore, project approval, if granted, would be subject to the following standard conditions, that would further avoid and/or reduce potential archeological and historical resource impacts.

- c. There are no unique geologic features on the project site. Due to the nature of the soils in the project site and because average vineyard ripping depth would be 48 inches with a maximum of 72 inches depending on site conditions, the probability of encountering paleontological resources within the project area is minimal. Furthermore, project approval, if granted, would be subject to the standard conditions described in the following impact that would avoid and reduce potential paleontological resource impacts. Therefore, impacts to geologic features and paleontological resources are anticipated to be less than significant.
- d. The Historical Resources Study did not locate any human remains in the proposed development areas and does not anticipate the discovery of human remains due to the proposed project. Therefore, impacts on human remains are anticipated to be less than significant. Furthermore, project approval, if granted, would be subject to the standard conditions identified above, which would ensure that potential impacts on human remains would be less than significant.

Cultural Resources – Conditions of Approval:

Discovery of historical, archaeological, paleontological resources, or human remains during construction, grading, or other earth moving activities:

- In accordance with CEQA Subsection 15064.5(f), should any previously unknown historic or prehistoric resources, including but not limited to charcoal, obsidian or chert flakes, grinding bowls, shell fragments, bone, pockets of dark, friable solids, glass, metal, ceramics, wood or similar debris, be discovered during grading, trenching or other onsite excavation(s), earth work within 100-feet of these materials shall be stopped until a professional archaeologist certified by the Registry of Professional Archaeologists (RPA) has had an opportunity to evaluate the significance of the find and suggest appropriate mitigation(s), as determined necessary.
- If human remains are encountered the Napa County Coroner shall be informed to determine if an investigation of the cause of death is required and/or if the remains are of Native American origin. Pursuant to Public Resources Code Section 5097.98, if such remains are of Native American origin the nearest tribal relatives as determined by the State Native American Heritage Commission shall be contacted to obtain recommendations for treating or removal of such remains, including grave goods, with appropriate dignity.
- In the event that a discovery of a breas, true, and/or trace fossils are discovered during ground disturbing activities, all work within 100 feet of the fined shall be temporarily halted of diverted until the discovery is examined by a qualified paleontologist. The paleontologist shall notify the appropriate agencies to determine procedures that should be followed before ground disturbing activities are allowed to resume at the location of the find.
- All persons working onsite shall be bound by contract and instructed in the field to adhere to these provisions and restrictions.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a. The project site could experience potentially strong ground shaking and other seismic related hazards based on the number of active faults in the San Francisco Bay region. The proposed project consists of earthmoving activities associated with the installation of erosion control measures for agricultural development, but does not include the construction of new residences or other facilities (i.e., enclosed areas where people can congregate) that would be subject to seismic forces. Additionally, the proposed project would not result in a substantial increase in the number of people to the site. Therefore, the potential for the proposed project to expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving fault rupture, ground shaking, liquefaction, and landslides would result in no impact. Additional information supporting this conclusion is identified below.
- i) No faults have been mapped on the project site, and the project site is not located on an active fault or within an “Earthquake Fault Hazard Rupture Zone” designated by the Alquist-Priolo Earthquake Zoning Act. The closest active faults to the project site are the West Napa and Hunting Creek-Berryessa Fault approximately 3.7 miles southwest, and 6.8 miles east of the site, respectively. Two splays of an unnamed ancient fault are mapped crossing proposed vineyard Block 5 on the volcanic plateau near the northeast property corner; however no faulting offset and been documented (Gilpin Geosciences, Inc., 2018 – **Exhibit F**).
 - ii) Although the project site is located in an area that may be subject to strong or very strong seismic ground shaking potential during an earthquake (California Geological Society, 2016), the proposed project does not include construction of any new residences or enclosed areas where people would congregate.
 - iii) The project site is not in an area subject to high liquefaction potential. The Napa County General Plan identifies the project area as having very low liquefaction potential (Napa County, 2009). Further, as noted above, the proposed project would not result in a substantial increase in the number of people or add structures onsite.
 - iv) Landslides, landslide deposits, and areas of instability have not been identified within the proposed vineyard blocks. The closet mapped feature is a landslide deposit located approximately 350 to 400 vertical feet below proposed Blocks 2B and 2C (Gilpin Geosciences, Inc., 2018 - **Exhibit F**). The Sage Canyon landslide lies approximately 1,500 feet northwest of the project site (Gilpin Geosciences, Inc., 2018 - **Exhibit F**).
- b. The project site’s soils are mapped as Rock outcrop-Hambricht complex, 50-75% slopes (Soil series #176). The Hambricht series consists of well-drained soils with medium to very rapid runoff, low shrink-swell potential, moderate permeability, and low erosion (Soil Survey of Napa County, USDA 1978; and Gilpin Geosciences, Inc., 2018 - **Exhibit F**).

Installation and implementation of the ECPA would involve vegetation removal and earthmoving activities within the proposed vineyard areas. Pursuant to NCC Section 18.108.070(L) (Erosion Hazard Areas), earthmoving activities cannot be performed between October 15 and April 1. These activities would take place during the dry season when rainstorms are less likely, resulting in negligible erosion and sedimentation during project installation.

Soil loss calculations were prepared using the Universal Soil Loss Equation (USLE) in order to evaluate potential effects of erosion as a result of the proposed project. The USLE model evaluates the environmental conditions and physical forces that lead to the detachment and potential movement of soil particles through surface erosion. The USLE model does not describe travel distances of soil particles once dislodged. Potential soil loss and sedimentation associated with the proposed agricultural development and operations would primarily be controlled through a no-till cover crop with vegetative cover densities of at least 75%. Vineyard avenues would also include vegetative cover densities of at least 75%. The cover crop provides the ability to trap eroded soils onsite, thereby reducing soil loss and sedimentation potential.

Based on USLE modeling calculations prepared by PPI Engineering (**Exhibit E**), the proposed conversion of approximately 38.9 acres of chaparral, annual grassland, agriculture, broom patch, and California Bay forest to vineyard is anticipated to reduce soil loss, or surface

erosion, within the project area as compared to existing conditions (**Table 6**). Under existing conditions, the annual soil loss is anticipated to average 136.10 tons per acre per year across the entire project site depending on soil type, slope length, and gradient. Under proposed project conditions, annual soil loss is anticipated to average 107.58 tons per acre per year, or a reduction of approximately 20.96% as compared to existing conditions.

Table 6 – USLE Soil Loss Analysis

Vineyard Block Transect	Pre-project Soil Loss (tons/year)	Post-project Soil Loss (tons/year)	Difference	Percent Change (approximate)
1	2.74	2.56	-0.18	-6.57
2A	11.75	10.96	-0.79	-6.72
2B	13.62	12.59	-1.03	-7.56
2C-1	24.39	21.71	-2.68	-10.99
2C-2	15.16	9.41	-5.76	-37.99
2C-3	1.99	1.86	-0.13	-6.53
3	9.39	5.44	-3.96	-42.17
4	3.86	2.14	-1.72	-44.56
5A	49.73	38.82	-10.90	-21.92
5B	3.47	2.10	-1.37	-39.48
Vineyard Totals	136.10	107.58	-28.52	-20.96

Source: PPI Engineering, July 2018

Other proposed erosion control features that are anticipated to further reduce potential soil loss as a result of the project, including soil loss experienced during vineyard and cover crop establishment, consist of water bars, straw mulching, straw bale dikes, and other practices as needed.

Should the project be approved, the following conditions of approval shall be implemented to ensure that erosion control measures are installed according to plan specifications.

Erosion and Runoff Control (i.e., Hydromodification) Installation and Operation – Conditions of Approval:

The following conditions shall be incorporated by referenced into Erosion Control Plan # P18-00275-ECPA pursuant to NCC Chapter 18.108 (Conservation Regulations):

- Permanent Erosion and Runoff Control Measures: Pursuant to NCC Section 18.108.070(L) installation of runoff and sediment attenuation devices and hydromodification facilities including, but not limited to straw wattles, rock-filled avenue/level spreader, rocked crossing, and permanent no-till cover, shall be installed by October 15 during the same year that initial vineyard development occurs: for development areas located within the sensitive domestic watershed specified erosions control measures shall be installed by September 1. These requirements shall be clearly stated on the final Erosion Control Plan. Additionally, pursuant to NCC Section 18.108.135 “Oversight and Operation” the qualified professional that has prepared this erosion control plan (#P18-00275-ECPA) shall oversee its implementation throughout the duration of the project, and that installation of erosion control measures, sediment retention devices, and hydromodification facilities specified for the vineyard have be installed and are function correctly. Prior to the first winter rains after construction begins, and each year thereafter until the project has received a final inspection from the county or its agent and been found complete, the qualified professional shall inspect the site and certify in writing to the planning director, through an inspection report or formal letter of completion verifying that all of the erosion control measures, sediment retention devices, and hydromodification facilities required at that stage of development have been installed in conformance with the plan and related specifications, and are functioning correctly.
- Cover Crop Management/Practice: The permanent vineyard cover crop shall not be tilled (i.e., shall be managed as a no till cover crop) for the life of the vineyard and the owner/permittee shall maintain a plant residue density of 75% within the vineyard and vineyard avenues. The cover crop may be strip sprayed, with a strip no wider than 1.5 feet (18 inches) wide at the base of vines, with post-emergent herbicides: no pre-emergent sprays shall be used. Should the permanent no till cover crop need to be replanted/renewed during the life of the vineyard, cover crop renewal efforts shall follow the County “Protocol for Replanting/Renewal of Approved Non-Tilled Vineyard Cover Crops” July 19, 2004, or as amended.

It is not expected that land preparation activities associated with vineyard, such as removal of rocks from the soil profile, would substantially affect the USLE modeling results. The USLE model evaluates the environmental conditions and physical forces that lead to the detachment and movement of soil particles. The primary goal of cultivating the soils within the development area during implementation is to prepare the site for planting, including fracturing and mixing layers of compressed soil and rock to facilitate root growth and improve permeability, rather than to remove all the rock within the development area soils. Soil cultivation may result in a greater number of smaller

rocks at the soil surface. Smaller rocks that emerge through development would be left within the vineyard, and only larger rocks that surface would be removed. Because the larger rocks that may be removed from the site are generally underneath the soil surface, the removal of larger rocks that emerge during development would not significantly alter the composition of soil. Therefore, the soil type classification utilized in the USLE calculations would remain unchanged (Oster, 2008).

For these reasons the proposed project, with incorporation of specified erosion control measures and conditions of approval, would not increase soil erosion and the loss of topsoil as compared to existing conditions, and maximize the potential for containment of detached soil particles to the project area, resulting in no impact with regard to soil erosion, soil loss, and sedimentation. Also see **Section VIII (Hazards and Hazardous Materials)** and **Section IX (Hydrology and Water Quality)** for additional disclosures related to water quality. Additionally, as shown in the soil loss modeling following development, overall soil loss is anticipated to be less than pre-development conditions. This is consistent with General Plan Conservation Element Policy CON-48, which requires post-development sediment erosion conditions (i.e., soil loss) be less than or equal to pre-development conditions.

Furthermore, with implementation of **Mitigation Measure BR-1**, which would reduce the acreage of the project by approximately 13 acres, it is anticipated that expected soil loss associated with the project would be further reduced than that shown in **Table 6**.

See **Section IX (Hydrology and Water Quality)** for a discussion regarding potential impacts to water quality as a result of the project.

- c. As discussed above, the project area is not located in an area prone to landslides, ground failure or liquefaction. The proposed project identifies the soil types in the project area and addresses any potential soil instability. Therefore, impacts from offsite landslides, lateral spreading, subsidence, liquefaction or collapse would be less than significant.
- d. Soils of the project site consist of Rock outcrop-Hambright complex, which exhibits low and low shrink-swell potential (USDA Soil Survey of Napa County, 1978). In addition, no structures are proposed as part of the project and expansive soils pose little risk to vineyards and related agricultural improvements. Therefore, there would be no impacts associated with expansive soils.
- e. The proposed project involves the development of vineyard. No septic tanks or alternative wastewater disposal systems are needed or proposed at the project site. Therefore, there would be no impact with regard to soils supporting septic tanks or alternative wastewater disposal systems.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate a net increase in greenhouse gas emissions in excess of applicable thresholds adopted by the Bay Area Air Quality Management District or the California Air Resources Board which may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with a county-adopted climate action plan or another applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

See **Section III (Air Quality)** for other air quality emissions disclosures and impact assessments.

Napa County has been working to develop a Climate Action Plan (CAP) for several years. The 2012 Draft CAP (March 2012) recommended using the emissions checklist provided therein, on a trial basis, to determine potential GHG emissions associated with project development and operation. At the December 11, 2012, Napa County Board of Supervisors (BOS) hearing, the BOS considered adoption of the proposed CAP. In addition to reducing Napa County’s GHG emissions, the proposed plan was intended to address compliance with CEQA for projects reviewed by the County and to lay the foundation for development of a local offset program. While the BOS acknowledged the plan’s objectives, it requested that the CAP be revised to better address transportation-related GHG emissions, to acknowledge and credit past accomplishments and voluntary efforts, and to allow more time for establishment of a cost-effective local offset program. The BOS also requested that BMPs be applied and considered when reviewing projects until a revised CAP is adopted to ensure that projects address the County’s policy goal related to reducing GHG emissions. In addition, the BOS recommended utilizing the emissions checklist and associated carbon stock and sequestration factors in the Draft CAP to assess and disclose potential GHG emissions associated with project development and operation pursuant to CEQA.

