

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

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

1. **Project Title:** Darioush Estates Curry Lane Vineyard Erosion Control Plan Application (ECPA) #P18-00442-ECPA
2. **Property Owner(s):** DK 2014 LLC
3. **Contact Person, Phone Number and Email:** Donald Barrella, Planner III, (707) 299-1338, Donald.Barrella@countyofnapa.org
4. **Project Location and APN:** 2100 Curry Lane, Napa, CA 94559, APN 045-380-010 (**Figures 1 and 2**)
5. **Project Sponsor:** Darioush Estate
Attn.: Hope Goldie
4240 Silverado Trail
Napa, CA 94558

Agent: James R. Bushey (Registered Professional Engineer No. 49931)
PPI Engineering
2800 Jefferson Street
Napa, CA 94558

6. **General Plan Description:** Agriculture, Watershed and Open Space (AWOS)

7. **Zoning:** Agricultural Watershed (AW)

8. **Description of Project:**

The proposed project involves the clearing of vegetation, earthmoving, and installation and maintenance of erosion control measures associated with the development of approximately 8.3 gross acres of vineyard (i.e., development area, proposed clearing limits; approximately 5.8 net acres) within three vineyard blocks located on one 23.62-acre parcel (i.e., project site) (**Figure 3**). Block A would include approximately 4.3 gross acres (approximately 3 net acres), Block B would include approximately 2.2 gross acres (approximately 1.6 net acres), and Block C would include approximately 1.8 gross acres (approximately 1.2 net acres). Average slopes within the development area range from 15 percent (%) to 21% with approximately 0.3 acre on slopes over 30%. Approximately 183 trees with a diameter breast height (dbh) greater than 6 inches are proposed for removal, which includes predominately blue oak, as well as California buckeye, Northern black walnut, coast live oak, and Pacific madrone. Additionally, approximately 80 (abandoned) non-native European olive trees are proposed for removal. Rock removed during the clearing of the land would be crushed and used on existing roads where needed. There would be no transport of spoils off-site. Rock that is not used immediately would be stockpiled for future use inside the proposed clearing limits. Stockpiles are expected to be less than 20 feet in height. The vineyard would be irrigated via a drip irrigation system with reuse water provided by Napa Sanitation District. The northern portion of the project site is currently deer fenced. The proposed deer fence includes blocks fenced individually and in clusters where appropriate (**Exhibit A**).

Erosion Control Measures: Temporary erosion control measures include straw wattles and the application of straw mulch at a rate of 3,000 pounds per acre. Permanent erosion control measures include a permanent no-till cover crop maintained at a minimum vegetation cover density of 80%. Details of the proposed erosion control measures are provided in the Darioush Estate ECP #P18-00442-ECPA, dated July 2019, prepared by James R. Bushey (Registered Professional Engineer No. 49931) of PPI Engineering, Napa, California (**Exhibit A**).

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

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

- a. Installation of vineyard trellis and drip irrigation systems, and planting rootstock in a 4-foot by 7-foot spacing pattern for an approximate vine density of $\pm 1,555$ vines per acre.
- 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, and frost protection), weed control, cover crop mowing, irrigation and trellis system maintenance, and fruit harvesting. Pre-emergent herbicides would not be strip sprayed in the vinerows for weed management. Contact or systemic herbicides may be applied in the spring (no earlier than February 15) to ensure adequate vegetative cover in the spray strips for the remainder of the rainy season. The width of the spray strips would be no wider than 12 inches in order to achieve 80% vegetative cover.

Table 1 lists a general schedule for the construction of the proposed project as identified in #P18-00442 ECPA and **Table 2** outlines typical general ongoing vineyard operations. The final implementation schedule is pending action on #P18-00442-ECPA.

Table 1 – Implementation Schedule

April 1	Commence clearing and tillage operations.
October 1	All tillage and erosion control complete.
October 15 ¹	All winterization complete, including seeding, straw mulching, and straw wattle installation.

¹ 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 April	a. Prune vines. b. Weed control.
April to August	a. Sulfur application to protect against mildew. b. Mow cover crop. c. Weed control.
September to October	a. Harvest. b. Winterize vineyard and vineyard avenues.
November to April	a. Monitor and maintain erosion control measures and repair as necessary during rain events.

Implementation of the proposed project would be in accordance with the Darioush Estate ECP prepared by PPI Engineering (Revised July 2019- **Exhibit A**). The proposed project is further described in the application materials including the Supplemental Project Information sheets. All documents are incorporated herein by reference and available for review in the Napa County Department of Planning, Building and Environmental Services (PBES).

9. Describe the environmental setting and surrounding land uses.

The proposed project would occur on one parcel totaling approximately 23.62 acres located at 2100 Curry Lane in Napa, California (**Figures 1-3**). The parcel consists of 9.61 acres of developed area, including a residence, existing vineyards, associated outbuildings, access roads, and landscaping. Surrounding land uses include scattered residences, agriculture (e.g., vineyards), and undeveloped areas (naturally vegetated and/or wooded hillsides).

The project site is located approximately 2.3 miles east of the City of Napa and approximately 3.85 miles south of the unincorporated community of Vichy Springs. The project site is located within the Kreuse Creek watershed. There are two blue-line streams on the project site; runoff leaving the site drains toward the western edge of the site, toward Tulucay Creek and eventually drains into the Napa River, located approximately 2 miles west of the project site.

General topography of the area consists of hills on the eastern side of Napa Valley. The project site contains two narrow topographic swales. Slopes within the development area are gently to moderately sloped on generally northern-facing slopes, with elevations that range from approximately 150 to 240 feet above mean sea level (msl).

No potentially active faults have been mapped on the project site; the nearest active faults are an unnamed fault and West Napa Fault, 1.75 miles west of the project site and approximately 3.5 miles west of the project site, respectively. No landslides or areas of instability have been identified within the project site. Soils on the project site have been classified according to the Soil Survey of Napa County (USDA, 1978) as Haire Loam 2 to 9% slopes, Hambright Rock-Outcrop Complex 30 to 75% slopes, and Sobrante Loam 5 to 30% slopes (PPI Engineering, Revised July 2019 - **Exhibit A**).

The vegetation types in the area generally consist of non-native grassland, oak woodland, and vineyards and other developed lands. Vegetation types occurring within the project site consist of approximately 3.73 acres of non-native grassland, 6.74 acres of blue oak woodland, 3.3 acres of abandoned olive orchard, 9.61 acres of vineyard and developed areas, 0.32 acres of man-made ponds, and two blue-line streams (WRA, December 2018 - **Exhibit B-1**).

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 (Regional Water Board) (R)

Other Agencies Contacted

Middletown Rancheria
Mishewal Wappo Tribe of Alexander Valley
Yocha Dehe Wintun Nation

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

Notice of the proposed project was sent to Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, and Yocha Dehe Wintun Nation on January 29, 2019. On February 4, 2019, the County received a response letter from Middletown Rancheria indicating they have no specific comments at this time.

The County received response letters from Yocha Dehe Wintun Nation dated February 12 and March 12, 2019, indicating concerns that the proposed project could impact known cultural resources and recommending cultural monitors during development and ground disturbance. The Tribe also requested that the Cultural Resources Reconnaissance report be modified to indicate that in the event that archaeological materials are discovered during the development of this project, a Yocha Dehe Wintun Nation Tribal Cultural Monitor would be listed along with the archaeologist to evaluate the findings and recommend any mitigation measures, if necessary. On March 29, 2019, the County replied to the Yocha Dehe Wintun Nation letter indicating that the requested modification to the report would be incorporated into either a project specific mitigation measure or conditions of approval, and closing the consultation invitation because the Tribe did not request consultation within the 30-day notification period.

The Mishewal Wappo Tribe of Alexander Valley did not request consultation within the 30-day notification period, and because no response to the January 29, 2019 consultation invitation was received, on July 30, 2019, the County sent a consultation closure notice to the Tribe. This is discussed in detail in **Section XVIII (Tribal Cultural Resources)**.

ENVIRONMENTAL IMPACTS AND BASIS OF CONCLUSIONS

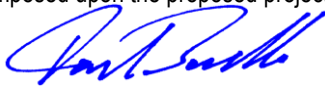
The conclusions and recommendations contained herein are professional opinions derived in accordance with current standards of professional practice. They are based on a review of the Napa County Environmental Resource Maps, the other sources of information listed in the file, and the comments received, conversations with knowledgeable individuals; the preparer's personal knowledge of the area; and, where necessary, a visit to the site. For further information, see the environmental background information contained in the permanent file on this project.

Other sources of information used in the preparation of this Initial Study include site-specific studies conducted by the applicant and filed by the applicant in conjunction with ECP #P18-00442-ECPA as listed below, and the environmental background information contained in the permanent file on this project. These documents and information sources are incorporated herein by reference and available for review at the Napa County Department of Planning, Building and Environmental Services located at 1195 Third Street, Suite 210, Napa, CA 94559:

- PPI Engineering, Revised July 2019, Original Submittal December 2018, Erosion Control Plan, Darioush Estate, 2100 Curry Lane (**Exhibit A**).
- WRA, Inc., December 2018, Biological Resources Reconnaissance Survey Report, 2100 Curry Lane, Napa County, California (APN: 045-380-010) (**Exhibit B-1**).
- WRA, Inc., May 31, 2019, Response to Comments (Biology) – Darioush Estate, Curry Lane Vineyard Agricultural Erosion Control Plan Application File No. P 18-00442-ECPA; 2100 Curry Lane, Napa, APN 045-380-010 (**Exhibit B-2**).
- PPI Engineering, December 13, 2018, Hydrologic Analysis, Darioush Estate Track I ECP, 2100 Curry Lane, Napa, CA 94558; APN 045-380-010 (**Exhibit C**).
- PPI Engineering, April 3, 2019, Revised Soil Loss Analysis, Darioush Curry Lane Track I ECP APN 045-380-010 (**Exhibit D**).
- Napa Sanitation District, October 15, 2019, Conditional Will Serve #83 Recycled Water, APN 045-380-010 (2100 Curry Lane – Darioush) (**Exhibit E**).
- Flaherty Cultural Resource Services, September 1, 2018, Cultural Resource Reconnaissance of 15+/- Acres Near Napa, Napa County, California.
- Site inspections conducted by Napa County Planning Division staff were completed on February 6 and August 12, 2019.
- Napa County Geographic Information System (GIS) sensitivity maps/layers.

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a (*SUBSEQUENT*) 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 (*SUBSEQUENT*) MITIGATED NEGATIVE DECLARATION will be prepared. Attached as **Exhibit F** 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

April 23, 2020
Date

Donald Barrella
Napa County
Planning, Building and Environmental Services Department

ENVIRONMENTAL CHECKLIST FORM

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Except as provided in Public Resources Code Section 21099, 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 public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<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 approximately 1.6 miles from Soscol Avenue and West Imola Avenue, the closest County viewshed roads. The site is not located on a prominent hillside, a major or minor ridgeline (Napa County GIS, Ridgelines Layer), or within a scenic corridor (Napa County GIS, Scenic Corridors Layer) and the closest minor ridgeline is located one mile to the south. There are no significant rock outcroppings or geologic features on the project site that would be impacted by the proposed project. Although trees would be removed with the proposed project (discussed in **Section IV [Biological Resources]** below), the project site is not visible from a state scenic highway, as there are no scenic highways in the area (Caltrans 2018 - http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm). Therefore, the proposed project would have a less than significant impact on a scenic vista, scenic highway, historic buildings, scenic trees, or rock outcrops for the reason described above.
- c. The proposed project would result in the removal of existing vegetation within the proposed development area and the development of vineyard. The proposed project is consistent with the Napa County AWOS land use designation and with adjacent land uses, which include other vineyards, wineries, and rural residential uses. Given these factors, the proposed project would not substantially degrade the existing visual character or quality of public views of the site or its surroundings, resulting in a less than significant impact.
- d. Proposed agricultural operations on the project site would require some lighted nighttime activities consistent with the nighttime activity already occurring on the project site and in the surrounding area, which includes vineyard and agricultural uses. Lighting would be in the form of headlights or downward direction lights on equipment being used during nighttime harvest. The proposed project would include harvest activities two to four times a year (typically occurring in September and October), that could include nighttime activity (typically from 10 p.m. to 6 a.m.). The proposed project would include sulfur applications (that could occur from 6 p.m. to 8 a.m.) approximately eight times per year. Although some nighttime activity would occur for limited periods, the proposed project would not introduce a new source of substantial light or glare, and the type of nighttime lighting would be consistent with surrounding land uses. Therefore, the proposed project would result in a less than significant impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide 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 checked="" type="checkbox"/>	<input type="checkbox"/>

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion

- a. The Napa County Important Farmland 2016 map prepared by the California Department of Conservation, Division of Land Resource Protection identifies the development area as Grazing Land; areas of Unique Farmland, Farmland of Statewide Importance, and Farmland of Local Importance are mapped in the project site. However, no development is proposed within these areas as they are outside of the proposed vineyard blocks. Therefore, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, resulting in a less than significant impact.
- b. The project site has a General Plan designation of Agriculture, Watershed and Open Space (AWOS) and is zoned Agricultural Watershed (AW). Therefore, the establishment of vineyard totaling approximately 8.3 gross acres (5.8 net acres) is consistent with project site's land use and zoning designations. The subject property does not have a Williamson Act contract associated with it. Therefore, the proposed project would not conflict with its land use designation or a Williamson Act contract resulting in no impact.
- c-d. "Forest Land" is defined in California Public Resource Code Section 12220(g) as "land that can support 10% 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." The project site does not contain forest land or coniferous forest (Napa County GIS; WRA October 2018). The project site is not zoned forest land as defined in Public Resource Code Section 12220(g), timberland as defined in Public Resource Code Section 4526, or a Timberland Production Zone (TPZ) as defined in Government Code Section 51104(g). Therefore, no impact would occur.
- e. The proposed project does not include the construction of roadways or other infrastructure that would result in the conversion of existing farmland or forestland in the area to non-agricultural or non-forestland uses. As such, the proposed project would not have an impact on agricultural or forest resources of Napa County.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district 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) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

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

On June 2, 2010, the Bay Area Air Quality Management District (BAAQMD) Board of Directors unanimously adopted thresholds of significance to assist in the review of projects under the California Environmental Quality Act (CEQA). These guidelines were updated in May 2017 to address the California Supreme Court's 2015 opinion in *Cal. Bkdg. Indus. Ass'n vs. Bay Area Air Quality Mgmt. Dist.*, 62 Ca 4th 369. These thresholds are designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA, and were posted on the BAAQMD website and included in the BAAQMD updated CEQA Guidelines (May 2012). The thresholds are advisory and may be followed by local agencies at their own discretion.

