

**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 CEQA, Appendix C)**

1. **Project title:** Laird Family Jamieson Vineyard, Agricultural Erosion Control Plan (ECPA), #P17-00276-ECPA
2. **Property owner(s):** Red Hen Properties LLC
3. **Contact person and phone number:** Donald Barrella, Planner III, (707) 299-1338, donald.barrella@countyofnapa.org
4. **Project location and APNs:** 200 Kirkland Ranch Road, Napa, CA, APN 057-140-002, -013, -014, -015, -016 (**Figures 1 and 2**)
5. **Project sponsor:** Kenneth Laird, 5055 Solano Avenue, Napa, CA 94558  
**Agent:** Drew Aspegren (RPE #31418) Napa Valley Vineyard Engineering, 176 Main Street, Suite B, St. Helena, CA 94574
6. **General Plan description:** Agriculture, Watershed & Open Space (AWOS)
7. **Zoning:** Agricultural Watershed-Airport Compatibility (AW-AC)
8. **Description of Project:**

The project involves the clearing of vegetation (annual grassland), earthmoving, and installation and maintenance of erosion control measures associated with the development of approximately 100.7 acres of vineyard (approximately 82.3 net planted acres) within 15 vineyard blocks (i.e. the project area) located on five parcels (i.e. the project site) totaling 300.35 acres (**Figure 3**). Average slopes within the project area range from 2% to 31%. Approximately 0.2 acre within the project area is on slopes over 30%. The vineyard will be irrigated via a drip irrigation system with reclaimed water from Napa Sanitation District. Portable wind machines for frost protection are being proposed as part of the project. The project parcels are currently fenced and replacement and new wildlife exclusion fencing (i.e. Pig Fencing) around the project parcels is proposed. The project also proposes the reshaping and rocking of an existing drainage course crossing, the reconstruction of a second existing drainage course crossing, and the reconstruction of two low water drainage course crossings (**Exhibit A**). No trees are proposed for removal. No new water tanks are proposed. There would be no transport off site of spoils: rock generated from vineyard development is expected to be minimal and will be utilized in the construction of erosion and runoff control measures, road base, and landscaping. While remaining rock is not anticipated, should it be produced it would be stored within proposed vineyard development areas.

**Erosion Control Measures:** Temporary erosion control measures include fiber rolls and installation of a temporary tilled cover crop (post-land preparation – year 1), and straw mulch applied at 2 tons per acre to the project area and within all disturbed areas prior to October 15. Additional temporary erosion control measures will be applied as needed. Permanent erosion control measures include waterbars, watercourse crossings, rock stabilization, and a permanent no-till cover crop maintained at a vegetation cover density of approximately 80%. Vineyard avenues will also maintain a minimum vegetative cover density of 80%. Details of the proposed erosion control measures are provided in the Laird Jamieson Vineyard Agricultural Erosion Control Plan # P17-00276-ECPA, dated July 18, 2017, prepared by Drew Aspegren (Registered Professional Engineer #31418) of Napa Valley Vineyard Engineering, St. Helena, 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 rock removal, soil ripping to a depth of up to 36 inches, disking, the development of erosion control measures, and potential rock storage. No cut or fill is anticipated.

**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 7-foot by 4-foot spacing pattern for an approximate vine density of  $\pm 1,555$  vines per acre (or approximately 128,035 vines within the 82.3 net acres of proposed 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 will be primarily mechanical (e.g., mower), but may include spot-spraying with post-emergent herbicide.

**Table 1** lists a general schedule for the construction of the proposed project as identified in #P17-00276-ECPA and **Table 2** outlines typical general ongoing vineyard operations. The final implementation schedule is pending action on #P17-00276-ECPA. The proposed project may

be phased over several years. Development of each phase would follow the implementation schedule outlined in **Table 1**. It is also possible that development of individual vineyard blocks could be accomplished in one year, resulting in activities identified in **Table 1** and **Table 2** occurring in the same year.

**Table 1 – Implementation Schedule**

Pre-plant April 1 to October 15 <sup>1</sup>	Clearing, rock and root removal, stacking vegetation for disposal, disking, installing permanent erosion control measures prior to vineyard layout, staking and installation of drip irrigation system, installing temporary erosion control measures. Winterization, consisting of seeding and mulching, shall be completed by October 1.
Rainy Season October 16 to March 31 of subsequent year	Inspect and maintain cover crop and erosion control measures; reseed cover crop and mulch as needed to maintain appropriate cover of any storm damaged areas.
Plant April 1 to October 15 <sup>2</sup>	Complete unfinished pre-plant operations, plant vineyard, and begin viticulture practices. Maintain all erosion control features.

<sup>1</sup> Installation of vineyard infrastructure and planting of rootstock may occur the year following clearing of vegetation and land preparation.

<sup>2</sup> During the winter months (October 15 to April 1 of the succeeding year), no earthmoving work is allowed by the Napa County Code (NCC) Section 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 project will be in accordance with the Laird Jamieson Vineyard ECPA prepared by Napa Valley Vineyard Engineering. The 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.

9. While not part of the proposed project, the restoration of approximately 3.5 acres of earth-disturbing activities that occurred within required stream setbacks of a blue-line stream pursuant to NCC 18.108.025<sup>1</sup> would occur as part of this ECPA, if approved. Pursuant to NCC 18.108.025(D) the revegetation of streamside setbacks may be required as part of an erosion control plan to restore areas where vegetation has been removed as a result of existing or past land use activities. See **Section IV (Biological Resources)** and **Section IX Hydrology and Water Quality** for details regarding this matter and the components that would be incorporated into this ECPA to rectify this compliance matter as well as offer additional protection to Sheehy Creek and its water quality by restoring this area.

The proposed project would occur on five parcels totaling approximately 300.35 acres located at 200 Kirkland Ranch Road (**Figures 1-3**). Typical slopes within the project area range from 2% to 31% with approximately 0.2 acre on slopes over 30%. An existing paved private road provides access to the project area from Kirkland Ranch Road. The project parcels are bordered to the south by vineyard and Jamieson Ranch Vineyards winery, to the west by Napa Sanitation spray/leach fields, and to the north and east by sparsely developed rolling hills with some rural residences.

The project parcels are located approximately 2.5 miles southeast of the City of Napa, within the Sheehy Creek and Fagan Creek drainages, at the base of the northern slopes of Jameson Canyon. General topography of the area consists of the flats of Napa Valley to the west and rolling foothills of the Vaca Mountains to the east. The project parcel is on a generally southwest-facing slope, with elevations within the project area ranging from approximately 200 to 525 feet above mean sea level (msl). The majority of the project area drains toward Sheehy Creek, with a small portion draining to Fagan Creek. Both creeks connect to the Napa River approximately 4.5 miles west of the project site, just north of the tidal estuary formed by the Napa River. These creeks are also the nearest blue-line streams. (**Figure 2**).

Geology of the area and project parcel consists of a combination of early tertiary assemblages and quaternary surficial deposits. No potentially active faults have been mapped on the project site; the nearest recorded fault is approximately 150 feet east of the project site, and the nearest active faults are the West Napa and Green Valley faults approximately 3 mile west and 4.6 miles east, respectively. A large landslide deposit is mapped just east of the project site (Napa County GIS: geology, faults and earthquakes, and landslide layers). Dormant and active landslides

<sup>1</sup> Based on the County's August 15, 2017 site inspection, the Project's Biological Resources Survey, review of permit history of the project parcels (#94078-ECPA and #P12-00390-ECPA), and historic aerial imagery review and interpretation, in 2012 within an approximate 3.5-acre area located north of proposed Vineyard Block 19, several trees and associated understory vegetation which fall within required stream setbacks, that range from 55 to 85 feet in this area were removed.

have been mapped within the project site, but are limited to steep slopes associated with drainage channels and areas outside the project boundaries (Gilpin Geosciences, 2017, **Exhibit F**).

The majority of the project site's soils are mapped Fagan clay loam, 30-50% slopes, slipped, while the southern most blocks are mapped Clear Lake clay, drained. The Fagan series consists of deep, well drained soils with medium to rapid runoff and slow permeability. The Fagan clay loam complex exhibits a high erosion potential and high shrink-swell potential. The Clear Lake series consists of very deep, poorly drained soils with negligible to high runoff and slow to very slow permeability. The Clear Lake, drained complex exhibits little to no erosion hazard and a high shrink-swell potential (Soil Survey of Napa County, USDA 1978; Napa County GIS soil types layer).

The vegetation types in the area consists primarily of annual grassland, interspersed with oak and other riparian woodland along streams, and vineyards and other developed lands. Vegetation types occurring within the project parcels consist of approximately 155 acres of non-native grassland (that includes ±2 acres of seasonal wetlands interspersed throughout the grassland and water storage reservoir<sup>2</sup>), approximately 9 acres of riparian woodland, and approximately 127 acres of existing vineyard. The remaining ±9 acres are developed with a winery, residence, and access drives/roadways (i.e. developed land). The project parcels are currently fenced with a mix of cattle fencing predominately consisting of ±4 foot tall wire mesh or wire mesh topped with barbed wire with a height of ±4 foot. Other fencing consists of 6 foot tall cyclone fencing located along a portion of the southeast property line abutting the Jamieson Canyon Water Treatment Plant.

The project site is currently connected to the Napa Sanitation District, Suscol Water Recycled Water Pipeline and has access to recycled water through an agreement (contract) with NSD to supply water to the project site (**Exhibit D**). The property's (or project site's) recycled water connection and distribution system is located along the western property line of project parcel APN 057-140-016 approximately 1,500 north of Jamieson Canyon Road (see **Exhibit D**), and consists of four (4) 6,000 gallon water tanks and a pump station. Main irrigation lines leading from the connection/distribution system provide irrigation to existing vineyard located on the project site.

Adjacent land uses consist predominantly of generally undeveloped lands interspersed with vineyard to the north/northwest, Napa County Regional Park & Open Space District lands to the north/northeast, predominately vineyards and undeveloped land to the east, vineyards to the south, and Sanitation District spray/leach fields and industrial park to the west. The Jamieson Canyon Water Treatment Plant abuts a portion of the project parcels/site to the east and lies between the northern and southern portions of the project. Nearby wineries and wine production facilities include the Jamieson Ranch Vineyards on one of the project parcels, Peju, Leaf and Vine, Binto Bottle, Rang Dong, and Black Cat Wineries approximately one mile to the west. Nearby vineyards include the existing 125 acres on the project parcels, 450 acres on parcels to the north (approved, with approximately 320 acres of which is in vineyard), 88 acres on parcels to the east (approved but only approximately 15 acres of which is in vineyard), and approximately 100 acres on parcels to the south. The closest residential area to the project site is the City of Napa, located approximately 2.5 miles southeast, the closest residences are located approximately 1,500 feet to the east and south of the project site.

- 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

- 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 project was sent to Yocha Dehe Wintun Nation, Middletown Rancheria, and Mishewal Wappo Tribe of Alexander Valley on August 2, 2017. In response, Yocha Dehe Wintun Nation recommended including cultural monitors during development or ground disturbance. As of the publication of this Initial Study, no tribes traditionally or culturally affiliated with the project area have requested consultation. This environmental review component/category is disclosed in greater 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 parcel and project sites.

<sup>2</sup> Water Rights License #13800 (Permit #20762), and Grading Permit and Structural Erosion Control Plan #97130

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 Erosion Control Plan #P17-00276-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:

- Napa Valley Vineyard Engineering, July 18, 2017 (Revised February 7, 2018 – Date stamped February 27, 2018), Laird Jamieson Vineyards Erosion Control Plan (**Exhibit A**).
- Kjeldsen Biological Consulting, July 2017, Biological Resource Survey Laird Family Vineyards (**Exhibit B-1**).
- Kjeldsen Biological Consulting, November 29, 2017, Addendum to Biological Resource Survey (**Exhibit B-2**).
- Napa Valley Vineyard Engineering, July 19, 2018, Revised February 20, 2018, Jamieson Vineyard USLE Analysis (**Exhibit C**).
- Napa Valley Vineyard Engineering, February 16, 2018, Laird Jamieson Canyon Ranch Water Demand and Water Availability Analysis (**Exhibit D**).
- Napa Valley Vineyard Engineering, July 18, 2017, revised January 25, 2018, Jamieson Vineyard Hydrology Study (**Exhibit E**).
- Gilpin Geosciences, Inc., August 21, 2017, Engineering Geological Evaluation Laird Family Vineyards - Jamieson Vineyard (**Exhibit F-1**).
- Gilpin Geosciences, Inc., February 23, 2018, Response to County Comments Laird Family Vineyards - Jamieson Vineyard (**Exhibit F-2**).
- Tom Origer & Associates, November 23, 2016, A Historical Resources Study of 167 acres located off of Kirkland Ranch Road.
- Site visit conducted by Napa County Staff on August 15, 2017.
- 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

October 31, 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
<b>I. AESTHETICS.</b> Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare 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 2.5 miles southeast of the City of Napa and 2.5 miles northeast of the City of American Canyon, in the hills of Jameson Canyon, in an area dominated by grassland and sparse development to the north and east, vineyards in the valley flats to the south, and industrial park to the west. Napa Sanitation District Spray/Leach fields and the Jamieson Canyon Water Treatment Plant bound the project parcels to the west and southeast, respectively. The southernmost project parcels are located west of Kirkland Ranch Road immediately north of its intersection with State Highway 12. The majority of the project is located on a parcel accessed by a private road approximately 0.25 mile north of Kirkland Ranch Road. State Highway 12 is the closest County viewshed road, and vineyard Blocks 21, 22, and portions of 15, 17, 18, and 20 fall within the associated scenic corridor. Blocks 21 and 22 will be visible from Highway 12, and the remaining aforementioned blocks will be visible at a considerable distance (a minimum of 0.4 mile). Current views of the project area are of gently sloping open grassland, power lines and poles, and fencing, while views of the surrounding area are primarily of vineyard and some undeveloped grassland. Views of the proposed vineyard will be consistent with the aesthetic setting of the area, including the areas immediately east, west, and south. No trees are proposed for removal, and there are no significant rock outcroppings or geologic features on the project site that would be impacted by the project. The project 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](http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm)).