In July 2015, the County recommenced preparation of the CAP to: i) account for present day conditions and modeling assumptions (such as methods, emission factors, and data sources); ii) address the concerns with the previous CAP effort as outlined above, iii) meet applicable state requirements, and iv) result in a functional and legally defensible CAP. As the part of the first phase of development and preparation of the CAP, the County released Final Technical Memorandum #1: 2014 Greenhouse Gas Emissions Inventory and Forecast, April 13, 2016. This initial phase included: i) updating and incorporating the County's community-wide GHG emissions inventory to 2014, and ii) preparing new GHG emissions forecasts for the 2020, 2030, and 2050 horizons. On July 24, 2018, the County prepared a Notice of Preparation of a Draft Focused Environmental Impact Report for the Climate Action Plan. The review period was from July 24, 2018 through August 22, 2018. Additional information on the County CAP can be obtained at the Napa County Department of Planning, Building and Environmental Services or online at <https://www.countyofnapa.org/592/Climate-Action-Plan>.

For the purposes of this assessment the carbon stock and sequestration factors identified within the 2012 Draft CAP are utilized to calculate and disclose potential GHG emissions associated with agricultural "construction" and development and with "ongoing" agricultural maintenance and operation, as further described below. The 2012 Draft CAP carbon stock and sequestration factors are utilized in this assessment because they provide the most generous estimate of potential emissions. As such the County considers that the anticipated potential emissions resulting from the proposed project that are disclosed in this Initial Study reasonably reflect proposed conditions and therefore are considered appropriate and adequate for project impact assessment.

a-b. Overall increases in GHG emissions in Napa County were assessed in the EIR prepared for the Napa County General Plan Update certified in June 2008. GHG emissions were found to be significant and unavoidable in that document, despite the adoption of mitigation measures incorporating specific policies and action items into the General Plan.

Consistent with these General Plan action items, Napa County participated in the development of a community-wide GHG emissions inventory and "emission reduction framework" for all local jurisdictions in the County in 2008-2009. This planning effort was completed by the Napa County Transportation and Planning Agency in December 2009, and served as the basis for development of a refined inventory and emission reduction plan for unincorporated Napa County.

The County requires project applicants to consider methods to reduce GHG emissions consistent with Napa County General Conservation Element Plan Policy CON-65e. Pursuant to State CEQA Guidelines Section 15183, this assessment focuses on impacts that are "peculiar to the project," rather than the cumulative impacts previously assessed, because this Initial Study assesses a project that is consistent with an adopted General Plan for which an EIR was prepared.

GHGs are the atmospheric gases whose absorption of solar radiation is responsible for the greenhouse effect, including carbon dioxide (CO₂), methane, ozone, and the fluorocarbons, which contribute to climate change. CO₂ is the principal GHG emitted by human activities, and its concentration in the atmosphere is most affected by human activity. It also serves as the reference gas to which to compare other GHGs. Agricultural sources of carbon emissions include forest clearing, land-use changes, biomass burning, and farm equipment and management activity emissions. Equivalent Carbon Dioxide (CO_{2e}) is the most commonly reported type of GHG emission and a way to get one number that approximates total emissions from all the different gasses that contribute to GHG, as described in BAAQMD's CEQA Guidelines. In this case CO₂ is used as the reference atom/compound to obtain atmospheric carbon CO₂ effects of GHG. Carbon stocks are converted to CO_{2e} by multiplying the carbon total by 44/12 (or 3.67), which is the ratio of the atomic mass of a carbon dioxide molecule to the atomic mass of a carbon atom (<http://ncasi2.org/COLE/faq.html>).¹³

One-time "Construction Emissions" associated with vineyard development projects include: i) the carbon stocks that are lost or released when site vegetation is removed, including any woody debris and downed wood; ii) underground carbon stocks, or soil carbon, released when soil is ripped in preparation for vineyard development and planting (referred to as Project Site Emissions below); and iii) emissions associated with the energy used to develop and prepare the project area and plant vineyard, including construction equipment and worker vehicle trips (referred to as Equipment Emissions below). For the purpose of this analysis, it is assumed that all removed vegetation would be burned, even though some may be chipped/mulched. Refer to **Section XVI (Transportation/Traffic)** for anticipated number of construction trips and equipment associated with project construction and operations.

In addition to the one-time Construction Emissions, "Operational Emissions" of the vineyard are also quantified and include: i) any reduction in the amount of carbon sequestered by existing vegetation that is removed as part of the project (referred to as Operational Sequestration Emissions below); and ii) ongoing emissions from the energy used to maintain and farm the vineyard, including farm equipment and vehicles (such as tractors, haul trucks, backhoes, pick-up trucks, and ATVs) and worker vehicle trips (referred to as Operational Equipment Emissions below). See **Section XVI (Transportation/Traffic)** for anticipated number of operational trips. Operational Emissions from the proposed vineyard would be modest when compared to one-time construction emissions (as discussed below), and a quantitative estimate would require many assumptions about what would happen during the next 100 years onsite under

¹³ "Carbon stock" refers to the total amount of carbon stored in the existing plant material including trunks, stems, branches, leaves, fruits, roots, dead plant material, downed trees, understory, and soil organic material. Carbon stock is expressed in units of metric tons of carbon per acre. When land is cleared, some percentage of the carbon stored is released back to the atmosphere as CO₂. Land clearing or the loss of carbon stock is thus a type of GHG emission (County of Napa, March 2012, Napa County Draft Climate Action Plan).

“project” and “no project” conditions (e.g., the life expectancy of the proposed vineyard and existing site vegetation, incidences of disease and fire, etc.).

Construction Emissions:

Equipment Emissions: As discussed in **Section III (Air Quality)**, three County Certified EIRs assessed and analyzed potential air quality and GHG emissions associated with vineyard development. Within those EIRs potential GHG emissions associated with construction equipment were calculated and disclosed. An estimation of potential construction equipment emissions per acre of vineyard development was derived using the most generous emissions results from these EIRs. The Circle-S Ranch EIR anticipated approximately 4,293 metric tons (MT) CO_{2e} of construction equipment emissions for a 459-acre vineyard development, resulting in approximately 9.4 MT CO_{2e} of construction equipment emissions per acre of vineyard development.¹⁴ Using this emission factor it is anticipated that Construction Equipment Emissions associated with the proposed 38.9-acre vineyard development would be approximately 365.7 MT CO_{2e} (38.9 acres multiplied by 9.4 MT CO_{2e}).

Project Site Emissions: Project site emissions are emissions resulting from vegetation removal and soil preparation associated with the conversion of approximately 38.9 acres of existing vegetation to vineyard. Because there is not yet a universally accepted scientific methodology or modeling method to calculate GHG emissions due to vegetation conversion and soil disturbance, the Greenhouse Gas Emissions Checklist and associated carbon stock factors developed as part of the 2012 CAP efforts are utilized to determine potential project site carbon stocks and emissions. Utilizing the 2012 Draft CAP carbon stocks and the acreages of vegetation types within the project area, total carbon stocks for the project site are estimated to be approximately 910.84 MT C or approximately 3,342.77 CO_{2e} (**Table 7**).

Table 7 – Estimated Project Site Carbon Stocks/Storage

Vegetation Type/Carbon Storage	Project Acreage	Carbon Storage/Stock per Acre (MT C/acre) ¹	Total Carbon Storage (MT)	Total Carbon Storage in MT CO _{2e}
Interior Live Oak Chaparral ²	0.95	95.1	90.35	331.57
Leather Oak Chaparral ³	0.61	95.1	58.01	212.90
Grasslands	6.18	1.4	8.65	31.75
Broom Patch	0.85	16.2	13.77	50.54
Shrubland/Chaparral ⁴	17.00	16.2	275.40	1,010.72
CA Bay Forest ⁵	4.68	95.1	445.07	1,633.40
Agriculture	3.11	3.8	11.82	43.37
Developed/Landscaped ⁶	5.55	1.4	7.77	28.52
Total			910.84	3,342.77

¹ Includes 100% of soil carbon stock.

² For the purpose of these GHG calculations the carbon stocks associated with oak woodland is applied to the Interior Live Oak Chaparral vegetation type.

³ For the purpose of these GHG calculations the carbon stocks associated with oak woodland is applied to the Leather Oak Chaparral vegetation type.

⁴ Includes Chamise Chaparral and Eastwood Manzanita Chaparral.

⁵ For the purpose of these GHG calculations the carbon stock associated with oak woodland is applied to California Bay Forest lands.

⁶ For the purpose of these GHG calculations the carbon stock associated with grassland is applied to Developed /Landscaped lands.

Sources: Napa County Draft Climate Action Plan, March 2012; Napa County Conservation Division, November 2018.

There is currently no scientific agreement about the percentage of carbon that would be lost (or emitted) from soils through grading. Some analyses have suggested 20-25% while others have suggested 50%.¹⁵ Using 50% as a more conservative estimate, the proposed project could result in one-time project site construction emissions from vegetation removal and soil preparation (i.e., grading and soil ripping) of approximately 2,918.97 MT CO_{2e} (**Table 8**).

Table 8 – Estimated Project Carbon Emissions Due to Vegetation Removal (Table continued on next page)

Vegetation Type/Carbon Storage	Project Acreage	Carbon Loss/Emission per Acre (MT C/acre) ¹	Total Carbon Loss/Emission (MT)	Total Carbon Loss/Emission in MT CO _{2e}
Interior Live Oak Chaparral ²	0.95	89.6	85.12	312.39
Leather Oak Chaparral ³	0.61	89.6	54.66	200.59
Grasslands	6.18	0.8	4.94	18.14
Broom Patch	0.85	12.1	10.29	37.75
Shrubland/Chaparral ⁴	17.00	12.1	205.70	754.92

¹⁴ As discussed in Section III (Air Quality) variations or similarities in emissions modeling results between the three projects can be attributed to modeling platform and version utilized, variations in modeling assumptions and inputs (such as project acreage and vegetation types removed), and anticipated construction and equipment and duration of use.

¹⁵ Napa County, July 12, 2010, Green House Gas Emissions Associated with Vineyard Development & Vineyard Operations, A Compilation of Quantitative Data from Three Recent Projects.

CA Bay Forest ⁵	4.68	89.6	419.33	1,538.93
Agriculture	3.11	3.5	10.89	39.95
Developed/Landscaped ⁶	5.55	0.8	4.44	16.29
Total			795.37	2,918.97

¹ Includes 50% of soil carbon stock.

² For the purpose of these GHG calculations the carbon stocks associated with oak woodland is applied to the Interior Live Oak Chaparral vegetation type.

³ For the purpose of these GHG calculations the carbon stocks associated with oak woodland is applied to the Leather Oak Chaparral vegetation type.

⁴ Includes Chamise Chaparral and Eastwood Manzanita Chaparral.

⁵ For the purpose of these GHG calculations the carbon stock associated with oak woodland is applied to California Bay Forest lands.

⁶ For the purpose of these GHG calculations the carbon stock associated with grassland is applied to Developed/Landscaped lands.

Sources: Napa County Draft Climate Action Plan, March 2012; Napa County Conservation Division November 2018.

Operational Emissions:

Operational Equipment Emissions: The referenced vineyard development EIRs also assessed ongoing vineyard operation emissions associated with vehicles and equipment. Estimated potential construction equipment emissions per acre of vineyard development were derived using the most generous emissions results from these EIRs. The Suscol Mountain Vineyard EIR anticipated approximately 373 MT CO_{2e} of operational emissions for a 560-acre vineyard, resulting in approximately 0.67 MT CO_{2e} of operational emissions per acre of vineyard per year. Using this emission factor it is anticipated that Operational Equipment Emissions associated with the proposed 38.9-acre agricultural development would be approximately 26.06 MT CO_{2e} (38.9 multiplied by 0.67 MT CO_{2e}).

Operational Sequestration Emissions: Emissions associated with loss of sequestration due to land use change (i.e., the conversions of existing vegetation to vineyard) have been calculated based the Annual Carbon Sequestration Factors within the 2012 Draft CAP, which indicates that grasslands sequester a negligible quantity of CO₂ acre per year (essentially zero), shrubland/chaparral sequester a negligible quantity (essentially zero), agriculture sequester 0.057 CO₂ acre per year, and oak woodlands sequester 0.425 CO₂ acre per year. The developed/landscaped land use is not identified by the 2012 Draft CAP and is considered similar to grasslands (essentially zero). Because the 2012 Draft CAP does not identify sequestration factors for either grasslands, shrublands/chaparral, developed/landscaped, or the Disturbed Chaparral/Non-native Grassland vegetation type, the sequestration factor for Croplands of 0.057 MT C per acre per year has been attributed to the grassland, broom patch, developed/landscaped, and shrublands/chaparral that are proposed for removal to provide the most conservative GHG emission estimate. The sequestration factor for oak woodlands of 0.057 MT C per acre per year has been attributed to the Interior Live Oak Chaparral, Leather Oak Chaparral and California Bay Forest that are proposed for removal. Utilizing these factors, it is anticipated that the annual emissions associated with changes in carbon sequestration as a result of land use changes would be approximately of 4.51 CO₂ acre per year or 16.55 MT CO_{2e} per year¹⁶.