The thresholds were challenged in court. Following litigation in the trial court, the court of appeal, and the California Supreme Court, all of the thresholds were upheld. However, in an opinion issued on December 17, 2015, the California Supreme Court held that CEQA does not generally require an analysis of the impacts of locating development in areas subject to environmental hazards unless the proposed 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 proposed 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-b. The project site is generally located at the base of the hills bordering the eastern side of the Napa Valley southeast 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 and equipment necessary for ongoing vineyard maintenance. Refer to **Section XVII (Transportation)** for the anticipated number of construction- and operation-related trips.

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

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

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

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

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

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

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

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

Table 3 – Emissions from Vineyard Development and Operation

Emissions and Thresholds	Criteria Pollutants – Constituents			
	ROG	NO _x	PM _{2.5}	PM ₁₀
	Construction Emissions			
Pounds per day: 150-acre vineyard development¹	8.43 to 11.39	34.39 to 52.16	3.93 to 4.47	13.93 to 14.53
Pounds per day: 150- to 250-acre vineyard development²	9.43 to 11.03	43.85 to 53.16	3.91 to 4.62	12.87 to 17.22
Pounds per day: 127-acre vineyard development^{3, 4}	4.6	42.3	5.21 ⁴	24.21 ⁴
Construction threshold	54	54	54	82
Operational Emissions				
Pounds per day: 400-acre vineyard operation¹	7.78	2.85	0.80	4.22
Pounds per day: 560-acre vineyard operation²	6.58	1.84	0.75	3.91
Pounds per day: 507-acre vineyard operation³	4.3	22.3	1.4	2.3
Operational threshold (lbs/day)	54	54	54	82
Tons per year (Metric)^{1, 5}	0.78	0.35	0.11	0.58
Operational threshold (tons per year)	10	10	10	15

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

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

Because the proposed project's 8.3 gross acre vineyard (approximately 5.8 net-planted acres) is smaller than any of the projects presented above, construction and operational emissions from the proposed project that could negatively affect air quality are expected to be less than those identified in **Table 3** and therefore below identified thresholds. Additionally, project approval, if granted, would be subject to the standard Air Quality condition described below, which includes standard air quality and construction best management practices (BMPs) consistent with BAAQMD measures identified in Table 8-1 of the CEQA Guidelines that would further reduce potential air quality impacts associated with construction and ongoing operation of the proposed project. These BMPs would be incorporated into the proposed project.

Air Quality – Conditions of Approval: The owner/permittee shall implement the following air quality BMPs during construction activities and vineyard maintenance and operations:

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

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

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

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

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

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

Installation of the proposed project is expected to generate emissions that are below the thresholds presented in **Table 3**, would contain other features that minimize fugitive dust (such as vineyard cover crop), and would introduce fewer new vehicle trips than the projects shown in **Table 3** during both installation and operation (see **Section XVII [Transportation]** for anticipated project trips). Therefore, implementation of the proposed project would result in less than significant air quality impacts, and it would not conflict with or obstruct implementation of an air quality plan or result in cumulatively considerable effects.

c-d. 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 site include vineyards, undeveloped land, and rural residential. The project site consists of approximately 23.62 acres of land with 9.61 acres of developed areas, including one residence and existing vineyard. The closest school (Camille Creek Community School) is located approximately 0.75 mile west of the project site in Napa (Napa County GIS, Schools Layer). The closest offsite residences are located approximately 60 feet to the west, and approximately 400 feet to the northeast of the development area. The closest residential area (Napa) is approximately 0.7 mile west of the project site.

During installation of the ECP, vineyard planting, and subsequent vineyard operations, airborne pollutants and odors would be created through the use of grading and farm equipment (e.g., tractors, trucks, and ATV's). These sources would be temporary and/or seasonal in nature and would occur 0.75 mile from the closest school and 0.7 mile from the closest residential neighborhood, providing dilution of pollutants and odors. For the reasons identified above, the proposed project would not expose sensitive receptors or a substantial number of people to pollutants or objectionable odors, resulting in a less than significant impact.

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

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

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

- 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?
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Discussion

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

- WRA, Inc., December 2018, Biological Resources Reconnaissance Survey Report, 2100 Curry Lane, Napa County, California (APN: 045-380-010) (**Exhibit B-1**)
- WRA, Inc., May 31, 2019, Response to Comments (Biology) – Darioush Estate Agricultural Erosion Control Plan Application File No. P18-00442-ECPA; 2100 Curry Lane, Napa, APN 045-380-010 (**Exhibit B-2**)

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

WRA conducted an assessment of biological resources on the project site on April 25 and June 21, 2018. The surveys were completed to determine: the presence of sensitive biological communities; the potential for biological communities on site to support special-status plant or wildlife species; and the presence of sensitive natural resources protected by local, state, or federal laws and regulations. The surveys correspond to blooming periods sufficient to observe and identify special-status plant species determined to have the potential to occur in the project site. The field surveys were conducted by botanists familiar with the flora of Napa County and surrounding counties. The surveys followed the protocol for plant surveys described by resource agency guidelines (CNPS, 2001; CDFW, 2018; USFWS, 1996). Plants were identified using Baldwin et al. (2012) and Jepson Flora Project (Jepson eFlora, 2018) to the taxonomic level necessary to determine whether they were rare. The wildlife surveys were conducted concurrently with the rare plant surveys. WRA conducted an additional survey on April 11, 2019 for areas that support western pond turtle, foothill yellow-legged frog, and California red-legged frog.

A list of special-status plant and animal species that have the potential to occur within the vicinity of the project site was compiled based on data in the CNDDDB (CDFW, 2018), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS, 2018), and the USFWS List of Federal Endangered and Threatened Species (USFWS, 2018) that may be affected by projects in the Fairfield North, Cuttings Wharf, Cordelia, Fairfield South, Mount Vaca, Yountville, Capell Valley, Napa, and Mt. George quadrangles.

The project site consists of the following upland biological communities (or habitat types): vineyard, developed, non-native grassland, blue oak woodland, (abandoned) olive orchard, man-made ponds, and streams. Oak woodland and aquatic resources are considered sensitive habitat types. The habitats and their acreages are shown in **Table 4**.

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

Biological Communities or Habitat Type	Pre-Project Conditions (acres)
Vineyard and developed areas	9.61
Non-native grassland	3.73
(Abandoned) olive orchard	3.30
Blue oak woodland	6.74
Man-made ponds	0.32
Intermittent Streams	1,136 linear feet

Source: WRA, December 2018

- a. **Special-Status Plants:** Based upon a review of the resources databases listed in **Exhibit B-1**, 75 special-status plant species have been documented in the vicinity of the project site. Occurrence records of these species in CNDDDB within a 3-mile radius of the project site are depicted in **Exhibit B-1** Figure A-3. Ten special-status plant species have the potential to occur in the project site (**Exhibit B-1**). However, no special-status plant species were observed within the project site during the surveys conducted by WRA, and no impacts to special-status plant species are expected.

The proposed project does not include the removal of special-status plant species or their habitat and would be consistent with the following Napa County General Plan Conservation Element Goals and Policies and Zoning Ordinance: General Plan Goal CON-2⁷ because it would assist in maintaining the existing level of biodiversity in the County, as well as contribute to minimization of potential cumulative impacts associated with the loss of special-status plant species and associated habitat due to agricultural conversion projects; Goal CON-3⁸ as it protects the continued presence of special-status plant species or its habitat; Policy CON-13⁹ in that impacts to special-status habitat can be avoided while allowing for up to approximately 8.3 acres of agriculture on the project site; Policy CON-17¹⁰ because the removal and disturbance of a sensitive natural plant community that contains special-status plant species is prevented; and, the purpose and intent of the Conservation Regulations (NCC Chapter 18.108) in that it preserves natural habitat or existing vegetation, and does not adversely affects sensitive, rare, threatened or endangered plants.

The blue oak woodland within the site is considered special-status species habitat because it contains the biological and ecological characteristics necessary to support special-status plant species. Napa County General Plan Conservation Element Policy CON-24 requires that oak woodland be maintained and/or improved to the extent feasible to provide oak woodland and wildlife habitat, slope stabilization, soil protection and species diversity. Policy CON 24c specifically calls for the preservation of oak woodland (on an acreage basis) at a 2:1 ratio. The project site contains approximately 6.74 acres of blue oak woodland. In order to maintain 2 acres preserved for 1 acre impacted in compliance with Policy Con 24(c)¹¹, 2:1 preservation ratio, only approximately 2.25 acres can be converted to vineyard. The project as proposed would remove approximately 2.07 acres of blue oak woodland habitat and therefore would be in compliance with the 2:1 preservation ratio requirement. The acreages of each biological community and the approximate number of each special-status plant species to be removed within the development area are listed in **Table 5**.

Table 5 – Retention of Biological Communities¹²

Biological Communities	Total Acres in the Project Site	Proposed Vineyard Blocks	
		Acreage	% Retention
Vineyard and Developed	9.61	1.02	89.4%
Non-native grassland	3.73	2.53	32.2%
(Abandoned) olive orchard	3.3	3.24	1.8%
Blue oak woodland ¹	6.74	2.07	69.3%
Man-made ponds ¹	0.32	0	100%
Intermittent Streams ¹	1,136 linear feet	0	100%

¹ Considered sensitive by Napa County.

Source: WRA, December 2018 - Exhibit B-1

To ensure protection of the blue oak woodland biological community and that a 2:1 preservation ration in compliance with Policy Con 24(c) is realized on the project site, the following condition of approval will be incorporated should the proposed project be approved.

Oak Woodland Preservation – Condition of Approval: The owner/permittee shall implement the following measures to permanently preserve blue oak woodland within the project site and to comply with Policy CON-24(c), 2:1 preservation ratio:

A Preservation Area, totaling a minimum of 4.14 acres of blue oak woodland shall be designated for preservation in a mitigatory or conservation easement with an organization such as the Land Trust of Napa County as the grantee, or other means of permanent protection acceptable to the County. Land placed in protection shall be restricted from development and other uses that would degrade the quality of the woodland (including, but not limed to conversion to other land uses such as agriculture or urban development, and excessive off-road vehicle use that increases erosion) and should be otherwise restricted by the existing goals and policies of Napa County. The owner/permittee shall record the mitigatory or conservation

⁷ Goal CON-2: Maintain and enhance the existing level of biodiversity.

⁸ 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.

⁹ 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.

¹⁰ Policy CON 17: Preserve and protect native grasslands, serpentine grasslands, mixed serpentine chaparral, and other sensitive biotic communities and habitats of limited distribution. The County, in its discretion, shall require mitigation that results in the following standards: Prevent removal or disturbance of sensitive natural plant communities that contain special-status plant species or provide critical habitat to special-status animal species.

¹¹ Policy CON 24(c): Provide replacement of lost oak woodlands or preservation of like habitat at a 2:1 ration when retention of existing vegetation is found to be infeasible. Removal of oak species limited in distribution shall be avoided to the maximum extent feasible.

¹² The acreages identified in **Table 5** and other tables in this initial study may slightly differ from acreages identified in the biological information (**Exhibits B-1** and **B-2**), and project plans (**Exhibit A**) due to differing mapping platforms, spatial characters, and rounding utilized by the various plan and report preparers. Therefore, the values disclosed herein and throughout are considered by the County to be adequate for CEQA review and disclosure purposes of the subject application.

easement within 60 days of approval of #P18-00442-ECPA by the County: in no case shall the ECPA be initiated until said mitigatory or conservation easement is recorded.

Special-Status Animals: A total of 58 special-status wildlife species have been documented in Napa County. Seven of these species have a moderate or high potential to occur within the project site: pallid bat (*Antrozous pallidus*), fringed myotis (*Myotis thysanodes*), white-tailed kite (*Elanus leucurus*), loggerhead shrike (*Lanius ludovicianus*), western pond turtle (*Emys marmorata*), foothill yellow-legged frog (*Rana boylei*), and California red-legged frog (*Rana draytonii*). Additionally, a variety of native bird species with protections under the Migratory Bird Treaty Act and California Fish and Game Code may use vegetation within the development area for nesting.

Pallid bat is broadly distributed throughout much of western North America. This species occurs in a number of habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous forests. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of man-made structures, including vacant and occupied buildings. Tree roosting occurs in large conifer snags, inside basal hollows of redwoods and giant sequoias, and within bole cavities in oak trees. Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight. Prey items include arthropods such as scorpions, ground crickets, and cicadas (WBWG, 2018). There were no observations of this species during the site visits (WRA, December 2018 - **Exhibit B-1**).

Fringed myotis ranges through much of western North America from southern British Columbia, Canada, south to Chiapas, Mexico and from Santa Cruz island in California, east to the Black Hills of South Dakota. The species occurs in a number of habitats ranging from desert scrubland, grassland, sage-grass steppe, old growth forest and subalpine coniferous and mixed deciduous forest. Roosts are typically in caves, buildings, underground mines, rock crevices in cliff faces and bridges in colonies from 10 to 2,000 individuals. There were no observations of this species during the site visits (WRA, December 2018 - **Exhibit B-1**).

While impacts to special-status bat species are not anticipated to be significant due to the lack of suitable habitat within the project area (WRA, May 31, 2019 - **Exhibit B-2**), there is the potential for bat species to occupy the project area prior to commencement of the project. To minimize and avoid potential impacts to bat species, including special-status bat species, to a less than significant level **Mitigation Measure BR-1** will be implemented.

White-tailed kite is resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities (Dunk, 1995). Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk, 1995). This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates. The project site and adjacent areas have a moderate potential for this species to occur due to the presences of trees suitable for nesting, as well as grassland and open woodland for foraging. There were no observations of this species during the site visits (WRA, December 2018 - **Exhibit B-1**). Potential direct or indirect impacts on white-tailed kite would be considered potentially significant.

Loggerhead shrike is a common resident of lowlands and foothills throughout California. They prefer open habitats with scattered trees, shrubs, posts, fences, utility lines, or other vertical perches. Nests are usually built on stable branches in densely foliated shrubs or small trees. This species is found most often in open-canopied valley foothill hardwood, conifer, pinyon-juniper, or desert riparian habitats. While this species eats mostly arthropods, they also forage on small amphibians, reptiles, mammals, or other birds. Occasionally, they forage on carrion. The loggerhead shrike has a moderate potential to occur in the project site due to the presence of open woodland habitat that provides suitable foraging and nesting habitat. There were no observations of this species during the site visits (WRA, December 2018 - **Exhibit B-1**). Potential direct or indirect impacts on loggerhead shrikes would be considered potentially significant.

