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:** Mt. Veeder Vineyards Agricultural Erosion Control Plan (ECPA) Application #P19-00080-ECPA

2. **Property Owner(s):** P&M Vineyards Holdings LLC

3. **Contact Person, Phone Number and Email:** Donald Barrella, Planner III, (707) 299-1338, Donald.Barrella@countyofnapa.org

4. **Project Location and APN:** 1300 Mt. Veeder Road, Napa, CA 94558, APN 034-230-029 (**Figures 1** and **2**)
   Sections 24 & 26, Township 6 North, Range 5 West, Mt. Diablo Base
   Longitude 38°20'42.37"N / Latitude 122°22'26.98"W

5. **Project Sponsor:** P&M Vineyards Holdings LLC
   P.O. Box 1480
   Sebastopol, CA 95473

   Agent: Cort Munselle
   Munselle Civil Engineering
   513 Center Street
   Healdsburg, CA 95448

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 the installation and maintenance of erosion control measures associated with i) the development of approximately 18.69 gross acres of new vineyard (approximately 15.12 net planted acres) within six vineyard blocks (Vineyard Blocks A through F), ii) the installation of a main irrigation water lines (4-inch PVC pipe) within existing gravel and dirt access roads between Vineyard Blocks B through F, and from an existing dirt access road to Vineyard Block A encompassing approximately 700 lineal feet and approximately 0.2 acres of new disturbance area, iii) the installation of subdrains in vineyard Blocks B and E; iv) the installation of two 10,000 gallon water tanks located at the northern corner of Vineyard Block B adjacent to the project well (i.e. Well A), and v) the establishment of a staging and stockpile area adjacent to Vineyard Block C, for a total project/disturbance area of approximately 20 acres, located on an approximate 114.9 acre parcel (i.e., project site) (**Figure 3**). Block A would include approximately 0.94 gross acre (±0.68 net acre), Block B would include approximately 13.88 gross acres (±11.57 net acres), Block C would include approximately 0.52 gross acre (±0.37 net acre), Block D would include approximately 0.22 gross acre (±0.13 net acre), Block E would include approximately 0.55 gross acre (±0.38 net acre), and Block F would include approximately 2.58 gross acre (±1.99 net acre). One tree is proposed to be removed as part of the project. The vineyard would be irrigated from an existing onsite well (Well A). Wildlife exclusion fencing would be installed to fence blocks individually and in clusters where appropriate. There would be no transport of spoils off-site.

   The vineyard is proposed to be developed over two years, with the first year consisting of land preparation; staking; installation of the irrigation system; installation of subdrains in Blocks B and E; and installation of temporary and permanent erosion control measures and the second year consisting of completion of pre-planting operations and planting rootstock.

   Erosion Control Measures: Temporary erosion control measures include straw bales or sand bags, sediment barriers, straw wattles, and the application of straw mulch at a rate of 4,000 pounds per acre and wood fiber mulch at a rate of 2,000 pounds per acre. Permanent erosion control measures include installation of water bars, dissipaters installed at subdrain outfalls, a winter cover crop and a permanent no-till cover crop maintained at a minimum vegetation cover density of 90%. Details of the proposed erosion control measures are provided in the Mt. Veeder Vineyards ECP #P19-00080-ECPA, dated August 14, 2019, prepared by Cort L. Munselle (Registered Professional Engineer No. 69941) of Munselle Civil Engineering, Healdsburg, 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 removal, soil ripping, discing, and the development of erosion control measures.

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 of rootstock in a 6-foot by 3- foot spacing pattern for a vine density of approximately 2,420 vines per acre (or approximately 36,590 vines within the 15.12 net acres of proposed planted vineyard).
b. Ongoing inspection and maintenance of temporary and permanent erosion and runoff control measures.
c. Ongoing operation and maintenance of the vineyard, which includes: vine management (pruning, fertilization, and pest and disease control), weed control, and fruit harvesting.

Table 1 lists a general schedule for the construction of the proposed project as identified in #P19-00080-ECPA and **Table 2** outlines typical general ongoing vineyard operations. The final implementation schedule is pending action on #P19-00080-ECPA.

Table 1 – Implementation Schedule

April to September	Conduct preconstruction surveys as necessary and installation of any avoidance buffers as applicable; vegetation clearing; drainage installation associated with project implementation
May to September	Apply soil amendments as needed; install erosion control measures; install irrigation and trellis
September	Seed/plant cover crop on entire vineyard and spread mulch
October[1] to May of subsequent year	Maintain erosion control measures during rainy season; reseed cover crop as needed to maintain appropriate cover at storm damaged areas
May and beyond	Plant rootstock and permanent no-till cover crop; commence annual maintenance for ongoing vineyard operations

[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).
Source: Mt. Veeder Vineyards Supplemental Environmental Information

Table 2 – Annual Operations Schedule

March	Pruning and tying vines
April to July	Sulfur application to prevent powdery mildew Mow cover crops
September	Harvest Winterize vineyards and vineyard avenues
October to April	Monitor and maintain erosion control measures during rain events

Source: Mt. Veeder Vineyards Supplemental Environmental Information

Implementation of the proposed project would be in accordance with the Mt. Veeder Vineyards ECP prepared by Munselle Civil Engineering (**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 114.9 acres located at 1300 Mount Veeder Road, Napa, California (**Figures 1-3)**. Existing development on the parcel consists of 0.6 acre of existing vineyard, one single-family residence (currently vacant), landscaping associated with the onsite residence (approximately 0.5 acre), three existing wells, and an existing gravel driveway that connects the project site to Mount Veeder Road. Deer fencing currently exists around Block A, a portion of Block B, and to the east and south of Blocks E and F. The onsite residence, located in the central portion of the project site, is currently uninhabited, but would be occupied during future development and operation of the proposed project. Surrounding land uses include agriculture (e.g., vineyards), undeveloped areas (primarily oak woodlands and grasslands), and scattered residences.

The project site is located approximately 2 miles northwest of the City of Napa, and is located within the Napa River watershed. There is one unnamed blueline stream tributary to Redwood Creek that separates the northeastern most block (Block B) from the southeastern vineyard blocks (Block C, D, E, and F).

General topography of the area consists of hills within the Mayacamas Mountains on the western side of Napa Valley. The project site consists of steep west-facing slopes and broader, gently sloping ridgetop areas with elevations that range from approximately 590 to 970 feet above mean sea level (msl). Slopes within the development area range from nearly flat to 30% with an average of 17%; approximately 1.12 acres have slopes greater than 30%.

No potentially active faults have been mapped in the project site; the nearest active fault is the West Napa fault, approximately 0.75 mile southeast of the project site. Large landslides underlie the westernmost portion of the project site. Soils on the project site have been classified according to the Soil Survey of Napa County (USDA, 1978) as Fagan clay loam 15 to 30% slopes, Fagan clay loam 30-50% slopes and Felton gravelly loam 30-50% slopes.

The vegetation types in the area generally consist of annual grassland, oak woodland, vineyards and other developed lands. Vegetation types occurring within an approximately 31-acre survey area on the project site (which includes the development area) include 22.34 acres of wild oats, 7.43 acres of mixed oak forest, 0.73 acre of purple needlegrass grassland, and 0.12 acre of seasonal wetland (WRA, July 2016 - **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	**Other Agencies Contacted**
California Department of Fish and Wildlife (CDFW) (T)	Middletown Rancheria
Regional Water Quality Control Board (Regional Water Board) (R)	Mishewal Wappo Tripe 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 March 19, 2019. On March 25, 2019, the County received a response letter from Middletown Rancheria indicating they have no specific comments at this time; on May 13, 2019, the County sent notification to the Middletown Rancheria acknowledging their response letter and closing the consultation invitation. On April 5, 2019, the County received a response letter from Yocha Dehe Wintun Nation indicating they have no specific comments at this time; on May 13, 2019, the County sent notification to the Yocha Dehe Wintun Nation acknowledging their response letter and closing the consultation invitation. The Mishewal Wappo Tribe of Alexander Valley did not request consultation within the 30-day notification period and on May 13, 2019, the County sent a consultation closure notice to the Tribe. This is discussed in detail in **Section XVIII (Tribal Cultural Resources)**.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

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

ENVIRONMENTAL IMPACTS AND BASIS OF CONCLUSIONS

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

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 #P19-00080-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:

- Munselle Civil Engineering, August 13 2019, Erosion Control Plan for Mt. Veeder Vineyards (**Exhibit A**)
- WRA, Inc., July 2016, Biological Resources Assessment, 1300 Mount Veeder Road, Napa County, California (**Exhibit B-1)**
- WRA, Inc., July 2016, Rare Plant Report, 1300 Mount Veeder Road (APN 034-230-029) Napa County, California (**Exhibit B-2**)
- WRA, Inc., March 2018, 1300 Mount Veeder Vineyard Development Wetland Buffer Analysis (**Exhibit B-3**)
- WRA, Inc., March 2019, 1300 Mount Veeder Vineyard Purple Needlegrass Grassland Impacts (**Exhibit B-4**)
- WRA, Inc., June 3, 2019, Response to Comments (Biology) – P&M Mt. Veeder Vineyard Agricultural Erosion Control Plan Application File No. P19-00080-ECPA; 1300 Mt. Veeder Road, Napa, APN 034-230-029 (**Exhibit B-5**)
- Miller Pacific Engineering Group, July 7, 2016, Mt. Veeder Vineyard Phase I Geotechnical Investigation (**Exhibit C**)
- Munselle Civil Engineering, March 2019, SCS Method Hydrology Calculations and USLE Soil Loss Calculations (**Exhibit D**)
- Richard C. Slade & Associates LLC (RCS), January 15, 2019, Results of Aquifer Testing of One Onsite Well and Napa County Tier 1 and Tier 2 Water Availability Analysis for Proposed P&M Vineyards, 1300 Mt. Veeder Road, Mt. Veeder Area, Napa County, California (**Exhibit E-1**)
- Luhdorff & Scalmanini, August 31, 2018, Peer Review of the November 13, 2017 Draft Memorandum "Results of Aquifer Testing of One Onsite Well and Napa County Tier 1 and Tier 2 Water Availability Analysis for Proposed P&M Vineyards, 1300 Mt. Veeder Road, Mt. Veeder Area, Napa County, California, by RCS (**Exhibit E-2**)
- Tom Origer & Associates, October 4, 2016, Historical Resources Study for a Vineyard Project at 1300 Mt. Veeder Road, Napa County, California
- Site inspection conducted by Napa County Planning Division and Engineering Division staff was completed on February 7, 2018.
- Napa County Geographic Information System (GIS) sensitivity maps/layers

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

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

March 10, 2020
Date

Donald Barrella
Printed Name

Napa County Planning, Building and Environmental Services

ENVIRONMENTAL CHECKLIST FORM

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of 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?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion

a-b. The project site is located adjacent to Mount Veeder Road and approximately 0.5 mile west of Dry Creek Road, which are the closest County viewshed roads (Napa County GIS, Scenic Corridors Layer). The nearest minor ridgeline is located approximately 1 mile south of the project site (Napa County GIS, Ridgelines Layer) and the site is not located on a prominent hillside, or within a scenic corridor. There are no significant rock outcroppings or geologic features on the project site that would be impacted by the proposed project. Although vegetation 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). The proposed project also would be consistent with surrounding land uses. 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 project site 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, scattered rural residential uses, and undeveloped land. 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 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 nighttime harvest (typically from 10 p.m. to 10 a.m.) and nighttime sulphur and pesticide/herbicide application (typically from 9 p.m. to 9 a.m.) from September to November depending on factors such as grape vintage and weather. 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?	☐	☐	☐	☒

b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
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))?	☐	☐	☐	☒
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Discussion

a. The Napa County Important Farmland 2016 map prepared by the California Department of Conservation, Division of Land Resource Protection identifies a portion of the project site as Grazing Land; there are no areas of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance mapped in the project site. Therefore, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance resulting in no impact. Vineyard development on areas designated Grazing Lands would not be inconsistent with this designation and would not result in an impact to farmland within Napa County.

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 18.69 gross acres (15.12 net acres) is consistent with property's land use and zoning designations. The subject property does not have a Williamson Act contract associated with it. Therefore, the 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." Neither the project site nor the project area contain forest land or coniferous forest (Napa County GIS; WRA October 2018). The project site and project area are not zoned forest land as defined in Public Resource Code Section 12220(g), timberland as defined in Public Resource Code Section 4526, or a Timberland Production Zone (TPZ) as defined in Government Code Section 51104(g). Therefore, no 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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d)	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

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 project would exacerbate existing environmental hazards. The Supreme Court also found that CEQA requires the analysis of exposing people to environmental hazards in specific circumstances, including the location of development near airports, schools near sources of toxic contamination, and certain exemptions for infill and workforce housing. The Supreme Court also held that public agencies remain free to conduct this analysis regardless of whether it is required by CEQA.

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

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

a-b. The project site is generally located in the hills bordering the western side of the Napa Valley northwest 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 (O_3), ozone precursors oxides of nitrogen and reactive organic gases (NO_x and ROG), carbon monoxide (CO), nitrogen dioxide (NO_2), and suspended particulate matter of ten micrometers or less and two and a half micrometers or less (PM_{10} and $PM_{2.5}$). Other criteria pollutants, such as lead (Pb) and sulfur dioxide (SO_2), would not be substantially emitted by the proposed development or associated traffic, and air quality standards for them are being met throughout the Bay Area.

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

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

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

completed: Suscol Mountain Vineyards[1] for an approximately 560-acre vineyard development, Walt Ranch Vineyard[2] for an approximately 507-acre vineyard development, and Circle-S Ranch Vineyards[3] 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, PM_{10}, and $PM_{2.5}$.

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

Table 3 – Emissions from Vineyard Development and Operation

Emissions and Thresholds	Criteria Pollutants – Constituents			
	ROG	NO_x	$PM_{2.5}$	PM_{10}
	Construction Emissions			
Pounds per day: 150-acre vineyard development[1]	8.43 to 11.39	34.39 to 52.16	3.93 to 4.47	13.93 to14.53
Pounds per day: 150- to 250-acre vineyard development[2]	9.43 to11.03	43.85 to 53.16	3.91 to 4.62	12.87 to 17.22
Pounds per day: 127-acre vineyard development[3, 4]	4.6	42.3	5.21[4]	24.21[4]
Construction threshold	54	54	54	82
	Operational Emissions			
Pounds per day: 400-acre vineyard operation[1]	7.78	2.85	0.80	4.22
Pounds per day: 560-acre vineyard operation[2]	6.58	1.84	0.75	3.91
Pounds per day: 507-acre vineyard operation[3]	4.3	22.3	1.4	2.3
Operational threshold (lbs/day)	54	54	54	82
Tons per year (Metric)[1,5]	0.78	0.35	0.11	0.58
Operational threshold (tons per year)	10	10	10	15

[1] As identified in Circle-S EIR; [2] As identified in Suscol Mountain EIR; [3] As identified in Walt Ranch EIR; [4] Includes dust and exhaust emissions; [5] Calculation based on 365 days of operation. Project emissions are anticipated to be less than identified as vineyard operations are seasonal in nature.
Sources: Circle-S Ranch Vineyard EIR 2011; Suscol Mountain Vineyard EIR 2013; Walt Ranch Vineyard EIR 2016; BAAQMD CEQA Guidelines May 2017.

Because this project's proposed 18.69 acre vineyard (approximately 15.12 net-planted acres) and approximate overall 20 acre development area 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 that 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.

[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.

- 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.
- 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 FAQ[5] or the PERP website[6].

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. Land uses surrounding the project site include agricultural areas, open space and scattered rural residences. The project site consists of approximately 114.87 acres of land with 0.6 acre of existing vineyards, a single-family residence and associated landscaping, and a gravel driveway. The closest school (Salvador Elementary School and Justin Siena High School) are located approximately 2.5 miles to 2.75 miles east of the project site in the City of Napa (Napa County GIS, Schools Layer). The closest offsite residences are located approximately 320 feet east, approximately 525 feet to the south, and approximately 656 feet to the north of the project site. The closest residential area (Salvador) is approximately 2 miles east 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 more than 2 miles from the closest school and approximately 2 miles 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?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations	☐	☐	☒	☐

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

[6] http://www.arb.ca.gov/portable/portable.htm

	or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?				
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?	☐	☐	☒	☐
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., July 2016, Biological Resources Assessment, 1300 Mount Veeder Road, Napa County, California (**Exhibit B-1)**
- WRA, Inc., July 2016, Rare Plant Report, 1300 Mount Veeder Road (APN 034-230-029) Napa County, California (**Exhibit B-2**)
- WRA, Inc., March 2018, 1300 Mount Veeder Vineyard Development Wetland Buffer Analysis (**Exhibit B-3**)
- WRA, Inc., March 2019, 1300 Mount Veeder Vineyard Purple Needlegrass Grassland Impacts (**Exhibit B-4**)
- WRA, Inc., June 3, 2019, Response to Comments (Biology) – P&M Mt. Veeder Vineyard Agricultural Erosion Control Plan Application File No. P19-00080-ECPA; 1300 Mt. Veeder Road, Napa, APN 034-230-029 (**Exhibit B-5**)

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 (CNDDB), Owl Habitat, Wetlands and Vernal Pools, Vegetation, Soil types, U.S. Geological Survey (USGS) Quadrangle (DRG), and Aerial Photos.

WRA conducted an assessment of biological resources on the project site on June 6, 2016, a rare plant survey on July 12, 2016, and a survey in March 2018 to reconfirm the 2016 surveys and refine the survey for Purple Needlegrass (*Nassella pulchra*) Grassland. The survey area included approximately 31 acres, which includes the development area. The surveys were completed to determine: presence of sensitive biological resources; the potential for biological communities on site to support special-status plant or wildlife species; and the location of purple needlegrass grassland in the project area. The surveys correspond to blooming periods sufficient to observe and identify special-status plant species determined to have the potential to occur in the project area. The field surveys were conducted by botanists familiar with the flora of Napa County and surrounding counties. The surveys followed the protocol for plant surveys described by resource agency guidelines (CNPS, 2001; CDFG, 2000 and 2009; USFWS, 1996). Plants were identified using Baldwin et al. (2012) and Jepson Flora Project (Jepson eFlora, 2016) to the taxonomic level necessary to determine whether they were rare.

A list of special-status plant and animal species that have the potential to occur within the vicinity of the project area was compiled based on data in the CNDDB (CDFW, 2016), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS, 2016), and the USFWS Information for Planning and Conservation website (USFWS, 2016). Database searches focused on the Rutherford, Yountville, Sonoma, and Napa 7.5-minute USGS quadrangles. WRA completed updated searches of the CNDDB and CNPS Inventory of Rare and Endangered Plants in 2019 for special-status mosses, bryophytes and lichens.