Grapevines are photosynthetic plants and therefore have value in terms of carbon capture. Additionally, the use of cover crops, which are also photosynthetic plants, tends to result in less soil CO₂ loss from vineyard soils. Carbon sequestration loss would be further offset by the proposed vineyard, which would likely act as a sink for atmospheric CO₂, depending on the longevity of grapevine roots and the quantity of carbon stored in deep roots. In addition to vines, the sequestration of atmospheric carbon is also achieved by the soil between vine rows through cover-cropping.

Project Emissions:

Based on the above estimates, the proposed project could result in one-time construction emissions of up to 3,284.67 MT CO_{2e} and annual ongoing emissions associated with vineyard operations (including loss of sequestration) estimated to be approximately 42.61 MT CO_{2e} per year (Table 9).

Table 9 – Estimated Overall Project-Related GHG Emissions

Construction Emissions in Metric Tons of CO _{2e}		Annual Ongoing Emissions in Metric Tons of CO _{2e}	
Source	Quantity	Source	Quantity
Vehicles and Equipment	365.7	Vehicles and Equipment	26.06
Vegetation and Soil	2,918.97	Loss of Sequestration	16.55 ¹
Total	3,284.67	Total	42.61

¹ For the purpose of these GHG calculations the annual sequestration factor associated with oak woodlands is applied to the Interior Live Oak Chaparral vegetation type and Leather Oak Chaparral vegetation type. For the purpose of these GHG calculations, the annual sequestration factor associated with Oak woodland is applied to California Bay Forest lands.

Source: Napa County Conservation Division, November 2018

There is no adopted CEQA significance threshold at the state, regional, or local level for construction-related GHG emissions, and the County has therefore evaluated the significance of one-time project-generated emissions of up to approximately 3,284.67 MT CO_{2e} by considering the size of the proposed vineyard in relation to projected vineyard development in the County. The program level EIR for the

¹⁶ 32.69 acres of developed/landscape, grasslands, broom patch, shrubland/chaparral, and agriculture times 0.057 MY C = 1.86 MY C, and 0.95 acres of Interior Live Oak Chaparral, 0.61 acres of Leather Oak Chaparral, and 4.68 acres of California Bay Forest times 0.425 MT C = 2.65 MT C, totaling 4.51 MT C

2008 Napa County General Plan Update (SCH#2005102088 certified June 3, 2008) projected 12,500 acres of new vineyard development in the County between 2005 and 2030. The County concluded in the General Plan EIR that emissions from all sources over the planning period would result in significant and unavoidable GHG emissions despite measures adopted to address the impact. Because this determination was based on emissions from all sources, not just agriculture, the General Plan did not determine that emissions solely from projected agricultural development would result in significant unavoidable impacts. Pursuant to Section 15183(a) of the California Code of Regulation (CCR), projects that are consistent with the general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific effects which are peculiar to the project or its site.

In the context of 12,500 acres of projected vineyard development, the proposed project would constitute less than approximately 0.31% of the vineyard development anticipated in the General Plan EIR. The proposed project also contains measures to reduce and/or offset emissions from vineyard development and vineyard operations such as maintaining a permanent no-till cover crop density of a minimum 75%, vegetated vineyard avenues, and the maintenance and establishment of grape vines. These measures in conjunction with the Air Quality conditions of approval (detailed in **Section III [Air Quality]**) would further reduce potential GHG air quality impacts associated with construction and ongoing operation of the project.

For these reasons, the County does not consider one-time GHG emissions from the proposed vineyard development to be a significant impact on a project level basis or to be a “considerable” contribution to significant unavoidable cumulative impacts identified in the General Plan EIR. Furthermore, with the implementation of **Mitigating Measure BR-1** the project would be reduced by approximately 13 acres, predominately consisting of shrubland/chaparral vegetation type, which would reduce one time emissions by approximately 1,498.96 MT CO_{2e} and operational emissions by 15.60 MT CO_{2e} per year thereby further reducing anticipated air quality impacts associated with vineyard development and ongoing vineyard operations

As described above, total annual GHG emissions from ongoing operations are anticipated to be approximately 42.61 MT CO_{2e} per year, which is well below the threshold of 1,100 MT CO_{2e} per year that BAAQMD has defined as significant for CEQA purposes when considering land development projects. Therefore, ongoing project emissions, including loss of sequestration, due to the proposed project are considered less than significant.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- h) Expose people or structures to a significant risk of loss, injury or death involving wild-land fires, including where wild-lands are adjacent to urbanized areas or where residences are intermixed with wild-lands?

Discussion

a-b. Installation of the proposed ECP and subsequent vineyard operation and maintenance would require a variety of equipment and vehicles that use fuel and other petroleum based products such as oil and transmission fluids, which are considered hazardous materials. Ongoing vineyard operations would also involve the transport and use of pesticides, herbicides, mildewcides, and fertilizers to the site that are considered hazardous materials. Herbicide applicators must be licensed by the state, and the Napa County Agricultural Commissioner enforces application of pesticides and regulates applicators.

A detailed listing of fertilizers and pesticides, application methods, application amounts, number of annual applications, and annual amounts of chemicals that are anticipated to be utilized for ongoing vineyard maintenance and operation of the existing and proposed vineyard is provided within Supplemental Project Information forms on file at the Planning Department.

The National Resource Conservation Service (NRCS) recommends a minimum 50-foot wide vegetated buffer from aquatic resources (such as streams, ephemeral drainages, and wetlands) because under most conditions it is generally an adequate buffer width to provide enough vegetation to effectively entrap and filter chemicals, nutrients, and sediment thereby, facilitating degradation within buffer soils and vegetation (USDA 2000).

Chemicals would be mixed at four mixing stations near existing vineyard and proposed Blocks 2C and 5 and would be stored at the existing barn near proposed Block 2C (locations shown in Figure 5 in the EPCA Narrative). The mixing station closest to a water source (i.e. ephemeral drainages) is over 300 feet away, the mixing station nearest the onsite pond is approximately 900 feet away. The soil and vegetation contained in the space between the mixing areas and the ephemeral drainage and pond would trap pollutants, which are then naturally filtered and reduced through the soil. The mixing station that is closest to an onsite well (Well #1 as shown in the project Water Availability Analysis: Summit Engineering, Inc., June 2018 - **Exhibit D**) is approximately 200 feet away. The use of fertilizers would be applied as necessary to the vineyard and to ensure the specified percent vegetative cover crop is achieved. No pre-emergent herbicides would be used for weed management. Project storage and staging areas would be located within proposed vineyard blocks (i.e. within clearing limits).

There are two ephemeral drainages in the project parcels, one located in the northwest portion of the parcels in between Vineyard Block 1 and Vineyard Block 2, the other is located along the southern property boundary adjacent to the southeast corner of Vineyard Block 2C: see Figure 2 of the Biological Resources Report (WRA July 2018 – **Exhibit B-1**). The project as designed would provide a minimum 26 foot wide buffer between these drainages and project boundaries. With the implementation of **Mitigation Measure BR-1** buffers from these ephemeral drainages would increase to a minimum of 50 feet. While the pond and associated blue-line stream located in the northeast corner of the project parcels are likely jurisdictional under Section 404 and 401 of the CWA and Section 1600 of the CFGC, they are located outside of the project area and provided with minimum 50-foot buffers from the project area, and therefore are not expected to be significantly impacted. Additionally, implementation of **Mitigation Measure BR-1** would increase buffers between these features and project areas.

The risk of potentially hazardous materials reaching or affecting adjacent water courses or other aquatic resources is significantly reduced because: i) the proposed project as designed and with implementation of **Mitigating Measure BR-1** would provide and maintain buffers a minimum of 50 feet from aquatic resources; ii) project staging and storage areas would be over 50 feet from aquatic resources; and iii) only federal and/or California approved chemicals would be applied to the vineyard in strict compliance with applicable state and federal laws. Project approval, if granted, would also be subject to the following standard conditions that would further avoid and/or reduce potential impacts associated with routine transport and use of hazardous materials during project implementation and ongoing vineyard operations and maintenance.

Hazardous Materials – Conditions of Approval:

The owner/operator shall implement the following BMPs during construction activities and vineyard maintenance and operations:

- Workers shall follow manufacturer's recommendations on use, storage and disposal of chemical products.
- Workers shall avoid overtopping fuel gas tanks and use automatic shutoff nozzles where available.
- During routine maintenance of equipment, properly contain and remove grease and oils.
- Discarded containers of fuel and other chemicals shall be properly disposed of.
- Spill containment features shall be installed at the project site wherever chemicals are stored overnight.
- All refueling, maintenance of vehicles and other equipment, handling of hazardous materials, and staging areas shall occur at least 100 feet from watercourses, existing groundwater well(s), and any other water resource to avoid the potential for risk of surface and groundwater contamination.

- To prevent the accidental discharge of fuel or other fluids associated with vehicles and other equipment, all workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

For these reasons, and with incorporation of **Mitigating Measure BR-1** and the conditions of approval described above, impacts associated with the use and transport of hazardous materials is considered to be less than significant.

- c. The closest school (Yountville Elementary School) is located approximately four miles to the south of the project site in Yountville. There are no schools proposed within one-quarter mile of the project site. Therefore, there would be no impact to existing or proposed schools.
- d. The project site is not on any of the lists of hazardous waste sites enumerated under Government Code Section 65962.5 (Napa County GIS hazardous facility layer). Therefore, there would be no impact.
- e-f. The closest public airport to the project site is Angwin-Parrett Field, located approximately 8.75 miles northwest. No portion of the proposed project is within an airport compatibility zone identified in the Airport Compatibility Plan (Napa County Airport Land Use Compatibility Plan, and Napa County GIS Airport layer). Therefore, there would be no impact.
- g. There would be negligible numbers of workers visiting the project parcels on a temporary basis for ECP and vineyard installation and on a seasonal basis for subsequent vineyard operations, resulting in no permanent substantial increase in the number of people working or residing at the project site. Therefore, the proposed project would not impair implementation of or physically interfere with any adopted emergency response plan or emergency evacuation plan, and no impact is anticipated.
- h. No structures are proposed as part of the project. The project site is located in an area identified as having high fire severity (Napa County, 2009). The risk of fire in vineyards is very low due to limited amount of fuel, combustibles, and ignition sources that are present. Vineyards are irrigated and cover crops are typically mowed in May and August, thereby reducing the fuel loads within the vineyard. The removal of vegetation and the management of vineyard results in an overall reduction of fuel loads within the project area as compared with existing conditions. Therefore, the proposed project would not increase the exposure of people or structures to wildland fires, resulting in no impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| j) Inundation by seiche, tsunami, or mudflow? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

On January 14, 2014, Governor Jerry Brown declared a drought emergency in the state of California. That declaration was followed up on April 1, 2015, when the Governor directed the State Water Resources Control Board to implement mandatory water reductions in cities and towns across California to reduce water usage by 25 percent. These water restrictions do not apply to agricultural users. However, on April 7, 2017, Governor Jerry Brown signed an executive order lifting California’s drought emergency in all but four counties (Fresno, Kings, Tulare and Tuolumne). The County of Napa has not adopted or implemented any additional mandatory water use restrictions. The County requires all discretionary permit applications (such as use permits and ECPAs) to complete necessary water analyses in order to document that sufficient water supplies are available for the proposed project and to implement water saving measures to prepare for periods of limited water supply and to conserve limited groundwater resources.

The project site is located within the Lake Hennessey and Vinehill Creek watersheds, which are located within the Napa River watershed. Napa River is designated critical habitat for steelhead (Napa County GIS USFWS critical habitat layer). The Napa River is currently listed as an impaired waterbody for nutrients, pathogens, and sediment under Section 303(d) of the CWA. Historically, the construction of large dams and other impoundment structures between 1924 and 1959 on major tributaries in the eastern Napa River watershed and northern headwater areas of the Napa River has affected sediment transport processes into the mainstem of the Napa River by reducing the delivery of coarse load sediments to the river (Stillwater Science and W. Dietrich, 2002). However, the finer sediments that are not trapped by dams negatively affect salmonid habitat by reducing gravel permeability potentially affecting special-status fish species (Stillwater Science and W. Dietrich, 2002).

In response, the San Francisco Bay Regional Water Quality Control Board (RWQCB – or Water Board) has implemented the following programs. In 2009 the Water Board adopted total maximum daily load (TMDL) for the Napa River (Order #R2-2009-0064), which calls for reductions in the amount of fine sediment deposits into the watershed to improve water quality and maintain beneficial uses of the river, including spawning and rearing habitat for salmonid species. Several watershed stewardship groups have developed management plans and are planning or have implemented large-scale projects to enhance water quality and stream-riparian habitat with the watershed (San Francisco Bay RWQCB, 2009).