Because the project would not significantly alter the aesthetic setting of the area, be consistent with the existing visual character of the area, and would not affect any trees, historic buildings or rock outcrops, or introduce new structural elements (such as water tanks), it is considered to have a less than significant impact on these resources.

Furthermore, while no new water storage tanks are proposed as part of the project, the location of any future water tanks would be limited to the vineyard development areas (or project area) prescribed in the ECPA, and be subject to the setback requirements pursuant to Napa County Code (NCC) Section 18.104.140 and Viewshed Protection Program pursuant to NCC Chapter 18.106. These provisions will be included as conditions of approval should the proposed project be approved.

- c. There are existing vineyards located on the project parcel as well as parcels immediately adjacent to the south, and on most parcels in the vicinity. Only minor topographic modifications would be necessary to install the vineyard, and no trees would be removed. 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 at night for harvest or spraying. The proposed project would include nighttime harvest and sulfur application (typically from 8 P.M. to 4 A.M.) for about 60 days per year each. Although some nighttime activity will occur for limited periods, the project does not introduce a new source of substantial light or glare, and will therefore have a less than significant impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
II. <b>AGRICULTURE AND FOREST RESOURCES.</b> 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 Resource Code Section 4526, or timberland zoned Timberland Production as defined in Government Code Section 51104(g)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use 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 Grazing Land, Unique Farmland, and Farmland of Statewide Important. Installation of vineyard is an agricultural use in keeping with the farmland designations. Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, resulting in no impact.
- b. The project property has a General Plan designation of Agriculture, Watershed and Open Space (AWOS), and is zoned Agricultural Watershed-Airport Compatibility. Therefore, the establishment of vineyard totaling approximately 100.7 gross acres (82.3 net acre) is consistent with the State’s mapping designation and the property’s land use and zoning designations. The property is not currently subject to Williamson Act Agricultural contracts. Therefore, there are no conflicts between the designations of the property or Williamson Act contract and the proposed project, resulting in no impact on farmland within Napa County or Williamson Act contracts.
- 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.” Based on the Napa County Geographic Information (GIS) vegetation layers and the Biological Resource Survey (Kjeldsen Biological Consulting, 2017 – **Exhibit B-1**), the project parcel consists primarily of grassland, with some areas of riparian woodland along drainages. The project will not remove or otherwise affect any trees or woodland. Therefore, there will be no impact to forest land or timberland.
- 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. A network of existing dirt roads will be improved for the purposes of vineyard access, an agricultural use. As such, the proposed project will not result in other changes that would convert Farmland, and therefore will have no impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
III. <b>AIR QUALITY.</b> Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input 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 - GHG)** for GHG emission 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 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 southwest of the City of Napa, 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 (including grape haul trucks) 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 (O<sub>3</sub>), ozone precursors oxides of nitrogen and reactive organic gases (NO<sub>x</sub> and ROG), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), and suspended particulate matter of ten micrometers or less and two and a half micrometers or less (PM<sub>10</sub> and PM<sub>2.5</sub>). Other criteria pollutants, such as lead (Pb) and sulfur dioxide (SO<sub>2</sub>), 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 Vineyards<sup>3</sup> for an approximately 560-acre vineyard development, Walt Ranch Vineyard<sup>4</sup> for an approximately 507-acre vineyard development, and Circle-S Ranch Vineyards<sup>5</sup> for an approximately 400-acre vineyard development.<sup>6</sup> Suscol Mountain Vineyards is located on the parcel immediately north of the project site.

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 8 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<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>.

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 <sub>x</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>
<b>Construction Emissions</b>				
<b>Pounds per day: 150-acre vineyard development<sup>1</sup></b>	8.43 to 11.39	34.39 to 52.16	3.93 to 4.47	13.93 to 14.53
<b>Pounds per day: 150- to 250-acre vineyard development<sup>2</sup></b>	9.43 to 11.03	43.85 to 53.16	3.91 to 4.62	12.87 to 17.22
<b>Pounds per day: 127-acre vineyard development<sup>3, 4</sup></b>	4.6	42.3	5.21 <sup>4</sup>	24.21 <sup>4</sup>
<b>Construction threshold</b>	54	54	54	82
<b>Operational Emissions</b>				
<b>Pounds per day: 400-acre vineyard operation<sup>1</sup></b>	7.78	2.85	0.80	4.22
<b>Pounds per day: 560-acre vineyard operation<sup>2</sup></b>	6.58	1.84	0.75	3.91
<b>Pounds per day: 507-acre vineyard operation<sup>3</sup></b>	4.3	22.3	1.4	2.3
<b>Operational threshold (lbs/day)</b>	54	54	54	82
<b>Tons per year (Metric)<sup>1, 5</sup></b>	0.78	0.35	0.11	0.58
<b>Operational threshold (tons per year)</b>	10	10	10	15

<sup>1</sup> As identified in Circle-S EIR; <sup>2</sup> As identified in Suscol Mountain EIR; <sup>3</sup> As identified in Walt Ranch EIR; <sup>4</sup> Includes dust and exhaust emissions; <sup>5</sup> 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 100.7-acre vineyard (82.3 net acres of vine) 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

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

<sup>4</sup> #P11-00205-ECPA, AES March 2016, SCH #2008052075 certified August 1, 2016

<sup>5</sup> #P06-01508-ECPA, AES April 2011, SCH #2007062069 certified December 22, 2011

<sup>6</sup> These EIRs are incorporated herein by reference and available for review in the Napa County Department of Planning, Building and Environmental Services permanent files.

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 – Standard Condition of Approval:** The applicant/owner 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.
- Cover all haul trucks transporting soil, sand, or other loose material off-site.
- 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 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 on-site 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 FAQ<sup>7</sup> or the PERP website<sup>8</sup>.

Given that installation of the proposed project is expected to generate emissions that are below identified thresholds, result in less temporary construction emissions than those identified in Table 3, contains other features that minimize fugitive dust (such as vineyard cover crop), and introduces a fewer new vehicle trips than the project 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.

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 parcel include agricultural (vineyards and winery), rural residential, and industrial (Jamieson Canyon Water Treatment Plant). The closest offsite residences are located approximately 1,500 feet to the east and south. The closest school is located approximately 2.8 miles southwest in American Canyon (Napa County GIS schools layer), which is also the closest residential area.

During installation of the erosion control plan, 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 2.8 miles from the closest school and residential neighborhood, providing dilution of pollutants and odors. The residence closest to the vineyard is owned by owner/applicant. Therefore, 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. <b>BIOLOGICAL RESOURCES.</b> Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<sup>7</sup> [http://www.arb.ca.gov/portable/perp/perpfaq\\_04-16-15.pdf](http://www.arb.ca.gov/portable/perp/perpfaq_04-16-15.pdf)

<sup>8</sup> <http://www.arb.ca.gov/portable/portable.htm>

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?

- |  |                          |                                     |                                     |                                     |
|--|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 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"/>            |
| 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 checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory 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.

- Kjeldsen Biological Consulting, July 2017, Biological Resource Survey Laird Family Vineyards (**Exhibit B-1**)
- Kjeldsen Biological Consulting, November 29, 2017, Addendum to Biological Resource Survey (**Exhibit B-2**)

Additionally, the following Napa County GIS layers were utilized in this biological resources assessment: Natural Diversity Database, Biological Points and Areas, Wetlands and Vernal Pools, Biological Critical Habitat Areas, Sensitive Biological Groups, Biological Areas, Soil types, Biological Surveys & Sites, US Geological Survey Quadrangle, and Aerial Imagery.

- a. **Special-Status Plants:** No special-status plant species were observed within the proposed project area during the surveys conducted by Kjeldsen Biological Consulting. While preferred habitats for many of the special-status plant species known to occur within the vicinity of the project parcel are not present, the project biologist has indicated that potential habitat for the following plant species may occur within the project area: Clara Hunt's milk vetch (*Astragalus claranus*), big scale balsamroot (*Balsamorhiza macrolepis*), big tarplant (*Blepharizonia plumosa*), Mt. Diablo fairy lantern (*Calochortus pulchellus*), Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), and Diablo helianthella (*Helianthella castanea*). Clara Hunt's milk vetch, big tarplant, and Congdon's tarplant are classified by the California Native Plant Society (CNPS) as List 1B.1, and big scale balsamroot, Mt. Diablo fairy lantern, and Diablo helianthella are classified as List 1B.2. Rank 1B species are considered rare, threatened, or endangered in California and elsewhere. Species that appear on List 1B.1 are seriously threatened in California (over 80% occurrences threatened), while those on List 1B.2 are moderately threatened in California (20-80% occurrences threatened).

These plant species are known to occur in chaparral, cismontane woodland, grassy slopes, and/or valley and foothill grassland. While the project parcels and project site contain grassland, potentially suitable habitat for these species is not expected to be present because the historical agricultural use has likely degraded any potential habitat. Heavy grazing has occurred onsite for decades, likely precluding any of these species' presence. Furthermore, as noted above, these plant species were not observed within the project area during time-appropriate surveys conducted by Kjeldsen Biological Consulting, which is an indicator that potentially suitable habitat for these species is not likely present within the project area. Therefore, no impacts to special-status plant species are anticipated as a result of the project.

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:

- Prevent removal or disturbance of sensitive natural plant communities that contain special-status plant species or provide critical habitat to special-status animal species.
- In other areas, avoid disturbances to or removal of sensitive natural plant communities and mitigate potentially significant impacts where avoidance is infeasible.
- 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.

Because the project site does not contain sensitive plants and has therefore been designed to avoid sensitive plant species and their habitat, the proposed project is consistent with this policy.

**Special-Status Animals:** One special-status animal species was observed on the project parcels: the tricolored blackbird (*Agelaius tricolor*) was observed within the habitat surrounding the reservoir that is located between proposed Vineyard Blocks 18 and 20. Tricolored blackbird is a Species of Special Concern, and Candidate Species for listing as threatened under the California Endangered Species Act (CESA). The tricolored blackbird is distinguished by its highly social nesting in dense cattail or tule marshes, with nests packed close together. They forage in open habitats like pasture, grassland, and some farmland. The majority of populations (more than 90%) are found in the California Central Valley. Its numbers have declined significantly in recent decades, likely due to loss of habitat. The project as designed avoids the reservoir where there is potential nesting habitat, including a 100-foot buffer between the reservoir and project site as recommended by the Biological Resource Survey. This will result in less than significant impacts to tricolored blackbird. While no direct impacts to special-status bird and raptor species<sup>9</sup> are expected as a result of the project, there is the potential for these species to move into adjacent areas, in particular woodlands and associated trees that could be utilized for nesting that are found adjacent to the project area. Noise and disturbance generated through vegetation removal and land preparation has the potential to indirectly affect special-status bird and raptor species through nest abandonment and death of young or loss of reproductive potential caused by temporary and intermittent increases in noise levels at active nests located near project activities, which is considered a potentially significant indirect impact.

To reduce potentially significant indirect impacts to tricolored blackbird and any other potential special-status bird species including nesting birds to a less than significant level, **Mitigation Measure BR-1** shall be implemented. Also see the discussion under “Swainson’s hawk” below for additional impact disclosure, assessment and mitigation specific to the Swainson’s hawk.

**Mitigation Measure BR-1:** The owner/permittee shall revise Erosion Control Plan #P17-00276-ECPA prior to County approval to include the following measures to minimize impacts associated with the loss and disturbance of nesting birds and protect bird species consistent with and pursuant to California Department of Fish and Wildlife (CDFW) Code 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 potential to occur at the project site) shall conduct preconstruction surveys for nesting birds within all suitable habitat on the project site and within 500 feet of all earthmoving activities. The preconstruction survey shall be conducted no earlier than 14 days prior to vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than 14 days from the survey date, surveys should be repeated. A copy of the survey will be provided to the Napa County Planning Division and CDFW prior to commencement of work.
- b. After commencement of work if there is a period of no work activity of 5 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 applicant/owner 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.

Although not observed onsite, Swainson’s hawk (*Buteo swainsoni*) and northwestern pond turtle (WPT, *Emys marmorata*) have been known to occur nearby, and the project site falls within a portion of mapped California red-legged frog (CRLF, *Rana draytonii*) critical habitat.

**Swainson’s hawk (*Buteo swainsoni*):** Swainson’s hawk is listed as threatened under CESA, with populations declining especially within California. They typically nest in the Central Valley of California and are generally found in scattered trees or along riparian systems adjacent to grasslands, pastures and agricultural fields (such as alfalfa, fallow fields, low-growing row or field crops, and cereal grain

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<sup>9</sup> Raptor nests are protected under the Migratory Bird Treaty Act (MBTA) and Section 3503.5 of the California Fish and Game Code. Migratory birds and their nests are protected under the MBTA, which makes it illegal to “take” migratory bird species

crops), that provide foraging habitat. They prey on small mammals, reptiles, and insects, and their range typically extends from 10 to up to 18 miles from established nests. Unsuitable foraging habitat types include crops where prey species (even if present) are not typically available due to vegetation characteristics (e.g., vineyards, mature orchards, cotton fields, dense vegetation, etc.).

Two active raptor nests were observed immediately adjacent to the project site, between Blocks 17 and 19 and at the northern parcel boundary near Block 20D, but it is not known if these are Swainson's hawk nests. Biological surveys associated with the Suscol Mountain Vineyard project immediately north of the project site observed individuals soaring over the southern portion of the Suscol Mountain Vineyard project site in 2009, and a pair of adults and one juvenile were frequently observed in trees along Suscol Creek, located approximately 2 miles from the current project site. According to the California Natural Diversity Databank (CNDDDB), there have been five observations of Swainson's hawks within five miles of the project, the most recent records of active nesting in the vicinity of the project site occurred in 2012. While active (used during one or more of the last 5 years – CDFG 1994) Swainson's hawk nests have not been identified in the project area, it may be reasonable to assume that Swainson's hawk, as well as other raptor species, could utilize the project site, or portions of as habitat. The project proposes to convert approximately 101 acres of the total 164 acres of the project site's potential raptor habitat<sup>10</sup>, to potentially unsuitable habitat through vineyard development, and therefore has the potential to have an impact on Swainson's hawk and other native raptor species that are known to occur within the area. Furthermore, this project in addition to past agricultural, industrial and urban development projects in the area that have converted habitat, including grassland that provides foraging habitat to Swainson's hawk and other local native raptor species, which may also include special-status species, may result in a cumulatively significant impact to raptor species, including special-status species and their habitat.