The approximately 31-acre survey area consists of the following upland biological communities (or habitat types): wild oats grassland (*Avena* spp. Semi-Natural Herbaceous Stand), mixed oak forest (*Quercus* spp. Forest Alliance), purple needlegrass grassland, and a seasonal wetland. Mixed oak forest, purple needed grass grassland and seasonal wetlands are considered sensitive habitat types. The habitats and their acreages are shown in **Table 4**. The acreages of each biological community to be removed within the development area is listed in **Table 5** below.

Table 4 – Biological Communities and Habitat Types in the Survey Area

Biological Communities or Habitat Type	Pre-Project Conditions (acres)
Wild Oats Grassland	22.34
Mixed Oak Forest	7.43
Purple Needlegrass Grassland	0.73
Seasonal Wetland	0.12

Source: WRA, July 2016 and March 2019

a. Special-Status Plants: Based upon a review of the resources databases listed in **Exhibit B-2**, 54 special-status plant species have been documented in the vicinity of the project site. Occurrence records of these species in CNDDB within a 5-mile radius of the project site are depicted in **Exhibit B-2** Figure 3. Six special-status plant species were found to have a moderate or high potential to occur within the project site: Napa false indigo (*Amorpha californica* var. *napensis*), congested-headed hayfield tarplant (*Hemizonia congesta* spp. *congesta*), redwood lily (*Lilium rubescens*), green monardella (*Mondardella viridis*), dark-mouthed triteleia (*Triteleia lugens*), oval-leaved viburnum (*Viburnum ellipticum*). None of these six special-status plant species were found during the site assessment. The species are described further below (WRA, July 2016 – **Exhibit B-2**).

> Napa false indigo is a small deciduous tree in the pea family (Fabaceae) that blooms from April to July, with identifiable vegetative structures remaining into early fall. It typically occurs on north facing aspects in openings in broadleaf upland forest, chaparral, and cismontane woodland habitat at elevations ranging from 395 to 6,560 feet.
>
> Congested-headed hayfield tarplant is an annual herb in the sunflower family (Asteraceae) that blooms April to November. It typically occurs in grassy areas and fallow fields in coastal scrub, and valley and foothill grassland at elevations ranging from 65 to 1,840 feet.
>
> Redwood lily is a bulbiferous perennial forb in the lily family (Liliaceae) that blooms from April through September. It typically occurs in openings, roadsides, and trails, often on serpentine and volcanic substrates in broadleaf upland forest, chaparral, lower montane coniferous forest, upper montane coniferous forest, and North Coast coniferous forest habitat at elevations ranging from 95 to 6,210 feet.
>
> Green monardella is a perennial forb in the mint family (Lamiaceae) that blooms from June through September. It typically occurs on serpentine substrates in chaparral, cismontane woodland, and broadleaf upland forest habitat at elevations ranging from 325 to 3,285 feet.
>
> Dark-mouthed triteleia is a perennial bulbiferous forb in the Brodiaea family (Themidaceae) that blooms from April through June. It typically occurs in chaparral, coastal scrub, broadleaf upland forest, and lower montane coniferous forest habitat at elevations ranging from 325 to 3,250 feet.
>
> Oval-leaf viburnum is a shrub in the honeysuckle family (Caprifoliaceae) that blooms from May to June, with identifiable vegetative characteristics reaming intact into fall. It typically occurs in chaparral, cismontane woodland, and lower montane coniferous forest habitat at elevations ranging from 695 to 4,550 feet.

Napa false indigo and congested-headed hayfield tarplant are a CNPS California Rare Plant Rank (CRPR) List 1B species, which are considered "Rare, Threatened, or Endangered in California and Elsewhere" and are fairly threatened in California (i.e., moderate degree/immediacy of threat). Oval-leaved vibrunum is listed a CPRP List 2B species, which are common beyond the boundaries of California but are considered rare, threatened, or endangered within the State. Redwood lily, green monardella, and dark-mouthed triteleia are CPRP List 4 species, which are of limited distribution or infrequent throughout a broader area of California; although not considered under CEQA, impacts to this species may be considered sensitive by Napa County.

CRPR List 1B species meet the definition of Section 1901, Chapter 10 of the Native Plant Protection Act, or Sections 2062 and 2067 of the California Endangered Species act of the California Fish and Game Code (CFGC), and are eligible for state listing. While Napa false indigo and congested-headed hayfield tarplant are not state or federally listed species at this time, these species and their associated habitat are of limited distribution locally within Napa County and warrant protection through applicable General Plan Goals and Policies. Protecting the continued presence of special-status species, including special-status plants, special-status wildlife, and their habitats is encouraged by Napa County General Plan Goal CON-3[7]. Additionally, pursuant to Napa County General Plan Policy CON-13[8], the County shall require that all discretionary agricultural projects consider and address impacts to wildlife habitat and avoid impacts to habitat supporting special-status species to the extent feasible, and where impacts to special-status species and their habitat cannot be avoided, projects shall include effective mitigation measures and management plans to provide protection for habitat supporting special-status species through buffering or other means, and enhance existing habitat values particularly for special-status species through restoration and replanting as part of the project or its mitigation.

No special-status plant species were observed in the survey area (WRA, July 2016 – **Exhibit B-2**); therefore, construction and operation of the vineyard would not affect special-status plant species. The installation of the water line within existing gravel and dirt access roads between Blocks B through F also would not affect special-status plant species given that these areas are previously disturbed and covered

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

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

with gravel and dirt. However, the installation of the 4-inch water line from the existing dirt access road to Block A has the potential to affect special-status plant species if they occur within the water line alignment. This is considered a potentially significant impact.

The removal of special-status plant species would be inconsistent with the following Napa County General Plan Conservation Element Goals and Policies and Zoning Ordinance: General Plan Goal CON-3 as it does not protect for the continued presence of special-status plant species or its habitat; Policy CON-13 in that impacts to special-status habitat can be avoided while allowing for agriculture development on the project site;; and, the purpose and intent of the Conservation Regulations (NCC Chapter 18.108) in that it does not preserve natural habitat or existing vegetation, and adversely affects sensitive, rare, threatened or endangered plants.

To reduce potential impacts to special-status plant species to a less-than-significant level, **Mitigation Measure BR-1** would be implemented. This measure includes conducting a preconstruction botanical survey prior to installation of the water line to Block A and replacement planting and/or rerouting the line as necessary to minimize impacts to any special-status plants that may occur within the disturbance area of this waterline.

Other natural communities in the County are considered sensitive simply due to their limited local distribution. Purple Needlegrass Grassland (*Nassella pulchra* Herbaceous Alliance) (PNG Grassland) is identified as a Sensitive Biotic Community. The CDFW also considers Purple PNG Grassland as sensitive. Additionally, Biotic Communities of Limited Distribution encompass less than 500 acres of cover within the County and are considered by local biological experts to be worthy of conservation (Napa County, 2008): native grassland is identified as a Biotic Community of Limited Distribution. Therefore, Purple Needlegrass Grassland is considered to be both a Sensitive Biotic Community and Biotic Community of Limited Distribution in the County. Purple Needlegrass Grassland is located within proposed Vineyard Blocks B, D and E.

Pursuant to Napa County General Plan Policy CON-17[9], projects shall be required to preserve and protect native grasslands, sensitive biotic communities and habitats of limited distribution through the following standards:

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

With respect to Policy **CON-17e,** County practice has been to require avoidance to the extent feasible with restoration and replacement as a secondary approach to achieve the no net loss standard. Furthermore General Plan Conservation **Goal CON-2[10]** encourage/requires that the existing level of biodiversity be maintained and enhanced, and Conservation Regulations (NCC Chapter 18.108), in part, encourages the preservation of the natural resources of the county including other natural habitats.

The project as proposed would remove approximately 31% of the PNG Grassland in the survey area (preserving approximately 69%) as shown in **Table 5**: this table also shows/lists the acreages of each biological community to be removed and retained within the study area.

Table 5 – Retention of Biological Communities with the Proposed Project[11]

Biological Communities	Total Acres in the Survey Area	Proposed Development Areas	
		Acreage	% Retention
Wild Oats Grassland	22.34	19.77	11.5
Mixed Oak Forest[1]	7.43	0	100
Purple Needlegrass Grassland[1]	0.73	0.23	69
Season Wetland[1]	0.12	0	100

[1] Considered sensitive by Napa County.
Sources: WRA, July 2016 - **Exhibits B-1 and B-2**, Munsell Civil Engineering ECPA, August 13 2019, and Napa County September 2020 Irrigation and Tree Avoidance Areas (**Exhibit A)**.

[9] Policy CON 17: Preserve and protect native grasslands, serpentine grasslands, mixed serpentine chaparral, and other sensitive biotic communities and habitats of limited distribution. The County, in its discretion, shall require mitigation that results in the following standards:

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

[11] The acreages identified in **Table 5** may differ from acreages identified in the biological information/data (**Exhibits 5A** through **B-5** due to mapping platforms, spatial characters, and rounding. Because approximate plant communities and project acreages have been corroborated through County GIS mapping, the values disclosed herein are considered by the County to be adequate for CEQA review and disclosure purposes of the subject application.