Because vineyard properties may pose threats to water quality by discharging sediment, nutrients, and pesticides and/or by increasing storm runoff, which consequently can cause erosion and sedimentation potentially impacting aquatic life, in July 2018 the Water Board adopted a water quality control permit (or General Permit) for vineyard properties in the Napa River and Sonoma Creek watersheds (Order #R2-2017-0033). The General Permit regulates parcels (including contiguous parcels under common ownership) developed with five or more acres of vineyard located in either of these watersheds. The Napa River and Sonoma Creek TMDLs adopted by the Water Board have established performance standards for sediment discharge and storm runoff to protect and restore water quality. The General Permit would require actions to control pollutant discharges including sediment and storm runoff from vineyards and unpaved roads, which are located throughout vineyard properties, and pesticides and nutrients from vineyards. The General Permit would require vineyard owners or operators of parcels that meet the enrollment criteria to do the following: develop and certify a “farm plan¹⁷”; implement the farm plan to achieve discharge performance standards; submit an annual report regarding plan implementation and attainment of performance standards; and participate in group or individual water quality monitoring programs.

In the General Permit the Water Board identified four significant sediment sources that are associated with vineyard properties: i) vineyard soil erosion; ii) offsite erosion caused by vineyard storm runoff increases; iii) road-related sediment delivery; and iv) channel incision. Napa County ECPA requirements and standards primarily address and control two of these sources, vineyard soil erosion and vineyard storm runoff. The General Permit will fill gaps in local regulation so that all four sediment sources are effectively controlled to reduce fine sediment deposition in stream channels that provide habitat for endangered steelhead populations, locally-rare Chinook salmon populations, and exceptionally diverse assemblages of native fish species in these watersheds. Additional details on the Vineyard Properties General Permit can be obtained from the RWQCB¹⁸.

One of the three ephemeral streams on the subject parcels is a blue-line stream. It runs along the eastern parcel boundary, but is located outside the project area. The stream originates outside of the project parcels and area and terminates into a pond located in the northeast corner of the project parcels. Although the pond is likely jurisdictional under Section 404 and 401 of the CWA and Section 1600 of the CFGC, it is located outside of the project area and minimum 50-foot buffers are provided and is not expected to be impacted.

¹⁷ A farm plan documents a vineyard property’s natural features, developed areas, and BMPs. Under the General Permit, a “certified” farm plan would mean that upon its full implementation of the plan, that the vineyard property is expected to achieve the performance standards for discharge. The Water Board’s Executive Officer would approve third-party programs or certify a farm plan.

¹⁸ https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/agriculture/vineyard/

- a. Waste discharge is not anticipated as part of the project or ongoing vineyard operations; therefore, there is no impact anticipated associated waste discharge requirements.

Furthermore, the proposed project has been designed with site-specific temporary and permanent erosion control measures and features to prevent sediment, runoff, and pollutants from leaving the project area. Agricultural Erosion Control Plan # P18-00275-ECPA includes BMPs that are consistent with NCC Section 18.108.080(c), as well as with RWQCB guidance from the Stormwater Best Management Practice Handbooks for Construction and for New Development and Redevelopment, and the Erosion and Sediment Control Field Manual. Therefore, the proposed project is not anticipated to violate any water quality standards, resulting in no impact.

- b. The County requires all ECPA applicants to complete necessary water analyses in order to document that sufficient water supplies are available for a proposed project. On June 28, 2011, the Board of Supervisors approved creation of a Groundwater Resources Advisory Committee (GRAC). The GRAC's purpose was to assist County staff and technical consultants with recommendations regarding groundwater, including data collection, monitoring, and well pump test protocols, management objectives, and community support. The County completed a countywide assessment of groundwater resources (Napa County Groundwater Conditions and Groundwater Monitoring Recommendations Report, 2011) and developed a groundwater monitoring program (Napa County Groundwater Monitoring Plan, 2013). The County also completed a 2013 Updated Hydrogeologic Conceptualization and Characterization of Groundwater Conditions (2013).

In general, recent studies have found that groundwater levels in the Napa Valley Floor exhibit stable long-term trends with a shallow depth to water. Historical trends in the Milliken-Sarco-Tuluca (MST) area, however, have shown increasing depths to groundwater, but recent stabilization in many locations. Groundwater availability, recharge, storage and yield are not consistent across the County. More is known about the resource where historical data have been collected. Less is known in areas with limited data or unknown geology. In order to fill existing data gaps and to provide a better understanding of groundwater resources in the County, the Napa County Groundwater Monitoring Plan recommended 18 Areas of Interest (AOIs) for additional groundwater level and water quality monitoring. Through GRAC's well owner and public outreach efforts, approximately 40 new wells have been added to the monitoring program within these areas. Groundwater Sustainability Objectives were developed and recommended by GRAC and adopted by the Board. The recommendations included the goal of developing sustainability objectives, provided a definition of sustainability, and explained the shared responsibility for Groundwater Sustainability and the important role of monitoring as a means to achieving groundwater sustainability.

In 2009, Napa County began a comprehensive study of its groundwater resources to meet identified action items in the County's 2008 General Plan update. The study, by Luhdorff and Scalmanini Consulting Engineers (LSCE), emphasized developing a sound understanding of groundwater conditions and implementing an expanded groundwater monitoring and data management program as a foundation for integrated water resources planning and dissemination of water resources information. The 2011 baseline study by LSCE, which included over 600 wells and data going back over 50 years, concluded that "the groundwater levels in Napa County are stable, except for portions of the MST district". Most wells elsewhere within the Napa Valley floor with a sufficient record indicate that groundwater levels are more affected by climatic conditions, are within historical levels, and seem to recover from dry periods during subsequent wet or normal periods

A Water Availability Analysis (WAA) was prepared in order to determine if the proposed increase in water demand as a result of the proposed project would result in a significant impact to groundwater supplies (Summit Engineering, Inc., June 2018 - **Exhibit D**). The WAA estimates the onsite groundwater recharge, overall availability, and use, both existing and proposed, in order to assess potential impact on groundwater. A WAA that includes a Tier II analysis (i.e. Well and Spring Interference Criterion) is not necessary for this project because there are no known non-project wells located within 500 feet of the project wells (Summit Engineering, Inc., June and November 2018 - **Exhibit D**). However, a Tire II analysis was performed for all wells onsite that are within 500 feet of the project parcels property lines, to cover any possibility of an existing neighboring well or future well within a 500 foot range from project wells. The objective of the Tier II analysis is to determine if any well (existing or in the future) within 500 feet of the project's wells could be affected by the drawdown of the project's wells.

Using very conservative estimates for aquifer thickness, specific storage, and hydraulic conductivity, based on values from the WAA guidelines adopted by Napa County, none of the wells should produce a drawdown greater than 10 feet on any existing or future wells that could be adjacent to the property. Based on the findings in the WAA, since the wells' estimated drawdown was less than 10 feet, no significant drawdown impact is expected for wells in adjacent parcels. It should be noted that there are no known offsite wells located within close proximity to the property boundaries. (Summit Engineering, Inc., June 2018 - **Exhibit D**).

The project proposes to irrigate the vineyard from the three existing vineyard groundwater wells located on the property (Wells #1, #5, and #12) as identified in the Project's Water Availability Analysis (Summit Engineering, Inc., June 2018 **Exhibit D**). One of the project wells (Well #12) is located on the abutting parcel to the southeast: APN 032-030-068 Lands of Nelson and Johnson. Another well (Well #11) that serves the project parcels is also located on this parcel (i.e. Land of Nelson and Johnson); however, it provides water to the winery and domestic/residence uses located on the project parcels and is not utilized as a water source for the proposed project. The applicant/permittee has an easement for these wells (i.e. Well#11 and Well #12) that includes the right to obtain and use water from these wells.

Typically, the annual irrigation season ranges from late May to September. Water use for frost protection is not proposed. Water from the agricultural wells is also used to irrigate landscaping and existing orchards on the winery parcels, which utilize approximately 2.09 acre-feet per year (AF/year). The total acreage of landscaping (approximately 3.3 acres) would not change with the implementation of the proposed project, but the existing approximately 3.5 acres of orchard would be replaced with vineyard. Winery process water and domestic water use would continue to be provided by the existing domestic well (Well #11) located on the Land of Nelson and Johnson (APN 032-030-068). The existing onsite winery buildings currently utilize approximately 0.50 AF/year for wine production. No changes to water use associated with the winery are expected. Domestic water demand includes the total number of employees, visitors and event guests and was estimated to be approximately 0.30 AF/year. No changes are proposed to the employee, visitation, or marketing plan as part of the proposed project. The approximately 15.4 acres of existing vineyard are irrigated with approximately 7.70 AF/year.

After full development, the proposed project would result in approximately 13.75 AF/year of additional groundwater use due to the installation of new vineyard, which includes the removal of existing orchard and conversion to vineyard. Therefore, existing and proposed uses supplied by Wells #1, #5, and #12 are anticipated to total approximately 24.34 AF/year of groundwater in the long term (**Table 10**). As proposed the project would be developed in two phases: Phase I consisting of approximately 23.5 planted acres and Phase II consisting of approximately 8 planted acres.

Table 10 – Pre- and Post-Project Property Water Use

Property Water Use	Pre-project (acre-feet/year)	Post-project (acre-feet/year)
Wine production, vineyard irrigation, landscape and orchard ¹ irrigation	10.59	24.34

¹ The orchard would be removed with the proposed project..

Source: Summit Engineering, Inc., Water Availability Analysis Ovid Winery, June 21, 2018 - **Exhibit D**

Groundwater Recharge: Long-term average groundwater recharge can be estimated as the percentage of rainfall that falls on the parcel that percolates into the underlying aquifer. The percentage of rain that has the potential to infiltrate varies depending on factors such as rates of evaporation and transpiration, soil type and geology that exists at the site, and average annual rainfall. Based on available climatological data, site-specific information, and other available data and analysis relevant to potential recharge, the Tier I WAA estimates the average annual groundwater recharge of the project parcels to be approximately 34.01 AF/year. The WAA utilizes an average annual rainfall of 33.79 inches per year over the approximately 71.04 acres of the project parcels land area available for recharge and a 17% groundwater recharge estimate (see **Exhibit D** for specific details and calculations). The average annual rainfall utilized in the recharge analysis includes times of below-average and above-average rainfall, and therefore inherently includes drought year conditions.

As proposed the project would be developed in two phases: Phase I consisting of approximately 23.5 planted acres and Phase II consisting of approximately 8 planted acres. Total annual water demand for existing and proposed uses for Phase I is anticipated to be approximately 32.09 AF/year while the young vines are being established, and reducing to 28.34 AF/year once vines are established, which is less than the estimated annual recharge of approximately 34 AF/year. This estimate represents a decrease of 2.25 AF/year from the current water usage. Total annual water demand during Phase II (including existing uses and vineyard developed in Phase I) in the short term is anticipated to be approximately 28.34 AF/year, reducing to 24.34 AF/year after the Phase II vines are established.

Furthermore, implementation of **Mitigation Measure BR-1** would reduce the project by approximately 13 acres resulting in a gross development of approximate 26 acres with a net planted acreage of approximately 22 acres¹⁹. The net acreage as a result of mitigation is consistent with the proposed Phase I net planted acreage, thereby reducing anticipated long term overall water use by approximately 4 AF/year from 24.34 AF/year to approximately 19.34AF/year.

Considering: i) anticipated annual water use of the project parcels for existing and proposed use of approximately 23.4 AF/year is below the parcel’s anticipated annual groundwater recharge rate of approximately 34.01 AF/year; ii) implementation of **Mitigating Measure BR-1** would reduce anticipated long term overall water use by approximately 4 AF/year from 24.34 AF/year to approximately 19.34AF/year; iii) there is no evidence to date indicating that there are groundwater problems or declining well production in the this area of the County; and iv) implementation of the standard water use condition below (if approved), the proposed project is anticipated to result in less than significant impacts to groundwater supplies, groundwater recharge, local groundwater aquifer levels, and well interference or drawdown effects on nearby wells.

Groundwater Management, Wells – Conditions of Approval:

This condition is implemented jointly by the Public Works and PBES Departments:

The owner/permittee shall be required (at the permittee’s expense) to record well monitoring data (specifically, static water level no less than quarterly, and the volume of water no less than monthly). Such data shall be provided to the County, if the PBES Director determines that substantial evidence indicates that water usage at the winery is affecting, or would

¹⁹ Calculation based on approximately 18% of the gross development area being attributed to vineyard avenues and tractor turnaround areas.

potentially affect, groundwater supplies or nearby wells. If data indicates the need for additional monitoring, and if the owner/permittee is unable to secure monitoring access to neighboring wells, onsite monitoring wells may need to be established to gauge potential impacts on the groundwater resource utilized for the project. Water usage shall be minimized by use of best available control technology and best water management conservation practices.