The removal of potential special-status species habitat would be potentially inconsistent with the following Napa County General Plan Conservation Element Goals and Policies and Zoning Ordinance: General Plan Goal CON-3<sup>11</sup> as it does not protect for the continued presence of special-status wildlife and their habitat; Policy CON-13<sup>12</sup> in that impacts to special-status habitat can be avoided while allowing for up to approximately 87.0 acres of agriculture on the project parcels without significantly impacting special-status species habitat (as further described below); and, the purpose and intent of the Conservation Regulations (NCC Chapter 18.108) in that it may adversely affect sensitive, rare, threatened or endangered species. Inconsistency with these goals, policies and regulations is considered a potentially significant impact of the proposed project.

Napa County General Plan Policy CON-13 requires the avoidance of impacts to special-status species habitat to the extent feasible, and the inclusion of effective mitigation measures and management plans where impacts will occur. CDFW recommends mitigating the potential loss of Swainson's hawk foraging habitat located between one and five miles of an active nest by preserving other suitable habitat at a 0.75:1 ratio. Implementation of **Mitigation Measure BR-1** will reduce potential impacts to Swainson's hawk as a result of habitat loss to a less than significant level through a combination of habitat avoidance and on-site preservation. Based on previously known Swainson's hawk activity centers in the area, as identified above, a 0.75:1 mitigation ratio applied to the overall raptor habitat available at the project site is considered appropriate. The project proposes to remove ±101 acres of habitat, therefore ±76 acres of habitat will need to be avoided and preserved to minimize potential impacts to a less than significant level. The project as designed avoids ±63 acres of potential habitat. Therefore, the project shall be redesigned to avoid an additional thirteen (13) acres of potential raptor habitat, so that 76 acres of habitat are avoided. This habitat shall be preserved by a deed restriction, mitigation easement, or other means of permanent protection.

Implementation of **Mitigation Measure BR-1** would reduce potentially significant direct and cumulative impacts to Swainson's hawk, as well as the habitat of other raptor species and habitat to a less than significant level. Implementation of this measure would result in project consistency with General Plan Goal CON-3 and the Conservation Regulations by preserving and protecting special-status species and their habitat. Implementation of this measure would also be consistent with Goal CON-2<sup>13</sup> 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 species and associated habitat due to agricultural conversion projects. Additionally, surrounding properties contain significant area of open grassland habitat which could also provide foraging habitat for raptors (Kjeldsen Biological Consulting, November 2017), including the Lands of Napa County Regional Parks an Open Space District abutting the project site to the north (APNs 057-030-014 and 045-360-013, totaling over 430 acres).

**Mitigation Measure BR-2:** A combination of avoidance and preservation of habitat will reduce potential impacts to Swainson's hawk and its habitat to less than significant and achieve consistency with applicable regulations and General Plan goals and policies.

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<sup>10</sup> For the purposes of this disclosure and analysis, potential raptor habitat includes non-native grassland for foraging, and riparian woodland that provides other ecological features (such as perching and nesting trees, water sources, and refuge for prey) that support open grasslands as foraging habitat.

<sup>11</sup> 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.

<sup>12</sup> 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.

<sup>13</sup> Goal CON-2: Maintain and enhance the existing level of biodiversity.

- a. In order to maintain sufficient raptor habitat on the project parcels, approximately 76 acres of habitat shall be avoided. The owner/permittee shall revise Erosion Control Plan #P17-00276-ECPA prior to County approval to reduce the conversion of habitat to vineyard (including vineyard avenues and turn spaces) to  $\pm 87.0$  acres, such that  $\pm 76$  acres of habitat will remain undeveloped onsite (thereby preserving suitable raptor habitat at a 0.75:1 ratio). The areas to be avoided and preserved by this measure shall be of like kind and quality to the habitat being impacted as a result of the proposed project, as determined by a qualified biologist in cooperation with the Planning Division, and should be selected in a manner that: increases buffers from riparian habitat/corridors (such as along northern section of Fagan Creek: Blocks 20D and 20F), minimizes fragmentation of habitat within the project property, and enhances habitat connectivity with adjacent protected open space located to the north of the project property (i.e. Lands of Napa County Regional Parks an Open Space District). The areas to be avoided and preserved by this measure shall be subject to review and approval by the Planning Division prior to their incorporation into #P17-00276-ECPA.
- b. The owner/permittee shall implement the following preservation measure: a minimum of  $\pm 76$  acres of raptor habitat designated for preservation shall be identified as such in a deed restriction or mitigation easement held by 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 applicant shall record the deed restriction or mitigation easement prior to the commencement of construction and/or earthmoving activities associated with #P17-00276, or within 90 days of project approval, whichever comes first.

Northwestern pond turtle (WPT, *Emys marmorata*): WPT is a CDFW Species of Special Concern. A Species of Special Concern (SSC) is a designation by CDFW indicating an animal native to California that currently satisfies one or more of the following criteria:

- is extirpated from the State or, in the case of birds, is extirpated in its primary season or breeding role;
- is listed as Federally-, but not State-, threatened or endangered; meets the State definition of threatened or endangered but has not formally been listed;
- is experiencing, or formerly experienced, serious (nonscyclical) population declines or range retractions that, if continued or resumed, could qualify it for State threatened or endangered status; or
- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.

The WPT is a small to medium sized turtle that generally range in size from 5 to 8 inches in length and are approximately half as wide as they are long. WPT habitat includes both permanent and intermittent waterbodies that contain logs, rocks or vegetation on which the turtles can bask and take shelter. They can spend 10 months a year in terrestrial habitats, and may migrate over a half mile and overwinter more than 1,500 feet from aquatic habitat. Although WPT was not observed within the reservoir or elsewhere on the project property, the reservoir does contain potential habitat for this species. WPT are known to occur in ponds located north of the site and could move onto the property due to their ability to move long distances over land. The northern side of the reservoir will not be developed and will provide an opening for turtles to move onto the property. As noted above, the project as designed avoids any impacts to the reservoir and a 100-foot buffer between the reservoir and project site, as recommended by the Biological Resource Survey. Additionally, the Project Biologist has concluded that the site conditions are such that there is no reason to expect any impacts to this species either on-site or off-site (Kjeldsen Biological Consulting, July and November 2017). This will result in less than significant impacts to WPT.

California red-legged frog (CRLF, *Rana draytonii*): CRLF is a CDFW Species of Special Concern and listed as threatened under the federal Endangered Species Act. Breeding sites are generally found in deep (greater than 2.5 feet), still or slow-moving water, with or without vegetation. Non-breeding habitat includes nearly any area within 1-2 miles of a breeding site that stays moist and cool through the summer. The northeast corner of the property, encompassing approximately 10 acres, is within the mapped critical habitat for the species. Critical habitat is a specific geographic area that contain features essential to the conservation of a federally endangered or threatened species and that may require special management and protection. Critical habitat may also include areas that are not currently occupied by the species but will be needed for its recovery. Most of Block 20F, about half of Block 20E, and a very small portion of Block 20D are mapped as critical habitat. This area is on an open grassy hillside that has been farmed for decades, where cattle have compacted the soil and removed native vegetation cover. The nearest recorded CRLF occurrence is 2.8 miles from the project site. These blocks are on a ridge above Fagan Creek, from which the project sets back 125 feet. As noted above, non-breeding or upland habitats must have sufficient moisture to allow amphibians to survive throughout the non-breeding season, and sufficient cover to moderate temperatures during the warmest and coldest times of the year. Given the recent history and current condition of this part of the project site including the mapped habitat area, the Project Biologist has concluded that it is unlikely to be utilized by the CRLF due to lack of moisture, lack of cover, and compaction of soil (Kjeldsen Biological Consulting, July and November 2017). Furthermore, CRLF have not been recorded in Fagan Creek or anywhere on the project parcels, and the closest known occurrence is more than 2 miles away. For these reasons, the project will result in less than significant impacts to CRLF and its habitat.

With respect to special-status bat species, because no trees are being removed as part of the project, no impacts to special-species are expected.

Therefore, the project as proposed with incorporation of **Mitigation Measures BR-1** and **BR-2** will result in less than significant direct and cumulative impacts to special-status animal species and their habitats.

- b. 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 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 ten feet in height; and those watercourses listed in Resolution No. 94-19. There are three blue-line streams within the project parcels, Fagan Creek, Sheehy Creek and an unnamed tributary to Sheehy Creek (**Figure 2**). The Biological Resource Survey (Kjeldsen Biological Consulting, 2017) identified an additional drainage that is not blue-line but is county definitional, and three additional drainages that are not County definitional or blue-line but are possible Waters of the U.S. and/or State: the blue-line streams are considered Waters of the U.S. and/or State. There are seven drainages in total, five of which run north-south across the project site and two of which run northeast-southwest. The project is designed to set back from all drainages, except at crossings that are described in detail below. While the non-County definitional streams are not subject to setbacks pursuant to NCC Section 18.108.025, the project biologist recommended 25-foot setbacks from these drainages (i.e. Water of the U.S. or State), which are included in the project design. Per NCC Section 18.108.025, setbacks from the remaining streams vary according to slope, ranging from 55 feet to 85 feet (**Exhibit A**).

The project also proposes the improvement/reconstruction of two existing low-water crossings, and installation of two new low-water crossings, as described in **Table 4**.

**Table 4 – Proposed Stream Crossing Improvements**

Location	Water Feature Type	Activity	Reason
Between Blocks 16 and 17	Possible Waters of the U.S. and State	Install new low water crossing and irrigation line.	Block access and installation of irrigation line.
Between Blocks 17 and 18 <sup>1</sup>	County definitional, possible Waters of the U.S.	Reconstruct existing low water crossing and install irrigation line.	Block access via existing road and installation of irrigation line.
Between Blocks 18 and 20 <sup>1</sup>	Blue-line stream, County definitional, possible Waters of the U.S. and State	Reshape and rock existing low water crossing.	Block access via existing road.
Between Blocks 21 and 22	Possible Waters of the U.S. and State	Install new low water crossing and install irrigation line.	Block access and install irrigation line.

<sup>1</sup> Existing crossing

Regarding irrigation lines, new main irrigation lines that will connect to existing irrigation lines are proposed to clear span of Sheehy Creek between Vineyard Blocks 19 and 20, and clear span Fagan Creek west of Vineyard Block 22 to this block (i.e. Vineyard Block 22). These irrigation lines not anticipated to encroach into prescribed creek setbacks as designed. Additionally, the plan specifies that other new irrigation lines would be located and routed to remain with the footprint of existing and/or proposed vineyard development areas: See **Exhibit A** and **Exhibit D** for additional details. To ensure that all new irrigation lines are located within existing or proposed vineyard development areas and are installed as not to encroach into required stream setbacks, project approval if granted, will include a condition of approval requiring that all new irrigation lines be installed as shown in #P17-00276-ECPA.

The proposed project was designed to avoid all Waters of the U.S. and/or State, and comply with all setback requirements except for the 12-foot wide crossings in the four locations shown in **Table 4**. Vineyard blocks were designed to facilitate as few stream crossings as possible, and stream crossings are only proposed when necessary for vineyard block access<sup>14</sup>. The crossings do not occur in riparian vegetation, and would not otherwise impact resources such as sensitive species or habitat. Activities associated with stream crossings are likely to result in potential impacts to Waters of the U.S. and therefore will require permits from the US Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW, or combination thereof. The project will minimize and mitigate for potentially significant impacts to jurisdictional Waters of the U.S., or State as described below in **Mitigation Measure BR-3**. Also see **Section IX.f (Hydrology and Water Quality)** and **Mitigating Measure HWQ-1**, for additional disclosure and analysis of potential impacts to jurisdictional Waters of the U.S., or State and associated mitigation.

<sup>14</sup> The owner/Permttee currently leases the vineyard property that abuts the project site to the west (Lands of Kirkland Cattle Company: APN 057-020-0281, 136 Kirkland Ranch Road) which also abuts proposed Vineyard Blocks 15 and 16; and therefore, has the ability to access Vineyard Blocks 15 and 16 from the Kirkland Cattle Company property. Accessing these Vineyard Blocks (i.e. Blocks 15 and 16) from the Lands of Kirkland Cattle Company would not require the improvement of stream crossings that would require a Section 404 Nationwide Permit from USACE, or a Section 1602 LSAA from CDFW. However, the owner/permittee has included the proposed crossing between the Vineyard Block 17 Vineyard Block 15 and 16 to ensure the project has on-site access to Vineyard Block s15 and 16. Additionally, the crossing between Vineyard Blocks 21 and 22 is not ultimately necessary to provide access these blocks, in that they can both be accessed directly from Kirkland Ranch Road. However, the owner/Permttee has included this crossing in the project to consolidate access points along Kirkland Ranch Road if necessary.