Migratory birds and raptors have the potential to nest within the trees throughout and adjacent to the development area. Potential impacts resulting from tree removal and temporary and intermittent increases in noise levels that may cause nest abandonment and death of young or loss of reproductive potential at active nests located near project activities. Potentially significant impacts on migratory birds and raptors as a result of the project would be considered less than significant with implementation of **Mitigation Measure BR-2** (see below)

Western pond turtle (WPT) is the only native freshwater turtle in California. This turtle is uncommon to common in suitable aquatic habitat throughout California, west of the Sierra- Cascade crest and Transverse Ranges. Western pond turtles inhabit perennial aquatic habitats, such as lakes, ponds, rivers, streams, and canals that provide submerged cover and suitable basking structures, such as rocks and logs (Zeiner et. al. 2000). WPT prefer to nest on unshaded upland slopes close to their aquatic habitat (15 to 300 feet distant), and hatchlings require shallow water with relatively dense emergent and submergent vegetation for foraging for aquatic invertebrates (Rathbun et al. 1992, Jennings and Hayes 1995). WPT may utilize the on-site and adjacent man-made ponds for aquatic foraging habitat as well as the adjacent uplands for nesting. While it is not anticipated that WPT will occur in the project site because there were no observations of this species during the site visits conducted by the project biologist, overall quality of the habitat to support WPT is generally lacking, and hatchling WPT are susceptible to predation by both bullfrogs and fish (WRA, December 2018 - **Exhibit B-1** and WRA, May 31, 2019 - **Exhibit B-2**), there is the potential for the project to impact WPT which would be considered significant. See Mitigation Measure BR-3 below that would reduce potential impacts to WPT to a less than significant level. Foothill yellow-legged frog (FYLF) historically occurred

in coastal and mountain streams from southern Oregon to Los Angeles County, but has declined in many parts of this range. This species is strongly associated with rivers and perennial creeks, and prefers shallow, flowing water with a rocky substrate. FYLF individuals do not typically move overland and are rarely observed far from a source of permanent water (typically less than ten feet). Aquatic breeding sites are in-stream, often near confluences, with eggs typically deposited behind or sometimes under rocks in low-flow areas with cobble and/or gravel (Thomson et al. 2016). Metamorphosis takes at least 15 weeks. The lower reach of the intermittent stream within the project site provides a rocky substrate and may be occupied when the stream is flowing; any individuals present would presumably retreat downstream when flow ceases. Breeding within the stream is unlikely given the limited water depth and intermittent nature of the flow. Non-native predators (bullfrogs, bass, and bluegill) also occur in the ponds. There were no observations of this species during the site visits. Cumulatively, the marginal quality of the stream for larval FYLF, the presence of non-native predators, obstacles presented by the man-made ponds and the lack of occurrences of the species in the immediate vicinity make it highly unlikely that FYLF would occur in the streams within the project site and dispersal into the project site is also unlikely. Furthermore, the species has been searched for on two occasions during times of the year that it would be likely to be detected if present, and as indicated there were no observations of this species during the site visits. Given all these factors, it is unlikely this species is present and that the proposed project would significantly negatively affect FYLF. Potential for impacts to FYLF is further avoided by the proposed setbacks from the streams in the project site, which are at least 55 feet (WRA, December 2018 - **Exhibit B-1** and WRA, May 31, 2019 - **Exhibit B-2**). Therefore, potential direct or indirect impacts to foothill yellow-legged frog are anticipated to be less than significant.

California red-legged frog (CRLF) is dependent on suitable aquatic, estivation, and upland habitat. During periods of wet weather, starting with the first rainfall in late fall, red-legged frogs disperse away from their estivation sites to seek suitable breeding habitat. Aquatic and breeding habitat is characterized by dense, shrubby, riparian vegetation and deep, still or slow-moving water. Breeding occurs between late November and late April. CRLF estivate (period of inactivity) during the dry months in small mammal burrows, moist leaf litter, incised stream channels, and large cracks in the bottom of dried ponds in the instances where perennial aquatic habitat is absent. Due to the lack of documented occurrences in the lower Napa River watershed (CDFW, 2019), it is likely that California red-legged are naturally absent or extirpated from the local vicinity of the project site. While the CRLF would have the potential to use the on-site and adjacent ponds for breeding and the adjacent uplands and intermittent stream for dispersal, the presence of non-native predators (fish and bullfrogs) and the marginal quality of the potential habitat further reduces the probability that a population exists in or near the project area. For these reasons, and that there were no observations of this species during the site visits (WRA, December 2018 - **Exhibit B-1** and WRA, May 31, 2019 - **Exhibit B-2**), potential impacts to California red-legged frog are anticipated to be less than significant.

Additionally, Kreuse Creek (and associate ponds) and the second blue-line stream near the development area have appropriate setbacks (ranging from 55 to 85 feet) pursuant to NCC Section 18.108.025. As indicated above, these setbacks would further reduce and avoid the probability of impacting foothill yellow-legged frog or California red-legged frog should they occur in the project site (WRA, May 31, 2019 - **Exhibit B-2**).

To reduce and avoid potential impacts on special-status bat and bird species, and western pond turtle as a result of the proposed project (as described above) to a less than significant level, **Mitigation Measures BR-1, BR-2, and BR-3** would be implemented: these measures include preconstruction, surveys and assessments, and avoidance measures if roosts, nests or species are identified.

Mitigation Measure BR-1: The owner/permittee shall revise Erosion Control Plan #P18-00442-ECPA prior to approval to include the following measures to minimize impacts associated with the potential loss and disturbance of special-status bat species:

- a. A Qualified Biologist (defined as having demonstrable qualifications and experience with the particular species for which they are surveying) shall conduct a pre-construction survey and habitat assessment in order to identify if bats are present and if there are suitable bat habitat trees within the project area. The survey and assessment shall be conducted no more than 3 months and no less than 14 days in advance of the planned tree removal. A copy of the survey shall be provided to the County Planning Division prior to commencement of work. If special-status bat species or bat maternity roosts are detected/present, roost trees shall be avoided with a minimum 10-foot buffer until the end of maternity roosting season or hibernation season (as determined by a Qualified Biologist), and an avoidance and removal plan shall be developed by a qualified biologist in conjunction with the County Planning Division and CDFW. The avoidance and removal plan shall be reviewed and authorized by the County Planning Division and implemented prior to commencement of the ECPA.
- b. If the habitat assessment determines that trees proposed for removal contain suitable bat habitat, the following shall apply to removal or trimming of potential bat habitat trees:
 - i. Bat habitat tree removal and trimming between August 31 through October 15, and March 1 to April 15: Under the supervision of a qualified biologist, bat habitat trees shall be removed or trimmed in a two-phased system conducted over two consecutive days. The first day (in the afternoon), limbs and branches would be removed by a tree cutter using chainsaws only. Limbs with cavities, crevices and deep bark fissures would be avoided, and only branches or limbs without those features would be removed. On the second day, the entire tree would be removed. All felled trees shall remain on the ground for at least 24 hours prior to disposal to allow any present bats within the trees to escape.

- ii. Bat habitat tree removal or trimming between October 16 and February 28/29 of the following year or between April 16 and August 30: A qualified biologist shall conduct pre-construction survey within 14 days of project initiation to determine absence or presence of special-status bat species. A copy of the survey shall be provided to the County Planning Division and CDFW prior to commencement of work. If special-status bat species are not present removal can proceed as prescribed in Measure BR-1(b)(i). If bats are found to be present a plan for removal or exclusion will be developed by a qualified biologist in conjunction with the County Planning Division and CDFW. The removal or exclusion plan shall be reviewed and authorized by the County Planning Division and implemented prior to commencement of the ECPA.

Mitigation Measure BR-2: The owner/permittee shall revise Erosion Control Plan #P18-00442-ECPA prior to approval to include the following measures to minimize impacts associated with the potential loss and disturbance of special-status and nesting birds and raptors consistent with and pursuant to California Fish and Game 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 the potential to occur at the project site) shall conduct a preconstruction surveys for nesting birds within all suitable habitat on the project site, and where there is potential for impacts adjacent to the project areas (typically within 500 feet of project activities). The preconstruction survey shall be conducted no earlier than 14 days prior to when vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than 14 days from the survey date, surveys shall be repeated. A copy of the survey shall be provided to the Napa County Conservation Division and the CDFW prior to commencement of work.
- b. After commencement of work if there is a period of no work activity of five days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.
- c. In the event that nesting birds are found, the owner/permittee shall identify appropriate avoidance methods and exclusion buffers in consultation with the County Conservation Division and the U.S. Fish and Wildlife Service (USFWS) and/or CDFW prior to initiation of project activities. Exclusion buffers may vary in size, depending on habitat characteristics, project activities/disturbance levels, and species as determined by a qualified biologist in consultation with County Conservation Division and the USFWS and/or CDFW.
- d. Exclusion buffers shall be fenced with temporary construction fencing (or the like), the installation of which shall be verified by Napa County prior to the commencement of any earthmoving and/or development activities. Exclusion buffers shall remain in effect until the young have fledged or nest(s) are otherwise determined inactive by a qualified biologist.
- e. Alternative methods aimed at flushing out nesting birds prior to preconstruction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or chemical (i.e., spraying nesting birds or their habitats) would be considered an impact to nesting birds and is prohibited. Any act associated with flushing birds from project areas should undergo consultation with the USFWS/CDFW prior to any activity that could disturb nesting birds.

Mitigation Measure BR-3: The owner/permittee shall revise Erosion Control Plan #P18-00442-ECPA prior to approval to include the following measures to avoid and minimize impacts associated with the potential loss and disturbance of western pond turtle:

- a. The intermittent streams and ponds in the project site shall be avoided by at least 50 feet by project activities.
- b. A targeted preconstruction survey for western pond turtle shall be completed between 7 days and 24 hours of the start of construction. Surveys shall take place between 9 a.m. and 3 p.m. and be conducted in areas that western pond turtle are likely to inhabit and focus on detection of basking and foraging turtles. Surveyors shall station in place for periods of 30 minutes in each area that is suitable for western pond turtle and use binoculars to visually detect and identify western pond turtle.
- c. If a western pond turtle is detected, the following measures shall be implemented:
 - i. A worker environmental awareness program that describes western pond turtle, its habitat affinities and its protections shall be given to project personnel prior to commencement of ground disturbing activities.
 - ii. If any western pond turtle are observed in the work area, the western pond turtle shall be avoided and work shall stop within 50 feet of the western pond turtle and shall not resume until the western pond turtle moves from the work area.
 - iii. If ground disturbing activities are to occur during the western pond turtle nesting season, between May 15 and July 15, an exclusion fence shall be installed around the work area to prevent western pond turtle from entering the work area. The design and installation of the fence shall be verified by a qualified biologist.
 - iv. If work stoppage occurs for more than 5 consecutive days, work shall cease and the owner/permittee shall contact a qualified biologist to determine further steps.

b-c. The project site contains blue oak woodland and aquatic resources, which are considered sensitive habitats. Blue oak woodland is known from the interior North Coast Range, South Coast Range, southern Cascade Range, and Sierra Nevada Foothills from Humboldt County south to Ventura County. They are typically located on valley bottoms, foothills, and rocky outcrops. The project site contains approximately 6.74 acres of blue oak woodland, with 2.07 acres occurring in the proposed development area (approximately 30.7% of the total community type on the project site). As discussed in question e below, the proposed project would preserve more than 2:1 of the oak woodland on site; therefore, the proposed project would be in compliance with Policy CON-24 and the impact would be less than significant. In addition, the condition of approval listed in question a above would permanently preserve a minimum of 4.14 acres of blue oak woodland on the project site.

WRA classified the aquatic resources on the project site during the April 25 and June 21, 2018 field visits. No wetlands were observed in the project site. The project site contains two ponds covering 0.32 acre and approximately 1,136 linear feet of blue-line streams; however, the ponds and streams do not occur in the proposed development area. One pond is entirely within the project site and may draw down and dry out in the summer. The second perennial pond is located on a neighboring parcel to the west with waters backing up into the project site. Both ponds are in-stream on Kreuse Creek and are therefore jurisdictional waters of the U.S. (WRA, December 2018 - **Exhibit B-1**).

The project site contains two intermittent blue line streams, one of which is Kreuse Creek. Both streams meet on the western edge of the project site and continue approximately 1.25 river miles where they drain into Tulucay Creek. Therefore, the two streams are considered jurisdictional blue-line streams and Napa County stream setbacks apply. The ECP includes appropriate setbacks (ranging from 55 to 85 feet), determined by slope as outlined in Napa County Conservation Regulation 18.108.025 from the blue-line streams (WRA, December 2018 - **Exhibit B-1**).

While the property's aquatic resources (blue line streams and ponds) are outside of the development area and required setbacks, potential indirect (or inadvertent) impacts on these features during construction and operation would be potentially significant. To reduce potential indirect impacts to the sites aquatic resources as a result of construction and operation of the proposed project to a less than significant level, **Mitigation Measures BR-4** would be implemented to avoid and protect the property's streams and ponds.

Mitigation Measure BR-4: The owner/Permittee shall implement the following measures to minimize potential impacts to on-site aquatic resources (ponds and streams) and to prevent the inadvertent encroachment into specified creek setbacks and associated riparian habitat during construction and subsequent vineyard operations:

- a. The location of creek setbacks adjacent to vineyard development areas 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. All construction and related traffic will remain outside of the creek setback protective fencing to ensure that the creek, buffer zones, and associated riparian habitat and/or woodland remains undisturbed
- b. The location and extent of existing access roads located within required creek setbacks utilized to access the vineyard development areas shall be accurately shown and specified on the plans prior to approval of the ECPA. Prior to commencement of any earthmoving activities existing access roads shall be clearly demarcated in the field with temporary construction fencing, which shall be placed as shown on the ECPA. The precise locations of said fences shall be inspected and approved by the Planning Division prior to any earthmoving and/or development activities. The protection fencing, or other permanent barrier as determined adequate by the planning director, shall remain in place for the duration of project implementation and operation. All construction and operational traffic will remain inside of the protective access fencing/barrier, and no disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur outside the designated access areas for the duration of vineyard installation and operation to ensure previously undisturbed areas of the creek setback/buffer zones, and associated riparian habitat remains undisturbed.
- c. In accordance with County Code 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 #P16-00337-ECPA shall be replaced on-site with fifteen-gallon trees at a ratio of 2:1 at locations approved by the planning director.
- d. The project site/parcel (approximately 23.62 acres) includes deer fencing around the northern perimeter of proposed Block A and along the eastern and western boundaries of the existing vineyard blocks. The proposed deer fence includes blocks fenced individually and in clusters where appropriate (**Exhibit A**).