In order to support the County's groundwater monitoring program, well monitoring data as discussed above shall be provided to the County if the Director of Public Works determines that such data could be useful in supporting the County's groundwater monitoring program. The project wells shall be made available for inclusion in the groundwater monitoring network if the Director of Public Works determines that the wells could be useful in supporting the program.

In the event that changed circumstances or significant new information provide substantial evidence that the groundwater system referenced in the ECPA would significantly affect the groundwater basin, the PBES Director shall be authorized to recommend additional reasonable conditions on the owner/permittee, or revocation of this permit, as necessary to meet the requirements of the Napa County Code and to protect public health, safety, and welfare.

c-d. Earthmoving activities have the potential to alter the natural pattern of surface runoff, which could lead to areas of concentrated runoff and/or increased erosion. The conversion of existing vegetation to vineyard would alter the composition of the existing land cover and infiltration rates, which could affect erosion and runoff. The project does not propose any alteration to a stream, river, or drainage course, or include the creation of impervious surfaces that would concentrate runoff.

Erosion control measures and plan features that are not anticipated to affect drainage patterns but would assist in minimizing the potential for increased erosion and water runoff include a no-till cover crop with vegetative cover density of 75% and the annual application of straw mulch cover on all disturbed areas at a rate of 3,000 pounds per acre. Vineyard avenues and turn spaces would be maintained with the minimum vegetative cover density of 75%. These features would slow and filter surface runoff water, thereby minimizing sediment, nutrients, and chemicals from leaving the project site and entering nearby aquatic resources. Refer to **Exhibits A, C and D** for details related to the following discussion.

Proposed erosion control and project features that have the potential to alter natural drainage patterns include rocked-filled avenues/level spreaders, and straw wattles. Straw wattles would be placed on contour at various locations around the perimeter of the vineyard blocks and within vineyard avenues to slow and maintain surface/sheet flow. Straw wattles are spaced according to the USLE to maintain soil losses below the tolerable levels for the soil types found on the site and to ensure (in conjunction with the cover crop and other runoff control features) that no net increase in erosion sediment conditions occurs beyond pre-development conditions as a result of the project. The design and location of straw wattles would have a negligible effect on existing drainage patterns in that they would not alter the existing topographic contours of the site.

Proposed rock-filled avenues/level spreaders would be constructed along the periphery of certain vineyard blocks (or portions thereof) from excess fieldstone as show in **Exhibit A**. The rock-filled avenues would typically be on the downslope side of a vineyard block and would function as a stabilization and dispersal method to slow down runoff and encourage infiltration back onto the native ground surface. A Hydrologic Analysis for the project was prepared by the Project Engineer (PPI Engineering, July 11, 2018: Metamorphosis Wines LLC Ovid Vineyards Track I ECP Hydrologic Analysis - **Exhibit C**). The project site is contained within four watershed basins. Two of these basins are hydrologically connected to Conn Creek via an unnamed stream. One basin drains to an existing sediment basin located on the adjacent parcel. The other basin flows to an unnamed stream that eventually flows to Lake Hennessey. The Hydrologic Analysis utilized the Natural Resource Conservation Service (NRCS) Technical Release 20 (TR-20) method to conclude that there would be no change or a decrease in peak flow for all watersheds in the project site (**Table 11**). The Hydrologic Analysis also concluded that the runoff time of concentration, which is the time it takes for runoff to flow from the upper most point in each watershed to the watershed's outlet, is anticipated to increase for Watershed 3 in comparison to existing conditions due to increased cover and drainage improvements proposed with the project, thereby resulting in a decrease in runoff. Runoff times of concentration are not anticipated to change for Watersheds 1, 2 and 4.

Table 11 – Hydrologic Modeling Calculations (TR-20) Results: Runoff Rates

	Peak Discharge Flow (cfs) by 24-hour Storm Event Frequency Return Interval (cubic feet/second)			
	2-year	10-year	50-year	100-year
Watershed 1				
Pre-project conditions	27.25	51.37	77.08	88.01
Post-project conditions	27.25	51.37	77.08	88.01
Change (cfs)	0.0	0.00	0.0	0.0
Change (%)	0%	0%	0%	0.00%
Watershed 2				
Pre-project conditions	25.24	51.23	79.85	92.18
Post-project conditions	25.24	51.23	79.85	92.18
Change (cfs)	0.0	0.0	0.0	0.0
Change (%)	0%	0%	0%	0%

	Peak Discharge Flow (cfs) by 24-hour Storm Event Frequency Return Interval (cubic feet/second)			
	2-year	10-year	50-year	100-year
Watershed 3				
Pre-project conditions	37.37	77.78	122.33	141.69
Post-project conditions	35.18	73.67	116.54	135.10
Change (cfs)	-2.19	-4.11	-5.79	-6.59
Change (%)	-5.86%	-5.28%	-4.73%	-4.65%
Watershed 4				
Pre-project conditions	26.34	52.31	80.75	92.97
Post-project conditions	26.34	52.31	80.75	92.97
Change (cfs)	0.0	0.0	0.0	0.0
Change (%)	0%	0%	0%	0%

Source: PPI Engineering, July 11, 2018: Metamorphosis Wines LLC Ovid Vineyards Track I ECP Hydrologic Analysis

Not increasing runoff flow rates is consistent with General Plan Conservation Element Policy CON-50c, which states peak runoff following development cannot be greater than predevelopment conditions. Additionally, as discussed in **Section VI (Geology and Soils)**, the proposed project is anticipated to decrease soil loss as compared to existing conditions. Therefore, the proposed project would have a less than significant impact with respect to alterations of existing drainage patterns of the site or area that would result in increased runoff, or considerable on or offsite erosion, siltation, or flooding. Additionally, implementation of **Mitigation Measure BR-1**, which would reduce the project by approximately 13 acres, is anticipated to result in similar hydrologic effects/rates.

Furthermore, pursuant to NCC Section 18.108.135 (Oversight and Operation) projects requiring an erosion control plan will be inspected by the County after the first major storm event of each winter until the project has been completed and stable for three years to ensure that the implemented erosion control plan is functioning properly. Additionally, because the project site is located within a Sensitive Domestic Water Supply Drainage (Lake Hennessey), financial securities equaling 125% of the estimated cost of installation of specified erosion and runoff control measures are required to be posted pursuant to NCC Section 18.108.140(A)(2). These securities are required to ensure all specified measures in the ECPA are implemented to protect domestic water supplies²⁰.

- e. The project site is not located in an area of a planned stormwater drainage system, nor is it not directly served by a stormwater drainage system. As discussed above in subsections (c) and (d), no increase in runoff volume or decrease in time of concentration is anticipated under post-project conditions. Furthermore, as discussed in **Section VI (Geology and Soils)**, a reduction in soil loss and sedimentation is anticipated under post-project conditions. Therefore, the proposed project would not contribute a substantial amount of additional runoff to an existing stormwater drainage system or provide substantial additional sources of polluted or sediment laden runoff, resulting in a less than significant impact (also see discussion in subsection (f) below).
- f. The proposed project would not have an adverse impact on water quality because the ECPA has been designed to keep polluted runoff and sediment from leaving the project area and project site. As discussed in **Section VIII (Hazards and Hazardous Materials)**, the project proposes the use of potentially hazardous materials during implementation activities (i.e., oil, gasoline, and transmission fluids associated with construction equipment) and the application of chemicals (i.e., fertilizers) for ongoing vineyard maintenance. Only federal and/or California approved chemicals would be applied to the vineyard in strict compliance with applicable state and federal law. As discussed in **Sections IV (Biological Resources)** and **VIII (Hazards and Hazardous Materials)**, buffers provided in the ECPA adjacent to drainage courses and watercourses would facilitate increased water infiltration so that chemicals and potentially hazardous materials associated with project implementation and operation can be trapped and degraded in buffer vegetation and soils to protect water quality. The limited application of agricultural chemicals generally occurring during the non-rainy season would also minimize the amounts of chemicals that could effect on or offsite water resources. Because the project as designed is not expected to increase runoff rates or times of concentration in relation to existing conditions (as discussed in subsections (c) and (d) above), the proposed cover crop and buffers would be able to effectively trap and filter sediments, thereby minimizing their entry into nearby water resources.

As discussed above and in **Section VI (Geology and Soils)**, the proposed project has been designed with site-specific temporary and permanent erosion and runoff control measures and features to prevent sediment, runoff, and pollutants from leaving the project area. As such, the proposed project is anticipated to reduce soil loss and sedimentation by approximately 20.96%, have a decrease or no effect on runoff rates, and maintain project site drainage characteristics as compared to existing conditions. The ECPA includes BMPs that are consistent with NCC Section 18.108.080(c), as well as with RWQCB guidance from the Storm Water Best Management Practice Handbooks for Construction and for New Development and Redevelopment, and the Erosion and Sediment Control Field Manual. Additionally, with the implementation of **Mitigation Measure BR-1** buffers from on-site aquatic resources (ephemeral drainages and wetlands) would increase to a minimum of 50 feet.

²⁰ Compliance with Sections 18.108.135 and 18.108.140 is achieved by including their provisions as conditions of approval for a project, if granted.

Furthermore, project approval, if granted, would be subject to the following condition of approval, which would further reduce and avoid potential impacts to water quality as a result of the project and ongoing operations.

Water quality – Condition of Approval

The owner/permittee shall refrain from disposing of debris, storage of materials, or constructing/operating the vineyard, including vineyard avenues, outside the boundaries of the approved plan, or within required setbacks Pursuant to Napa County Code Section 18.108.025 (General Provisions – Intermittent/perennial streams). Furthermore, consistent with the standard conditions identified in the Hazards and Hazardous Materials Section (Section VIII), all operational activities that include the use or handling of hazardous materials, such as but not limited to agricultural chemical storage and washing, portable restrooms, vehicular and equipment refueling/maintenance and storage areas, soil amendment storage and the like, shall occur at least 100 feet from groundwater wells, water courses, streams and any other water resource to avoid the potential risk of surface and groundwater contamination, whether or not such activities have occurred within these areas prior to this ECPA approval.

Therefore, the proposed project as designed, in conjunction with identified conditions of approval, would not adversely affect the water quality of the site or downstream receptors, resulting in less than significant impacts to water quality.

- g-j. The project site is not located within a Federal Emergency Management Agency (FEMA) 100-year flood zone, in a dam or levee failure inundation area, or in an area subject to seiche or tsunami (Napa County GIS FEMA flood zone and dam levee inundation areas layers; Napa County General Plan - Safety Element. pg. 10-20). Therefore, there would be no impacts to people or structures due to flooding within flood hazard areas, dam or levee failure inundation, or seiche or tsunami. The hillsides on which the vineyard would be developed would not expose people or improvements to mudflows, resulting in no impacts.

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

Discussion

- a. The proposed vineyard and subsequent vineyard operations would not physically divide an established community. The proposed project would have no impact on the nearest established community, the City of Yountville, approximately four miles south of the project site.
- b. Surrounding land uses consist predominantly of vineyards, undeveloped land and rural residential. Surrounding parcels are zoned Agricultural Watershed (AW) and designated Agriculture, Watershed and Open Space (AWOS) in the Napa County General Plan Land Use Element. Vineyards and associated improvements are permitted uses under these designations.

The proposed project has been analyzed for consistency with applicable sections of the NCC and with the Napa County General Plan. With inclusion of the mitigation measures and conditions of approval, the project has been found consistent with applicable code requirements and General Plan Goals and Policies, including but not limited to the following:

- The project as proposed is consistent with NCC Section 18.108.010, which requires that soil loss and runoff as a result of a project be minimized to protect water quality. As discussed in **Sections VI (Geology and Soils) and IX (Hydrology and Water Quality)**, the project is anticipated to decrease soil loss and potential sedimentation by approximately 21% and maintain runoff conditions as compared to existing conditions.
- The project is consistent with Policies CON 48 and CON 50c, which require pre-development sediment erosion conditions and runoff characteristics following development not be greater than predevelopment conditions. As discussed in **Section VI (Geology and Soils) and Section IX (Hydrology and Water Quality)** the project as proposed would reduce soil loss, sedimentation, and maintain runoff characteristics as compared to existing conditions.
- The project with implementation of **Mitigation Measures BR-1 through BR-3** is consistent with **Policies CON-13 and CON-16**, which require discretionary projects consider and avoid impacts to fisheries, wildlife habitat, and special-status species through evaluation of

biological resources. A Biological Reconnaissance Survey was prepared for the project. The project as proposed with implementation of **Mitigation Measure BR-1** would avoid potential direct, indirect, and cumulative impacts to special-status plant species and associated habitat occurring on the parcel. With implementation of **Mitigation Measure BR-2** and **BR-3** potential impacts to special-status bird and bat species would be avoided. Furthermore, implementation of these measures would not affect the feasibility of the project in that, impacts to special-status species and their habitat can be avoided while allowing for up to 26 acres of additional agriculture to be developed and operated on the project parcels.