Removal of a Sensitive Biotic Community and a Biotic Community of Limited Distribution (Purple Needlegrass Grassland) is considered a potentially significant impact. To reduce potential impacts to this Sensitive Biotic Community and Biotic Community of Limited Distribution to a less-than-significant level, **Mitigation Measure BR-1** would be implemented. **Mitigation Measure BR-1** would eliminate proposed Vineyard Block D and the remaining portions of proposed Vineyard Block E, that has not been removed from the development area as a result of implementation of **Mitigation Measure GEO-1**, so that an additional ±0.1 acre of PNG Grassland is avoided (resulting in ±0.13 PNG being removed), and require the re-plating of ±0.13 acres of PNG Grassland within the areas previously proposed as Vineyard Blocks D and E. Implementation of this measure would reduce proposed vineyard development by approximately 0.4 acres: overall, implementation of **Mitigation Measures BR-1** and **GEO-1** would reduce the project by approximately 1 acre. Implementation of this measure would also result in consistency with Conservation Policy CON-17(e), in that it would result in not net loss of a Sensitive Biotic Community and a Biotic Community of Limited Distribution.

While a buffer is not proposed around the purple needlegrass grassland that would be retained with the proposed project, the 25-foot vegetated vineyard avenue is expected to be a suitable buffer from activities associated with construction and operation of vineyard to allow the grasslands to maintain viability and populations. To avoid potential indirect impacts to PNG **Mitigation Measure BR-1** includes flagging the edge of the purple needlegrass grasslands to be retained in the vicinity of the development area prior to construction to help avoid potential inadvertent removal. Reduction and/or control of annual non-native grasses also is important in maintaining the viability of existing stands of purple needlegrass grassland. Therefore, **Mitigation Measure BR-1** also includes use of a cover crop blend composed primarily native species within the vegetated vineyard avenues adjacent to purple needlegrass grasslands.

Mitigation Measure BR-1: The owner/permittee shall incorporate the following measures into #P19-00080-ECPA prior to approval to minimize potential impacts to special-status plant species, and Sensitive Biotic Communities and Biotic Communities of Limited Distribution (i.e. Purple Needlegrass Grassland):

a. Revise the vineyard layout of Erosion Control Plan #P19-00080-ECPA prior to approval to remove Vineyard Block E, including portions of Vineyard Block E not otherwise removed by **Mitigation Measure GEO-1**.
b. Prior to the commencement of vegetation removal or earth-disturbing activities associated with #P19-00080-ECPA, the owner/permittee shall submit to the County for review and approval a Purple Needlegrass Grassland Replacement/Revegetation Plan to replace approximately 0.13 acres of Purple Needlegrass grassland removed as a result of the mitigated project. Revegetation areas may occur in the area formally proposed as Vineyard Block E or in areas determined suitable for Purple Needlegrass revegetaion as determined by a qualified biologist or restoration ecologist. The Plan shall be prepared by a qualified biologist or restoration ecologist and include the following: i) a site plan showing the areas of revegetation, ii) a plant pallet composed primarily of Purple Needle Grassland (*Nassella pulchra)* and can include other compatible native plant species common to the area, that includes planting densities and plant sizes and/or application rates, iii) planting notes and details including any recommended plant protection measures, iv) invasive species removal and management recommendations, specifications and goals, v) an implementation and monitoring schedule, and vi) performance standards with a minimum success rate of 80% to ensure the success of Purple Needlegrass Grassland replacement and re-vegetation efforts.
c. Prior to ground disturbance associated with installation of the water line to Block A, the footprint of the water line shall be surveyed by a qualified botanist, and any special-status plants found within the footprint shall be mapped. To the fullest extent practicable, impacts to special-status plants shall be minimized via adjustments to the precise installation location. In addition, to preserve the local soil characteristics and seed bank, all native soil that is excavated/disrupted shall be retained and replaced *en situ*; no imported (off-site) soil shall be utilized or introduced.
d. Clearing limits shall be clearly and accurately flagged by an engineer using GPS equipment. The purple needlegrass grasslands to be retained adjacent to the proposed vineyard boundaries shall be demarcated with construction flagging/fencing, and incursions into the boundary shall be conducted only by qualified personnel. No equipment or materials shall be laid down in or near the boundary.
e. Revise Erosion Control Plan #P19-00080-ECPA prior to approval to include a cover crop blend utilizing primarily native species, such as the "Native, No-Till Blend" listed in the Napa Resource Conservation District Best Management Practices report, within the vegetated vineyard avenues adjacent to purple needlegrass grasslands to be retained.

Special-Status Animals: A total of 62 special-status wildlife species have potential to occur in the vicinity of the project site. Nine of these species have a moderate or high potential to occur within the project site: northern spotted owl (*Strix occidentalis caurina*), oak titmouse (*Baeolophus inornatus*), Nuttal's woodpecker (*Picoides nuttallii*), white-tailed kite (*Elanus leucurus*), olive-sided flycatcher (*Contopus cooperi*), pallid bat (*Antrozous pallidus*), silver-haired bat (*Lasionycteris noctivagans*), hoary bat (*Lasiurus cinereus*), long-eared myotis (*Myotis evotis*), and fringed myotis (*Myotis thysanodes).* Additionally, a variety of native bird species with protections under the Migratory Bird Treaty Act (MBTA) and CFGC may use vegetation within the development area for nesting.

Northern spotted owl is a subspecies of spotted owl (*Strix occidentalis*) and nests in cavities or on platforms in large trees, preferentially inhabiting old growth forests, though can be found in mixed primary and secondary growth-forests in the southern part of its range (southern Oregon and California). Northern spotted owls have been observed within 0.25 mile east of the project site in the dense forests

which grow on the northeast facing slopes of a mountain ridge. The species requires enclosed mature forests with dense tree canopies, a diversity of vegetation heights within the understory, as well as an absence of disturbance. Most of these required habitat features are absent, or are of marginal quality in the project site, making the project site unlikely to be used by northern spotted owls (WRA, July 2016 – **Exhibit B-1**).

Oak titmouse occurs in open woodlands of oak, pine, and juniper. Nests are often built in woodpecker holes and natural cavities, although they sometimes partially excavate their own cavity. Mixed forest within and surrounding the project site provide suitable nesting and foraging habitat for this species. The species was documented within the survey area during the field surveys (WRA, July 2016 – **Exhibit B-1**).

Nuttall's woodpecker is associated with intact oak and riparian woodlands, infrequently in conifers, and is a primary cavity nester. They are generally found in lowland woodlands throughout much of California west of the Sierra Nevada. This species drills for sap and gleans insects from the trunk and bark of oak deciduous forests. The project area is located within the species year-round range and multiple observations have documented the species presence in the local area. The mixed forest within and adjacent to the survey area provides suitable nesting and foraging habitat for this species. Although none were documented during the field surveys, Nuttall's woodpecker has a high potential to occur within the survey area.

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. 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. This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates. The survey area 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 (WRA, July 2016 – **Exhibit B-1**).

Olive-sided flycatcher is often associated with forest openings, forest edges near natural openings (e.g. meadows, canyons, rivers) or human-made openings (e.g., harvest units), or open to semi-open forest stands. Mixed oak forests bordering grasslands within the survey area provide edge habitats, which are preferred nesting and foraging habitat for the species. Observations of the species in the local area are common. Based on the presence of suitable nesting and foraging habitat within and adjacent to the survey area as well as nearby observations, there is a moderate potential for this species to occur (WRA, July 2016 – **Exhibit B-1**).

Pallid bat is broadly distributed throughout much of western North America. This species occurs in a number of habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous forests. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of man-made structures, including vacant and occupied buildings. Tree roosting has been documented in large conifer snags, inside basal hollows of redwoods and giant sequoias, and within bole cavities in oak trees. Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight. Prey items include arthropods such as scorpions, ground crickets, and cicadas. Mature oak and madrone trees within and adjacent to the survey area support crevices and cavities that provide suitable roost sites for pallid bats. Pallid bats have access to foraging opportunities within the survey area or in adjacent riparian zones outside of the survey area. This species also has access to water at multiple agricultural ponds within 0.25 mile of the survey area. Due to the presence of potential suitable roost trees as well as the availability of water and foraging opportunities within and adjacent to the survey area, this species has a moderate potential to occur (WRA, July 2016 – **Exhibit B-1**).

Silver-haired bat is most abundant in the forests and croplands of the plains states and in forests of the Pacific Northwest, and is also found in the forests of the eastern United States and the arid deserts of the Southwest. Diverse woodland habitats with a mixture of forest and small open areas that provide edges seem ideal for this species. The mixed oak forest within and adjacent to the survey area provide suitable roost-sites for this species. Bats have access to foraging opportunities within the survey area along habitat borders, and may also forage outside of the survey area within agricultural fields and over multiple ponds within 0.25 mile of the survey area. Considering the presence of suitable roost trees as well as the availability of water and foraging opportunities within and surrounding the survey area, this species has a moderate potential to occur (WRA, July 2016 – **Exhibit B-1**).

Hoary bat is most abundant in the forests and croplands of the plains states and in forests of the Pacific Northwest, and is also found in the forests of the eastern United States and the arid deserts of the southwest. Diverse woodland habitats with a mixture of forest and small open areas that provide edges seem ideal for the species. This species has been found in Spanish moss (Tillandsia sp.) squirrel nests, woodpecker holes, and on the trunks of trees. Summer tree roots are typically located along edge habitats close to feeding grounds. The mixed oak forest within and adjacent to the survey area provides suitable roost sites for this species. Bats have access to foraging habitat within the survey area along habitat borders, and may also forage outside the survey area within agricultural fields and over multiple ponds within 0.25 mile of the survey area. Considering the presence of suitable roost trees as well as the availability of water and foraging opportunities within and surrounding the survey area, this species has a moderate potential to occur (WRA, July 2016 – **Exhibit B-1**).