The project site is located within a mapped “Essential Connectivity Area,” specifically a large, north-south oriented tract of land east of Napa Valley which is approximately 3.5 miles wide in the vicinity of the project site (CDFW and Caltrans, 2010). At the scale of landscape linkages, this tract provides connectivity between baylands of San Pablo Bay and areas from northern Napa County northward. Given the relatively small size of the project site (relative to the width of the corridor tract) and the lack of apparent development impacts within the more central portion of this tract, agricultural expansion within the project site is in and of itself unlikely to result in any significant impacts to wildlife movement or migration at the landscape linkage scale. At a more local scale, the project site provides connectivity between a patchwork of undeveloped lands consisting primarily of woodland and grassland, and low-density residential and agricultural developments. While the proposed vineyard blocks would result in portions of the site having reduced potential for on-site wildlife movement, the preservation/avoidance of streams within the project site, as well as the condition of the surrounding lands, would continue to allow for movement through the vicinity. The proposed deer fencing would not interfere substantially with wildlife movement and impacts are expected to be less than significant.

In addition, the preservation of stands of oak woodland would provide movement and shelter habitat for a variety of common wildlife species and include connectivity to adjacent properties. Maintaining this connectivity should provide for continued cross-pollination and gene flow, as well as local wildlife movement. The proposed project would be consistent with General Plan Policy CON-18, which encourages the reduction of impacts to habitat conservation and connectivity.

Because wildlife nursery sites were not identified in the project site, there would be no impacts to wildlife nursery sites. While the proposed fencing would not result in significant impacts to wildlife movement and use, in order to ensure that deer fencing is installed in a manner that is consistent with CDFW recommendations to minimize impacts to wildlife movement, the following condition of approval would be incorporated should the proposed project be approved.

Fencing – Condition of Approval: The owner/permittee shall revise Erosion Control Plan #P18-00442-ECPA prior to approval to include a Vineyard Fencing Plan. The Vineyard Fencing Plan shall be submitted to the Planning Department for review and approval prior to its incorporation into #P18-00442-ECPA, and include the following components:

- New fencing shall use a design that has 6-inch square gaps at the base (instead of the typical 3-inch by 6-inch rectangular openings) to allow small mammals to move through the fence.
- Exit gates shall be installed at the corners of wildlife exclusion fencing to allow trapped wildlife to escape. Smooth wire instead of barbed wire shall be utilized to top wildlife exclusion fencing to prevent entanglement.
- Any modifications to the location of deer fencing as specified in Erosion Control Plan #P18-00442-ECPA pursuant to the Vineyard Fencing Plan required by this condition shall be strictly prohibited, and would require County review and approval to ensure the modified deer fencing location/plan would not result in potential impacts to wildlife movement.

- e. Based on the Biological Resources Reconnaissance Survey, plant communities or alliances occurring within the project site include vineyard and developed (9.61 acres), non-native grassland (3.73 acres), (abandoned) olive orchard (3.30 acres), blue oak woodland (6.74 acres), man-made pond (0.32 acre) and intermittent streams (1,136 linear feet) (**Table 4**). The proposed project would result in the removal of 1.02 acres of developed areas (89.4% retention), 2.53 acres of non-native grassland (32.2% retention), 3.24 acres of (abandoned) olive orchard (1.8% retention), 2.07 acres of blue oak woodland (69.3% retention), and 100% retention of the man-made pond (0.32 acre) and intermittent streams (1,136 linear feet) in the project site (**Table 5**). Approximately 183 trees with a dbh greater than 6 inches are proposed for removal with the 8.3 gross acre development area.

Oak woodland is the most common land cover in the County occurring on approximately 167,000 acres (33% of the County's area). Approximately 733 acres of oak woodland or 0.5% of the total area of oak woodland in the County has been cleared for residential and agricultural purposes between 1993 and 2002 (Napa County Baseline Data Report, Biological Resources Section, pages 4-22 and 4-25, Version 1, November 20050). While oak woodlands may be one of the most common land covers within the County, their past conversion to residential and agricultural uses in conjunction with foreseeable oak woodland conversion to agricultural use is considered a potentially significant impact on both a project-specific level and a cumulative level (Napa County General Plan, Draft Environmental Impact Report, Volume 1, Section 5.4 Biological Resources, Pacific Municipal Corporation, February 2007).

Napa County General Plan Conservation Element Policy CON-24 requires that oak woodland be maintained and/or improved to the extent feasible to provide for oak woodland and wildlife habitat, slope stabilization and soil protection, and species diversity. General Plan Conservation Element Policy CON-24c specifically provides for the preservation of oak woodland (on an acreage basis) at a 2:1 ratio where feasible, where preservation/avoidance of oak woodland is not feasible replacement of oak woodland at a 2:1 ratio is required. Removal of more than 1 acre of oak woodland for every 2 acres preserved would be a significant impact. As proposed, the project would preserve more than 2:1 of the oak woodland on site; therefore, the proposed project would be in compliance with Policy CON-24 and impact would be less than significant. In addition, the condition of approval listed in question a above would permanently preserve a minimum of 4.14 acres of blue oak woodland on the project site.

To ensure that oak trees outside the development area are not inadvertently removed as part of the proposed project, and because the proposed project would also be subject to the provisions of Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement), the following provisions would be incorporated as conditions of approval should the proposed project be approved:

Tree/Woodland Protection – Conditions of Approval:

- Prior to any earthmoving activities temporary fencing shall be placed at the edge of the dripline of trees to be retained that are located adjacent to the project site (typically within approximately 50-feet of the project site). The precise locations of said fences shall be inspected and approved by the Planning Division prior to the commencement of any earthmoving activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated protection areas for the duration of erosion control plan and vineyard installation.
- Trees removed that are not within the boundary of the project and/or not identified for removal as part of #P18-00442-ECPA shall be replaced onsite with fifteen-gallon trees at a ratio of 2:1 at locations approved by the director.
- The owner/permittee shall refrain from severely trimming the trees and vegetation to be retained adjacent to the vineyard conversion area.

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

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) 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 XVIII (Tribal Cultural Resources)** for disclosures and the impact assessment pursuant to Pursuant to Public Resources Code 21080.3.1 (Assembly Bill 52 - Gatto).

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

- Flaherty Cultural Resource Services, September 1, 2018, Cultural Resource Reconnaissance of 15+/- Acres Near Napa, Napa County, California

Flaherty Cultural Resource Services conducted an archeological evaluation of the project site which included a check of information on file with the California Historical Resources Information System Northwest Information Center to determine presence or absence of previously recorded historic or prehistoric cultural resources; a check of relevant historic references to determine the potential for historic era archaeological deposits or structure; and a surface reconnaissance survey of the all accessible parts of approximately 15 acres of the project site to locate any visible signs of potentially significant historic or prehistoric cultural deposits.

- a-b. The cultural resource reconnaissance (Flaherty Cultural Resource Services, September 1, 2018) identified four cultural resources: a historic olive orchard, a bridge over Kreuse Creek, a rock fence, and a structural debris/depression within the project site.

The majority of the trees within the historic olive orchard are missing, dead, or dying and the orchard lacks the physical integrity for listing on the California Register of Historic Resources. It was determined that removal of the orchard would not represent a significant adverse change.

The bridge was constructed to allow access to the olive orchard and area around the orchard. It was determined that impacts to the bridge would not represent a significant adverse change.

The rock fence would not be eligible for the California Register under Criteria 4 (has yielded or may be likely to yield information important in prehistory or history) as no archaeological associations were observed. However, because the fence segments lie within a ranching area, it is reasonable to presume that it relates to ranching operations and therefore the rock fence segments could be considered eligible under for the California Register of Historic Resources under Criteria 1 and 2 (historical associations with important events and or persons). It was determined that individual features likely would not be eligible, and it is unlikely that impacts to the rock fence, if any, would represent a significant adverse change.

Little could be deduced from the surface of the structural debris and depression that represent this site. It would appear that the remains could be associated with the olive orchard, bridge, and possibly the rock fence. Based on surface observations, the eligibility of the structural debris could not be evaluated so it is presumed potentially eligible for the California Register under Criteria 4. Should project design result in a need to directly affect the structural debris/depression it would be considered a significant impact. The proposed project would not affect this resource, however to ensure no impacts to the cultural resource occur, **Mitigation Measure CUL-1** would be implemented to provide it with a protective buffer. Implementation of this measure would reduce any potential impact to a less than significant level.

Mitigation Measure CUL-1: The owner/permittee shall implement the following measures to avoid and minimize indirect impacts to cultural resources:

- a. Prior to the commencement of grading and/or earthmoving activities associated with the development of #P18-00442-ECPA, the identified structural debris/depression shall be flagged in the field by a qualified archeologist.
- b. A buffer around the perimeter of the resource area shall be established and protective fencing shall be installed around the buffer. The protective fencing shall be maintained and remain in place.
- b. No vineyard development and operations, including vineyard avenues and tractor turnaround areas, shall occur with the buffer area.

Furthermore, project approval, if granted, would be subject to the standard conditions identified below to protect cultural resources that may be discovered accidentally.

- c. The cultural resource reconnaissance did not locate any human remains in the proposed development area 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, the following conditions of approval would be incorporated should the proposed project be approved, which would ensure that potential impacts on human remains would be less than significant.

Cultural Resources – Conditions of Approval: Discovery of cultural, historical or archaeological resources, or human remains during construction, grading, or other earth moving activities:

- Prior to the commencement of vegetation removal and earth-moving activities of #P18-00442-ECPA, the owner/Permittee shall provide documentation to the Napa County Planning Department that there is a Monitoring Agreement with the Yocha Dehe Wintun Nation. If a Monitoring Agreement is not entered into with the Yocha Dehe Wintun Nation, the owner/Permittee shall provide, for review and approval by Napa County, a Cultural Monitoring Plan prepared by a professional archaeologist certified by the Registry of Professional Archeologists (RPA). The Cultural Monitoring Plan shall outline monitoring requirements including but not limited to, sensitivity training for site workers, identification of project activities and project site areas requiring an on-site monitor, find procedures, and monitoring documentation and reporting procedures.
- In accordance with CEQA Subsection 15064.5(f), should any previously unknown historic or prehistoric resources, including but not limited to charcoal, obsidian or chert flakes, grinding bowls, shell fragments, bone, pockets of dark, friable solids, glass, metal, ceramics, wood or similar debris, be discovered during grading, trenching or other onsite excavation(s), earth work within 100-feet of these materials shall be stopped until a professional archaeologist certified by the Registry of Professional Archaeologists (RPA) and a Yocha Dehe Wintun Nation Tribal Cultural Monitor have had an opportunity to evaluate the significance of the find and suggest appropriate mitigation(s), as determined necessary.
- If human remains are encountered the Napa County Coroner shall be informed to determine if an investigation of the cause of death is required and/or if the remains are of Native American origin. Pursuant to Public Resources Code Section 5097.98, if such remains are of Native American origin the nearest tribal relatives as determined by the State Native American Heritage Commission shall be contacted to obtain recommendations for treating or removal of such remains, including grave goods, with appropriate dignity.
- All persons working onsite shall be bound by contract and instructed in the field to adhere to these provisions and restrictions.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. ENERGY. Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

Consistent with Public Resources Code Section 21100(b)(3), this impact analysis evaluates the potential for the proposed project to result in a substantial increase in energy demand and wasteful use of energy during project construction, operation and maintenance. The impact analysis is informed by Appendix G of the CEQA Guidelines. The potential impacts are analyzed based on an evaluation of whether construction and operation energy use estimates for the proposed project would be considered excessive, wasteful, or inefficient.

- a. During construction of the proposed project, the use of construction equipment, truck trips for hauling materials, and construction workers' commutes to and from the project site would consume fuel. Project construction is anticipated to occur over six months. Construction activities and corresponding fuel energy consumption would be temporary and localized. In addition, there are no unusual project characteristics that would cause the use of construction equipment or haul vehicles that would be less energy efficient compared with other similar agricultural construction sites within Napa County.

Once construction is complete, equipment and energy use would be slightly higher than existing levels and the proposed project would not include any unusual maintenance activities that would cause a significant difference in energy efficiency compared to the surrounding developed land uses. Thus, the proposed project would not result in wasteful, inefficient, or unnecessary energy use. This impact would be less than significant.

- b. The transportation sector is a major end-user of energy in California, accounting for approximately 39 percent of total statewide energy consumption in 2014 (U.S. Energy Information Administration 2016). In addition, energy is consumed in connection with construction and maintenance of transportation infrastructure, such as streets, highways, freeways, rail lines, and airport runways. California's 30 million vehicles consume more than 16 billion gallons of gasoline and more than 3 billion gallons of diesel each year, making California the second largest consumer of gasoline in the world (CEC 2016). In Napa County, farm equipment (not including irrigation pumps) accounted for approximately 60% of agricultural emissions in Napa County in 2014, with the percentage anticipated to increase through 2050 (Napa County 2018 - <https://www.countyofnapa.org/DocumentCenter/View/9247/Revised-Draft-Climate-Action-Plan>).

With respect to transportation energy, existing energy standards are promulgated through the regulation of fuel refineries and products such as the Low Carbon Fuel Standard (LCFS), which mandates a 10% reduction in the non-biogenic carbon content of vehicle fuels by 2020. Additionally, there are other regulatory programs with emissions and fuel efficiency standards established by USEPA and the California ARB such as Pavley II/LEV III from California's Advanced Clean Cars Program and the Heavy-Duty (Tractor-Trailer) GHG Regulation. Further, construction sites will need to comply with State requirements designed to minimize idling and associated emissions, which also minimizes use of fuel. Specifically, idling of commercial vehicles and off-road equipment would be limited to five minutes in accordance with the Commercial Motor Vehicle Idling Regulation and the Off-Road Regulation¹³. The proposed project would comply with these State requirements; see the Air Quality conditions of approval. Napa County has not implemented an energy action plan. Therefore, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency or impede progress towards achieving goals and targets, and impacts would be less than significant.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				

¹³ California Code of Regulations (CCR), 2005. Title 13, Chapter 10, 2485, updated through 2014.

- | | | | | | |
|------|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| 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 checked="" type="checkbox"/> | <input type="checkbox"/> |
| iii. | Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input 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 (1994), creating substantial direct or indirect 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"/> |
| f) | Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Discussion

a. The project site could experience potentially strong ground shaking and other seismic related hazards based on the number of active faults in the San Francisco Bay region. The proposed project consists of earthmoving activities associated with the installation of erosion control measures for agricultural development, but does not include the construction of new residences or other facilities (i.e., enclosed areas where people can congregate) that would be subject to seismic forces. Additionally, the proposed project would not result in a substantial increase in the number of people to the site. Therefore, the proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving fault rupture, ground shaking, liquefaction, and landslides and less than significant impact would occur. Additional information supporting this conclusion is identified below.