- With implementation of **Mitigation Measures BR-1, BR-2, BR-3** and the tree/woodland and fencing conditions of approval, the project is consistent with Goals CON-2 and CON-3, which require the continued enhancement of existing levels of biodiversity and protection of special-status species and habitat, and the County Conservation Regulations through preservation of natural habitats and existing vegetation. With these measures and conditions, the project would maintain levels of biodiversity and would avoid impacts to special-status plant and animal species.
- With implementation of **Mitigation Measures BR-1, BR-2, BR-3** and the tree/woodland and fencing conditions of approval, the project is consistent with Policy CON-13, which requires discretionary projects to consider and avoid impacts to fisheries, wildlife habitat, and special-status species, and Policy CON-17, which requires the preservation and protection of native grasslands, sensitive biotic communities, and habitats of limited distribution and no net loss of sensitive biotic communities.
- As proposed, the project is consistent with CON-16, which requires discretionary projects prepare an evaluation of biological resources. A Biological Resource Reconnaissance Survey was prepared for the project (**Exhibit B-1**).
- The project is consistent with Policy CON-30, which encourages the avoidance of wetlands: no wetlands have been identified within project site or subject parcel.
- The project as proposed is consistent with Policy CON-18, which encourages the reduction of impacts to habitat conservation and connectivity. With implementation of the fencing conditions of approval, and the project's small amount of proposed new fencing, wildlife movement would not be impaired.
- The project is consistent with Policies CON-48 and CON-50c, which require pre-development sediment erosion conditions and runoff characteristics following development to be no greater than pre-project conditions. As discussed in **Section VI (Geology and Soils)** and **Section IX (Hydrology and Water Quality)**, with implementation of the Permanent Erosion and Runoff Control Measures condition of approval, the project would reduce soil loss and sedimentation, and result in no change to runoff.
- The project as proposed is consistent with Policy CON-65b. Due to the project's scope and scale, its construction and operational GHG emissions, as disclosed in **Section VII (Greenhouse Gas Emissions)**, are anticipated to be less than significant.
- The project as proposed is consistent with Policy AG/LU-1, which states that agricultural and related activities are the primary land uses in Napa County, as the proposed project is vineyard development and would increase agriculture uses in the County.
- The project as proposed is consistent with General Plan land use designation of Agricultural, Watershed and Open Space (AWOS), and is therefore consistent with Policy AG/LU-20.

For these reasons, the project, with the mitigation measures and conditions of approval incorporated, would not be in conflict with applicable County regulations, policies, or goals and is anticipated to have a less than significant impact with respect to applicable County regulations, policies, or goals.

- c. There are no habitat conservation plans or natural community conservation plans applicable to project site or adjacent parcels. Therefore, no impact would result.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a-b. The project site is not in an area with a known mineral resource of value to the region or state or within a known mineral resource recovery area (Napa County Baseline Date Report, Figure 2-2 and Map 2-1, Version 1, November 2005; Napa County General Plan Map, December 2008; Special Report 205, Update of Mineral Land Classification, Aggregate Materials in the North San Francisco Bay Production-Consumption Region, Sonoma, Napa, Marin and Southwestern Solano Counties, California Geological Survey, 2013). The nearest known mineral resource area in Napa County is located over 12 miles to the south of the project site. Proposed site improvements

and development of vineyard on the property would not physically preclude future mining activities from occurring. Therefore, no impacts to mineral resources are anticipated.

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

Discussion

a-c. The project site is located in a rural setting where surrounding parcels are generally planted with vineyards and contain wineries or are undeveloped. The nearest offsite residences to the project site are located approximately 800 feet to the west and north and approximately 1,200 feet to the south of the project site. Additionally, many adjacent properties and properties in the immediate area contain vineyard.

Activities associated with installation of the proposed project, including earthmoving and subsequent vineyard operations, could generate noise levels above existing conditions. Several different types of equipment would be necessary for implementation and operation of the proposed project, including a bulldozer, excavator, dump truck, trencher, backhoe, and small trucks. **Table 12** characterizes typical equipment noise levels at a reference distance of 50 feet. As identified in **Table 12**, equipment used for vineyard development could produce a maximum of 89 (A-weighted decibels) dBA at a distance of 50 feet.

Table 12 – Construction Equipment Noise Emission Levels

Equipment	Typical Noise Level (dBA) 50 feet from Source	Equipment	Typical Noise Level (dBA) 50 feet from Source
Backhoe	80	Roller/Sheep's Foot	74
Bulldozer	85	Scarifier	83
Chainsaw	86	Scraper	89
Compactor	82	Shovel	82
Excavator/Shovel	82	Spike driver	77
Grader	85	Truck	88
Loader	85	Wood Chipper	89

Sources: Cowan 1994, Federal Transit Administration 1995, Nelson 1987, United States Department of Agriculture Forest Service 1980, and Napa County Baseline Date Report Chapter 6 (Noise Resources) November 2005 (Version 1)

Table 13 characterizes the typical reduction in construction equipment noise levels as the distance increases from the source, based on a source noise level of 90 dBA.

Based on distances to existing residences, noise associated with project construction would be approximately 55 to 60 dBA at the nearest existing offsite residences.

Table 13 – Estimated Distance to dBA Contours from Construction Activities ¹

Distance from Construction Source	Calculated Noise Level
50 feet	90 dBA
180 feet	75 dBA
300 feet	70 dBA
450 feet	65 dBA
700 feet	60 dBA
1,100 feet	55 dBA
1,700 feet	50 dBA

¹ Based on a source noise level of 90 dBA

Source: Napa County Baseline Date Report, Noise Section Table 6-13, Version 1, November 2005

Noise related to farming activities and equipment typically ranges from 75 dBA to 95 dBA, with an average of approximately 84 dBA (Toth 1979 and Napa County Baseline Date Report, Version 1, November 2005). These noise levels should be reasonably representative of noise levels from wheeled and tracked farm equipment. Noise sources associated with ongoing vineyard operation and maintenance include a variety of vehicles and equipment, such as ATV's, tractors, grape haul trucks, passenger cars, and light trucks, which would occur on a temporary and seasonal basis. **Table 14** characterizes the typical reduction of farming activity noise levels as the distance increases from the source using a noise source level of 84 dBA.

Table 14 – Estimated Distance to dBA Contours from Farming Activities ¹

Distance from Farming Source	Calculated Noise Level
50 feet	84 dBA
115 feet	75 dBA
175 feet	70 dBA
275 feet	65 dBA
400 feet	60 dBA
650 feet	55 dBA
1,000 feet	50 dBA

¹ Based on a source noise level of 84 dBA

Source: Napa County Baseline Date Report, Noise Section Table 6-14, Version 1, November 2005.

Based on distances to existing residences, it is anticipated that noise due to operation and maintenance agricultural activities would be between 50 and 55 dBA at the closest existing offsite residences.

Napa County considers construction noise levels up to 75 dBA during daytime hours (7 a.m. to 7 p.m.) and 60 dBA during nighttime hours (7 p.m. to 7 a.m.) as compatible with residential uses (NCC Section 8.16.080), and ongoing (or established use) noise levels of approximately 55 dBA as compatible with residential uses (NCC Section 8.16.070). As the closest offsite residence would experience construction noise levels of approximately 55 dBA, noise and vibration impacts associated with project development are anticipated to be less than significant.

Noise levels from routine operation and maintenance activities at the nearest offsite residence would be less than typical for compatible uses, and the temporary and ongoing noise sources and levels are considered typical and reasonable for agricultural development and operational activities, consistent with the County's "Right to Farm" ordinance (NCC Chapter 2.94 and General Plan Agricultural Preservation and Land Use Policy AG/LU-15), and are therefore exempt from compliance with the noise ordinance. NCC Section 8.16.090.E (Exemptions to Noise Regulations) exempts agricultural operations from noise regulations. Additionally, the proposed project would not result in a permanent increase in ambient noise levels over what currently exists in the project vicinity, resulting in a less than significant impact on ambient noise levels of the area.

- d. During site preparation and vineyard installation, the use of heavy equipment could result in a temporary increase in ambient noise levels in the vicinity of the project site as described above. Compliance with measures identified in the County's noise ordinance for construction-related noise, such as a limitation of hours of construction activity and muffling of equipment, would result in temporary less than significant noise impacts.
- e-f. The project site is neither located within an area covered by an airport land use plan, nor is it within two miles of a public, public-use, or private airport (Napa County GIS: Napa Airport Compatibility Zones and USGS Quad layers). Therefore, no impacts are anticipated.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING. 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a. The proposed project involves earthmoving activities and the installation and maintenance of erosion control measures in connection with the development and cultivation of vineyard. It does not involve the construction of new homes, businesses, roads, or infrastructure (e.g., water, sewer or utility lines) that would directly or indirectly induce substantial population growth. Construction and installation activities of the proposed project would generate a minimal number of employees to the property on a temporary basis, and ongoing vineyard operation and maintenance would generate a minimal number employees to the property on an ongoing basis. Therefore, no impacts are expected.

b-c. There would be no impact on housing because the project would not displace any existing housing or people.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES. Would the project:				
a) Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a. The proposed project does not include the construction of residential or commercial structures, as discussed in **Section XIII (Population and Housing)**, resulting in no substantial population growth in the area. Public services are currently provided to the project site and, as such, there would not be an increase in the need or use of the listed services and amenities. There would therefore be no impacts to public services.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. RECREATION. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

Discussion

a-b. The proposed project does not include any recreational facilities. As discussed in **Sections XIII (Population and Housing) and XIV (Public Services)**, the proposed project would not result in substantial population growth, resulting in no increase in the use of recreational facilities and requiring no construction or expansion of recreational facilities. Therefore, there would be no impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC. 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 and/or conflict with General Plan Policy CIR-16, which seeks to maintain an adequate Level of Service (LOS) at signalized and unsignalized intersections, or reduce the effectiveness of existing transit services or pedestrian/bicycle facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the Napa County Transportation and Planning Agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature, (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with General Plan Policy CIR-23, which requires new uses to meet their anticipated parking demand, but to avoid providing excess parking which could stimulate unnecessary vehicle trips or activity exceeding the sites capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a-b. Currently, the project parcels are developed with approximately 15 acres of vineyard and infrastructure, a winery facility, access roads, a sanitary sewage pressure distribution leach field, a winery process wastewater hold and haul storage system, and four groundwater wells. The proposed project is expected to generate approximately 12 one-way trips per day during construction and installation for anticipated work crews of 12 employees. Vehicular equipment anticipated for project implementation typically includes a tractor/trailer, D9 bulldozers, backhoe, excavator, dump truck, pickup trucks, water truck, flatbed trucks, and ATVs. Pruning would occur approximately 18 days of the year and is anticipated to generate 12 daily employees, resulting in approximately six to 12 one-way trips per day during pruning. Weed control would occur five to six days of the year (outside of pruning months) and is anticipated to generate one employee. Harvest is anticipated to generate up to 12 daily employees resulting in approximately 12 one-way trips per day for a period of 15 days of the year. No grape haul trucks would be used during harvest because grapes would be processed onsite. Vehicular equipment for ongoing vineyard maintenance is anticipated to include ATVs, tractors, truck and equipment trailers, and passenger cars and/or light trucks. Much of this traffic already exists onsite due to the operation and maintenance of the existing vineyard and winery. Construction traffic would be intermittent during non-peak hours, generally arriving between 6 a.m. and 7 a.m. and departing between 2 p.m. and 3 p.m. Traffic associated with routine vineyard operation and maintenance, including harvest, would also be intermittent during the non-peak hours, generally arriving around 6 a.m. and departing around 3 p.m.

The project site is accessed directly off Long Ranch Road, approximately 2.5 miles southeast of its eastern intersection with California State Route 128 (CA-128). The closest road for which traffic data is available is CA-128. The Average Daily Traffic (ADT) volume for the

segment of CA-128 closest to the project site is 3,750 vehicles (Caltrans, 2015). Peak hour traffic volume is approximately 550 vehicles. This segment of CA-128 operates at a Level of Service (LOS) C for daily traffic and peak hour traffic (Napa County, 2007).

Anticipated increases in traffic on CA-128 based on given project activities are shown in **Table 15**. As noted above, traffic associated with vineyard development, operation, and harvest would generally occur during off-peak hours. However, they are assumed to occur during the peak hours to provide the most conservative assessment of potential impacts.

Table 15 – Potential Increases in Traffic Volumes

Project Activity	Project Trips	Daily			Peak		
		Existing	With Project	% Increase	Existing	With Project	% Increase
Vineyard Development	12	3,750	3,762	0.32%	550	562	2.18%
Ongoing Vineyard Operation	12	3,750	3,762	0.32%	550	562	2.18%
Harvest	12	3,750	3,762	0.32%	550	562	2.18%

Sources: Caltrans, 2015; Napa County General Plan EIR, February 2007

Considering traffic generated by construction of the proposed project and subsequent vineyard operation, including harvest, would increase traffic a small percent above existing and would remain well below capacity, that these activities would occur on a temporary and/or seasonal basis, that they would generally occur during non-peak hours, and that trips already occur due to the existing vineyard, traffic impacts are considered to be less than significant in that they are not anticipated to substantially increase the traffic load or negatively affect the current LOS of CA-128. Furthermore, the owner/permittee operates other vineyard on the project site and it is anticipated that a number of existing employees would be utilized to develop and manage the vineyard, thereby potentially overstating the increase in traffic disclosed above.