Long-eared myotis are primarily associated with coniferous forest, but can be found in semiarid shrub lands, sage, chaparral, and agricultural areas. This species roots under exfoliating tree bark, in tree hollows, caves, mines, crevices in rocky outcrops, in buildings,

under bridges and occasionally on the ground. The mixed oak forest within and adjacent to the survey area provides suitable roost sites for long-eared myotis. This species has access to foraging opportunities within nearby agricultural fields, and over several agricultural ponds or within riparian zones associated with Pickle Canyon Creek. Considering the presence of suitable roost trees as well as the availability of water and foraging opportunities within and surrounding the survey area, this species has a moderate potential to occur (WRA, July 2016 – **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. The mixed oak forest within and adjacent to the survey area provides suitable roost sites for this species. This species has access to foraging opportunities within nearby agricultural fields, and over several agricultural ponds or within riparian zones associated with Pickle Canyon Creek. Considering the presence of suitable roost trees as well as the availability of water and foraging opportunities within and surrounding the survey area, this species has a moderate potential to occur (WRA, October 2018 - **Exhibit B-1**).

The proposed project does not include tree removal, therefore no direct impacts to special-status birds or bats, or migratory birds would occur. Potential indirect impacts resulting from temporary and intermittent increases in noise levels during construction may cause nest abandonment and death of young or loss of reproductive potential at active nests located near project activities. Potential indirect impacts to nesting birds would be significant.

To reduce potential indirect significant impacts to nesting birds as a result of construction of the proposed project to a less than significant level, **Mitigation Measures BR-2** would be implemented. This measure would include preconstruction nesting bird surveys and avoidance of any nests with an exclusion buffer until young have fledged.

Mitigation Measure BR-2: The owner/permittee shall revise Erosion Control Plan #P19-00080-ECPA prior to approval to include the following measures to minimize potential indirect impacts associated with the disturbance of nesting birds consistent with and pursuant to CFGC Sections 3503 and 3503.5:

a. For earth-disturbing activities occurring between February 1 and August 31 (which coincides with the grading season of April 1 through October 15 – NCC Section 18.108.070.L, and bird breeding and nesting seasons), a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local avian resources with the potential to occur at the project site) shall conduct a preconstruction surveys for nesting birds within all suitable habitat in the development area, and where there is potential for impacts adjacent to the development 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 results 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.

b-c. The project site contains mixed oak forest, purple needlegrass grassland and seasonal wetlands, which are considered sensitive habitats. Mixed oak forest occurs in valleys and gentle to steep slopes in moderately deep soils from Sonoma and Napa counties south to Santa Barbara County. The survey area contains approximately 7.43 acres of mixed oak forest, none of which is proposed to be converted to vineyard during implementation of the proposed project. Therefore, the proposed project would preserve more than 2:1 of the mixed oak forest habitat in the survey area and would be in compliance with Napa County General Plan Conservation Element Policy CON-24 (also discussed in question a above).

The survey area contains approximately 0.73 acre of purple needlegrass grassland, with 0.23 acre occurring in the development area (approximately 31% of the community type in the survey area). See the discussion above regarding removal and mitigation associated with the removal of purple needlegrass grassland.

The survey area contains approximately 0.12 acre of seasonal wetlands adjacent to Block B (WRA, July 2016 - **Exhibit B-1**). Seasonal wetlands are known from a variety of topographic positions and soil types where surface waters collect and flows are reduced, or subsurface waters approach the soil surface as a rising water table or seep. Indicators of wetland hydrology include flow patterns, sediment deposition, and algal mats in (in micro-depressions). A Wetland Buffer Analysis prepared for the proposed project (WRA, March 2018 - **Exhibit B-3**) determined that the wetlands have seasonal hydrology and are vegetated with common wetland and facultative wetland plant species and nonnative wetland and facultative wetland plant species. is the seasonal wetlands are located within a small gully with slopes of 10 to 20% approximately 300 feet upstream of an unnamed intermittent stream that connects to Redwood Creek; however, is the seasonal wetlands are not a perennial headwater seeps. The seasonal wetland does not provide habitat for any special-status plants nor aquatic or special-status wildlife, and historic aerial imagery indicates the seasonal wetland and surrounding grassland is mowed annually (WRA March 2018). The land use intensity associated with implementation of the proposed project (i.e. vineyard development and operation) is anticipated to be low with increments of moderate activity. The current project plans include a 50-foot buffer from the seasonal wetland, which includes a 25-foot no-touch area from the outer edge of the wetland and an adjacent 25-foot vegetated vineyard avenue. The vineyard avenue would be seeded with annual and perennial grasses and forbs and would be maintained with 90% ground cover that would be mowed and not disced.

Based on the existing wetland conditions described above, the seasonal wetlands are not a sensitive feature and provide minimal functional value as wetlands (WRA March 2018). The value it does provide (as non-native grassland or semi-natural herbaceous grassland) is not likely to be impacted by the proposed project which includes a 50-foot buffer (comprised of a 25-foot no-touch area from the outer edge of the wetland and an adjacent 25-foot limited use vegetated vineyard avenue): the vineyard and avenues will be seeded with annual and perennial grasses and herbs that are not expected to have a significant impact and the functional or habitat value of the seasonal wetlands because existing and proposed buffer as vegetation will not be dramatically different (WRA, March 2018).

While the Project Biologist has indicated that the design of the vineyard avenues may divert sheet flow runoff away from the seasonal wetlands, outloped avenues typically have a negligible effect on exiting topography and drainage patterns (as opposed to insloped avenues that collect and divert runoff due to necessary roadside ditches and outfalls); therefore, the County does not anticipate that vineyard avenue design will materially affect existing hydrologic patterns to the seasonal wetland or result in any significant impacts to the seasonal wetlands, and no further analysis is necessary.

Because the existing seasonal wetlands located adjacent to Block B are not considered sensitive and provide minimal functional value as wetlands, and because the proposed 50-foot buffer and avenue design is expected to function similar to existing conditions as there will not be a dramatic shift in vegetation (WRA, March 2018), potential impacts to the seasonal wetlands would be less than significant.

d. The project site includes some existing deer fencing around Block A, a portion of Block B, and to the east and south of Blocks E and F. Additional new deer fencing is proposed to complete the fencing around Block B, to fence Block D, and to complete the fencing around Blocks C, E and F. Fencing would consist of smooth wire instead of barbed wire to prevent animal entanglement, and would include exit gates at any corners to allow entrapped animals to escape.

The project area is not located within a mapped "Essential Connectivity Area" (CDFW and Caltrans, 2010). Furthermore, given the relatively small size of the development area, agricultural expansion within the project site would not 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 onsite wildlife movement, the generally undeveloped condition of the project site and 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. 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 area, 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, and to recognize and account for implementation of **Mitigation Measure BR-1**, the following condition of approval would be incorporated should the project be approved.

Fencing – Condition of Approval:

> The owner/permittee shall revise Erosion Control Plan #P19-00080-ECPA prior to approval to include a modified Vineyard Fencing Plan. The Vineyard Fencing Plan shall be submitted to the Planning Department for review and approval prior to its incorporation into #P19-00080-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.
- For Vineyard Blocks C, D and F, Block D shall be fenced as an individual unit and Blocks C and F shall be fenced as an individual unit. The location of new wildlife exclusion fencing around these vineyard blocks shall generally be limited, to the maximum extent feasible, to the outside edge of vineyards avenues and existing access roads.
- Any modifications to the location of wildlife exclusion fencing as specified in Erosion Control Plan #P19-00080-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.

d. The proposed project would not impact any of the 7.43 acres of mixed oak forest mapped in the survey area (**Table 5**) or any oak woodland occurring within the project parcel. Therefore, it is anticipated there would be no impacts to oak woodlands as a result of the project. Additionally, avoidance of the property's oak woodlands would be consistent with General Plan Conservation **Policy CON-24.**

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 project be approved:

Tree/Woodland Protection – Conditions of Approval:

- Prior to any earthmoving activities temporary fencing shall be placed at the edge of the dripline of trees to be retained that are located adjacent to the project area (typically within approximately 50-feet of the project area). The precise locations of said fences shall be inspected and approved by the Planning Division prior to the commencement of any earthmoving activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated protection areas for the duration of erosion control plan and vineyard installation.
- Trees removed that are not within the boundary of the project and/or not identified for removal as part of #P19-00080-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 (i.e. Sensitive Biotic Communities and a Biotic Communities of Limited Distribution – Purple Needlegrass Grassland) 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?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

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:

- Tom Origer & Associates, October 4, 2016, Historical Resources Study for a Vineyard Project at 1300 Mt. Veeder Road, Napa County, California.

Tom Origer & Associates conducted a cultural resources evaluation for the proposed project which included review on information on file at the Northwest Information Center, Sonoma State University, Rohnert Park, to determine presence or absence of previously recorded historic resources; contact with the Native American Heritage Commission to request a check of the Sacred Lands File and correspondence with the Native American community; and a surface reconnaissance survey of approximately 30 acres of the project site.

a-b. The Cultural Resources Evaluation (Tom Origer & Associates, October 2016) conducted for the proposed project did not identify historical or archaeological resources on-site; therefore, the proposed project would not result in any impacts to historical or archaeological resources.