**Mitigation Measure BR-3:** Prior to the construction and installation of stream crossings associated with #P17-00276, and development of vineyard blocks reliant on those crossings (such as Vineyard Blocks 17 and 18, and/or Vineyard Blocks 15 and 16), the owner/permittee shall obtain all required authorizations and/or permits from agencies with jurisdiction over Waters of the U.S. or the State, such as but not limited to: a Section 404 Nationwide Permit from the US Army Corps of Engineers (USACE), or a Section 1602 Lake and Streambed Alteration Agreement (LSAA) from the California Department of Fish and Wildlife (CDFW). Alternatively, the owner/permittee may revise the plan to include clear-span crossings, with footings located outside of identified setbacks, over these drainages to minimize and mitigate for potential impacts to jurisdictional Waters of the U.S. or State. Construction activities, including but not limited to earthmoving and staging activities, within 50 feet of any USACE or CDFW jurisdictional features shall be conducted during the dry season to minimize impacts related to erosion, water quality, and aquatic resources. Should unavoidable impacts occur to Waters of the U.S., or State compensatory mitigation consisting of creating or enhancing Waters of the U.S. or State on the project property shall be implemented at no less than a 1:1 ratio upon approval by USACE and/or CDFW.

Creeks will be protected by the winter shut-down period pursuant to NCC Section 18.108.070(L), which requires that all earth-disturbing activities on slopes greater than 5% be limited to the period between April 1 and October 15. By limiting earthwork to the dry season, creeks are additionally protected from impacts related to erosion, water quality, and aquatic resources. Additionally, staging and temporary stockpiling of excavated or imported material will occur only within the project footprint or staging area, which is designed to remain outside stream setbacks as previously discussed. The Hazardous Materials Condition of Approval described in **Section XIII (Hazards and Hazardous Materials)** requires that Best Management Practices (BMPs) are employed by the construction contractor to prevent the accidental release of fuel, oil, lubricant, or other hazardous materials associated with construction activities. Finally, project approval, if granted, would be subject to the following condition of approval to prevent the potential encroachment into creek setbacks required pursuant to NCC Section 18.108.025 and those recommended by the biologist, further protecting watercourses and associated riparian features during project implementation and operation. For these reasons, the project as designed with implementation of **Mitigation Measure BR-3** and identified conditions of approval, will result in a less than significant impact to streams and drainage features including jurisdictional Waters of the U.S. or State.

**Creek Protection - Condition of Approval:** The applicant/owner shall implement the following measures (as necessary and at the discretion of the Planning Division) to prevent the inadvertent encroachment into specified creek setbacks and associated riparian features during construction and subsequent vineyard operations:

- a. The location of creek setbacks shall be clearly demarcated in the field, as necessary, with temporary construction fencing, which shall be placed at the outermost edge of required setbacks shown on the project plans. Prior to any earthmoving activities, temporary fencing shall be installed: the precise locations of said fences shall be inspected and approved by the Planning Division prior to any earthmoving and/or development activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated areas for the duration of erosion control plan installation and vineyard installation. The protection fencing shall remain in place for the duration of project implementation.
- b. All construction and related traffic will remain outside of the protective fencing to ensure that the creek, buffer zones, and associated riparian habitat and/or woodland remains undisturbed.
- c. In accordance with NCC Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) trees that are inadvertently removed that are not within the boundary of the project and/or not identified for removal as part of #P17-00276-ECPA shall be replaced on-site with fifteen-gallon trees at a ratio of 2:1 at locations approved by the Planning Director.
- d. 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.

There are five small seasonal wetlands on the project parcel, which are considered a Sensitive Community by CDFW and listed as a sensitive biotic community in the Napa County Baseline Data Report (BDR, 2005). They are located on the eastern edge of Block 18B, north of the reservoir near the northern edge of Block 18B, along the blue-line stream between Blocks 18B and 20, near the northern edge of Block 20, and near the southern edge of Block 20 (see **Plate V, Exhibit B-1**). The project has been designed to avoid these areas and provide them with a minimum 50 foot setback/buffer. However, not all of these areas and/or setbacks are clearly shown or delineated on the project plans, therefore resulting in a potential impact to wetlands. To ensure the project avoids all wetlands and that they are provided with a 50 foot buffer, **Mitigation Measure BR-4** will be implemented. Implementation of this measure will reduce potential impacts to wetlands to a less than significant level.

**Mitigation Measure BR-4:** The owner/permittee shall revise Erosion Control Plan #P17-00276-ECPA prior to County approval to include the following measures to minimize impacts to wetlands that occur on the project parcels.

- a. Revise the plan prior to County approval to show all five seasonal wetlands that were mapped in the Biological Resource Survey (Kjeldsen Biological Consulting, 2017) and include a 50-foot no-touch setback from each wetland. The no-touch setback cannot include vineyard avenues, turn-spaces, or any other disturbance or operational areas.
- b. All wetlands and wetland buffers shall be flagged in the field by a qualified biologist prior to the commencement of grading or earthmoving activities.
- c. Protective construction shall be installed along the flagged boundaries of wetlands, as necessary, 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 complete.

Riparian habitat lines Fagan Creek, which run along the project on the northeast and southwest boundaries. The project as designed also avoids the riparian corridor associated with Fagan Creek, with setbacks ranging from 55 to 85 feet. The portions of Sheehy Creek and unnamed blue-line tributary to Sheehy Creek that occurs on the project parcels do not contain riparian vegetation and have also been avoided with setbacks ranging from 55 to 85 feet, resulting in no impacts to riparian habitat. There are no other sensitive communities on the project parcel. With implementation of the mitigation measure and condition of approval described above, impacts to streams and other sensitive habitat, including wetlands (as described above), will be less than significant.

However, between September 2012 and April 2013, approximately 4.9 acres of woodland were removed from the banks of Sheehy Creek near Blocks 17, 18A, and 19: more specifically along the southern limits of Vineyard Blocks 17 and 18A or northern bank of Sheehy Creek), and along the northern limits of Vineyard Block 19 (or southern banks of Sheehy Creek). This area also appears to have been cleared again between July 2015 and March 2016. Based on the Biological Survey, aerial imagery review, the August 15, 2017 site inspection by county staff, and previous plans approved on the project parcels, this area was likely occupied by eucalyptus trees. Approximately 3.5 acres of the cleared area falls within the stream setbacks, which range from 55 to 85 feet. Vegetation clearing in the stream setback is not allowed pursuant to NCC 18.108.025. NCC 18.108.025(D) states that revegetation of streamside setbacks may be required as part of an erosion control plan to restore areas where vegetation has been removed as a result of existing or past land use activities. Therefore, the following condition of approval will be implemented, should the project be approved, to rectify this compliance matter, as well as offer additional protection to Sheehy Creek and its water quality by restoring this area. This condition would also work in conjunction with **Mitigation Measure BR-3** and **HWQ-1** to minimize impacts to water/drainage courses and associated water quality as a result of development and operation of the proposed project. See the discussion and analysis in **Section IX.f (Hydrology and Water Quality)** for additional details, particularly as it relates to potential pollution sources identified in the condition. Should the project not be approved the County will pursue restoration and compliance through other regulatory processes/avenues.

**Creek Revegetation Condition of Approval:** Prior to vegetation removal or ground disturbing activities associated with #P17-00276, the applicant/owner shall submit for review and approval to Napa County a Creek Revegetation Plan for the area within the stream setback along Sheehy Creek that was cleared in 2012/2013, and for the removal and restoration of areas that are potential pollutant sources. The Creek Revegetation Plan shall be prepared by a qualified biologist ecologist, or professional with experience in preparing revegetation/restoration plans. The revegetation shall consist of native plants that are consistent with native riparian species present/found in the area. The Revegetation Plan shall include the following information: map of revegetation planting; plant pallet composed of native species; methods of planting, including source of plants and timing, size of plants, pest protection such as tree tubes, and irrigation; monitoring methods and schedules; success criteria; and management actions should success criteria not be met. The owner/permittee shall submit annual reports assessing plantings survival, which shall include recommendations for any additional required action. Replacement plantings shall achieve an 80% survival rate and be monitored for a minimum of 3 years to demonstrate that success criteria have been met.

The revegetation plan required pursuant to this condition shall initiation of the ECPA, or within 18 months of approval of the Revegetation Plan by the County, to achieve compliance with County Code. The Revegetation Plan shall be completely implemented within 18-months of its initiation, and the Laird Jamieson Vineyard ECPA (#P17-00276-ECPA) shall not be finalized by the County until the success criteria identified in the approved Revegetation Plan have been met. The owner/permittee shall obtain any other required authorizations and/or permits from agencies with jurisdiction over Waters of the U.S. or the State, such as but not limited to, a Section 404 Nationwide Permit from the US Army Corps of Engineers (USACE), or a Section 1602 Lake and Streambed Alteration Agreement (LSAA) from the California Department of Fish and Wildlife (CDFW) prior to initiation of the Creek Revegetation Plan. If the Creek Revegetation Plan is incorporated or otherwise integrated into the *Road and Drainage Assessment and Improvement Plan* required pursuant to **Mitigation Measures HWQ-1**, the owner/permittee shall have 24 months from approval of the Creek Revegetation Plan by the County to initiate the plan.

- 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.

As described above in subsection (b), there are five small seasonal wetlands on the project parcels. Implementation of **Mitigation Measure BR-4** will reduce any potential impacts to the wetlands by requiring a 50-foot no-touch setback between the wetland edge and project footprint. The no-touch buffer along the edge of the wetlands is designed to protect and preserve the wetland from any over spray, dust, sediment and fertilizer. The no-touch buffer zone will trap and hold dust, sediment and fertilizers from the vineyard operations, resulting in less than significant impacts to the wetland.

- d. The project parcels (approximately 300 acres) are currently generally fenced along the property lines with a combination of deer and cattle fencing. Adjacent land uses consist predominantly of mostly undeveloped lands to the north, vineyards and undeveloped land to the east, vineyards to the south, and Napa Sanitation District spray/leach fields and industrial park to the west. The Jamieson Canyon Water Treatment Plant lies between the northern and southern portions of the project. 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 fencing along the northern property boundary will be replaced with pig fencing, which will be 4-foot-tall 6"x6" wire mesh bent outward one foot along the bottom and stapled to the ground to prevent pigs from burrowing underneath. New pig fencing will also be installed on the eastern boundary of Block 20, which is not currently fenced. Wild pigs are not native to California, and cause significant damage to natural resources, environmentally sensitive habitats, and farm and rangeland. Wild pigs dig and overturn soil to find foods (grubs, insects, root bulbs, etc.), which damages native plants and can thereby lead to soil erosion. They may also destroy fences and ponds, and kill livestock and poultry.

The project parcels lie at the northern extent of a large portion of land that is developed with vineyard for many square miles, with the suburbs of American Canyon farther south. There is undeveloped land to the north and east, which allows for free wildlife movement. As lands west and south are generally developed and fenced, the project parcels do not represent an important wildlife movement corridor. Furthermore, the project is not located in a Natural Landscape Block (i.e. a relatively large natural habitat area that support native biodiversity) or within an Essential Connectivity Area. The Biological Resource Survey concluded that there are no identifiable wildlife corridors or nursery sites that will be impacted by the project.

Given the fact that active significant wildlife movement corridors have not been identified in the project parcel, that other adequate wildlife movement corridors exist in the surrounding area, that the project parcels are already generally fenced, and that minimal new fencing which is limited to 3-4 feet in height and contains a 6" by 6" mesh pattern that will allow resident wildlife to move through and/or use the project area and project parcels is proposed, impacts to wildlife movement and use are expected to be less than significant. Because wildlife nursery sites were not identified in the project area or parcel, there would be no impacts to wildlife nursery sites.

- e. Specific local policies and ordinances are discussed in more detail in **Section X (Land Use and Planning)**. Based on the Biological Resource Survey and mapping conducted by the County, plant communities or alliances occurring within the project parcel include non-native annual grassland (±155 acres, which includes approximately 2 acres of seasonal wetland interspersed throughout the grassland), riparian woodland (±9 acres), agriculture/vineyard (±127 acres), and other developed land (9 acres) (**Table 5**). As proposed, the project would result in the removal of 100.7 acres (62.2%) of non-native grassland; the remaining vegetation types would not be impacted.

**Table 5 – Plant Communities/Vegetation Alliances<sup>15</sup>**

Plant Community or Vegetation Alliance	Pre-Project Conditions (acres)	Acreage Change	Percent Change	Percent Remaining	Post-project Conditions (acres)
Non-native grassland <sup>1</sup>	155	-100.7	-64.97%	35.03%	54
Vineyard	127	+100.7	+79.29%	100%	227.7
Riparian woodland	9	No Change			6.0
Developed	9				9

<sup>1</sup> Includes approximately 2 acres of Seasonal Wetland interspersed throughout the grassland.

Sources: Kjeldsen Biological Consulting, July and November 2017; and Napa County GIS mapping August 2019.

The non-native grassland is composed of many introduced non-native species with relict native annual species within the stands. The common taxa include non-native wild oat (*Avena* spp.), ripgut brome (*Bromus didandrus*), soft chess (*Bromus hordordaceus*), wild barley (*Hordium murinum*), Mediterranean barley (*Hordium murinum* ssp. *gusoneanum*), rattlesnake grass (*Briza maxima*), little quaking grass (*Briza minor*), dogtail grass (*Cynosurus echinatus*), cultivated timothy (*Phleum pretense*), annual hairgrass (*Deschampsia danthooides*), hood canarygrass (*Phalaris paradoxa*), fescue (*Festuca arundinacea*), Medusa head-grass (*Taeniantherium caput-medusae*) and rattail fescue (*Vulpia myuros*). Often this alliance is invaded by star thistle (*Centaurea solstitialis*). Common forbs include filaree (*Erodium cicutarium*), smooth cat's ear (*Hypochaeris glabra*), rough cat's ear (*Hypochaeris radicata*), bur clover (*Medicago polymorpha*), California

<sup>15</sup> The acreages identified in **Table 5** may differ from acreages identified in the biological assessment (**Exhibit B**) due to mapping platforms, spatial characters, and rounding. Because approximate 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.

poppy (*Eschscholzia californica*), clover (*Trifolium* spp.), vetch (*Vicia* spp.) and plantain (*Plantago lanceolata*). Within this mix of annual species there are also more uniform stands of wild oats, ripgut brome, perennial rye grass (*Festuca perennis*), and Harding grass (*Phalaris aquatica*).