- i) No faults have been mapped on the project site, and the project site is not located on an active fault or within an “Earthquake Fault Hazard Rupture Zone” designated by the Alquist-Priolo Earthquake Zoning Act. The closest active faults to the project site are an unnamed fault 1.75 mile to the west and the West Napa Fault 3.5 miles to the west (Napa County GIS faults and earthquakes layers). Therefore, no impact would occur.
- ii) Although the project site is located in an area that may be subject to strong or very strong seismic ground shaking potential during an earthquake (California Geological Society, 2016), the proposed project does not include construction of any new residences or enclosed areas where people would congregate. Therefore, this impact would be less than significant.
- iii) The project site is not in an area subject to high liquefaction potential. The Napa County General Plan identifies the project site as having very low liquefaction potential (Napa County, 2009). Further, as noted above, the proposed project would not result in a substantial increase in the number of people or add structures onsite. Therefore, this impact would be less than significant.
- iv) Landslides, landslide deposits, and areas of instability have not been identified within the project site (Napa County GIS landslide layer). Therefore, no impact would occur.

b. The project site’s soils are mapped as Haire Loam, Hambright Rock-Outcrop Complex, and Sobrante Loam.

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

Soil loss calculations were prepared using the Universal Soil Loss Equation (USLE) in order to evaluate potential effects of erosion as a result of the proposed project. The USLE model evaluates the environmental conditions and physical forces that lead to the detachment and potential movement of soil particles through surface erosion. The USLE model does not describe travel distances of soil particles once dislodged. Potential soil loss and sedimentation associated with the proposed agricultural development and operations would primarily be controlled through a no-till cover crop with vegetative cover densities of at least 80%. Vineyard avenues would also include vegetative cover densities of at least 80%. The cover crop provides the ability to trap eroded soils onsite, thereby reducing soil loss and sedimentation potential.

Based on USLE modeling calculations prepared by PPI Engineering (**Exhibit D**), the proposed conversion of approximately 8.3 acres of non-native grassland and blue oak woodland to vineyard and vineyard avenues is anticipated to reduce soil loss, or surface erosion, within the project site as compared to existing conditions (**Table 6**). Under existing conditions, the annual soil loss is anticipated to average 9.14 tons per acre per year across the development area depending on soil type, slope length, and gradient. Under proposed project conditions, annual soil loss is anticipated to average 6.75 tons per acre per year, or a reduction of approximately 26% as compared to existing conditions.

Table 6 – USLE Soil Loss Analysis

Vineyard Block	Pre-project Soil Loss (tons/year)	Post-project Soil Loss (tons/year)	Difference	Percent Change (approximate)
A	7.19	5.06	-2.13	-30%
B	1.09	0.95	-0.14	-13%
C	0.86	0.74	-0.12	-14%
Total	9.14	6.75	-2.39	-26%

Source: PPI Engineering, April 2019

Other proposed erosion control features that are anticipated to further reduce potential soil loss as a result of the proposed project, including soil loss experienced during vineyard and cover crop establishment, consist of permanent no-till cover, straw mulching, straw wattles, and other practices as needed.

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

Erosion and Runoff Control (i.e., Hydromodification) Installation and Operation – Conditions of Approval: The following conditions shall be incorporated by referenced into Erosion Control Plan #P18-00442-ECPA pursuant to NCC Chapter 18.108 (Conservation Regulations):

- **Permanent Erosion and Runoff Control Measures:** Pursuant to NCC Section 18.108.070(L) installation of runoff and sediment attenuation devices and hydromodification facilities including, but not limited to straw wattles and permanent no-till cover, shall be installed no later than October 15 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 (#P18-00442-ECPA) shall oversee its implementation throughout the duration of the proposed project, and that installation of erosion control measures, sediment retention devices, and hydromodification facilities specified for the vineyard have be installed and are functioning correctly. Prior to the first winter rains after construction begins, and each year thereafter until the proposed project has received a final inspection from the county or its agent and been found complete, the qualified professional shall inspect the site and certify in writing to the planning director, through an inspection report or formal letter of completion verifying that all of the erosion control measures, sediment retention devices, and hydromodification facilities required at that stage of development have been installed in conformance with the plan and related specifications, and are functioning correctly.
- **Cover Crop Management/Practice:** The permanent vineyard cover crop shall not be tilled (i.e., shall be managed as a no till cover crop) for the life of the vineyard and the owner/permittee shall maintain a plant residue density of 80% within the vineyard and vineyard avenues. The cover crop may be strip sprayed, with a strip no wider than 1 foot (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.

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

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

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

- c. As discussed above, the project site is not located in an area prone to landslides, ground failure or liquefaction. The proposed project identifies the soil types in the project site and addresses any potential soil instability. Therefore, impacts from offsite landslides, lateral spreading, subsidence, liquefaction or collapse would be less than significant.
- d. Soils of the project site consist of Haire Loam, Hambright Rock-Outcrop Complex, and Sobrante Loam, which all exhibit low shrink-swell potential (USDA Soil Survey of Napa County, 1978). In addition, no structures are proposed as part of the project and expansive soils pose little risk to vineyards and related agricultural improvements. Therefore, there would be no impacts associated with expansive soils.
- e. The proposed project involves the development of vineyard. No septic tanks or alternative wastewater disposal systems are needed or proposed at the project site. Therefore, no impact would occur with regard to soils supporting septic tanks or alternative wastewater disposal systems.
- f. There are no unique geologic features on the project site. Due to the nature of the soils in the project site and the nature of the proposed project (which would involve relatively shallow vineyard), the probability of encountering paleontological resources within the project site is minimal. Furthermore, project approval, if granted, would be subject to the standard conditions described below that would avoid and reduce potential paleontological resource impacts. Therefore, impacts to geologic features and paleontological resources are anticipated to be less than significant.

Paleontological Resources – Conditions of Approval: Discovery of paleontological resources during construction, grading, or other earth moving activities:

- 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 onsite shall be bound by contract and instructed in the field to adhere to these provisions and restrictions.

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

Discussion

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

Napa County has been working to develop a Climate Action Plan (CAP) for several years. The 2012 Draft CAP (March 2012) recommended using the emissions checklist provided therein, on a trial basis, to determine potential GHG emissions associated with project development and operation. At the December 11, 2012, Napa County Board of Supervisors (BOS) hearing, the BOS considered adoption of the proposed CAP. In addition to reducing Napa County’s GHG emissions, the proposed plan was intended to address compliance with CEQA for projects reviewed by the County and to lay the foundation for development of a local offset program. While the BOS acknowledged the plan’s objectives, it

requested that the CAP be revised to better address transportation-related GHG emissions, to acknowledge and credit past accomplishments and voluntary efforts, and to allow more time for establishment of a cost-effective local offset program. The BOS also requested that BMPs be applied and considered when reviewing projects until a revised CAP is adopted to ensure that projects address the County's policy goal related to reducing GHG emissions. In addition, the BOS recommended utilizing the emissions checklist and associated carbon stock and sequestration factors in the Draft CAP to assess and disclose potential GHG emissions associated with project development and operation pursuant to CEQA.

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

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

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

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

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

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

One-time "Construction Emissions" associated with vineyard development projects include: i) the carbon stocks that are lost or released when site vegetation is removed, including any woody debris and downed wood; ii) underground carbon stocks, or soil carbon, released when soil is ripped in preparation for vineyard development and planting (referred to as Project Site Emissions below); and iii) emissions associated with the energy used to develop and prepare the project site 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 XVII (Transportation)** for anticipated number of construction trips and equipment associated with project construction and operations.

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

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 XVII (Transportation)** 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_{2e} of construction equipment emissions for a 459-acre vineyard development, resulting in approximately 9.4 MT CO_{2e} of construction equipment emissions per acre of vineyard development.¹⁴ Using this emission factor it is anticipated that Construction Equipment Emissions associated with the proposed 8.3 gross acres of vineyard development would be approximately 78 MT CO_{2e} (8.3 acres multiplied by 9.4 MT CO_{2e}).

Project Site Emissions: Project site emissions are emissions resulting from vegetation removal and soil preparation associated with the conversion of approximately 5.8 acres of existing vegetation to vineyard. Because there is not yet a universally accepted scientific methodology or modeling method to calculate GHG emissions due to vegetation conversion and soil disturbance, the Greenhouse Gas Emissions Checklist and associated carbon stock factors developed as part of the 2012 CAP efforts are utilized to determine potential project site carbon stocks and emissions. Utilizing the 2012 Draft CAP carbon stocks and the acreages of vegetation types within the project site, total carbon stocks for the project site are estimated to be approximately 390.07 MT C or approximately 1,431.56 MT CO_{2e} (**Table 7**).

Table 7 – Estimated Development Area Carbon Stocks/Storage

Vegetation Type/Carbon Storage	Project Acreage	Carbon Storage/Stock per Acre (MT C/acre) ¹	Total Carbon Storage (MT)	Total Carbon Storage in MT CO _{2e}
Oak Woodland	2.07	95.1	196.86	722.48
Grasslands	2.53	1.4	3.54	12.99
Coniferous Forest ¹	3.24	58.1	188.24	690.84
Developed	1.02	1.4	1.43	5.25
Total			390.07	1,431.56

¹ For the purpose of these GHG calculations, the most conservative option was chosen; therefore, carbon stocks associated with olive orchard is applied to the Coniferous Forest vegetation type.

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

There is currently no scientific agreement about the percentage of carbon that would be lost (or emitted) from soils through grading. Some analyses have suggested 20-25% while others have suggested 50%.¹⁵ Using 50% as a more conservative estimate, the proposed project could result in one-time project site construction emissions from vegetation removal and soil preparation (i.e., grading and soil ripping) of approximately 1,315.37 MT CO_{2e} (**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) ¹	Total Carbon Loss/Emission (MT)	Total Carbon Loss/Emission in MT CO _{2e}
Oak Woodland	2.07	89.6	185.47	680.68
Grasslands	2.53	0.8	2.02	7.41
Coniferous Forest ¹	3.24	52.5	170.10	624.27
Developed	1.02	0.8	0.82	3.01
Total			358.41	1,315.37

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

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

¹ For the purpose of these GHG calculations, the most conservative option was chosen; therefore, carbon stocks associated with olive orchard is applied to the Coniferous Forest vegetation type.

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

Operational Emissions:

Operational Equipment Emissions: The referenced vineyard development EIRs also assessed ongoing vineyard operation emissions associated with vehicles and equipment. Estimated potential construction equipment emissions per acre of vineyard development were derived using the most generous emissions results from these EIRs. The Suscol Mountain Vineyard EIR anticipated approximately 373 MT CO_{2e} of operational emissions for a 560-acre vineyard, resulting in approximately 0.67 MT CO_{2e} of operational emissions per acre of vineyard per year. Using this emission factor, it is anticipated that Operational Equipment Emissions associated with the proposed 8.3-acre agricultural development would be approximately 5.56 MT CO_{2e} (8.3 multiplied by 0.67 MT CO_{2e}).

Operational Sequestration Emissions: Emissions associated with loss of sequestration due to land use change (i.e., the conversions of existing vegetation to vineyard) have been calculated based on the Annual Carbon Sequestration Factors within the 2012 Draft CAP, which indicates that oak woodlands sequester 0.425 CO₂ acre per year, grasslands sequester a negligible quantity of CO₂ acre per year (essentially zero), and coniferous forest sequester 0.666 CO₂ acre per year. The developed land use is not identified by the 2012 Draft CAP and is considered similar to grasslands (essentially zero). Because the 2012 Draft CAP does not identify sequestration factors for the grassland vegetation type, the sequestration factor for Croplands of 0.057 MT C per acre per year has been attributed to the grasslands that are proposed for removal to provide the most conservative GHG emission estimate. Utilizing these factors, it is anticipated that the annual emissions associated with changes in carbon sequestration as a result of land use changes would be approximately 3.24 MT C per year or 11.89 MT CO_{2e} per year¹⁶.

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

Project Emissions:

Based on the above estimates, the proposed project could result in one-time construction emissions of up to 1,393.39MT CO_{2e} and annual ongoing emissions associated with vineyard operations (including loss of sequestration) estimated to be approximately 17.45 MT CO_{2e} per year (Table 9).

Table 9 – Estimated Overall Project-Related GHG Emissions

Construction Emissions in Metric Tons of CO _{2e}		Annual Ongoing Emissions in Metric Tons of CO _{2e}	
Source	Quantity	Source	Quantity
Vehicles and Equipment	78.02	Vehicles and Equipment	5.56
Vegetation and Soil	1,315.37	Loss of Sequestration	11.89
Total	1,393.39	Total	17.45

Source: Napa County Conservation Division, November 2018

There is no adopted CEQA significance threshold at the state, regional, or local level for construction-related GHG emissions, and the County has therefore evaluated the significance of one-time project-generated emissions of up to approximately 1,393.39 MT CO_{2e} by considering the size of the proposed vineyard in relation to projected vineyard development in the County. The program level EIR for the 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 proposed project or its site.

In the context of 12,500 acres of projected vineyard development, the proposed project would constitute less than approximately 0.07% of the vineyard development anticipated in the General Plan EIR. The proposed project also contains measures to reduce and/or offset emissions from vineyard development and vineyard operations such as maintaining a permanent no-till cover crop density of a minimum

¹⁶ 3.55 acres of grassland times 0.057 MT C = 0.20 MT C, 2.07 acres of oak woodland times 0.425 MT C = 0.88 MT C, and 3.24 acres of coniferous forest times 0.666 MT C = 2.16, totaling 3.24 MT C

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 proposed 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 17.45 MT CO_{2e} per year, which is well below the threshold of 1,100 MT CO_{2e} per year that BAAQMD has defined as significant for CEQA purposes when considering land development projects. Therefore, ongoing project emissions, including loss of sequestration, due to the proposed project are considered less than significant.

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

Discussion

a-b. Installation of the proposed ECP and subsequent vineyard operation and maintenance would require a variety of equipment and vehicles that use fuel and other petroleum-based products such as oil and transmission fluids, which are considered hazardous materials. Ongoing vineyard operations would also involve the transport and use of chemicals such as 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 other chemicals, application methods, application amounts, number of annual applications, and annual amounts of chemicals that are anticipated to be utilized for ongoing vineyard maintenance and operation of the existing and proposed vineyard is provided within Supplemental Project Information forms on file at the Planning Department.

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

Chemicals for vineyard operation would be mixed and stored at an existing outbuilding located north of Block A; the nearest water source (i.e., Kreuse Creek) on the project site is approximately 400 feet south of the outbuilding. The soil and vegetation contained in the space between the mixing area and Kreuse Creek would trap pollutants, which are then naturally filtered and reduced through the soil. Fertilizers would be applied as necessary to the vineyard and to ensure the specified percent vegetative cover crop is achieved. No pre-emergent herbicides would be strip sprayed in the vinerows for weed management. Project storage and staging areas would be located within proposed clearing limits.