- c. The proposed project would not affect existing air traffic and thus no impacts are anticipated on either air traffic patterns and/or air traffic safety.
- d. The project proposes to utilize the existing site access off Long Ranch Road for project development (**Figures 1-3**). The project does not include roadway improvements and/or modifications to Long Ranch Road, or include any other design feature that would result in hazardous conditions. The installation of the vineyard is consistent with the allowed use of the property and other agricultural uses in the area. Therefore, the potential for the creation of a substantial increase in hazards would be a less than significant impact.
- e. The existing roads would continue to provide adequate emergency access to the project site and project area, resulting in no impact.
- f. The proposed project would generate its largest demand for parking (approximately 12 vehicles) during harvest period, which would last approximately 15 days. Current County ordinances do not require formal parking for agricultural projects. Parking within the proposed vineyard avenues would satisfy parking demands of project installation and subsequent vineyard operations. Therefore, no parking impacts are anticipated.
- g. There are no adopted policies, plans, or programs supporting alternative transportation that applies to agricultural vineyard projects. Thus, the project would have no impact in this area.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. TRIBAL CULTURAL RESOURCES. 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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a) 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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

On July 17, 2018, the County notified pursuant to Public Resources Code Section 21074 (AB-52: Gatto) the Mishewal-Wappo Tribe of Alexander Valley, the Yocha Dehe Wintun Nation, and Middletown Rancheria of the proposed project. No response was received from Mishewal-Wappo Tribe of Alexander Valley. On August 27, 2018, the County sent notification to the Mishewal-Wappo Tribe of Alexander Valley closing the consultation invitation because the Tribe did not request consultation within the 30-day notification period.

On July 25, 2018 the County received a response letter from the Middletown Rancheria (via email) indicating they have no specific comments at this time; on August 27, 2018 the County sent notification to the Middletown Rancheria acknowledging their response letter and closing the consultation invitation.

Yocha Dehe Wintun Nation replied to the County’s notification, in a letter dated August 7, 2018 (identification number YD-04242018-02), stating that the project site is within the aboriginal territories of the Tribe, and therefore the Tribe had a cultural interest and authority in the project area and requested to initiate formal consultation with the lead agency. On May 9, 2019, the Tribe provided follow up correspondence requesting that the cultural monitor(s) be present during development activities and that a Tribal monitoring agreement be establish for this purpose. Consultation with Yocha Dehe is ongoing as of the printing of this document.

a-b. As discussed in **Section V (Cultural Resources)** the proposed projects’ Historical Resources Study (Tom Origer and Associates, March 2017), two isolated obsidian flakes and a lithic scatter were found during the survey.

The lithic scatter site, which is near one of the isolates, is in the south-central portion of the property on the southern property boundary and consisted of two obsidian flakes and three bifacial tool fragments. Materials were found in an area measuring approximately 25 feet by 33 feet. The other isolate is located in the northeast corner of the project parcels in the proximity of pond and road. All of the specimens were from the Napa Valley obsidian source. The project has been designed to avoid these sites/areas. While the project has been designed to avoid these cultural sites there is the potential for these sites to be inadvertently disturbed during project development, which is considered a potential significant indirect impact. To ensure potentially significant indirect impacts to cultural resources are reduced to a less than significant level, **Mitigation Measure CUL-1** shall be implemented. Additionally, it should be noted that with implementation of **Mitigation Measure BR-1** buffers from these resources, in particular the resources located along the southern property boundary in the proximity of Vineyard Block 2C, would be increased which would further reduce potential impacts to these resources.

As indicated the Yocha Dehe Wintun Nation has requested consultation on this proposed project: consultation with Yocha Dehe is ongoing as of the circulation of this document. The County will continue to work with Yoche Dehe and the owner/permittee to complete consultation with the Tribe. Furthermore, to ensure that consultation is appropriately completed and Tribal cultural resources are protected the project shall be subject to the project specific condition of approval below, should the project be approved.

As such, the proposed project, with incorporation of **Mitigation Measures CUL-1** and the Cultural Resources conditions of approval, would result in less than significant impacts to Tribal Cultural Resources, including those that may be eligible for the CHRIS or local register or cultural resources as defined in Public Resources Code Section 5024.1(c).

Cultural Resources – Conditions of Approval:

Prior to the commencement of vegetation removal and earth-moving activities of #P18-00275-ECPA, owner/Permittee shall provide documentation to the Napa County Planning Department that a Monitoring Agreement with the Yocha Dehe Wintun Nation has been entered into. Should the owner/Permittee be unsuccessful in entering into a monitoring agreement with the Yocha Dehe Wintun Nation, the owner/Permittee shall provide, for review and approval by Napa County, a Cultural Monitoring Plan prepared by a professional archaeologist certified by the Registry of Professional Archeologists (RPA). The Cultural Monitoring Plan shall outline monitoring requirements including but not limited to, sensitivity training for site workers, identification of project activities and project site areas requiring an on-site monitor, find procedures, and monitoring documentation and reporting procedures.

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

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

Discussion

- a. The proposed project would not generate wastewater, resulting in no impact.
- b. Implementation of the proposed project would not result in the construction or expansion of a water or wastewater treatment facility because it would not generate wastewater and three existing groundwater wells would provide irrigation water to the vineyard, resulting in no impact. Irrigation pipelines would be located within existing roadways and/or within proposed clearing limits.
- c. The proposed project involves the installation of a limited number of onsite storm water drainage features such as straw wattles, water bars, and a permanent no-till vineyard cover crop, which have been designed to meet project-related storm water drainage needs. The effect of the proposed storm water drainage system is described in **Sections IV (Biological Resources), VI (Geology and Soils), and IX (Hydrology and Water Quality)**. As discussed in the referenced sections, the environmental impacts of construction of these features, with incorporation of standard conditions identified in **Sections III (Air Quality), IV (Biological Resources), V (Cultural Resources) and VIII (Hazards and Hazardous Materials)**, would result in a less than significant impact.
- d. The proposed development of approximately 38.9 gross acres of vineyard (approximately 31.5 net-planted acres) would be irrigated by three existing onsite wells. The WAA conducted by Summit Engineering Inc. concluded that after full development, water use for the proposed 31.5 acres of vineyard and existing water use for wine production, domestic use, existing vineyard irrigation, and landscape irrigation is estimated to be 24.34 AF/year, representing an increase of 13.75 AF/year from the current water uses. Based on site-specific recharge analysis, the project parcels are estimated to have a total groundwater allotment of 34.01 AF/year. Estimated water demand for the proposed project represents 24.34 AF/year or 72% once the vines are mature. Therefore, the proposed project would have a less than significant impact on water supplies. Water availability and water use are discussed in greater detail in **Section IX (Hydrology and Water Quality)**.
- Furthermore, with implementation of **Mitigation Measure BR-1**, which would reduce the project by approximately 13 acres resulting in a ±26 acre development with net planted acreage of approximately 22 acres²¹, would reduce anticipated long term overall water use by approximately 4 AF/year from 24.34 AF/year to approximately 19.34AF/year.
- e. The proposed project would generate no wastewater that would require treatment, resulting in no impact on wastewater treatment providers.
- f. Implementation of the proposed project would have no impact on existing landfills because the only significant solid waste would be cane generated during vine pruning. Materials generated during pruning or harvest activities are generally disposed of onsite by spreading back into the vineyard, burning it, or a combination of the two. Rock generated during vineyard preparation would be utilized onsite primarily in surfacing vineyard avenues, or used in erosion control measures (e.g., rock level spreaders). Rock not used immediately would be stockpiled for future use inside the proposed clearing limits. Solid waste generated during construction activities (e.g., broken pipe, fittings, trellis, end posts, etc.) would be negligible.
- g. The California Integrated Waste Management Board is responsible for guaranteeing the proper storage and transportation of solid waste by providing standards for storage and transportation of solid waste containing toxic materials generated by urban and industrial users. The owner/permittee would be required to comply with these regulations, to the extent that they apply to agricultural projects, which will ensure that the project would have no impact.

²¹ Calculation based on approximately 18% of the gross development area being attributed to vineyard avenues and tractor turnaround areas.

Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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XIX. **MANDATORY FINDINGS OF SIGNIFICANCE.** Would the project:

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

Discussion

Project impacts have been analyzed to determine potential project-specific and cumulatively considerable significant impacts. All areas of impact analysis were found to have a less than significant negative effect on the environment or human beings due to project design with incorporation of identified mitigation measures and conditions of approval.

- a. As discussed in this Initial Study, implementation of #P18-00275-ECPA, with the incorporation of identified mitigation measures and conditions of approval (should the project be approved), would not have the potential to significantly degrade the quality of the environment. Special-status plant species Napa lomatium, narrow-anthered brodiaea, Sharsmith’s western flax, green monardella, and holly-leaved ceanothus and their habitats have been identified on the subject property and within the project area. Narrow-anthered brodiaea, Sharsmith’s western flax, and holly-leaved ceanothus are CNPS List 1B.2 species. Green monardella and Napa lomatium are CNPS List 4 species. With incorporation of **Mitigation Measure BR-1**, a majority of the special-status plants and their habitat would be avoided and preserved (**Table 5**).

Implementation of **Mitigation Measures BR-1** through **BR-3** would avoid potential direct and indirect impacts to special-status plant, bat, and bird species. Parcels in the immediate vicinity currently contain fencing of various types located around the property perimeter or agricultural development. Therefore, there is a mix of existing fencing within the surrounding area associated with agricultural and residential uses, which has affected wildlife movement in the area. Given the relatively small size of the project area (relative to the width of the corridor tract) and the lack of apparent development impacts within the more central portion of this tract, agricultural expansion within the project area is in and of itself unlikely to result in any significant impacts to wildlife movement or migration at the landscape linkage scale. While the proposed project (vineyard blocks) would result in portions of the site having reduced potential for on-site wildlife movement, the retention of blocks of chaparral with direct connectivity with similar habitats on neighboring properties would allow for continued local wildlife movement. The only proposed change to this fencing array would be the inclusion within the fenced area of an approximately 4.3-acre area along the southwestern boundary of the property, which consists primarily of chaparral. Though the subject area is currently unfenced, it effectively “dead ends” within the property, and does not function as a local movement corridor for wildlife already restricted by the deer fencing. As such, the proposed alterations to the deer fencing array would not introduce any new movement barriers to wildlife and impacts to wildlife movement are expected to be less than significant, and the range of special-status plant species would not be restricted, cumulative impacts are anticipated to be less than significant. No potential wetlands have been identified on the property or project area. The boundary of proposed Block 2C was designed to avoid the area in which the cultural resource was identified. To ensure potentially significant impacts to cultural resources to a less than significant level, **Mitigation Measure CUL-1** shall be implemented to temporarily fence around the identified scatter. With incorporation of standard conditions to protect cultural resources that may be discovered accidentally, significant impacts to cultural resources are not expected (**Section V, Cultural Resources**). Therefore, the proposed project as designed with the incorporation **Mitigation Measure BR-1** and conditions of approval, the proposed vineyard development project would have a less than significant potential to degrade the quality of the environment.

- b. The subject property is located within the Lake Hennessey and Vinehill Creek drainages. The Lake Hennessey Drainage contains approximately 5,165 acres. In 1993, vineyard acreage within this drainage was approximately 317 acres, or 6.14% of the drainage. Since 1993 approximately 133.75 acres of additional vineyard (or 2.59% of the drainage) have been developed to vineyard, resulting in approximately 8.73% of the drainage (or approximately 450.75 acres) containing vineyard. Presently there are eight producing wineries within the Lake Hennessey Drainage with a total annual production limitation of 203,500 gallons per year. There are two pending ECPA

applications requesting a total of 18.5 acres of vineyard, no pending winery use permit applications, or known water rights applications on file within this drainage.

It is estimated, based on evaluation of the County's GIS layer identifying Potentially Productive Soils (PPS) within the Lake Hennessey Drainage, that there are approximately 1,027.38 acres (19.89% of the drainage) having the potential to be developed to vineyard. This in conjunction with existing and approved vineyard development (approximately 450.75 acres) results in a total potential build out of approximately 1,478.13 acres or approximately 28.6% of the drainage. The PPS layer includes lands with characteristics that have been found to be suitable for potential future vineyard development. However this total does not take into consideration other site-specific limitations such as water courses requiring setbacks, wetlands, other water features, rare or special-status plants and animal species, or cultural resources, nor does the layer take into account other factors influencing vineyard development, such as sun exposure, soil type, water availability, or economic factors.

The Vinehill Creek Drainage contains approximately 2,078 acres. In 1993, vineyard acreage within this drainage was approximately 768 acres, or 36.96% of the drainage. Since 1993, approximately 171 acres of additional vineyard (or 8.23% of the drainage) have been developed to vineyard, resulting in approximately 45.19% of the drainage containing vineyard. Presently there are ten producing wineries within the Vinehill Creek Drainage with a total annual production limitation of 713,000 gallons per year. There are three pending ECPA applications requesting a total of 39 acres of vineyard, no pending winery use permit applications, or known water rights applications on file within this drainage.