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

c. The cultural resource reconnaissance did not locate any human remains in the 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 historical and archaeological resources, or human remains during construction, grading, or other earth moving activities:

- In accordance with CEQA Subsection 15064.5(f), should any previously unknown historic or prehistoric resources, including but not limited to charcoal, obsidian or chert flakes, grinding bowls, shell fragments, bone, pockets of dark, friable solids, glass, metal, ceramics, wood or similar debris, be discovered during grading, trenching or other onsite excavation(s), earth work within 100-feet of these materials shall be stopped until a professional archaeologist certified by the Registry of Professional Archaeologists (RPA) has had an opportunity to evaluate the significance of the find and suggest appropriate mitigation(s), as determined necessary.
- If human remains are encountered the Napa County Coroner shall be informed to determine if an investigation of the cause of death is required and/or if the remains are of Native American origin. Pursuant to Public Resources Code Section 5097.98, if such remains are of Native American origin the nearest tribal relatives as determined by the State Native American Heritage Commission shall be contacted to obtain recommendations for treating or removal of such remains, including grave goods, with appropriate dignity.
- 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?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

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 two years, with work occurring

April 1 through September 1. 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 Regulation[13]. 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:				
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.	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐

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

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?	☐	☐	☐	☒
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

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 in 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 fault to the project site is the West Napa Fault, approximately 0.75 mile southeast of the project site (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 area as having very low liquefaction potential (Napa County, 2009). Further, as noted above, the proposed project would not result in a substantial increase in the number of people or add structures onsite. Therefore, this impact would be less than significant.

   iv) Landslides, landslide deposits, and areas of instability have been mapped within the project site (Miller Pacific Engineering Group, 2019 - **Exhibit C**). Regional-scale geologic mapping indicates that portions of the west side of the project site are underlain by the debris of large active landslides. Portions of Blocks D, E and F are also underlain by older (apparently dormant) and smaller areas of more recent (active) landslides. Additionally, one small slide was mapped adjacent to Block B. While the Geotechnical Investigation anticipates that proposed subsurface drainage improvements would reduce the risk of landslides as a result of the project to a less than significant level, potential impacts as a result of development in unstable areas or that are prone to slope failure, and associated erosion and sedimentation could result in potentially significant impacts: see question c (i.e. subsection c) below for additional analysis associated with development in historically unstable areas.

b. The project site's soils are mapped as Fagan clay loam 15 to 30% slopes, Fagan clay loam 30-50% slopes and Felton gravelly loam 30-50% slopes.

   Installation and implementation of the ECP 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 90%. Vineyard avenues would also include vegetative cover densities of at least 90%. 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 Munselle Civil Engineering (**Exhibit D**), the proposed conversion of approximately 18.69 acres of grassland to vineyard (within an overall ±20 acre development area) 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 3.53 tons per acre per year across in the development area depending on soil type, slope length, and gradient. Under proposed project conditions, annual soil loss is anticipated to average 3.02 tons per acre per year, or a reduction of approximately 14% as compared to existing conditions.

Table 6 – USLE Soil Loss Analysis

Vineyard Block Transect	Pre-project Soil Loss (tons/acre)	Post-project Soil Loss (tons/acre)	Difference	Percent Change (approximate)
A	0.28	0.24	-0.04	-14
B1	0.13	0.11	-0.02	-15
B2	0.34	0.29	-0.05	-15
B3	0.45	0.38	-0.07	-16
B4	0.19	0.17	-0.02	-11
B5	0.31	0.27	-0.04	-13
B6	0.25	0.21	-0.04	-16
C	0.13	0.11	-0.02	-15
D	0.14	0.12	-0.02	-14
E	0.25	0.21	-0.04	-16
F1	0.48	0.41	-0.07	-15
F2	0.58	0.50	-0.08	-14
Vineyard Totals	**3.53**	**3.02**	**-0.51**	**-14**

Source: Munselle Civil Engineering, 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 water bars, straw and wood fiber mulching, straw wattles, and other practices as needed.

Should the 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 #P19-00080-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 (#P19-00080-ECPA) shall oversee its implementation throughout the duration of the project, and that installation of erosion control measures, sediment retention devices, and hydromodification facilities specified for the vineyard have be installed and are functioning correctly. Prior to the first winter rains after construction begins, and each year thereafter until the project has received a final inspection from the county or its agent and been found complete, the qualified professional shall inspect the site and certify in writing to the planning director, through an inspection report or formal letter of completion verifying that all of the erosion control measures, sediment retention devices, and hydromodification facilities required at that stage of development have been installed in conformance with the plan and related specifications, and are functioning correctly.
- Cover Crop Management/Practice: The permanent vineyard cover crop shall not be tilled (i.e., shall be managed as a no-till cover crop) for the life of the vineyard and the owner/permittee shall maintain a plant residue density of 90% 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.

For these reasons the proposed project, with incorporation of specified erosion control measures and conditions of approval, would not increase soil erosion and the loss of topsoil as compared to existing conditions, and maximize the potential for containment of detached soil particles to the project area, resulting in no impact with regard to soil erosion, soil loss, and sedimentation. Also, see **Section 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, overall soil loss following development 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 area is located in an area historically and presently prone to landslides and ground failure, but not liquefaction. Within the southern portion of the project site, both adjacent to and within proposed Vineyard Blocks E and F, there is an area

that exhibits distinctly "hummocky" topography and well-developed, deeply-incised erosion gullies commonly associated with historic landsliding. Additionally, this area is underlain by older (apparently dormant) and smaller areas of more recent (active) landslides Miler Pacific, July 2016). Active landslides are identified as *Qls* within the Miller Pacific Geotechnical Investigation and project plans, and are anticipated to present a high risk of instability.

The Geotechnical Investigation indicates where active landslides exist (map unit Qls), either a structural solution such as an engineered buttress or retaining structure should be considered to reduce the risk of damage due to instability, or if some risk of future movement/instability is acceptable these areas could be developed provided new surface and subsurface drainage improvements are provided to maintain current levels of stability. However, General Plan Conservation Policy CON-6 specifies limiting development in physically hazardous areas such as steep slopes and geologically hazardous areas, and General Plan Safety Policy SAF-10 discourages grading on slopes over 15% where landslides or other geologic hazards are present.

Considering the unstable nature of this portion of the project site and that it is located on a geologic formation that is highly susceptible to the occurrence of landslides, as evident by the numerous active and dormant slides in this area, in conjunction with the increased sedimentation potential associated with landslides and slope failures that could negatively affect water quality, development within or adjacent to geological hazardous areas (i.e. Qls - active landslides) is considered a potentially significant impact. Implementation of **Mitigation Measure GEO-1**, which would eliminate proposed vineyard development within active landslides and provide them with a 50-foot buffer, would reduce potential slope instability and associated sedimentation impacts as a result of the project to a less-than-significant level. Implementation of this measure would reduce proposed vineyard development by approximately 0.5-0.6 acres.

Mitigation Measure GEO-1: The owner/permittee shall implement the following measures prior to approval to reduce potential impacts to slope stability and associated erosion, sedimentation, and water quality as a result of the proposed project, to a less than significant level:

a. Revise the vineyard layout of Erosion Control Plan #P19-00080-ECPA prior to approval to i) remove the portions of Vineyard Block E located within active landslides (map unit Qls) and provide a minimum 50-foot buffer from active landslides, and ii) provide a minimum 50-foot buffer from active landslides located adjacent to the northern and southern ends of Vineyard Block F
b. Prior to the commencement of earthmoving activities associated with #P19-000380-ECPA, the limits of identified active landslides including the 50-foot buffer that are located adjacent to vineyard development shall be demarcated in the field by the project's geotechnical engineering. The locations of said demarcation shall be inspected and approved by the Planning Division prior to the commencement of any earthmoving activities.

With the implementation of **Mitigation Measure GEO-1**, potential impacts to slope stability and associated erosion and sedimentation as a result of the proposed project would be reduced to a less-than-significant level. Implementation of this measure would also result in consistency with General Plan Conservation Policy CON-6 and Safety Policy SAF-10 in that development, as mitigated, avoids environmentally sensitive areas (i.e., geologically hazardous areas) and grading on slopes over 15 percent where landslides or other geologic hazards are present. Implementation of this measure would also avoid removal of a portion of the purple needlegrass located within proposed Vineyard Block E: see **Section IV (Biological Resources)** and **Mitigating Measure BR-1** for additional discussion on this topic.

d. Soils of the project site consist of Fagan clay loam, which exhibits moderate to high shrink-swell potential and Felton gravelly loam, which exhibits moderate shrink-swell potential (USDA Soil Survey of Napa County, 1978). However, no structures are proposed as part of the project and expansive soils pose little risk to vineyards and related agricultural improvements. Therefore, impacts associated with expansive soils would be less than significant.

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 area 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 of diverted until the discovery is examined by a qualified paleontologist. The paleontologist shall notify the appropriate agencies to determine procedures that should be followed before ground disturbing activities are allowed to resume at the location of the find.