Kreuse Creek (and the in-stream ponds in Kreuse Creek) and the second blue-line stream near the development area meet the Napa County definition of a stream and have the appropriate setbacks (ranging from 55 to 85 feet), determined by slope as outlined in Napa County Conservation Regulation 18.108.025.

The risk of potentially hazardous materials reaching or affecting adjacent water courses or other aquatic resources is significantly reduced because: i) the proposed project would maintain buffers greater than 50 feet from the blue-line streams; 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 BMPs during construction activities and vineyard maintenance and operations:

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

For these reasons, and with incorporation of the conditions of approval described above, impacts associated with the use and transport of hazardous materials would be less than significant.

- c. The closest school (Camille Creek Community School) is located approximately 0.75 mile to the west of the project site. There are no schools proposed within 0.25 mile of the project site. Therefore, no impact would occur.
- 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, no impact would occur.
- e. The closest public airport to the project site is the Napa County Airport, located approximately 4.5 miles southwest of the project site. No portion of the proposed project is within an airport compatibility zone identified in the Airport Compatibility Plan (Napa County Airport Land Use Compatibility Plan, and Napa County GIS Airport layer). Therefore, no impact would occur.
- f. There would be negligible numbers of workers visiting the project site on a temporary basis for ECP and vineyard installation and on a seasonal basis for subsequent vineyard operations, resulting in no permanent substantial increase in the number of people working or residing at the project site. Therefore, the proposed project would not impair implementation of or physically interfere with any adopted emergency response plan or emergency evacuation plan, and no impact would occur.
- g. No structures are proposed as part of the project. The project site is located in an area identified as having moderate fire severity (CALFIRE 2007 - <https://egis.fire.ca.gov/FHSZ/>). 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 site as compared with existing conditions. Therefore, the proposed project would not increase the exposure of people or structures to wildland fires and impacts would be less than significant.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<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 or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. 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"/>
iii. 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; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<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%. 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 in the Kreuse Creek watershed and within the Napa River sub-watershed. The Napa River is designated as critical habitat for steelhead (Napa County GIS USFWS critical habitat layer). The Napa River is currently listed as an impaired waterbody for nutrients, pathogens, and sediment under Section 303(d) of the Clean Water Act. 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 Board has implemented the following programs. In 2009 the San Francisco Bay Regional 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 Regional Water Board, 2009).

Because vineyard properties may pose threats to water quality by discharging sediment, nutrients, and pesticides and/or by increasing storm runoff, which consequently can cause erosion and sedimentation and otherwise impact aquatic life, in July 2018 the San Francisco Bay Regional Water board adopted a water quality control permit (or General Permit) for vineyard properties in the Napa River and Sonoma Creek watersheds (Order #R2-2017-0033). The General Permit regulates parcels (including contiguous parcels under common ownership) developed

with five or more acres of vineyard located in either of these watersheds. The Napa River and Sonoma Creek TMDLs adopted by the San Francisco Bay Regional 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"¹⁷; implement the farm plan to achieve discharge performance standards; submit an annual report regarding plan implementation and attainment of performance standards; and participate in group or individual water quality monitoring programs.

In the General Permit the San Francisco Bay Regional Water Board identified four significant sediment sources that are associated with vineyard properties: i) vineyard soil erosion; ii) offsite erosion caused by vineyard storm runoff increases; iii) road-related sediment delivery; and iv) channel incision. Napa County ECPA requirements and standards primarily address and control two of these sources, vineyard soil erosion and vineyard storm runoff. The General Permit will fill gaps in local regulation so that all four sediment sources are effectively controlled to reduce fine sediment deposition in stream channels that provide habitat for endangered steelhead populations, locally-rare Chinook salmon populations, and exceptionally diverse assemblages of native fish species in these watersheds. Additional details on the Vineyard Properties General Permit can be obtained from the Regional Water Board¹⁸.

Two intermittent streams, one of which is Kreuse Creek, run through the project site. There are also two ponds located within the project site. Both ponds are in-stream on Kreuse Creek and are therefore jurisdictional waters of the U.S. The project site contains 1,136 linear feet of jurisdictional waters of the U.S. (discussed further in **Section IV [Biological Resources]**).

- a. Waste discharge is not anticipated as part of the proposed project or ongoing vineyard operations; therefore, the proposed project would not violate waste discharge requirements.

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 site. Agricultural Erosion Control Plan #P18-00442-ECPA includes BMPs that are consistent with NCC Section 18.108.080(c), as well as with Regional Water Board 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 or otherwise substantially degrade surface or groundwater quality, and this impact would be less than significant.

- b. The County requires all ECPA applicants to complete necessary water analyses in order to document that sufficient water supplies are available for a proposed project. The proposed vineyard would be irrigated using recycled water exclusively supplied by Napa Sanitation District (LincolnAE LLC, August 21, 2019 - **Exhibit A** and **Exhibit D-1**). A Water Availability Analysis (WAA) was prepared in order to determine the increase in water demand as a result of the proposed project (LincolnAE LLC, 2019 - **Exhibit D**)

The proposed vineyard would be irrigated using recycled water exclusively supplied by Napa Sanitation District: see project ECPA (PPI Engineering, July 2019 - **Exhibit A**); and Napa Sanitation District, Conditional Will Serve Recycled Water, APN 045-380-010 (October 15, 2019 - **Exhibit E**). Irrigation pipelines would be installed within existing roadways, vineyards and vineyard avenues, and/or within proposed clearing limits and would be connected to the recycled water pipeline located at the end of Curry Lane.

It is anticipated that the proposed vineyards (5.8-net planted acres) may require up to approximately 3.5 acre-feet of recycled water per year, or approximately 0.6 acre-feet of water per planted acre (see the Supplemental Project Information sheets and information request responses). While the Napa Sanitation District will serve indicates an anticipated total annual irrigation need of 2.5 acre-feet, this amount would provide for approximately 0.43 acre-feet of water per acer of planted vineyard (i.e. 0.43 acre-feet times 5.8 planted acres equals 2.49 acre-feet), which is considered by the County to be a plausible and adequate amount of irrigation water necessary and available (or otherwise allocated) for the proposed vineyard project.

Given that the proposed project would be irrigated exclusively with recycled water supplied by Napa Sanitation District, no impacts on groundwater supplies, groundwater recharge, and local groundwater aquifer levels would occur.

To ensure that the proposed vineyard is irrigated with recycled water, the following condition of approval would be incorporated should the project be approved:

Vineyard Irrigation – Condition of Approval: The owner/permittee shall implement the following measures to ensure that the vineyard is irrigated with recycled water:

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

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

- a. Prior to commencement of any grading, earth-disturbing activities, or vegetation removal associated with #P18-00442-ECPA, the owner/permittee shall provide documentation to Napa County that the property has been enrolled/Annexed into the Milliken-Sarco-Tulucay (MST) Recycled Water Line Community Facilities District and that a main water line from 4th Avenue to the project site has been installed and connected.
 - b. No new or existing on-site or off-site water sources, other than that evaluated as part of the ECPA (i.e., recycled water) shall be used for vineyard irrigation. Any other proposed irrigation source, including but not limited to 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 modification to this ECPA.
 - c. The owner/permittee shall (at the owner/permittee's expense) maintain data of both recycled water use and groundwater use of the project parcel through monthly monitoring annual reporting. Such data shall include total annual recycled and groundwater used/pumped, water extraction volumes, and static well level(s) of the parcel's well(s). All monitoring shall commence upon commencement of the vineyard development authorized by this ECPA, and shall be submitted to the Conservation Division no later than January 31st every calendar year thereafter and available upon the County's request at any other time.
 - d. The permittee shall be required to include the well in the County's Groundwater Monitoring program upon the County's request.
- c. Earthmoving activities have the potential to alter the natural pattern of surface runoff, which could lead to areas of concentrated runoff and/or increased erosion. The conversion of existing vegetation to vineyard would alter the composition of the existing land cover and infiltration rates, which could affect erosion and runoff. The proposed project does not propose any alteration to a stream, river, or drainage course, or include the creation of impervious surfaces that would concentrate runoff.

Erosion control measures and plan features that are not anticipated to affect drainage patterns but would assist in minimizing the potential for increased erosion and water runoff include a no-till cover crop with vegetative cover density of 80% (including vegetated avenues and turnaround avenues), and the annual application of straw mulch cover on all disturbed areas at a rate of 3,000 pounds per acre. Vineyard avenues and turn spaces would be maintained with the minimum vegetative cover density as specified for the individual vineyard block (80%). These features would slow and filter surface runoff water, thereby minimizing sediment, nutrients, and chemicals from leaving the project site and entering nearby aquatic resources. Refer to **Exhibits A, C and D** for details related to the following discussion.

Proposed erosion control and project features that have the potential to alter natural drainage patterns include straw wattles and mulching. Erosion control features would maintain soil losses below the tolerable levels for the soil types found on the site and ensure (in conjunction with the cover crop) that no net increase in erosion sediment conditions occurs beyond pre-development conditions as a result of the proposed project. The erosion control features would not alter the existing topographic contours of the site.

A Hydrologic Analysis for the proposed project was prepared by the Project Engineer (PPI Engineering, December 13, 2018 - **Exhibit C**). The development area is contained within two watershed basins. Watershed 1 encompasses approximately 31 acres and drains directly into Kreuse Creek. Watershed 2 is located south of Watershed 1 and contains approximately 12 acres that contribute flow to an unnamed blue-line stream that eventually drains into Kreuse Creek. Runoff leaving the project site drains toward the western edge of the property and towards Tulucay Creek and eventually drains into the Napa River. The Hydrologic Analysis utilized the Natural Resource Conservation Service (NRCS) Technical Release 20 (TR-20) method to conclude that there would be no change in peak flow for all watersheds in the development area (**Table 10**). The Hydrologic Analysis also concluded that the runoff time of concentration, which is the time it takes for runoff to flow from the upper most point in each watershed to the watershed's outlet, is anticipated to remain the same as existing conditions.

Table 10 – Hydrologic Modeling Calculations (TR-20) Results: Runoff Rates

	Peak Discharge Flow (cfs) by 24-hour Storm Event Frequency Return Interval (cubic feet/second)			
	2-year	10-year	50-year	100-year
Watershed 1				
Pre-project conditions	5.98	17.25	30.16	35.61
Post-project conditions	5.98	17.25	30.16	35.61
Change (cfs)	0	0	0	0
Change (%)	0	0	0	0
Watershed 2				
Pre-project conditions	2.77	7.41	12.60	14.81
Post-project conditions	2.77	7.41	12.60	14.81
Change (cfs)	0	0	0	0
Change (%)	0	0	0	0

Source: PPI Engineering, December 13, 2018, Hydrologic Analysis, Darioush Estate Track I ECP, 2100 Curry Lane, Napa, CA 94558; APN 045-380-010 (Exhibit C)

The proposed project's 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 VII (Geology and Soils)**, the proposed project is anticipated to decrease soil loss as compared to existing conditions. Therefore, the proposed project would have a less than significant impact with respect to alterations of existing drainage patterns of the site or area that would result in increased runoff, or considerable on or offsite erosion, siltation, or flooding.

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, no increase in runoff volume or decrease in time of concentration is anticipated under post-project conditions. Furthermore, as discussed in **Section VII (Geology and Soils)**, a reduction in soil loss and sedimentation is anticipated under post-project conditions. Therefore, the proposed project would not contribute a substantial amount of additional runoff to an existing stormwater drainage system or provide substantial additional sources of polluted or sediment laden runoff, resulting in a less than significant impact.

In addition, pursuant to NCC Section 18.108.135 (Oversight and Operation) projects requiring an erosion control plan would be inspected by the County after the first major storm event of each winter until the proposed project has been completed and stable for three years to ensure that the implemented erosion control plan is functioning properly¹⁹. Furthermore, pursuant to NCC Section 18.108.135 (Oversight and Operation) projects requiring an erosion control plan will be inspected by the County after the first major storm event of each winter until the proposed project has been completed and stable for three years to ensure that the implemented erosion control plan is functioning properly.

- d. The project site is not located within a Federal Emergency Management Agency (FEMA) 100-year flood zone, in a dam or levee failure inundation area, or in an area subject to seiche or tsunami (Napa County GIS FEMA flood zone and dam levee inundation areas layers; Napa County General Plan - Safety Element. pg. 10-20). Therefore, no impact would occur.
- e. The proposed project would not have an adverse impact on water quality because the ECPA has been designed to keep polluted runoff and sediment from leaving the project site. As discussed in **Section IX (Hazards and Hazardous Materials)**, the project proposes the use of potentially hazardous materials during implementation activities (i.e., oil, gasoline, and transmission fluids associated with construction equipment) and the application of chemicals (i.e., fertilizers) for ongoing vineyard maintenance. Only federal and/or California approved chemicals would be applied to the vineyard in strict compliance with applicable state and federal law. As discussed in **Sections IV (Biological Resources)** and **IX (Hazards and Hazardous Materials)**, buffers provided in the ECP adjacent to watercourses would facilitate increased water infiltration so that chemicals and potentially hazardous materials associated with project implementation and operation can be trapped and degraded in buffer vegetation and soils to protect water quality. The limited application of agricultural chemicals generally occurring during the non-rainy season would also minimize the amounts of chemicals that could affect on or offsite water resources. Because the proposed project as designed is not expected to increase runoff rates or times of concentration in relation to existing conditions (as discussed in question c 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 VII (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 site. As such, the proposed project is anticipated to reduce soil loss and sedimentation by approximately 2.39 tons/year, have no effect on runoff rates, and maintain project site drainage characteristics as compared to existing conditions. The ECPA includes BMPs that are consistent with NCC Section 18.108.080(c), as well as with Regional Water Board 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.

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

Water Quality – Condition of Approval: The owner/permittee shall refrain from disposing of debris, storage of materials, or constructing/operating the vineyard, including vineyard avenues, outside the boundaries of the approved plan, or within required setbacks Pursuant to Napa County Code Section 18.108.025 (General Provisions – Intermittent/perennial streams). Furthermore, consistent with the standard conditions identified in the **Hazards and Hazardous Materials Section (Section IX)**, 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, watercourses, streams and any other water resource to avoid the potential risk of surface and groundwater contamination, whether or not such activities have occurred within these areas prior to this ECPA approval.

Therefore, the proposed project as designed, in conjunction with identified conditions of approval, would not adversely conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. No impact would occur.