No woodlands or individual trees are proposed for removal. The riparian woodland that lines Fagan Creek along the northeast and southwest project boundaries (adjacent to Blocks 20, 21, and 22) will be avoided as previously described. Riparian vegetation is characterized by tree cover that includes broadleaved, deciduous trees such as willow, alder, oak, and cottonwood species. Common shrubs include poison oak (*Toxicodendron diversilobum*), coyote brush (*Baccharis pilularis*), Himalayan blackberry (*Rubus armeniacus*), and California wild grape (*Vitis californica*). The understory consists of torrent sedge (*Carex nudata*), mule fat (*Baccharis salicifolia*), ninebark (*Physocarpus capitatus*), spicebush (*Calycanthus occidentalis*), California polypody (*Polypodium californicum*), and dogwood (*Cornus* spp). Riparian vegetation is usually transitional between wetland and upland.

Napa County General Plan Policy CON-50(a) requires the protection of surface water quality through the preservation of riparian areas. While no riparian woodland will be removed as part of the project, there is a potential for riparian woodland located adjacent to the project area to be effected due to inadvertent tree removal and subsequent limited regeneration as a result of the project. In order to ensure that no trees or woodlands 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 project be approved.

- a. **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.
- b. Trees removed that are not within the boundary of the project and/or not identified for removal as part of #P17-00276-ECPA shall be replaced on-site with fifteen-gallon trees at a ratio of 2:1 at locations approved by the director.
- c. The applicant/owner 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 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 will be less than significant. Therefore, the proposed project with mitigation measures and 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. <b>CULTURAL RESOURCES.</b> 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 were utilized in this analysis and are incorporated herein by reference:

- Tom Origer & Associates, October 10, 2016, A Historical Resources Study of 167 Acres located off of Kirkland Ranch Road.
  - Napa County Geographic Information System (GIS) Cultural Resources Maps/layers.
  - Site inspections conducted by County Staff on August 15, 2017.
- a. The Historical Resources Study (Tom Origer & Associates, October 2016) conducted an archival records search, investigating maps and records, survey reports, and other materials on file on the Northwest Information Center. Sources of information included current listings of properties on the National Register of Historic Places, California Historical Landmarks, California Register of Historical Resources, and California Points of Historical Interest. The archaeologist also conducted an intensive field survey of the project site. The archival search identified two historic-era resources, which were relocated during the field survey. Site P-28-001600 is an arch bridge located near the northern corner of one of project parcel(APN 057-140-014). Site P-28-001601 is a barn located in the northeast corner of project parcel APN 057-140-015, outside the project area. The Historical Resources Study recommends that should any future plans call for alteration of the bridge or barn, an architectural historian should conduct an evaluation to determine their historical significance. The bridge is located approximately 250 feet from the project and the barn is approximately 330 feet from the project. These historic resources therefore lie outside of the project and no alterations to them are proposed. Therefore, the project will not result in any impacts to historical resources.
  - b. The archival records search identified one archaeological resource, which was also relocated during the field survey. Site P-29-001600 is an area of midden soil that contains burned rock, obsidian flakes, and fragments of shell located in the southeast corner of one of project parcel APN 057-140-010, near Fagan Creek. The project site is approximately 150 feet from this resource, which exceeds the recommended 10-meter (32.8 feet) setback from the resource that is identified in the Historical Resources Study. Furthermore, project approval, if granted, would be subject to the standard condition identified below, which would further avoid and reduce potential impacts to unknown archeological and cultural resources. Therefore, impacts to archaeological resources as a result of the proposed project would be less than significant.
  - c. There are no unique geologic features on the project site. Due to the nature of the soils in the project site and because vineyard ripping depth is limited to 36 inches, 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 above, 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 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 condition identified below, which would ensure that potential impacts on human remains will 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 on-site 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 will 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 or 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 on-site 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
<b>VI. GEOLOGY AND SOILS.</b> Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated 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"/>
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 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 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 resulting 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 and is not within an “Earthquake Fault Hazard Rupture Zone” designated by the Alquist-Priolo Earthquake Zoning Act. Active faults have been mapped in the vicinity. The closest active faults to the site are the West Napa and the Green Valley faults approximately 3 and 4.6 miles west and east respectively (Gilpin Geosciences Inc., 2017 – **Exhibit F-1**).
  - ii) Although the project site is located in an area that may be subject to strong to very strong seismic ground shaking potential during an earthquake (Gilpin Geosciences Inc., 2017), the proposed project does not include construction of any new residences or enclosed areas where people would congregate.
  - iii) The project is not in an area subject to high liquefaction potential. The Napa County GIS liquefaction layer identifies northern project area is having very low liquefaction potential, and the southern project area (Blocks 21 and 22) as having medium liquefaction potential. As noted above, however, the project will not result in a substantial increase in the number of people or add structures onsite.
  - iv) Dormant and active landslides were mapped in steeply sloping areas on the project parcel. The project will avoid these areas with minimum 25 foot setbacks that are included in the project design, and the project does not include structures or a substantial increase in number of people in the project area. Landslides are discussed in more detail in the response to item (c) below.

- b. The majority of the project site's soils are mapped Fagan clay loam, 30-50% slopes (Soil series #133), while the southernmost blocks are mapped Clear Lake clay (Soil series #116). The Fagan series consists of deep, well drained soils with medium to rapid runoff and slow permeability. The Fagan clay loam complex exhibits a high erosion potential and high shrink-swell potential. The Clear Lake series consists of very deep, poorly drained soils with negligible to high runoff and slow to very slow permeability. The Clear Lake, drained complex exhibits little to no erosion hazard and a high shrink-swell potential (Soil Survey of Napa County, USDA 1978; Napa County GIS soil types layer).

Installation and implementation of the erosion control plan 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 15th and April 1st. 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 have been 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 a vegetative cover density of 80%. Vineyard avenues would also maintain in 80% vegetative cover. The cover crop provides the ability to trap eroded soils on-site, thereby reducing soil loss and sedimentation potential.

Based on USLE modeling calculations prepared by Napa Valley Vineyard Engineering (**Exhibit C**), the proposed conversion of approximately 100.7 acre of grassland 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 2.81 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 1.78 tons per acre per year. Overall, soil loss is calculated to be reduced within the project area by approximately 67.39 tons per year, from approximately 180.56 tons per acre (pre-project) to approximately 113.21 tons per acre (post-project) or a reduction of approximately 37.9% 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)
15A	8.06	4.54	-3.53	-43.75%
15B	3.29	1.86	-1.43	-43.40%
16A	4.97	2.81	-2.16	-43.52%
16B	5.81	3.67	-2.15	-36.91%
17	12.04	8.32	-3.73	-30.94%
18A	8.74	6.00	-2.74	-31.30%
19	23.42	16.10	-7.32	-31.25%
20A	12.32	8.46	-3.86	-31.33%
20B	11.62	7.30	-4.32	-37.19%
20C	17.02	10.75	-6.27	-36.84%
20D	14.90	8.42	-6.49	-43.52%
20E	14.98	10.36	-4.62	-30.84%
20F	3.40	2.14	-1.26	-37.00%
21	1.42	0.74	-0.67	-47.46%
22	38.57	21.74	-16.84	-43.65%
<b>Vineyard Totals</b>	<b>180.56</b>	<b>113.21</b>	<b>-67.39</b>	<b>-37.93%</b>

Source: Napa Valley Vineyard Engineering, February 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 straw wattles, silt fencing, erosion control blankets, waterbars, rock stabilization, and straw mulch applied at 2 tons per acre.

Should the project be approved, the following condition 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:**

The following conditions shall be incorporated by referenced into #P17-00276-ECPA pursuant to NCC Chapter 18.108 (Conservation Regulations):

- a. 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: fiber rolls (i.e. straw wattles), rock

stabilization, low water crossing, stream crossing, and waterbars with rock energy dissipaters, and permanent no-till cover, shall be installed by October 15th during the same year that initial vineyard development occurs. This requirement 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 (#P17-00276-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.

- b. 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 80% within the vineyard and vineyard avenues. The cover crop may be spot sprayed, no greater than 12 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.

For these reasons the proposed project, with incorporation of specified erosion control measures and conditions of approval, will 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 **(IX Hydrology and Water)** 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, 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).

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

- c. Geology of the project site consists of early tertiary assemblages (Napa County GIS geology layer). As discussed above, the project area is not located in an area prone to ground failure or liquefaction, and the proposed project identifies the soil types in the project area and addresses any potential soil instability.

Dormant and active landslides were mapped in steeply sloping areas on the site, typically occurring on the steep-side of drainage channels located on the site. Three active landslides and one dormant landside, as well as a cluster of active slides along the west side of Fagan Creek were mapped on the project parcels (**Exhibits A and F-1**). The landslides are characterized as debris slides and slumps and are being actively undermined where they encroach on the drainage channels. The project as designed avoids and sets back a minimum of 25 feet from these areas. Furthermore, the ripping planned for vineyard development and operation will result in improved drainage (by increasing infiltration), thereby increasing slope stability at the site by reducing concentrated surface erosion that contributed to the localized slope failures that were mapped on site (Gilpin Geosciences Inc., 2017). Therefore, this project will result less than significant impacts of on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse.

To ensure that minimum 25 foot setbacks are provided from areas of instability according to plan specifications and geotechnical recommendations to minimize the potential for decreased slope instability as a result of vineyard development, the following condition of approval shall be implemented, should the project be approved.

#### **Geology/Landslide – Condition of Approval**

The owner/permittee shall revise Erosion Control Plan #P17-00276-ECPA prior to approval to include a 25 foot minimum setback from all areas of instability (i.e. active and dormant landslides) mapped on the project site by Gilpin Geosciences Inc.. The limits of all identified areas of instability and the 25-foot buffers shall be field verified by the project's engineering geologist prior to implementation of

earthmoving activities. Prior to any vegetation removal and earthmoving activities associated with #P17-00276-ECPA the limits of all identified areas of instability and 25-foot buffers shall be demarcated in the field with temporary fencing placed at the edge of the 25 foot buffer. Demarcation fencing shall be inspected and approved by the Planning Division prior to the commencement of any vegetation or earthmoving activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated buffer areas for the duration of erosion control plan installation, vineyard installation and ongoing vineyard operation. Should unstable landslide deposits be encountered and/or localized slope failures occur during development, the slope shall be restored to a stable configuration using specifications provided by the project's engineering geologist. The specifications shall be reviewed and approved by the Planning Division prior to commencement of slope re-stabilization

- d. Soils of the project site consist of Fagan clay loam and Clear Lake clay soils, which both exhibit high shrink-swell potential (USDA Soil Survey of Napa County, 1978). However, no structures are proposed as part of this 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
<b>VII. GREENHOUSE GAS EMISSIONS.</b> 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 greenhouse gas (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. Additional information on the County CAP can be obtained at the Napa County Department of Planning, Building and Environmental Services or <http://www.countyofnapa.org/CAP/>.

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 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 Environmental Impact Report (EIR) prepared for the Napa County General Plan Update and 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 (CO<sub>2</sub>), methane, ozone, and the fluorocarbons, which contribute to climate change. CO<sub>2</sub> 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 greenhouse gases. Agricultural sources of carbon emissions include forest clearing, land-use changes, biomass burning, and farm equipment and management activity emissions. Equivalent Carbon Dioxide (CO<sub>2e</sub>) 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 CO<sub>2</sub> is used as the reference atom/compound to obtain atmospheric carbon CO<sub>2</sub> effects of GHG. Carbon stocks are converted to CO<sub>2e</sub> 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>).<sup>16</sup>

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 “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<sub>2e</sub> of construction equipment emissions for a 459-acre vineyard development, resulting in approximately 9.4 MT CO<sub>2e</sub> of construction equipment emissions per acre of vineyard development.<sup>17</sup> Using this emission factor it is anticipated that Construction

<sup>16</sup> “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 CO<sub>2</sub>. 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).

<sup>17</sup> 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.

Equipment Emissions associated with the proposed 100.7-acre vineyard development would be approximately 946.58 MT CO<sub>2e</sub> (100.7 acres multiplied by 9.4 MT CO<sub>2e</sub>).

**Project Site Emissions:** Project site emissions are emissions resulting from vegetation removal and soil preparation associated with the conversion of approximately 100.7 acres of grassland 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 Green House 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 project site carbon stocks for the project site are estimated to be approximately 95.17 MT C or approximately 348.96 CO<sub>2e</sub> (**Table 7**).

**Table 7 – Estimated Project Site Carbon Stocks/Storage**

Vegetation Type/Carbon Storage	Project Acreage	Carbon Storage/Stock per Acre (MT C/acre) <sup>1</sup>	Total Carbon Storage (MT)	Total Carbon Storage in MT CO <sub>2e</sub>
Grassland <sup>2</sup>	100.7	1.40	140.98	516.93

<sup>1</sup> Includes 100% of soil carbon stock; <sup>2</sup> Non-native grassland.

Sources: March 2012 Napa County Draft Climate Action Plan, and Napa County Engineering and Conservation Division May 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%.<sup>18</sup> Using 50% as a more conservative estimate, the project could result in one time project site construction emissions from vegetation removal and soil preparation (i.e. grading and soil ripping) of approximately 328.68 MT CO<sub>2e</sub> (**Table 8**).

**Table 8 – Estimated Project Carbon Emissions Due to Vegetation Removal**

Vegetation Type/Carbon Storage	Project Acreage	Carbon Loss/Emission per Acre (MT C/acre) <sup>1</sup>	Total Carbon Loss/Emission (MT)	Total Carbon Loss/Emission in MT CO <sub>2e</sub>
Grassland <sup>2</sup>	100.7	0.8	80.56	295.39

<sup>1</sup> Includes 50% of soil carbon stock; <sup>2</sup> Non-native grassland.

Sources: March 2012 Napa County Draft Climate Action Plan, and Napa County Engineering and Conservation Division August 2017

### 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<sub>2e</sub> of operational emissions for a 560-acre vineyard, resulting in approximately 0.67 MT CO<sub>2e</sub> of operational emissions per acre of vineyard per year. Using this emission factor it is anticipated that Operational Equipment Emissions associated with the proposed 100.7-acre agricultural development would be approximately 67.47 MT CO<sub>2e</sub> (100.7 multiplied by 0.67 MT CO<sub>2e</sub>).