It is estimated, based on evaluation of the County's GIS layer identifying PPS within the Vinehill Creek Drainage, that there is approximately 417 acres (20.07% of the drainage) having the potential to be developed to vineyard. This in conjunction with existing and approved vineyard development (approximately 939 acres) results in a total potential build out of approximately 1,356 acres or approximately 65.26% of the Drainage.

While it is not possible to quantify precisely the acreage and location of additional vineyard development that may be proposed by property owners in these drainages in the future, it is possible to make a conservative estimate based on previous trends. To estimate the amount reasonably foreseeable vineyard that may be developed over time, the acreage of vineyard development including approved vineyard projects in the cumulative environment (i.e., Lake Hennessey and Vinehill Creek drainages) over the last 25 years (1993-2018) were used to project an estimation of vineyard development for the next three to five years. Over the past 25 years within the Lake Hennessey and Vinehill Creek drainages, approximately 55.59 acres of agriculture were developed per year (450.75 plus 939 divided by 25).

Combined with Napa County policies and other site selection factors that limit the amount of land that can be converted to vineyard, the development of approximately 167 to 278 acres over the next three to five years within the Lake Hennessey and Vinehill Creek drainages are considered reasonable estimates. NCC Chapter 18.108 includes policies that require setbacks of 35 to 150 feet from watercourses (depending on slopes), and General Plan Conservation Policy CON 24c that requires the retention of oak woodland at a 2:1 ratio, which limits the amount of potential vineyard acreage that could be converted within the watershed. It has been the County's experience with ECP projects that there are generally site-specific issues, such as oak woodland preservation, wetlands, other water features, special-status plant and animal species, or cultural resources that further reduce areas that can be developed to other land uses. Additionally, the vineyard acreage projections for the next three to five years do not consider environmental factors that influence vineyard site selection, such as sun exposure, soil type, water availability, slopes greater than 30 percent, or economic factors such as land availability, cost of development or investment returns.

Air Quality and GHG - Sections III and VII:

The project (#P18-00275-ECPA) includes the removal of vegetation and installation of vineyard and erosion control measures concurrent with other projects in the air basin that would generate emissions of criteria pollutants, including suspended particulate matter (PM) and equipment exhaust emissions. For construction-related dust impacts the BAAQMD recommends that significance be based on the consideration of the control measures to be implemented (BAAQMD, May 2017). As discussed in **Section III (Air Quality)** and shown in **Table 3** (Emissions from Vineyard Development and Operation) criteria pollutant emissions associated with development and operations are anticipated to be well below identified thresholds, and therefore are not expected to result in project or cumulatively significant impacts. Additionally, the project would be subject to standard air quality conditions of approval (should the project be approved) that requires implementation of Air Quality Best Management Practices to further reduce potential adverse air quality effects of the project and ongoing operation. Conversion of existing vegetation and disturbance of soil would result in releases of carbon dioxide, one of the gasses that contribute to climate change (**Tables 7 and 8**). As discussed in **Section VII (Greenhouse Gas)**, the proposed project is not anticipated to result in substantial or significant GHG emissions, and includes the installation of grapevines and a permanent no-till cover crop, which may off-set (in whole or in part) potential impacts related to reductions in carbon sequestration. Potential contributions to air quality impacts associated with the proposed project, including GHG emissions and loss of sequestration, would be considered less than cumulatively significant through project design (i.e., scope and scale) and implementation of standard conditions of approval. Furthermore, with the implementation of **Mitigating Measure BR-1** the project would be reduced by approximately 13 acres, thereby further reducing anticipated air quality impacts associated with vineyard development and ongoing vineyard operations.

Biological Resources - Section IV:

A project specific Biological Resources Reconnaissance Survey (WRA Environmental Consultants, July 2018 - **Exhibit B-1**) was performed for the project to evaluate potential habitat loss and disturbance to plant and wildlife species as a result of the project. The reconnaissance survey included a records search to identify the presence or potential presence of special-status species within the project area; this record search was updated on March 1, 2019. The records search included the CNDDDB and CNPS databases. As discussed in **Section IV (Biological Resources)**, five special-status plant species (narrow-anthered brodiaea, holly-leaved ceanothus, Sharsmith's western flax, Napa lomatium and green monardella) and were identified in the subject project parcels and project area. With implementation of **Mitigation Measure BR-1**, the project would avoid and preserve approximately 68% of the of the project parcels' special-status plant species habitat and approximately 73% to 100% of the special-status plant populations/individuals. This would provide the opportunity for these species to maintain viable populations both on the property and, more broadly, in the region, reducing potentially significant direct and cumulative impacts to special-status plant species and habitat to a less than significant level. Implementation of this mitigation measure would also effectively offset the loss of special-status plants and habitat located within the mitigated project (+650 plants within approximately 6.8 acres of habitat). Potential direct and indirect impacts to special-status plant, bird, bat and animal species would be avoided or reduced through implementation of **Mitigation Measures BR-1** through **BR-3**, and standard conditions of approval for fencing and tree/woodland protection. Wetlands have not been identified in the project area or the subject property. Therefore, the project would not contribute to a cumulatively significant impact to special-status plants and animals or habitats.

Cultural and Tribal Resources – Sections V and XVII

Three cultural resources were identified in the project area, including two isolated obsidian flakes and a lithic scatter. The project has been designed to avoid these sites/areas. Implementation of **Mitigation Measure CUL-1** would avoid any potential inadvertent impacts to the identified cultural resources. Additionally, the incorporation of standard and project specific conditions to protect cultural resources that may be discovered accidentally, and to ensure that Tribal cultural consultation is completed and Tribal cultural resources are protected, significant impacts to cultural and tribal resources are not expected (see **Section V [Cultural Resources]** and **Section XVII [Tribal Cultural Resources]**). Therefore, with the incorporation of the identified mitigation measure and conditions of approval, the proposed vineyard development project would have a less than significant impacts on cultural and tribal resources.

Geology and Soils - Section VI:

Soil loss and associated sedimentation resulting from implementation of the proposed project is anticipated to be reduced by approximately 20.96% as compared to existing conditions (**Table 6**). The reasons for this reduction is due to the increased vegetative cover conditions within the proposed vineyard development areas and the installation of straw wattles that reduce overland flow velocities and erosive power, and trap eroded soil on-site, thereby reducing soil loss potential. Furthermore, with implementation of **Mitigation Measure BR-1**, which would reduce the acreage of the project by approximately 13 acres, it is anticipated that expected soil loss associated with the project would be further reduced that that shown in **Table 6**. Because the project would reduce soil loss as compared to existing conditions the project is not anticipated to contribute cumulatively to sediment production within the Lake Hennessey and Vinehill Creek drainages; therefore, impacts associated with soil loss and associated sedimentation are not considered cumulatively significant.

Because geologic impacts associated with future agricultural projects would receive the same scrutiny under CEQA, and the County's General Plan Goals and Policies, in particular General Plan Conservation Element Policy CON-48 which requires development projects to result in no net increase in sediment erosion conditions and soil loss as compared to existing conditions, it is not unreasonable to anticipate that those projects would also have a less than significant project specific and cumulative impact on erosion and associated sedimentation.

Hydrology and Water Quality - Section IX:

Water use calculations provided in the WAA prepared by Summit Engineering, Inc. (June 2018 - **Exhibit D**) indicate that the proposed development consisting of approximately 31.5 acres of planted vineyard and removal of existing orchard would result in approximately 13.75 AF/year of additional groundwater use compared to the approximately 10.59 AF/year used under current conditions, totaling approximately 24.34 AF/year (**Table 10**). Winery process water and domestic water use would continue to be provided by the existing domestic well also located on the property.

The average annual rainfall utilized in the groundwater recharge analysis includes times of below-average and above-average rainfall, and therefore inherently includes drought year conditions. Based on annual average annual rainfall for the area (approximately 33.79 inches per year) and the size of the subject property (approximately 71.04 acres available for recharge), and other conditions that affect the amount of precipitation that has the potential to recharge the groundwater aquifer, such as geological conditions, runoff characteristics, and evapotranspiration, it was anticipated that approximately 17% of the average rainfall or 34.01 AF/year would be available for groundwater recharge.

Considering: i) the anticipated water use for existing uses and proposed vineyard of 24.34 AF/year is below the property's anticipated annual groundwater recharge rate of approximately 34.01 AF/year; ii) implementation of **Mitigating Measure BR-1** would reduce anticipated long term overall water use by approximately 4 AF/year from 24.34 AF/year to approximately 19.34AF/year; iii) there is no evidence to date indicating that there are groundwater problems or declining well production in the this area of the County; and iv) implementation of the standard water use condition would further reduce potential impacts associated with groundwater use, the proposed project is anticipated to result in less than significant impacts to groundwater supplies, groundwater recharge, local groundwater aquifer levels, and well interference or drawdown effects on nearby wells.

As discussed in **Section IX.c-d (Hydrology and Water Quality)** A Hydrologic Analysis utilizing Technical Release 20 (TR-20) Runoff Model has been prepared by PPI Engineering (July 2018 - **Exhibit C**). Because the project does not include diversions, create concentrated flows or otherwise alter site drainage patterns, and does not materially alter site slopes no net increase in runoff volumes or time of concentrations are expected as compared to pre-project conditions (**Exhibit C**), therefore no significant impacts due to changes in hydrology are expected.

Not increasing runoff rates is consistent with General Plan Conservation Element Policy CON-50c that requires that peak runoff following development is not greater than predevelopment conditions. Additionally, as discussed in **Section VI (Geology and Soils)** the proposed project is anticipated to decrease soil loss as compared to existing conditions. Therefore, the proposed project would have a less than significant impact with respect to alterations of existing drainage patterns of the site or area that would result in increased runoff, considerable on or off-site erosion, siltation or flooding. Additionally, implementation of **Mitigation Measure BR-1**, which would reduce the project by approximately 13 acres, is anticipated to result in similar hydrologic effects/rates.

Furthermore, because hydrologic impacts associated with future agricultural projects would receive the same scrutiny under CEQA and County General Plan Policy CON-50(c), which requires development projects be designed so that peak runoff following development is not greater than predevelopment conditions, it is not unreasonable to anticipate that those projects would also have a less than significant project specific and cumulative impact on hydrologic conditions.

Land Use and Planning - Section X:

As discussed in **Section X (Land Use and Planning)**, the proposed project, with implementation of the mitigation measures and conditions of approval identified in this Initial Study, achieves compliance with applicable NCC requirements and General Plan Goals and Policies (also see **Section VII [Greenhouse Gas Emissions]**).

Proposed Project Impacts found to be Less Than Significant

In addition to the impact categories identified above, the following discussion summarizes those impacts considered to be less than significant with development of the project: Aesthetics, Agricultural Resources, Hazards and Hazardous Materials, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation/Traffic, and Utilities and Service Systems. The periodic use of lighting at the site would not create a substantial source of light. The periodic glare from vehicles would not create a substantial source of glare. The potential contribution to aesthetic impacts associated with the project is considered to be less than cumulatively considerable. The project does not conflict with any current zoning for agricultural use, nor does the project conflict with the any applicable land use plan, policies, or regulation as mitigated and conditioned. There are no know mineral resource areas within the project site or immediate vicinity. This project would generate noise levels that are considered normal and reasonable for agricultural activities and consistent with the County's "Right to Farm" Ordinance. The potential contribution to noise impacts is considered less than cumulatively considerable. Traffic related to construction and farm worker trips would not increase by a discernible amount and the relatively low and off-peak vehicle trips associated with the project are considered less than cumulative considerable. The project does not include the construction of structures that would result in population growth or displacement of people, the project would not adversely impact current or future public services, or require the need to utilities and service systems. For these reasons, impacts associated with the project that may be individually limited, but cumulatively considerable, would be less than significant.

Considering the project site's characteristics, surrounding environment, and the scope and scale of the proposed project, the project with incorporation of identified mitigation measures and conditions of approval, as discussed throughout this initial study, is not anticipated to result in either project specific or cumulatively considerable negative impacts; therefore, impacts associated with this project that may be individually limited, but cumulatively considerable, would be less than significant.

- c. Implementation of the project would not have any potentially significant negative effects on human beings (see discussions under **Sections III [Air Quality], VIII [Hazards and Hazardous Materials], IX [Hydrology and Water Quality], XII [Noise], XIII [Population and Housing], and XVI [Transportation/Traffic]**). The proposed project, the use of the property, and reasonably foreseeable projects would be activities at a level of intensity considered normal and reasonable for a property within Agricultural Watershed zoning district. Therefore, less than significant impacts on human beings are anticipated.

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Exhibit B-1	Biological Resource Reconnaissance Survey Report
Exhibit B-2	Biological Resources Response to Comments
Exhibit B-3	Mitigated Project
Exhibit C	Hydrologic Analysis
Exhibit D	Water Availability Analysis
Exhibit E	Soil Loss Analysis
Exhibit F	Engineering Geological and Geotechnical Evaluation
Exhibit G	Project Revision Statement