¹⁹ Compliance with Section 18.108.135 is achieved by including their provisions as conditions of approval for a project, if granted.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a. The proposed site is in a rural area of Napa County and the nearest established community, Imola, is approximately 0.7 miles west of the project site. Therefore, the proposed vineyard and subsequent vineyard operations would not physically divide an established community and no impact would occur.
- b. Surrounding land uses consist predominantly of undeveloped land and scattered rural residential, and vineyards. 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 proposed project has been found consistent with applicable code requirements and General Plan Goals and Policies, including but not limited to the following:

- The project as proposed is consistent with NCC Section 18.108.010, which requires that soil loss and runoff as a result of a project be minimized to protect water quality. As discussed in **Sections VII (Geology and Soils)** and **X (Hydrology and Water Quality)**, the proposed project is anticipated to decrease soil loss and potential sedimentation by approximately 26% and maintain runoff conditions as compared to existing conditions.
- The proposed project is consistent with Policies CON 48 and CON 50c, which require pre-development sediment erosion conditions and runoff characteristics following development not be greater than predevelopment conditions. As discussed in **Section VII (Geology and Soils)** and **Section X (Hydrology and Water Quality)** the project as proposed would reduce soil loss, sedimentation, and maintain runoff characteristics as compared to existing conditions.
- The proposed project with implementation of **Mitigation Measures BR-1, BR-2, BR-3, and BR-4** is consistent with Policies CON-13 and CON-16, which require discretionary projects consider and avoid impacts to fisheries, wildlife habitat, and special-status species through evaluation of biological resources. A Biological Resources Reconnaissance Survey was prepared for the proposed project. The proposed project as proposed would avoid potential direct, indirect, and cumulative impacts to special-status plant species and associated habitat occurring on the project site. With implementation of **Mitigation Measures BR-1 and BR-2** potential impacts to special-status bat and bird species would be avoided. Furthermore, implementation of these measures would not affect the feasibility of the proposed project in that, impacts to special-status species and their habitat can be avoided while allowing for 5.8 net acres of additional agriculture to be developed and operated on the project site.
- With implementation of **Mitigation Measures BR-1, BR-2, BR-3, and BR-4** and the oak woodland preservation, fencing, and tree/woodland conditions of approval, the proposed 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 proposed project would maintain levels of biodiversity and would avoid impacts to special-status plant and animal species.
- With implementation of **Mitigation Measures BR-1, BR-2, BR-3, and BR-4** and the oak woodland preservation, fencing, and tree/woodland conditions of approval, the proposed project is consistent with Policy CON-13, which requires discretionary projects to consider and avoid impacts to fisheries, wildlife habitat, and special-status species, and Policy CON-17, which requires the preservation and protection of native grasslands, sensitive biotic communities, and habitats of limited distribution and no net loss of sensitive biotic communities.
- As proposed, the project is consistent with CON-16, which requires discretionary projects prepare an evaluation of biological resources. A Biological Resources Reconnaissance Survey was prepared for the proposed project (**Exhibit B-1**).
- The proposed project is consistent with Policy CON-30, which encourages the avoidance of wetlands, as there are no wetlands within the project site.
- The proposed project as proposed is consistent with Policy CON-18, which encourages the reduction of impacts to habitat conservation and connectivity. With incorporation of the fencing conditions of approval, and the proposed project's small amount of proposed new fencing, wildlife movement would not be impaired.

- The proposed 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 VII (Geology and Soils)** and **Section X (Hydrology and Water Quality)**, with incorporation of the Permanent Erosion and Runoff Control Measures condition of approval, the proposed 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 proposed project's scope and scale, its construction and operational GHG emissions, as disclosed in **Section VIII (Greenhouse Gas Emissions)**, are anticipated to be less than significant.
- The project as proposed is consistent with Policy AG/LU-1, which states that agricultural and related activities are the primary land uses in Napa County, as the proposed project is vineyard development and would increase agriculture uses in the County.
- The project as proposed is consistent with General Plan land use designation of Agricultural, Watershed and Open Space (AWOS), and is therefore consistent with Policy AG/LU-20.

For these reasons, the proposed 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.

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

Discussion

a-b. The project site is not in an area with a known mineral resource of value to the region or state or within a known mineral resource recovery area (Napa County Baseline Date Report, Figure 2-2 and Map 2-1, Version 1, November 2005; Napa County General Plan Map, December 2008; Special Report 205, Update of Mineral Land Classification, Aggregate Materials in the North San Francisco Bay Production-Consumption Region, Sonoma, Napa, Marin and Southwestern Solano Counties, California Geological Survey, 2013). The nearest known mineral resource area in Napa County is located one to the southwest of the project site. Proposed site improvements and development of vineyard on the parcel would not physically preclude future mining activities from occurring. Therefore, no impact would occur.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. NOISE. Would the project:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project 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) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a-b. The project site is located in a rural setting where surrounding parcels are generally undeveloped, planted with vineyards and contain wineries. The closest offsite residences are located approximately 60 feet to the west, and approximately 400 feet to the northwest of the development area. Additionally, adjacent proprietries and properties in the immediate area contain vineyard.

Activities associated with installation of the proposed project, including earthmoving and subsequent vineyard operations, could generate noise levels above existing conditions. Several different types of equipment would be necessary for implementation and operation of the proposed project, including a bulldozer, excavator, dump truck, trencher, backhoe, and small trucks. **Table 11** characterizes typical equipment noise levels at a reference distance of 50 feet. As identified in **Table 11**, equipment used for vineyard development could produce a maximum of 89 (A-weighted decibels) dBA at a distance of 50 feet.

Table 11 – 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 12 characterizes the typical reduction in construction equipment noise levels as the distance increases from the source, based on a source noise level of 90 dBA.

Table 12 – Estimated Distance to dBA Contours from Construction Activities ¹

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

¹ Based on a source noise level of 90 dBA

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

Based on distances to existing residences, noise associated with project construction would be approximately 90 dBA at the nearest existing offsite residences.

Noise related to farming activities and equipment typically ranges from 75 dBA to 95 dBA, with an average of approximately 84 dBA (Toth 1979 and Napa County Baseline Date Report, Version 1, November 2005). These noise levels should be reasonably representative of noise levels from wheeled and tracked farm equipment. Noise sources associated with ongoing vineyard operation and maintenance include a variety of vehicles and equipment, such as ATV's, tractors, grape haul trucks, passenger cars, and light trucks, which would occur on a temporary and seasonal basis. **Table 13** 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 13 – Estimated Distance to dBA Contours from Farming Activities ¹

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

¹ Based on a source noise level of 84 dBA

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

Based on distances to existing residences, it is anticipated that noise due to operation and maintenance agricultural activities would be below 84 dBA at the closest existing offsite residences.

Napa County considers construction noise levels up to 75 dBA during daytime hours (7 a.m. to 7 p.m.) and 60 dBA during nighttime hours (7 p.m. to 7 a.m.) as compatible with residential uses (NCC Section 8.16.080), and ongoing (or established use) noise levels of approximately 55 dBA as compatible with residential uses (NCC Section 8.16.070). Noise levels from routine operation and maintenance

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

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 and vibration impacts, and would result in no permanent increase in ambient noise levels in the vicinity of the proposed project in excess of County standards.

- c. The project site is neither located within an area covered by an airport land use plan, nor is it within 2 miles of a public, public-use, or private airport (Napa County GIS: Napa Airport Compatibility Zones and USGS Quad layers). Therefore, no impact would occur.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. POPULATION AND HOUSING. Would the project:				
a) Induce substantial unplanned 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 people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a. The proposed project involves earthmoving activities and the installation and maintenance of erosion control measures in connection with the development and cultivation of vineyard. It does not involve the construction of new homes, businesses, roads, or infrastructure (e.g., water, sewer or utility lines) that would directly or indirectly induce substantial unplanned population growth. Construction and installation activities of the proposed project would generate a minimal number of employees to the project site on a temporary basis, and ongoing vineyard operation and maintenance would generate a minimal number of employees to the project site on an ongoing basis. It is anticipated that these employees would come from the existing labor pool in the region. Therefore, the proposed project would not induce unplanned population growth in the proposed project vicinity or greater region, either directly or indirectly. No impact would occur.
- b. The proposed project would not displace any existing housing or people and it does not involve the construction of new homes. Therefore, no impact would occur.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
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 XIV (Population and Housing)**, resulting in no substantial population growth in the area. It is anticipated that these temporary employees would come from the existing labor pool in the local region and, would not result in an increase in population over existing conditions. As a result, there would be no need to construct any new government facilities. Therefore, there would be no change in the demand for the listed services and amenities. No impact would occur.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. RECREATION. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<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 XIV (Population and Housing) and XV (Public Services)**, the proposed project would not result in substantial population growth, resulting in no increase in the use of recreational facilities and requiring no construction or expansion of recreational facilities. Therefore, no impact would occur.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. TRANSPORTATION. Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA guidelines § 15064.3 subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric 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"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a-b. Currently, the project site is developed with approximately 9.61 acres of existing vineyard, one single-family residence, landscaped areas, outbuildings, and access roads.

The proposed project is expected to generate approximately three round trips per day during construction. Four truck trips would deliver and remove heavy equipment at the start and end of project construction. Typical construction equipment anticipated for project implementation includes a medium excavator, D8 bulldozer, haul trucks, loader, and two farm tractors with trailers. Pruning would occur

approximately three days of the year and is anticipated to generate 10 daily employees, resulting in approximately five round trips per day during pruning. Weed control would occur between May and July (outside of pruning months) and is anticipated to generate up to six workers. Harvest would occur approximately two days of the year and is anticipated to generate up to 10 daily employees, resulting in approximately five round trips per day during harvest. Two grape haul trucks would be used during harvest. Vehicular equipment for ongoing vineyard maintenance is anticipated to include ATVs, tractors, truck and equipment trailers, and passenger cars and/or light trucks. Some of this traffic already exists onsite due to the operation and maintenance of the existing vineyard. Construction traffic would be intermittent during non-peak hours, generally arriving between 6 a.m. and 7 a.m. and departing between 2 p.m. and 3 p.m. Traffic associated with routine vineyard operation and maintenance, including harvest, would also be intermittent during the non-peak hours, generally arriving around 6 a.m. and departing around 3 p.m.

The project site is accessed from Curry Lane, approximately 0.25 mile south of its intersection with Kreuzer Lane. Trucks and other equipment would use County roads or State highways for very short periods during construction and subsequent vineyard operation.

Traffic generated by construction of the proposed project and subsequent vineyard operation, including harvest, would increase traffic on area roadways and result in additional vehicle miles traveled compared to current conditions. These activities would occur on a temporary and/or seasonal basis, and they would generally occur during non-peak hours. Trips already occur due to the existing vineyard and it is anticipated that a number of existing employees would be utilized to develop and manage the proposed vineyard. The proposed project would result in a minimal increase in traffic levels along the local roadways compared to existing conditions, and would not result in decreased travel times on roads in the vicinity of the proposed project or a substantial increase in vehicle miles traveled given the scale of the proposed project. Further, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, or designated bicycle and pedestrian facilities or with CEQA Section 15064.3(b). Therefore, the impact would be less than significant.

- c. The project proposes to utilize the existing site access off Curry Lane for project development (**Figures 1-3**). The proposed project does not include roadway improvements and/or modifications to Curry Lane, or include any other design feature that would result in hazardous conditions due to a geometric design feature or incompatible uses. The installation of the vineyard is consistent with the allowed use of the property and other agricultural uses in the area. Therefore, the potential for the creation, substantial increase in hazards or hazards due to a geometric design feature and incompatible uses would be a less than significant impact.
- d. The existing roads would continue to provide adequate emergency access to the project site, resulting in no impact.

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

Discussion

On January 29, 2019, the County notified pursuant to Public Resources Code Section 21074 (AB-52: Gatto) Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, and Yocha Dehe Wintun Nation of the proposed project. On February 4, 2019, the County received a response letter from Middletown Rancheria indicating they have no specific comments at this time.

The County received response letters from Yocha Dehe Wintun Nation dated February 12 and March 12, 2019, indicating concerns that the proposed project could impact known cultural resources and recommending cultural monitors during development and ground disturbance. The Tribe also requested that the Cultural Resources Reconnaissance report be modified to indicate that in the event that archaeological materials

are discovered during the development of this project, a Yocha Dehe Wintun Nation Tribal Cultural Monitor would be listed along with the archaeologist to evaluate the findings and recommend any mitigation measures, if necessary. On March 29, 2019, the County replied to the Yocha Dehe Wintun Nation letter indicating that the requested modification to the report would be incorporated into either a project specific mitigation measure or conditions of approval, and closing the consultation invitation because the Tribe did not request consultation within the 30-day notification period.

The Mishewal Wappo Tribe of Alexander Valley did not request consultation within the 30-day notification period. Because no response to the January 29, 2019 consultation invitation was received, on July 30, 2019 the County sent a consultation closure notice to the Tribe.

a-b. As discussed in **Section V (Cultural Resources)** the proposed project's Cultural Resource Reconnaissance (Flaherty Cultural Resource Services, September 1, 2018), identified four resources, one of which (structural debris) could not be evaluated for eligibility so it is presumed eligible for the California Register. However, with implementation of **Mitigation Measure CUL-1**, impacts to cultural resources as a result of the proposed project would be considered 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 conditions of approval discussed in **Section V (Cultural Resources)** would avoid and reduce potential impacts to unknown resources.

Based on correspondence with Yocha Dehe Wintun Nation (described above), the Cultural Resources conditions of approval includes a provision that a cultural monitor be present during project development (via a Monitoring Agreement with the Yocha Dehe or other Cultural Monitoring Plan) and Yocha Dehe Wintun Nation Tribal Cultural Monitor notification to evaluate archaeological materials that may be discovered during the development of the project.

As such, the proposed project, with the Cultural Resources conditions of approval, that includes Yocha Dehe Wintun Nation recommendations, and **Mitigation Measure CUL-1**, would result in less than significant impacts to Tribal Cultural Resources, including those that may be eligible for the California Historical Resources Information System 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
XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the waste water 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"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with federal, state, and local management and reduction 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 generate a minimal number of employees to the property on a temporary basis, and ongoing vineyard operation and maintenance would generate a minimal number of employees to the property on an ongoing basis. It is anticipated that these employees would come from the existing labor pool in the region and would not generate an increase in the population relative to the existing conditions. Therefore, the proposed project would not create a need to construct new or modified utilities and service systems. Further, implementation of the proposed project would not result in the construction or expansion of a water or wastewater treatment facility; the proposed project would not generate wastewater and one existing groundwater well would provide irrigation water to the vineyard.

Irrigation pipelines would be located within existing roadways, vineyards and vineyard avenues, and/or within proposed clearing limits. The proposed project would include the installation of a limited number of onsite storm water drainage features such as straw wattles 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), VII (Geology and Soils), and X (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 IX (Hazards and Hazardous Materials)**, would result in a less than significant impact.

- b. The approximately 8.3 gross acres of vineyard (approximately 5.8 net acres) would be irrigated by reuse water supplied by Napa Sanitation District. It is anticipated that after full development over three years, water use for the 5.8-net acres of proposed vineyard is estimated to be approximately 3.5 acre-feet of water per year. No groundwater would be used with the proposed project.