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

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 (CO_2), methane, ozone, and the fluorocarbons, which contribute to climate change. CO_2 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 CO_2 is used as the reference atom/compound to obtain atmospheric carbon CO_2 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).[12]

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

In addition to the one-time Construction Emissions, "Operational Emissions" of the vineyard are also quantified and include: i) any reduction in the amount of carbon sequestered by existing vegetation that is removed as part of the project (referred to as Operational Sequestration Emissions below); and ii) ongoing emissions from the energy used to maintain and farm the vineyard, including farm equipment and vehicles (such as tractors, haul trucks, backhoes, pick-up trucks, and ATVs) and worker vehicle trips (referred to as Operational Equipment Emissions below). See **Section 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.[13] Using this emission factor it is anticipated that Construction Equipment Emissions associated with the proposed ±20 gross acres of development would be approximately 188 MT CO_{2e} (20 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 20 acres of existing vegetation/grassland to vineyard. Because there is not yet a universally accepted scientific methodology or modeling method to calculate GHG emissions due to vegetation conversion and soil disturbance, the Greenhouse Gas Emissions Checklist and associated carbon stock factors developed as part of the 2012 CAP efforts are utilized to determine potential project site carbon stocks and emissions. Utilizing the 2012 Draft CAP carbon stocks and the acreages of vegetation types within the project area, total carbon stocks for the project site are estimated to be approximately 28 MT C or approximately 102.76 MT CO_{2e} (**Table 7**).

Table 7 – Estimated Development Area Carbon Stocks/Storage

Vegetation Type/Carbon Storage[1]	Project Acreage	Carbon Storage/Stock per Acre (MT C/acre)	Total Carbon Storage (MT)	Total Carbon Storage in MT CO2e
Grasslands	20	1.4	28	102.76
Total			28	102.76

Sources: Napa County Draft Climate Action Plan, March 2012; Napa County Conservation Division January 2020

[12] "Carbon stock" refers to the total amount of carbon stored in the existing plant material including trunks, stems, branches, leaves, fruits, roots, dead plant material, downed trees, understory, and soil organic material. Carbon stock is expressed in units of metric tons of carbon per acre. When land is cleared, some percentage of the carbon stored is released back to the atmosphere as CO_2. 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).

[13] 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.

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%.[14] 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 58.72 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 CO2e
Grasslands	20	0.8	16	58.72
Total			16	58.72

Sources: Napa County Draft Climate Action Plan, March 2012; Napa County Conservation Division January 2020

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 20 acre agricultural development would be approximately 13.4 MT CO_{2e} (20 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 grasslands sequester a negligible quantity of CO_2 acre per year (essentially zero). Because the 2012 Draft CAP does not identify sequestration factors for the grasslands 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 1.14 MT C per year or 4.18 MT CO_{2e} per year[15].

Grapevines are photosynthetic plants and therefore have value in terms of carbon capture. Additionally, the use of cover crops, which are also photosynthetic plants, tends to result in less soil CO_2 loss from vineyard soils. Carbon sequestration loss would be further offset by the proposed vineyard, which would likely act as a sink for atmospheric CO_2, 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 246.72 MT CO_{2e} and annual ongoing emissions associated with vineyard operations (including loss of sequestration) estimated to be approximately 16.45 MT CO_{2e} per year (**Table 9**).

Table 9 – Estimated Overall Project-Related GHG Emissions

Construction Emissions in Metric Tons of $C0_{2e}$		Annual Ongoing Emissions in Metric Tons of $C0_{2e}$	
Source	**Quantity**	**Source**	**Quantity**
Vehicles and Equipment	188	Vehicles and Equipment	13.4
Vegetation and Soil	58.72	Loss of Sequestration	4.18
Total	246.72	**Total**	17.58

Source: Napa County Conservation Division January 2020

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 246.72 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

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

[15] 20 acres of grassland times 0.057 MT C = 1.14 MT C

Regulation (CCR), projects that are consistent with the general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific effects which are peculiar to the project or its site.

In the context of 12,500 acres of projected vineyard development, the proposed project would constitute less than approximately 0.14% 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 90%, vegetated vineyard avenues, and the maintenance and establishment of grape vines. These measures in conjunction with the Air Quality conditions of approval (detailed in **Section III [Air Quality]**) would further reduce potential GHG air quality impacts associated with construction and ongoing operation of the project.

For these reasons, the County does not consider one-time GHG emissions from the proposed vineyard development to be a significant impact on a project level basis or to be a "considerable" contribution to significant unavoidable cumulative impacts identified in the General Plan EIR.

As described above, total annual GHG emissions from ongoing operations are anticipated to be approximately 17.58 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. Additionally, implementation of **Mitigation Measures BR-1** and **GEO-1**, which would reduce the project by approximately 05 acres would slightly reduce anticipated project emissions,

	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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

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 equipment would be cleaned in an existing building south of Block C and east of Block E. The nearest water source (i.e., unnamed streams) are located approximately 300 feet east and 500 feet southwest of the mixing area. The soil and vegetation contained in the space between the mixing area and the streams would trap pollutants, which are then naturally filtered and reduced through the soil. The onsite wells are over 1,200 feet away from the mixing area. 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 vine rows for weed management. Project storage and staging areas would either be located within proposed vineyard blocks (i.e., within clearing limits) or within a staging area located adjacent to Vineyard Block C, that is located well over 50 feet from any aquatic resources.

There is one seasonal wetland located adjacent to Block B and unnamed streams near the vineyard blocks. While the seasonal wetland is not considered to be sensitive, it would be avoided by the proposed vineyard blocks with a minimum 50-foot buffer, which includes a 25-foot undisturbed filter strip and a 25-foot vegetated vineyard avenue beyond that. The unnamed streams on the project site also have received no-touch setbacks incorporated into the project design, in accordance with NCC Section 18.108.025.

The risk of potentially hazardous materials reaching or affecting adjacent the wetland or other aquatic resources is significantly reduced because: i) aquatic resources within the project site are over 50 feet from the development area; ii) project staging and storage areas would be over 50 feet from aquatic resources; and iii) only federal and/or California approved chemicals would be applied to the vineyard in strict compliance with applicable state and federal laws. Project approval, if granted, would also be subject to the following standard conditions that would further avoid and/or reduce potential impacts associated with routine transport and use of hazardous materials during project implementation and ongoing vineyard operations and maintenance.

Hazardous Materials – Conditions of Approval:

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

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

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

c. The closest schools (Salvador Elementary School and Justin Siena High School) are located approximately 2.5 miles to 2.75 miles east of the project site in the City of Napa. 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 Sonoma Valley Airport located approximately 9 miles to the south. 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 would result in an overall reduction of fuel loads within the project area as compared with existing conditions. Therefore, the proposed project would not increase the exposure of people or structures to wildland fires 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?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
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;	☐	☐	☒	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
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	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

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

In response, the San Francisco Bay Regional Water 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[16]"; 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 Board[17].

There are no actively flowing drainages and/or creeks on the project site; thus, onsite drainage is strictly ephemeral and flows only occur during and directly after rainfall.

a. Waste discharge is not anticipated as part of the 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 area. Agricultural Erosion Control Plan #P19-00080-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. On June 28, 2011, the Board of Supervisors approved creation of a Groundwater Resources Advisory Committee (GRAC). The GRAC's purpose was to assist County staff and technical consultants with recommendations regarding groundwater, including data collection, monitoring, and well pump test protocols, management objectives, and community support. The County completed a countywide assessment of groundwater resources (Napa County Groundwater Conditions and Groundwater Monitoring Recommendations Report, 2011) and developed a groundwater monitoring program (Napa County Groundwater Monitoring Plan, 2013). The County also completed a 2013 Updated Hydrogeologic Conceptualization and Characterization of Groundwater Conditions (2013).

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

[16] 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.

[17] https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/agriculture/vineyard/

included the goal of developing sustainability objectives, provided a definition of sustainability, and explained the shared responsibility for Groundwater Sustainability and the important role of monitoring as a means to achieving groundwater sustainability.

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

A Water Availability Analysis (WAA) was prepared in order to determine if the proposed increase in water demand as a result of the proposed project would result in a significant impact to groundwater supplies (RCS, January 15, 2019 - **Exhibit E-1**). The WAA estimates the onsite groundwater recharge, overall availability and use, both existing and proposed, in order to assess potential impact on groundwater. There are a least two offsite wells located within 500 feet of the existing project wells. Aquifer testing did not show significant water level drawdown impacts at the nearby offsite wells.

The project proposes to irrigate the vineyard from the three onsite wells as identified in the WAA (RCS, January 15, 2019 - **Exhibit E-1**). The existing 0.6-acre vineyard is currently irrigated with an estimated 0.1 acre-feet of water per acre per year using water stored in onsite water tanks that are filled with water that is trucked to the property. No additional water is currently used for landscaping or residential use.

Typically, the annual irrigation season ranges from late May to September. Water use for frost protection is not proposed. After full development, the proposed project would result in approximately 9.65 acre-feet per year (AF/year) of groundwater demand due to the installation of new vineyard, irrigation of the existing 0.6 acre vineyard, and landscaping and residential use (**Table 10).** The proposed project would be developed in two phases and would consist of approximately 15.8 acres of planted vineyard (including the 0.6 acre of existing vineyard). After an estimated five years following initial vineyard planting, the applicant plans to dry farm the vineyard, thereby reducing water demand. For the purposes of this analysis, the full initial water demand has been assumed.