**Operational Sequestration Emissions:** Emissions associated with loss of sequestration due to land use change (i.e., the conversions of grassland 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 CO<sub>2</sub> acre per year (essentially zero). Utilizing this factors it is anticipated that the annual emissions associated with changes in carbon sequestration as a result of land use changes would also be negligible.

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 CO<sub>2</sub> loss from vineyard soils. Carbon sequestration loss would be further offset by the proposed vineyard, which would likely act as a sink for atmospheric CO<sub>2</sub>, 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 vinerows through cover-cropping.

### Project Emissions:

Based on the above estimates, the proposed project could result in one time construction emissions of up to 338.55 MT CO<sub>2e</sub> and annual on-going emissions associated with vineyard operations (including loss of sequestration) estimated to be approximately 2.35 MT CO<sub>2e</sub> per year (**Table 9**).

<sup>18</sup> Napa County, July 12, 2010, Green House Gas Emissions Associated with Vineyard Development & Vineyard Operations, A Compilation of Quantitative Data from Three Recent Projects.

**Table 9 – Estimated Overall Project-related GHG Emissions**

Construction Emissions in Metric Tons of CO <sub>2</sub> e		Annual On-Going Emissions in Metric Tons of CO <sub>2</sub> e	
Source	Quantity	Source	Quantity
Vehicles and Equipment	946.58	Vehicles and Equipment	67.47
Vegetation and Soil	295.39	Loss of Sequestration	0.00
<b>Total</b>	<b>1,241.98</b>	<b>Total</b>	<b>67.47</b>

Source: Napa County Planning Division August 2017

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 1,241.98 MT CO<sub>2e</sub> by considering the size of the proposed vineyard in relation to projected vineyard development in the County. The program level EIR for the 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 0.8% 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 80%, 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.

As described above, total annual GHG emissions from ongoing operations are anticipated to be approximately 67.47 MT CO<sub>2e</sub> per year, which is well below the threshold of 1,100 MT CO<sub>2e</sub> 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.

Furthermore, implementation of **Mitigation Measure BR-3** would further reduce project construction GHG emissions by reducing the acres of grassland to be removed, thereby reducing the emissions associated with vegetation removal and soil preparation.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. <b>HAZARDS AND HAZARDOUS MATERIALS.</b> 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 checked="" type="checkbox"/> | <input 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 checked="" type="checkbox"/> | <input 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?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

**Discussion**

a-b. Installation of the proposed erosion control plan 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.

No chemicals will be stored onsite. The southern end of the barn located in the eastern corner of project parcel APN 057-140-015 is identified as the location where agricultural chemical mixing and cleaning and washing of chemical application equipment, as well as project staging, will occur. This location is located over 100 feet from the closest watercourse (Fagan Creek). The soil and vegetation contained in the space between the barn and creek will trap pollutants, which are then naturally filtered and reduced through the soil. The use of pesticides, fertilizers, and sulfur for the proposed vineyard would typically be limited to approximately nine applications per year, generally occurring between April and June of each year. Weed control under vines will be accomplished through spot spraying of herbicide, which targets specific areas and does not include spraying broad areas.

There are three blue-line streams on the project parcels, Sheehy Creek, Fagan Creek, and an unnamed tributary to Sheehy Creek, the setbacks for which range from 55 to 85 feet (**Figures 1-3 and Exhibit A**). Sheehy Creek and the unnamed tributary run northeast-southwest across the project site, while Fagan Creek runs north-south along the eastern periphery of the project area on project parcel APN 057-140-016 and along the western periphery of the project area on project parcel APN 057-140-015. Near the southern project site boundary, Sheehy Creek turns east-west before continuing offsite. The majority of the project site and area drain to Sheehy Creek directly through sheet flow or through other small drainage features, while the southern project area (Blocks 21 and 22) drains to Fagan Creek, and a very small amount of runoff from the northern part of the project site drains to the onsite reservoir. In addition to the two blue-line streams, there are four drainage swales that do not appear on the USGS quadrangle and do not meet the Napa County definition of stream as defined in NCC Section 18.108.030, and one drainage that meets the County definition. The project includes setbacks ranging from 55 to 65 feet from the County definitional stream. While the remaining drainages are not County definitional streams and are therefore not subject to setbacks pursuant to NCC Section 18.108.025, the project biologist recommended avoiding them nonetheless. The project has been designed to maintain 25-foot setbacks from these drainages, offering additional protection. As proposed the project is in compliance with required stream setbacks. With implementation of the conditional of approval identified in **Section IV.c (Biological Resources)** of this Initial Study, the project will also be set back at least 50 feet from onsite wetlands.

The risk of potentially hazardous materials reaching or affecting adjacent water courses or other aquatic resources is significantly reduced because the project provides: i) buffers ranging from 25 to 85 feet from the onsite streams and drainages; ii) project staging and storage areas would be a minimum of 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 law. 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 Best Management Practices (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 water courses, 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 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 is located approximately 2.8 miles southwest in American Canyon (Napa County GIS schools layer). 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 is no impact.
- e-f. The closest public airport to the project site is Napa County Airport, approximately 2.2 miles west. All of the project except the very eastern edge of Blocks 21 and 22 is within an airport compatibility zone identified in the Airport Compatibility Plan (Napa County Airport Land Use Compatibility Plan, and Napa County GIS zoning layer). The project site is located in Zone E, Other Airport Environs, which normally allows for any permitted use, but does not normally allow amphitheaters, landfills, or ponds. Agriculture, including vineyard, is an allowed use within Zone E, and will not result in any safety hazard. Therefore, the project will result in less than significant impacts.
- g. There would be negligible numbers of workers visiting the parcel on a temporary basis for erosion control plan 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 to very high fire severity (Napa County GIS fire hazard severity zones layer). 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 project would not increase the exposure of people or structures to wild-land fires, resulting in no impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. <b>HYDROLOGY AND WATER QUALITY.</b> 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 type="checkbox"/>	<input checked="" 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 two sub-watersheds: Sheehy Creek and Fagan Creek, both of which are located within the Napa River watershed. Napa River is designated critical habitat for steelhead (Napa County GIS US Fish and Wildlife critical habitat layer). The Napa River is currently listed as an impaired waterbody for nutrients, pathogens, and sediment under Section 303(d) of the Clean Water Act (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).

In July 2018, 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 and otherwise impact aquatic life, 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 5 or more acres of vineyard located in either of these watersheds. The Napa River and Sonoma Creek Total Maximum Daily Loads (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 plan<sup>19</sup>”; implement the farm plan to achieve discharge performance standards; submit an annual reports 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 are associated with vineyard properties: 1) Vineyard soil erosion; 2) Off-site erosion caused by vineyard storm runoff increases; 3) Road-related sediment delivery; and 4) channel incision. Napa County Agricultural Erosions Control Plan (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 RWQCB<sup>20</sup>.

- 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 #P17-00276 includes BMPs that are consistent with County Code 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 ECP applicants to complete necessary water analyses in order to document that sufficient water supplies are available for the proposed project. The project proposes to irrigate the vineyard using recycled water provided by Napa Sanitation District (NSD). There is currently an Agreement for the Purchase of Recycled Water in place with NSD to supply water to the project parcel through 2022 (**Exhibit D**), at which time it will be renewed. The project site’s recycled water connection and distribution system is located along the western property line of project parcel APN 057-140-016 approximately 1,500 north of Jamieson Canyon Road, and consists of four (4) 6,000 gallon water tanks and a pump station. Main irrigation lines leading from the connection/distribution system provide irrigation to existing vineyard located on the project site (see **Exhibit D**). Recycled water will continue to supply irrigation for the existing vineyard. Typically, the annual irrigation season ranges from late May to September. Water use for frost protection is not proposed. The existing onsite residence, winery, and landscaping use water from a separate source as that proposed for the vineyard. Although there is an existing reservoir onsite, the water rights associated with that reservoir do not allow for irrigation use. Therefore, the water from this reservoir will not be used for this project.

A Water Demand and Water Availability Analysis (WAA) was prepared in order to determine if the proposed increase in water demand for this parcel would result in any significant impacts (Napa Valley Vineyard Engineering Inc., February 2018 - **Exhibit D**). Traditionally, the WAA estimates the onsite groundwater recharge, overall availability, and use, both existing and proposed in order to assess potential impact on groundwater, for project that rely on groundwater. However, because this project will not utilize groundwater, the Project’s WAA evaluates existing and proposed water use and availability based on the source, in this case recycled water supplied/provided by NSD. Under the terms of the agreement with NSD, the project parcels are allocated up to 85 acre-feet of recycled water per year.

The existing 125-acre vineyard requires 46.07 acre-feet per year (AF/year) for irrigation. The proposed project would result in approximately 31.43 AF/year of additional water usage due to the installation of new vineyard. Allowing .04 AF/year for other minor agricultural uses (such as stock watering), total water use at the project site is expected to be 77.55 AF/year (**Table 11**).

**Table 11 – Pre- and Post-Project Property Water use**

Property Water Use	Pre-project (acre-feet/year)	Post-project (acre-feet/year)
Vineyard	46.1	77.55

Source: Napa Valley Vineyard Engineering, Laird Jamieson Canyon Ranch, Water Demand and Availability Analysis, February 16, 2018.

Because the project will not utilize groundwater and projected water use is below the NSD recycled water allocation, there will be no direct, indirect, or cumulative impacts are anticipated to groundwater supply, groundwater recharge, local groundwater aquifer levels, or well interference or drawdown effects on nearby wells.

To ensure that the vineyard is irrigated with recycled water the following condition of approval shall be implemented, should be project be approved.

<sup>19</sup> A farm plan documents a vineyard property’s natural features, developed areas, and best management practices. 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.

<sup>20</sup> [https://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/agriculture/vineyard/](https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/agriculture/vineyard/)

**Recycled Water Management – Condition of Approval:**

- a. No new or existing on-site or off-site water sources, other than recycled water supplied by the Napa County Sanitation District shall be used for vineyard irrigation. Any other proposed irrigation source, including but not limited to groundwater wells, imported water, new or existing ponds/reservoir(s) or other surface water impoundments, to serve the vineyard, shall not be allowed without additional environmental review, if necessary, and may be subject to a modification to this ECPA.
  - b. The owner/Permittee shall provide documentation by June 30, 2022, and as necessary thereafter, demonstrating that the Napa Sanitation District has renewed the Agreement, including any modifications thereto.
- 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 grassland 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 will assist in minimizing the potential for increased erosion and water runoff include a no-till cover crop with vegetative cover density of 80% (including vegetated and/or rock surfaced vineyard avenues and turn spaces), and the annual application of straw mulch cover on all seeded and disturbed areas at a rate of 2 tons per acre. These features will 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, D, and E** for details related to the following discussion.

Proposed erosion control and project features that have the potential to alter natural drainage patterns include water bars and straw wattles. Straw wattles (i.e., fiber roll sediment barriers) 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. Fiber roll sediment barriers are spaced according to the Universal Soil Loss Equation (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 fiber roll sediment barriers would have a negligible effect on existing drainage patterns in that they would not alter the existing topographic contours of the site.

The project site is contained within eight watershed basins. Six of these basins drain to Sheehy Creek via shallow concentrated surface flow and various drainages, while two of these basins drain to Fagan Creek. The Hydrologic Analysis utilized Technical Release 55 (TR-55) Runoff Model to conclude that there would be a decrease in peak flow (**Table 12**). 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 off-site erosion, siltation, or flooding.

Furthermore, pursuant to NCC Section 18.108.135, 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.

**Table 12 – Hydrologic Modeling Calculations (TR-55) Results: Runoff Rates**

	Peak Discharge Flow (cfs) by 24-hour Storm Event Frequency Return Interval (cubic feet/second)					
	2-year	5-year	10-year	25-year	50-year	100-year
<b>Watershed 1</b>						
Pre-project conditions	6.07	9.82	13.07	17.94	21.7	25.7
Post-project conditions	5.16	8.73	11.88	16.67	20.4	25.7
Change (cfs)	-0.91	-1.09	-1.19	-1.27	-1.3	0
Change (%)	-14.99%	-11.10%	-9.10%	-7.08%	-5.99%	0.00%
<b>Watershed 2</b>						
Pre-project conditions	4.19	7.22	9.91	14.01	17.21	20.64
Post-project conditions	4.19	7.22	9.91	14.01	17.21	20.64
Change (cfs)	No Change					
Change (%)						
<b>Watershed 3</b>						
Pre-project conditions	42.31	68.13	90.39	123.77	149.52	176.88
Post-project conditions	41.29	66.97	89.11	122.43	148.16	175.53
Change (cfs)	-1.02	-1.16	-1.28	-1.34	-1.36	-1.35
Change (%)	-2.41%	-1.70%	-1.42%	-1.08%	-0.91%	-0.76%
<b>Watershed 4</b>						
Pre-project conditions	35.16	57.37	76.63	105.6	128.01	151.86

	Peak Discharge Flow (cfs) by 24-hour Storm Event Frequency Return Interval (cubic feet/second)					
	2-year	5-year	10-year	25-year	50-year	100-year
Post-project conditions	34.35	56.4	75.57	104.47	126.86	150.69
Change (cfs)	-0.81	-0.97	-1.06	-1.13	-1.15	-1.17
Change (%)	-2.30%	-1.69%	-1.38%	-1.07%	-0.90%	-0.77%
<b>Watershed 5</b>						
Pre-project conditions	8.09	13.1	17.42	23.91	28.92	34.24
Post-project conditions	7.28	12.13	16.37	22.79	27.78	33.1
Change (cfs)	-0.81	-0.97	-1.05	-1.12	-1.14	-1.14
Change (%)	-10.01%	-7.40%	-6.03%	-4.68%	-3.94%	-3.33%
<b>Watershed 6</b>						
Pre-project conditions	0.71	1.18	1.59	2.21	2.69	3.21
Post-project conditions	0.63	1.08	1.49	2.1	2.58	3.09
Change (cfs)	-0.08	-0.1	-0.1	-0.11	-0.11	-0.12
Change (%)	-11.27%	-8.47%	-6.29%	-4.98%	-4.09%	-3.74%
<b>Watershed 7</b>						
Pre-project conditions	0.87	1.52	2.09	2.98	3.67	4.42
Post-project conditions	0.71	1.32	1.87	2.73	3.41	4.15
Change (cfs)	-0.16	-0.2	-0.22	-0.25	-0.26	-0.27
Change (%)	-18.39%	-13.16%	-10.53%	-8.39%	-7.08%	-6.11%
<b>Watershed 8</b>						
Pre-project conditions	11.66	18.86	25.09	34.44	41.65	49.33
Post-project conditions	11.66	18.86	25.09	34.44	41.65	49.33
Change (cfs)	No Change					
Change (%)						

Source: Napa Valley Vineyard Engineering, Laird Family Vineyards Jamieson Vineyard, January 25, 2018

- 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) above, no increase in runoff volume or 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 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 project would not have an adverse impact on water quality because the project ECPA has been designed to keep polluted runoff and sediment from leaving the project area and project site. As discussed in **Section VIII (Hazard 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, herbicides, pesticides) 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 plan 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 will also minimize the amounts of chemicals that could affect on- or off-site 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 37.9%, have no effect on runoff rates, and maintain project site drainage characteristics as compared to existing conditions. Additionally, the project ECPA includes BMPs that are consistent with NCC Section 18.108.080C, 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. Therefore, the proposed project as designed with incorporation of mitigation measures and standard conditions would not adversely affect the water quality of the site or downstream receptors, resulting in less than significant impacts to water quality.