Implementation of the proposed project would not result in the construction or expansion of a water or wastewater treatment facility because it would not generate wastewater and the Napa Sanitation District would provide irrigation water to the vineyard. Irrigation pipelines would be located within existing roadways, vineyards and vineyard avenues, and/or within proposed clearing limits. Therefore, the proposed project would have less than significant impact on water supplies. Water availability and water use are discussed in greater detail in **Section X (Hydrology and Water Quality)**.

- c. Given the small number of employees that the proposed project would generate for construction and operation, wastewater generation by the proposed project would not be substantial enough to affect wastewater treatment capacity. The proposed project would generate no wastewater that would require treatment, resulting in no impact on wastewater treatment providers.
- d-e. Rock generated during vineyard preparation would be utilized onsite primarily on existing roads. Rock that is not used immediately would be stockpiled for future use inside the proposed clearing limits. Solid waste generated during construction activities (e.g., broken pipe, fittings, trellis, end posts, etc.) would be negligible. Implementation of the proposed project would include pruning and harvesting activities which would generate waste material (cane). This material would generally be disposed of by being chipped and disposed of onsite. Therefore, the proposed project would not generate a volume of waste that would need to be disposed of at a landfill that would exceed the permitted capacity of applicable landfills serving the project area. Furthermore, all waste would be disposed of in accordance with federal, State, and local statutes and regulations. Therefore, no impact would occur.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

The project site is located in a State Responsibility Area (SRA) that is designated as a Moderate Fire Hazard Severity Zone and is within a Federal Responsibility Area (CALFIRE, 2007, Napa County GIS Fire Hazard Layer). The project site is gently to moderately sloped on generally northern-facing slopes and elevations range from approximately 150 to 240 feet above msl.

- a. Project construction and operation would not require any road closures and would not substantially increase traffic in the area compared to current conditions. Existing roads would continue to provide adequate emergency access to the project site. Therefore, the proposed project would not impact an adopted emergency response plan or emergency evacuation plan.

- b-c. Project construction would require the use of vehicles and heavy equipment for grading and other activities, and these vehicles and equipment could spark and ignite flammable vegetation. During construction, the risk of igniting a fire would be low because vegetation would be cleared prior to developing the vineyard, and the risk would be temporary due to the short duration of construction (approximately six months). Operation and maintenance activities would be similar to activities already occurring on the project site with the existing vineyard. The proposed project does not include any infrastructure that would exacerbate fire risk. The proposed project would not exacerbate wildfire risk and this impact would be less than significant.
- d. Although the proposed project would alter land cover, the proposed project includes temporary and permanent erosion control measures which would reduce the impact of stormwater runoff or drainage changes being discharged on or offsite and there would be a decrease in peak flow in the development area (see **Section X [Hydrology and Water Quality]**). The onsite residence and residence closest to the proposed vineyard are located on relatively flat terrain. Therefore, there are no structures or people that would be exposed to downslope or downstream flooding or landslides and the impact would be less than significant.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE. Would the project:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have the impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

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

- a. As discussed in this Initial Study, implementation of #P18-00442-ECPA, with the incorporation of identified mitigation measures and conditions of approval (should the proposed project be approved), would not have the potential to significantly degrade the quality of the environment.

Implementation of **Mitigation Measures BR-1, BR-2, BR-3, and BR-4** would avoid potential direct and indirect impacts to special-status bat, bird and turtle species and their habitat. Existing deer fence surrounds northern boundary of the proposed vineyard blocks. The proposed new vineyard blocks would be fenced individually and in clusters where appropriate. Given the relatively small size of the project site (relative to the width of the corridor tract) and the lack of apparent development impacts within the more central portion of this tract, agricultural expansion within the project site is in and of itself unlikely to result in any significant impacts to wildlife movement or migration at the landscape linkage scale. While the proposed project (vineyard blocks) would result in portions of the site having reduced potential for on-site wildlife movement, the retention of blocks of vegetation with direct connectivity with similar habitats on neighboring properties would allow for continued local wildlife movement. As such, the proposed deer fencing would not introduce any new movement barriers to wildlife and impacts to wildlife movement are expected to be less than significant, and the range of special-status plant species would not be restricted, cumulative impacts are anticipated to be less than significant. The two blue-line streams onsite are avoided with a minimum 55 to 85-foot buffers. To ensure direct impacts to the on-site cultural resource are reduced to a less-than-significant level, **Mitigation Measure CUL-1** would be implemented to provide it with a protective buffer. With incorporation of standard conditions to protect cultural resources that may be discovered accidentally, significant impacts to cultural resources are not expected (**Section V [Cultural Resources]**). Therefore, the proposed project as designed with the incorporation **Mitigation Measures BR-1, BR-2, BR-3, and BR-4 and Mitigation**

Measure CUL-1 and conditions of approval, the proposed vineyard development project would have a less than significant potential to degrade the quality of the environment.

- b. The project site is located within the Kreuse Creek Drainage. The Kreuse Creek Drainage contains approximately 980 acres. In 1993, vineyard acreage within this drainage was approximately 47 acres, or 4.7% of the drainage. Since 1993 approximately 45 acres of additional vineyard (or 4.7% of the drainage) have been developed to vineyard, resulting in approximately 9.4% of the drainage (or approximately 92 acres) containing vineyard.

It is estimated, based on evaluation of the County's GIS layer identifying Potentially Productive Soils (PPS) within the Kreuse Creek Drainage, that there are approximately 217 acres (22% of the drainage) having the potential to be developed to vineyard, this in conjunction with existing and approved vineyard development (approximately 92 acres) results in a total potential build out of approximately 309 acres or approximately 31.5% of the drainage. The PPS layer includes lands with characteristics that have been found to be suitable for potential future vineyard development; however this total does not take into consideration other site-specific limitations such as water courses requiring setbacks, wetlands, other water features, rare or special-status plants and animal species, or cultural resources, nor does the layer take into account other factors influencing vineyard development, such as sun exposure, soil type, water availability, or economic factors.

While it is not possible to quantify precisely the acreage and location of additional vineyard development that may be proposed by property owners in these drainages in the future, it is possible to make a conservative estimate based on previous trends. To estimate the amount reasonably foreseeable vineyard that may be developed over time, the acreage of vineyard development including approved vineyard projects in the cumulative environment (i.e., Kreuse Creek Drainage) over the last 26 years (1993-2019) were used to project an estimation of vineyard development for the next three to five years. Over the past 26 years within the Kreuse Creek Drainage, approximately 3.5 acres of agriculture were developed per year (92 divided by 26). 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 10.5 to 17.5 acres over the next three to five years within the Kreuse Creek Drainage are considered reasonable estimates. NCC Chapter 18.108 includes policies that require setbacks of 35 to 150 feet from watercourses (depending on slopes), and General Plan Conservation Policy CON 24c that requires the retention of oak woodland at a 2:1 ratio, which limits the amount of potential vineyard acreage that could be converted within the watershed. It has been the County's experience with ECP projects that there are generally site-specific issues, such as oak woodland preservation, wetlands, other water features, special-status plant and animal species, or cultural resources that further reduce areas that can be developed to other land uses. Additionally, the vineyard acreage projections for the next three to five years do not consider environmental factors that influence vineyard site selection, such as sun exposure, soil type, water availability, slopes greater than 30%, or economic factors such as land availability, cost of development or investment returns.

Air Quality and GHG - Sections III and VIII:

The proposed project (#P18-00442-ECPA) includes the removal of vegetation and installation of vineyard and erosion control measures concurrent with other projects in the air basin that would generate emissions of criteria pollutants, including suspended particulate matter (PM) and equipment exhaust emissions. For construction-related dust impacts the Regional Water Board recommends that significance be based on the consideration of the control measures to be implemented (Regional Water Board, May 2017). As discussed in **Section III (Air Quality)** and shown in **Table 3** (Emissions from Vineyard Development and Operation) criteria pollutant emissions associated with development and operations are anticipated to be well below identified thresholds, and therefore are not expected to result in project or cumulatively significant impacts. Additionally, the proposed project would be subject to standard air quality conditions of approval (should the proposed project be approved) that requires implementation of Air Quality BMPs to further reduce potential less than significant air quality effects of the proposed project and ongoing operation. Conversion of existing vegetation and disturbance of soil would result in releases of carbon dioxide, one of the gasses that contribute to climate change (**Tables 7 and 8**). As discussed in **Section VIII (Greenhouse Gas Emissions)**, the proposed project is not anticipated to result in substantial or significant GHG emissions, and includes the installation of grapevines and a permanent no-till cover crop, which may off-set (in whole or in part) potential impacts related to reductions in carbon sequestration. Potential contributions to air quality impacts associated with the proposed project, including GHG emissions and loss of sequestration, would be considered less than cumulatively significant through project design (i.e., scope and scale) and implementation of standard conditions of approval.

Biological Resources - Section IV:

A project specific Biological Resources Reconnaissance Survey (WRA, December 2018 - **Exhibit B-1**) was performed for the proposed project to evaluate potential habitat loss and disturbance to plant and wildlife species as a result of the proposed project. The reconnaissance survey included a records search to identify the presence or potential presence of special-status species within the project area. The records search included the USFWS, CNDDDB, and CNPS databases. As discussed in **Section IV (Biological Resources)**, no special-status plant species or wetlands were identified in the project site. Seven special-status animal species have the potential to occur within the project site; however, with the stream setbacks proposed in the ECP and implementation of **Mitigation Measures BR-1, BR-2, and BR-3**, impacts on these species would be less than significant. With implementation of **Mitigation Measure BR-4**, no impacts to

waters of the U.S. would occur. Therefore, the proposed project would not contribute to a cumulatively significant impact to special-status plants and animals or habitats.

Cultural and Tribal Resources – Sections V and XVIII:

One potential cultural resource was identified in the project site (i.e., a structural debris and depression). With the incorporation of **Mitigation Measure CUL-1** and standard conditions to protect cultural and tribal cultural resources that may be discovered accidentally, significant impacts to cultural and tribal cultural resources are not expected (see **Section V [Cultural Resources]** and **Section XVII [Tribal Cultural Resources]**). Therefore, with the incorporation of the identified conditions of approval and implementation of **Mitigation Measure CUL-1**, the proposed vineyard development project would have a less than significant project-specific and cumulative impact on cultural and tribal cultural resources.

Geology and Soils - Section VII:

Soil loss and associated sedimentation resulting from implementation of the proposed project is anticipated to be reduced by approximately 2.39 tons/year as compared to existing conditions (**Table 6**). The reasons for this reduction is due to the increased vegetative cover conditions within the proposed vineyard development areas and the installation of straw wattles that reduce overland flow velocities and erosive power, and trap eroded soil on-site, thereby reducing soil loss potential. Because the proposed project would reduce soil loss as compared to existing conditions the proposed project is not anticipated to contribute cumulatively to sediment production within the Kreuse Creek Drainage; therefore, impacts associated with soil loss and associated sedimentation are not considered cumulatively significant.

Because geologic impacts associated with future agricultural projects would receive the same scrutiny under CEQA, the County's General Plan Goals and Policies, in particular General Plan Conservation Element Policy CON-48 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 X:

It is anticipated that approximately 2.5 to 3.5 acre-feet of water per year would be needed to irrigate the 5.8-net acres of proposed planted vineyard. Given that the proposed project would be irrigated entirely with recycled water supplied by Napa Sanitation District, no potential impacts associated with groundwater use would occur and the proposed project would result in less than significant impacts to groundwater supplies, groundwater recharge, and local groundwater aquifer levels.

As discussed in **Section X.c (Hydrology and Water Quality)** a Hydrologic Analysis utilizing the TR-20 Runoff Model has been prepared by PPI Engineering (Revised May 2019 - **Exhibit C**). Because the proposed project does not include diversions, create concentrated flows or otherwise alter site drainage patterns, and does not materially alter site slopes no net increase in runoff volumes or time of concentrations are expected as compared to pre-project conditions (**Exhibit C**), therefore no significant impacts due to changes in hydrology are expected.

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

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

Land Use and Planning - Section XI:

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

Proposed Project Impacts found to be Less Than Significant

In addition to the impact categories identified above, the following discussion summarizes those impacts considered to be less than significant with development of the proposed project: Aesthetics, Agriculture and Forestry Resources, Energy, Hazards and Hazardous

Materials, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Utilities and Service Systems, and Wildfire. Periodic use of lighting at the site would not create a substantial source of light and lighting would be in the form of heat lights or downward directional lights on equipment being used during nighttime harvest. The potential contribution to aesthetic impacts associated with the proposed project is considered to be less than cumulatively considerable. The proposed project does not conflict with any current zoning for agricultural or forestry use, nor does the proposed 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 proposed project site or immediate vicinity. This project would generate noise levels that are considered normal and reasonable for agricultural activities and consistent with the County's "Right to Farm" Ordinance. The potential contribution to noise or vibration impacts is considered less than cumulatively considerable. Traffic related to construction and farm worker trips would not increase by a discernible amount and the relatively low and off-peak vehicle trips associated with the proposed project are considered less than cumulative considerable. The proposed project does not include the construction of structures that would result in population growth or displacement of people, the proposed project would not adversely impact current or future public services, or require the need for utilities and service systems. For these reasons, impacts associated with the proposed project that may be individually limited, but cumulatively considerable, would be less than significant.

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

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

LIST OF FIGURES:

- Figure 1 Site Location Map (USGS)
- Figure 2 Site Location Map (2018 Aerial)
- Figure 3 Project Site and Project Area Air Photo

LIST OF TABLES:

- Table 1 Implementation Schedule
- Table 2 Annual Operations Schedule
- Table 3 Emissions from Vineyard Development and Operation
- Table 4 Biological Communities and Habitat Types on the Project Site
- Table 5 Retention of Biological Communities
- Table 6 USLE Soil Loss Analysis
- Table 7 Estimated Development Area Carbon Stocks/Storage
- Table 8 Estimated Project Carbon Emissions Due to Vegetation Removal
- Table 9 Estimated Overall Project-Related GHG Emissions
- Table 10 Hydrologic Modeling Calculations (TR-20) Results: Runoff Rates
- Table 11 Construction Equipment Noise Emission Levels
- Table 12 Estimated Distance to dBA Contours from Construction Activities
- Table 13 Estimated Distance to dBA Contours from Farming Activities

LIST OF EXHIBITS:

- Exhibit A Agricultural Erosion Control Plan #P18-00442-ECPA
- Exhibit B-1 Biological Resources Reconnaissance Survey Report
- Exhibit B-2 Response to Napa County Comments on Biological Resources
- Exhibit C Hydrologic Analysis
- Exhibit D Soil Loss Analysis
- Exhibit E Napa Sanitation District, letter dated October 15, 2019
- Exhibit F Project Revision Statement