While the project is not anticipated to adversely affect water quality directly, the extensive existing and proposed access/road system including vineyard avenues and turn spaces (approximately 2.4 miles) which are located immediately adjacent to these streams and drainage courses, that are necessary to develop and operate the vineyards, has the potential to deliver sediment to adjacent drainages and water courses that traverse the project parcels (i.e. Blue-line streams and Waters of the U.S. and/or State). Other project components that could deliver sediment to drainages due to the project's proximity to on-site and off-site drainages identified herein include, necessary access improvements (such as rock stabilization, access creation and widening, and water course crossing improvements and creation

(See **Table 4 Section IV – Biological Resources**), and an increase in the intensity of use of these roads as a result of the project. This is of particular concern at watercourse crossings, vineyard avenues and turn spaces located on steeper slopes (16 to 24% slope), and at other potential pollutant sources. In the proximity of the existing crossing between Vineyard Bocks 17 and 18, a stockpile of tires was utilized in the past as a method of bank stabilization. These tires and their continued use and reliance to provided long term bank stabilization within the project parcels is considered a potential pollutant source that could adversely impact water quality within Fagan And Sheehy Creeks and the Napa River Watershed. These project components in conjunction with perpetuation of existing site conditions that could pose a threat to water quality are considered potentially significant indirect and cumulative impacts of the project. Also see the discussion, disclosures, and analysis under **Section IV.b (Biological Resources)** for additional information on this topic.

Furthermore, as designed the ECPA may not be in compliance with the Farm Plan requirements for vineyard properties in the Napa River watershed recently adopted by the San Francisco Bay Regional Quality Control Board (Order #R2-2017-0033) because of the aforementioned reasons and existing site conditions. To reduce potentially significant indirect impacts to water quality to a less than significant level and achieve compliance with the Farm Plan requirements, **Mitigation Measure HWQ-1** in conjunction with **Mitigation Measure BR-3** and the **Creek Re-vegetation Condition of Approval** (see **Section IV.b Biological Resources**) shall be implemented to reduce potential indirect and cumulative impact of the project and ongoing operation.

**Measure HWQ-1:** The owner/permittee shall revise Erosion Control Plan #P17-00276-ECPA prior to approval to include a Road and Drainage Assessment and Improvement Plan to minimize indirect impacts to water quality as a result of the project and ongoing operations. The Road and Drainage Assessment and Improvement Plan shall be submitted to the Planning Department for review and approval prior to its incorporation into #P17-00276-ECPA, and include the following:

- a. An assessment of the existing road and drainage system and the extent of anticipated road improvements and grading necessary for the road system to adequately support the proposed agricultural development and ongoing operations, and best management practices necessary to maintain or improve current hydrologic conditions and related soil loss and sedimentation.
- b. A plan that identifies roads to be utilized year round, seasonally, or that are to be abandoned. The plan shall include Best Management Practices to be implemented on all roads to minimize soil loss and associated sedimentation to achieve compliance with San Francisco Bay Regional Quality Control Board Order #R2-2017-0033. The plan shall identify necessary cover treatments or all weather surfacing (i.e. vegetative, rock, or paved) for roads within the parcel. For roads that will be abandoned, repair and re-vegetation specifications and details shall be provided.
- c. Specific to existing bank stabilization within the project parcels that are potential pollutant sources, such as but not limited to tires, the plan shall identify those areas and include removal, stabilization, and restoration procedures for those areas acceptable to the county and consistent with County and CDFW practices.
- d. Prior to construction and installation of stream crossings associated with #P17-00276-ECPA (as identified in **Mitigation Measure BR-3**) and/or bank restoration required pursuant to this measure, the owner/permittee shall obtain all required authorizations and/or permits from agencies with jurisdiction over Waters of the U.S. or the State, such as but not limited to: a Section 404 Nationwide Permit from the US Army Corps of Engineers (USACE), or a Section 1602 Lake and Streambed Alteration Agreement (LSAA) from the California Department of Fish and Wildlife (CDFW).

Therefore, the proposed project as designed with incorporation of **Mitigation Measures HWQ-1**, **Mitigating Measure BR-3**, and identified conditions 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 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. <b>LAND USE AND PLANNING.</b> Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

### Discussion

- a. The proposed project and subsequent vineyard operations would not physically divide an established community. The nearest established community is the City of American Canyon, approximately 2.5 miles southwest, on which development of the proposed vineyard on the project parcel would have no impact.
- b. Surrounding land uses consist predominantly of mostly undeveloped lands to the north, vineyards and undeveloped land to the east, vineyards to the south, and Sanitation District spray/leach fields and industrial park to the west. The Jamieson Canyon Water Treatment Plant lies between the northern and southern portions of the project. 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 **Section VI (Geology and Soils)** and **Section IX (Hydrology and Water Quality)**, the project would not increase soil loss, sedimentation, or runoff as compared to existing conditions, thereby minimizing negative effects to water quality.
- With implementation of **Mitigation Measures BR-1 and BR-2** and the tree/woodland and creek protection 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.
- The project as proposed would not remove any woodlands or trees, and with implementation of the Tree/Woodland Protection and Creek Revegetation conditions of approval, which protects and restores woodland adjacent to the project site, the project is consistent with General Plan Conservation Element Goal CON-6.
- With implementation of **Mitigation Measures BR-1, BR-2**, and the tree/woodland and creek protection 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 .
- With implementation of **Mitigation Measures BR-3 and BR-4**, the project is consistent with Policy CON-30, which requires projects avoid impacts to wetlands where feasible, and mitigate unavoidable impacts.
- As proposed, the project is consistent with CON-16, which requires discretionary projects prepare an evaluation of biological resources. A Biological Resource Survey was prepared for the project (**Exhibit B**).
- The project as proposed is consistent with Policy CON-18, which encourages the reduction of impacts to habitat conservation and connectivity. The project includes a small amount of new fencing and the Biological Resource Survey concluded that the project site does not represent an important wildlife corridor.
- 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 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, 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.

Furthermore, as discussed in **Section I (Aesthetics)**, while no new water storage tanks are proposed as part of the project, the location of any future water tanks would be limited to the vineyard development areas (or project area) prescribed in the ECPA, and be subject to the

setback requirements pursuant to Napa County Code (NCC) Section 18.104.140 and Viewshed Protection Program pursuant to NCC Chapter 18.106. These provisions will be included as conditions of approval should the proposed project be approved.

- 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. <b>MINERAL RESOURCES.</b> 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 does not take place in the area of a known mineral resource of value to the region or state or within the area of 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 approximately 2.5 miles northwest. 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. <b>NOISE.</b> 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>

**Discussion**

a-c. The project site is located in a rural setting where surrounding parcels are generally planted with vineyards and wineries or undeveloped. The nearest offsite residences to the project site are approximately 1,500 feet from the project.

Activities associated with installation of the project, including earthmoving, and subsequent vineyard operations, including wind machines for frost protection, could generate noise levels above existing conditions. Several different types of equipment would be necessary for

implementation and operation of the proposed project, including bulldozer, excavator, dump truck, trencher, backhoe, and small trucks. **Table 13** characterizes typical equipment noise levels at a reference distance of 50 feet. Equipment used for vineyard development could produce a maximum of 89dBA at a distance of 50 feet.

**Table 13 – 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 14** characterizes the typical reduction in construction equipment noise levels as the distance increases from the source, based on a source noise level of 90dBA.

**Table 14 – Estimated Distance to dBA Contours from Construction Activities <sup>1</sup>**

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

<sup>1</sup> Based on a source noise level of 90 dBA

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

Based on distances to existing residences, noise associated with project construction would be between 50 and 55 dBA at the nearest existing offsite residence.

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 on-going 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. The project also proposes the use of wind machines for frost protection, which would run for approximately 6 hours (12:00 a.m. to 6:00 a.m.) approximately 6 times per year. **Table 15** 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 15 – Estimated Distance to dBA Contours from Farming Activities <sup>1</sup>**

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

<sup>1</sup> 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 ongoing agricultural activities would be 50 dBA at the closest existing off-site 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 on-going (or established use) noise levels of approximately 55 dBA as compatible with residential uses (NCC Section 8.16.070). As the closest offsite resident will experience construction noise levels less than 60 dBA and ongoing noise levels 50 dBA or less, noise and vibration impacts associated with project development and operation are anticipated to be less than significant. 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.

Furthermore, these noise sources and levels are considered typical and reasonable for agricultural development and operational activities, consistent with the County's 'Right to Farm' (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.

- 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. All of the project except the very eastern edge of Blocks 21 and 22 is within an airport compatibility zone identified in the Airport Compatibility Plan (Napa County Airport Land Use Compatibility Plan, and Napa County GIS zoning layer). The project site is located in Zone E, Other Airport Environs, which normally allows for any permitted use, but does not normally allow amphitheaters, landfills, or ponds. Agriculture, including vineyard, is an allowed use within Zone E. The project will not result in a substantial increase in the number of people onsite, and therefore will not expose people to excessive noise. Impacts are less than significant.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XIII. POPULATION AND HOUSING.</b> 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 project involves earthmoving 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, business, roads, or infrastructure (water, sewer, utility lines) that would directly or indirectly induce population growth. Construction and installation activities of the proposed project would generate employees to the property on a temporary basis, and ongoing vineyard operation and maintenance would generate employees to the property on a permanent basis. 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. 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
<b>XIV. PUBLIC SERVICES.</b> 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 already provided to the 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. <b>RECREATION.</b> Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**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 project does 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. <b>TRANSPORTATION/TRAFFIC.</b> 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 parcel is developed with a winery, residence, water storage reservoirs, access drives, and vineyards. The proposed project is expected to generate approximately 20-25 one-way trips per day during construction and installation, for anticipated work crews of about 20 employees and about 3 truck trips for materials/equipment. Vehicles traveling to and from the project site are expected to carry two 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 will occur 20 days of the year and is anticipated to generate 40 daily employees, resulting in approximately 40 one-way trips per day. Weed control will occur in February and June and is anticipated to generate 6 daily employees, resulting in approximately 6 one-way trips per day during that time. Harvest is anticipated to generate up to 200 daily employees resulting in approximately 200 one-way trips per day, including grape haul trucks; harvest is anticipated to last 60 days. Much of this traffic would already exist onsite due to the similarly sized existing vineyard. Activities will be coordinated such that employees traveling to and from the project site are likely to work on both vineyards. Vehicular equipment for ongoing vineyard maintenance is anticipated to include ATVs, tractors, 5- to 24-ton grape haul trucks, truck and equipment trailers, and passenger cars and/or light trucks. Construction traffic would be intermittent throughout 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, is anticipated to be intermittent during the non-peak hours, generally arriving around 6 a.m. and departing around 3 p.m.

The southern portion of the project site (Blocks 21 and 22) is accessed directly off of Kirkland Ranch Road, approximately 0.3 mile north of its eastern intersection with State Highway 12 (aka. Jameson Canyon Road). The northern portion is accessed by a private road off of Kirkland Ranch Road, approximately 700 feet from its western intersection with State Highway 12. The closest road for which traffic data is available is State Highway 12. The Average Daily Traffic (ADT) volume for the segment of State Highway 12 closest to the project site is 28,597 vehicles. Peak hour traffic volume is approximately 2,338 vehicles. Daily and peak hour traffic capacity for this segment of State Highway 12 is approximately 40,300 and 4,030 vehicles respectively, which operates at a Level of Service (LOS) D for daily traffic and LOS C for peak hour traffic (Napa County Baseline Data Report Version 1, Nov., 2005; Transportation and Circulation Technical Report, Fehr & Peers 2003).

Anticipated increases in traffic on State Highway 12 based on given project activities are shown in **Table 16**. 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<sup>21</sup> to provide the most conservative assessment of potential impacts.

**Table 16 – Potential Increases in Traffic Volumes**

Project Activity	Project Trips	Daily			Peak		
		Existing	With Project	% Increase	Existing	With Project	% Increase
Vineyard Development	25	28,597	28,622	0.09%	2,338	2,363	1.07%
Ongoing Vineyard Operation	40	28,597	28,637	0.14%	2,338	2,378	1.71%
Harvest	200	28,597	28,797	0.70%	2,338	2,538	8.55%

Sources: Napa County Baseline Data Report Version 1, Nov., 2005; Transportation and Circulation Technical Report, Fehr & Peers 2003

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 will generally occur during non-peak hours, and that many 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 State Highway 12. 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 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 for project development (**Figures 1-3, Exhibit A**). Access is via Kirkland Ranch Road. The project does not include roadway improvements and/or modifications to the existing private road or Kirkland 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, there would be a less than significant impact of the project creating or substantially increasing hazards.
- e. The existing roads would continue to provide adequate emergency access to the project site and project area, resulting in no impact.
- f. The project would generate its largest demand for parking (approximately 200 vehicles) during harvest period, which lasts approximately 60 days. Current County ordinances do not require formal parking for agricultural projects. Parking within the proposed staging area and/or along proposed vineyard avenues would satisfy parking demands of project installation and subsequent vineyard operations. Therefore no parking impacts are anticipated.

<sup>21</sup> Generally considered to be between 6 a.m. to 9 a.m. and 3 p.m. to 7 p.m.,

- 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
<p>XVII. <b>TRIBAL CULTURAL RESOURCES.</b> Would the project:</p> <p>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:</p>				
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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Discussion**

The project archeologist (Tom Origer and Associated) notified the following entities of the proposed project in September 2016: the Native American Heritage Commission (NAHC), the Cortina Band of Indians, Middletown Rancheria of Pomo Indians, the Mishewal-Wappo Tribe of Alexander Valley, and the Yocha Dehe Wintun Nation. No responses were received from the Cortina Band of Indian or the Mishewal-Wappo Tribe of Alexander Valley. The Middletown Rancheria of Pomo Indians provided a response dated November 30, 2016 indicating they had no specific comments, and the Yocha Dehe Wintun Nation provided a response dated October 18, 2016 indicating that they have a cultural interest in the project and requested a site visit to evaluate cultural concerns.

On August 2, 2017, 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. Middletown Rancheria replied, in a letter dated August 7, 2017, indicating that they had no specific comments. Yocha Dehe Wintun Nation replied to the County’s notification, in a letter dated August 23, 2017, stating that the project is within the aboriginal territories of the Tribe, and therefore the tribe has a cultural interest in the area. They therefore recommended the inclusion of cultural monitors during ground disturbance (see discussion below for additional details). On September 14, 2017, the County sent notification to the Middletown Rancheria and Yocha Dehe closing the consultation invitation because neither tribe requested consultation within the 30 day notification period (these closure notices also acknowledged receipt of their response letters and comments). On September 22, 2017, the County sent notification to the Mishewal-Wappo Tribe of Alexander Valley closing the consultation invitation, because more than 30 days had elapsed since confirmed receipt of the County’s August 2, 2017 consultation invitation.

- a-b. As discussed in **Section V (Cultural Resources)** the Projects’ Historical Resources Study (Tom Origer & Associates, November 2016) historic or archaeological resources were not identified onsite, therefore no resources listed or eligible for the California Register of Historical Resources (CRHR) are present and impacts to archaeological resources as a result of the proposed project are considered to be less than significant. Furthermore, no resources that may be significant pursuant to Public Resources Code Section 5024.1(c) have been identified or are anticipated onsite. The Cultural Resources condition of approval discussed in **Section V (Cultural Resources)** will avoid and reduce potential impacts to unknown resources.

However, as noted above, the Yocha Dehe Wintun Nation has concluded that the project site is within their aboriginal territories, therefore having a cultural interest and authority in the proposed project area. The Yocha Dehe Wintun Nation has recommended a cultural monitor be present onsite during earthwork, particularly during trenching and excavation activities, to further reduce the likelihood that tribal cultural resources, if present, would be significantly affected. Based on Yocha Dehe’s recommendation, project approval, if granted, would be subject to the following condition to avoid potential unanticipated tribal cultural resource impacts.

**Tribal Cultural Resources - Condition of Approval:** Prior to the commencement of construction of #P17-00276-ECPA, 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.

As such, the project, with incorporation of this Tribal Cultural Resources Condition of Approval and the Cultural Resources Conditions of Approval specified in **Section V (Cultural Resources)**, will result in less than significant impacts to Tribal Cultural Resources, including those that may be eligible for the CRHR or local register or cultural resources as defined in Public Resources Code Section 5024.1(c).

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XVIII. UTILITIES AND SERVICE SYSTEMS.</b> Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 project would not result in the construction or expansion of a water or wastewater treatment facility because it would not generate wastewater and an existing pipe to recycled water would provide irrigation water to the vineyard, resulting in no impact.
- c. The proposed project involves the installation of a limited number of on-site storm water drainage features. These features include 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 100.7 acres of vineyard (approximately 82.3 net acre) would be supplied by an existing on-site pipe providing recycled water. Therefore, the project would have a less than significant impact on water supplies. Discussion of water availability and water use is discussed in greater detail in **Section IX (Hydrology and Water Quality)**.
- e. The project generates no wastewater that would require treatment, resulting in no impact on wastewater treatment providers.
- f. Implementation of the project would have no impact on existing landfills because the only significant solid waste generated by the project is 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, or used in erosion control measures (e.g., rock energy dissipaters) or surfacing vineyard avenues. 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 applicant/owner would be required to compliance with these regulations, to the extent that they apply to agricultural projects, which will ensure that the project would have no impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XIX. MANDATORY FINDINGS OF SIGNIFICANCE.</b> 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 conditions of approval.

- a. As discussed in **Section IV (Biological Resources)**, implementation of the project ECPA with mitigation measures and conditions of approval incorporated would not have the potential to significantly degrade the quality of the environment. No special status species were identified within the project site. **Mitigation Measures BR-1 and BR-2** would avoid any potential indirect impacts to special-status bird species that may utilize tress/woodland adjacent to or within the project areas for nesting or roosting. The project as proposed avoid tree and woodland removal, and with incorporation of the Tree/Woodland Protection condition the project would avoid any potential indirect impacts to trees and woodland. Therefore, the project would not contribute to a cumulatively significant impact to special-status plants and animals or habitats.

**Mitigation Measures BR-3 and BR-4** will protect the drainages and wetlands found onsite. Given the current degraded habitat quality of the site, and that the surrounding undeveloped land would allow for easy circumnavigation of the parcel by wildlife, especially north and east of the project parcel where more wildland is likely associated with more wildlife, adequate wildlife movement corridors and habitat will be maintained. No cultural resources or examples of California history or prehistory have been identified within the project area, and with incorporation of standard conditions to protect cultural resources that may be discovered accidentally, significant impacts to cultural resources are not expected [see **Section V (Cultural Resources)** and **Section XVII (Tribal Cultural Resources)**]. Therefore, with the incorporation of identified mitigation measures and conditions of approval, the proposed vineyard development project would have a less than significant potential to degrade the quality of the environment.

- b. As discussed in **Section IX (Hydrology and Water Quality)**, the property is located across two drainages: Sheehy Creek and Fagan Creek. In 1993, vineyard acreage within these drainages was 76.3 (2.8%) and zero acres, respectively. Since 1993 approximately 157.6 and 449 acres, respectively, of additional vineyard have been developed in the drainages. Currently 8.62% of the Sheehy Creek drainage and 10.7% of the Fagan Creek drainage have been converted to vineyard. There are no pending ECPA application in either drainage. These drainages include 9 approved wineries/production facilities, with a total annual production limit of 50.1 million gallons. There is one pending winery use permit applications or known water rights applications on file within these drainages.

Based on evaluation of the County's GIS layer identifying Potentially Productive Soils (PPS) within the drainages, there is approximately 938 acres (34.6% of the drainage) with the potential to be developed into vineyard within the Sheehy Creek drainage and 910 acres (21.7%) in the Fagan Creek 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 other factors influencing vineyard development, such as sun exposure, soil type, water availability, or economic factors.

While it is impossible to precisely quantify the acreage and location of additional vineyard development in this drainage in the future, it is possible to make a conservative estimate based on previous trends. To estimate the amount of reasonably foreseeable vineyard that may be developed over time, the acreage of vineyard development including approved vineyard projects in the cumulative environment (i.e., within the drainages) over the last 25 years (1993-2018) was used to project vineyard development for the next three to five years. Across the two drainages, 682.9 acres were developed into vineyard over the 25-year period, or about 27.3 acres per year. Based on this rate, about 136.6 acres of vineyard are expected to be developed in the two drainages in the next 5 years.

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 136 acres over the next five years within the two drainages is considered a reasonable estimate. NCC Chapter 18.108 includes policies that require setbacks of 35 to 150 feet from watercourses (depending on slopes), and General Plan Conservation Element Policy CON-24c requires the retention of oak woodland at a 2:1 ratio. These regulations limit the amount of potential vineyard acreage that could be converted within the watershed. In the County's experience, ECP projects generally involve site-specific issues, such as oak woodland preservation, wetlands and other aquatic features, special-status plant and animal species, or cultural resources, which further reduce areas that can be developed. Additionally, the vineyard acreage projections for the next five years do not consider environmental factors that influence vineyard site selection, such as sun exposure, soil type, water availability, slopes greater than 30%, or economic factors such as land availability, cost of development, or investment returns.

#### **Air Quality and GHG – Sections III and VII:**

The project 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. BAAQMD recommends that significance of impacts related to construction-related dust be based on the consideration of the control measures to be implemented (BAAQMD 2017). As discussed in **Section III (Air Quality)** and shown in **Table 3**, 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 that require implementation of Air Quality BMPs to further reduce potential adverse air quality effects of the project. Conversion of grassland and disturbance of soil would result in releases of carbon dioxide (**Tables 7-8**). 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., its scope and scale) and implementation of standard conditions of approval.

#### **Biological Resources – Section IV:**

A project-specific Biological Resource Survey (Kjeldsen Biological Consulting, 2016) was performed for the project to evaluate potential habitat loss and disturbance to plant and wildlife species as a result of the project. The survey included a records search to identify the presence or potential presence of special-status species within the project area. The records search included California Natural Diversity Database (CNDDDB) and the CNPS database. As discussed in **Section IV (Biological Resources)**, potential indirect impacts to special-status birds will be less than significant with incorporation of **Mitigation Measures BR-1** and **BR-2**. Potential impacts to streams, wetlands, and water of the U.S., and associated water quality will be less than significant with incorporation of **Mitigation Measures BR-3** and **BR-4**. There would be no potential impacts to oak woodland because the project as proposed does not remove any oak trees or woodland. Given that minimal new fencing is proposed and lands to the north and east are undeveloped and available for wildlife movement and use, adequate wildlife movement corridors and habitat have been maintained. Therefore, the project would not contribute to a cumulatively significant impact to special-status plants and animals or habitats.

#### **Geology and Soils – Section VI:**

Soil loss and associated sedimentation resulting from implementation of the proposed project is anticipated to be approximately 37.9% less than existing conditions (**Table 6**). The reasons for this reduction are increased vegetative cover conditions within the proposed vineyard development areas and the installation of straw wattles and water bars that reduce overland flow velocities and erosive power, and trap eroded soil on-site, thereby reducing soil loss potential. 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 Sheehy Creek and Fagan Creek drainages. Therefore, impacts associated with soil loss and sedimentation are not considered cumulatively significant.

Because geologic impacts associated with future agricultural projects would receive the same scrutiny under CEQA, and would be in agreement with 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 by the applicant indicate that the proposed vineyard would use approximately 31.43 AF/year of water, and the existing vineyard uses approximately 46.07 AF/year, totaling approximately 77.55 AF/year of water use, allowing for .04 AF/year in miscellaneous use (**Table 11**). The vineyard will be irrigated with recycled water provided by the Napa Sanitation District. Therefore, 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 on both a project-specific and cumulative basis.

As discussed in **Section IX (Hydrology and Water Quality)**, the hydrologic modeling was performed to evaluate the project's impact on runoff. 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 E**). Therefore no significant impacts due to changes in hydrology are expected, and peak runoff rates are unchanged by the project.

Avoiding increases in runoff rates is consistent with General Plan Conservation Element Policy CON-50(c), which requires peak runoff following development is less than or equal to 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 off-site erosion, siltation, or flooding.

Furthermore, because hydrologic impacts associated with future agricultural projects would receive the same scrutiny under CEQA and County General Plan Conservation Element 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 County Code 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 impacts considered to be less than significant as a result of the project: Aesthetics, Agricultural Resources, Cultural Resources, Hazards and Hazardous Materials, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation/Traffic, Tribal Cultural Resources, and Utilities and Service Systems. The periodic use of lighting and vehicles would not create a substantial source of light or 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 known 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, and therefore noise impacts are 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 cumulatively considerable. The project does not include the construction of structures that would result in population growth or displacement of people, and as such the project would not adversely impact current or future public services, or require the need to utilities and service systems. No cultural resources, tribal cultural resources, or examples of California history or prehistory have been identified within the project area.

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, is not anticipated to result in either project specific or cumulatively considerable adverse 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 an Agricultural Watershed zoning district. Therefore, less than significant impacts on human beings are anticipated.

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- Figure 1 Site Location Map
- Figure 2 Project Site with Aerial Image 2016
- Figure 3 Project Site and Project Area with Aerial Image 2016

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- Table 3 Emissions from Vineyard Development and Operations
- Table 4 Proposed Stream Crossing Improvements
- Table 5 Plant Communities/Vegetation Alliances
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- Table 7 Estimated Project Site Carbon Stocks/Storage
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- Table 14 Estimated Distance to dBA Contours from Construction Activities
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**LIST OF EXHIBITS:**

- Exhibit A Agricultural Erosion Control Plan #P17-00276-ECPA
- Exhibit B-1 Biological Resource Survey
- Exhibit B-2 Addendum to Biological Resource Survey
- Exhibit C Soil Loss (USLE) Analysis
- Exhibit D Water Availability and Use Analysis
- Exhibit E Hydrological Analysis
- Exhibit F-1 Engineering Geological Evaluation
- Exhibit F-2 Engineering Geological Evaluation Response/Addendum
- Exhibit G Project Revision Statement