Table 10 – Pre- and Post-Project Water Use[18]

Property Water Use	Pre-project (acre-feet/year)	Post-project (acre-feet/year)
Vineyard irrigation	0.1	7.86
Landscape irrigation	0	1.04
Residential use	0	0.75

Source: RCS, Results of Aquifer Testing of One Onsite Well and Napa County Tier 1 and Tier 2 Water Availability Analysis for Proposed P&M Vineyards, 1300 Mt. Veeder Road, Mt. Veeder Area, Napa County, California, January 15, 2019 - **Exhibit E-1**

Groundwater Recharge: Long-term average groundwater recharge can be estimated as the percentage of rainfall that falls on the project site that percolates into the underlying aquifer. The percentage of rain that has the potential to infiltrate varies depending on factors such as rates of evaporation and transpiration, soil type and geology that exists at the site, and average annual rainfall. Based on available climatological data, site-specific information, and other available data and analysis relevant to potential recharge, the WAA, which uses an average annual rainfall of 34.1 inches per year over the project site's land area available for recharge and a 10% groundwater recharge estimate, estimates the average annual groundwater recharge of the project site to be approximately 32.8 AF/year (see **Exhibit E-1** for details and calculations). The average annual rainfall utilized in the recharge analysis includes times of below-average and above-average rainfall, and therefore inherently includes drought year conditions.

As proposed the project is estimated to have an annual onsite future groundwater demand of 9.65 AF/, which is below the estimated average annual recharge volume of 32.8 AF/year. Considering: i) anticipated annual water use of the project site for existing and proposed use of approximately 9.65 AF/year is below the project site's anticipated annual groundwater recharge rate of approximately 32.8 AF/year; ii) there is no evidence to date indicating that there are groundwater problems or declining well production in the this area of the County; and iii) incorporation of the standard water use condition below to reduce potential impacts associated with water use as a result of vineyard establishment and ongoing vineyard operations and maintenance (if approved), the proposed project is anticipated to result in less than significant impacts to groundwater supplies, groundwater recharge, and local groundwater aquifer levels. Additionally, implementation of **Mitigation Measure BR-1** and **GEO-1** would reduce anticipated water use by approximately 0.25 af/yr.

[18] The project analyzed in the WAA originally anticipated irrigation of 16.4 acres of planted vineyard and a 2 acre olive grove/orchard: however the proposed project as described and analyzed herein anticipates 15.12 acres of proposed vineyard and no orchard. The water use described in **Table 10** utilizes a 0.5 af/ac irrigation factor from the WAA and 15.72 acres of vineyard (15.12 acres of proposed vineyard + 0.6 acres of existing vineyard) resulting in an anticipated annual water use of 7.86 af/yr for existing and proposed vineyard (or 15.12+0.6x0.5).

Groundwater Management, Wells – Conditions of Approval:

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

The owner/permittee shall be required (at the permittee's expense) to record well monitoring data (specifically, static water level no less than quarterly, and the volume of water no less than monthly). Such data shall be provided to the County, if the PBES Director determines that substantial evidence indicates that water usage is affecting, or would potentially affect, groundwater supplies. If data indicates the need for additional monitoring, and if the owner/permittee is unable to secure monitoring access to neighboring wells, onsite monitoring wells may need to be established to gauge potential impacts on the groundwater resource utilized for the project. Water usage shall be minimized by use of best available control technology and best water management conservation practices.

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

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

c. 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 90% (including vegetated avenues and turnaround avenue), and the annual application of straw mulch cover on all disturbed areas at a rate of 4,000 pounds per acre and the annual application of wood fiber mulch at a rate of 2,000 pounds per acre. Vineyard avenues would be maintained with the minimum vegetative cover density as specified for the individual vineyard blocks (90%). 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 bales, sand bags, sediment barriers, straw wattles, water bars, subdrains and dissipaters. 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 Munselle Civil Engineering (July 7, 2019 - **Exhibit D**). The Hydrologic Analysis utilized the Soil Conservation Service (SCS) method to conclude that there would be no change in peak flows for all watersheds in the project site as a result of the proposed project (**Table 11**). The Hydrologic Analysis also concluded that the runoff time of concentration, which is the time it takes for runoff to flow from the upper most point in each watershed to the watershed's outlet, is anticipated to remain the same as existing conditions.

Table 11 – Hydrologic Modeling Calculations 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**
Block A				
Pre-project conditions	0.33	0.76	1.22	1.41
Post-project conditions	0.33	0.76	1.22	1.41
Change (cfs)	0.0	0.0	0.0	0.0
Change (%)	0%	0%	0%	0%
Block B1				
Pre-project conditions	0.18	0.35	0.54	0.63
Post-project conditions	0.18	0.35	0.54	0.63
Change (cfs)	0.0	0.0	0.0	0.0
Change (%)	0%	0%	0%	0%

	Peak Discharge Flow (cfs) by 24-hour Storm Event Frequency Return Interval (cubic feet/second)			
	2-year	10-year	50-year	100-year
Block B2				
Pre-project conditions	1.26	2.46	3.82	4.42
Post-project conditions	1.26	2.46	3.82	4.42
Change (cfs)	0.0	0.0	0.0	0.0
Change (%)	0%	0%	0%	0%
Block B3				
Pre-project conditions	0.98	2.21	3.49	4.04
Post-project conditions	0.98	2.21	3.49	4.04
Change (cfs)	0.0	0.0	0.0	0.0
Change (%)	0%	0%	0%	0%
Block B4				
Pre-project conditions	0.64	1.46	2.32	2.68
Post-project conditions	0.64	1.46	2.32	2.68
Change (cfs)	0.0	0.0	0.0	0.0
Change (%)	0%	0%	0%	0%
Block B5				
Pre-project conditions	0.85	1.93	3.07	3.56
Post-project conditions	0.85	1.93	3.07	3.56
Change (cfs)	0.0	0.0	0.0	0.0
Change (%)	0%	0%	0%	0%
Block B6				
Pre-project conditions	0.41	0.91	1.46	1.69
Post-project conditions	0.41	0.91	1.46	1.69
Change (cfs)	0.0	0.0	0.0	0.0
Change (%)	0%	0%	0%	0%
Block C				
Pre-project conditions	0.20	0.43	0.68	0.79
Post-project conditions	0.20	0.43	0.68	0.79
Change (cfs)	0.0	0.0	0.0	0.0
Change (%)	0%	0%	0%	0%
Block D				
Pre-project conditions	0.08	0.18	0.29	0.33
Post-project conditions	0.08	0.18	0.29	0.33
Change (cfs)	0.0	0.0	0.0	0.0
Change (%)	0%	0%	0%	0%
Block E				
Pre-project conditions	0.21	0.44	0.72	0.83
Post-project conditions	0.21	0.44	0.72	0.83
Change (cfs)	0.0	0.0	0.0	0.0
Change (%)	0%	0%	0%	0%
Block F1				
Pre-project conditions	0.48	1.06	1.69	1.96
Post-project conditions	0.48	1.06	1.69	1.96
Change (cfs)	0.0	0.0	0.0	0.0
Change (%)	0%	0%	0%	0%
Block F2				
Pre-project conditions	0.39	0.88	1.48	1.74
Post-project conditions	0.39	0.88	1.48	1.74
Change (cfs)	0.05	0.0	0.0	0.0
Change (%)	13%	0%	0%	0%

Source: Munselle Civil Engineering, March 2019 Hydrology and USLE Soil Loss Calculations - **Exhibit D**

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 significant 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.

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

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 area and 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 drainage courses would facilitate increased water infiltration so that chemicals and potentially hazardous materials associated with project implementation and operation can be trapped and degraded in buffer vegetation and soils to protect water quality. The limited application of agricultural chemicals generally occurring during the non-rainy season would also minimize the amounts of chemicals that could effect on or offsite water resources. Because the project as designed is not expected to substantially 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 area. As such, the proposed project is anticipated to reduce soil loss and sedimentation by approximately 0.51 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 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, water courses, streams and any other water resource to avoid the potential risk of surface and groundwater contamination, whether or not such activities have occurred within these areas prior to this ECPA approval.

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

	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?	☐	☐	☐	☒
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?	☐	☐	☒	☐

Discussion

a. The project site is in a rural area of Napa County and the nearest established community, Salvador, is approximately 2 miles east 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, 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 14% and generally 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 generally maintain runoff characteristics as compared to existing conditions.
- The proposed project with implementation of **Mitigation Measures BR-1** and **BR-2** 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 Assessment and Rare Plant Report were prepared for the proposed project. The project as proposed with implementation of **Mitigation Measures BR-1** and **BR-2** would avoid potential direct, indirect, and cumulative impacts to special-status plant species and Sensitive Biotic Communities and Biotic Communities of Limited Distribution occurring on the project site. With implementation of **Mitigation Measures BR-2** potential impacts to special-status bird species would be avoided. Furthermore, implementation of these measures would not affect the feasibility of the project in that, impacts to special-status species and their habitat can be avoided while allowing for up to approximately 18 acres of additional agriculture to be developed and operated on the project site.
- With implementation of **Mitigation Measures BR-1** and **BR-2** and the tree/woodland and fencing 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** and **BR-2** and the tree/woodland and fencing 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 (purple needlegrass grassland) 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 Assessment and Rare Plant Report were prepared for the proposed project (**Exhibits B-1 and B-2**).
- The proposed project is consistent with Policy CON-30, which encourages the avoidance of wetlands. The seasonal wetland onsite is avoided with a minimum 50-foot buffer, which includes a 25-foot no-touch area from the outer edge of the wetland and an adjacent 25-foot outsloped vegetated vineyard avenue.
- The 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 substantial change to runoff.
- With implementation of Mitigation Measure GEO-1 the project would be consistent with General Plan Conservation Policy CON-6 and Safety Policy SAF-10 by avoiding development and grading in geologically hazardous areas where landslides are present.
- 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Discussion

a-b. The project site is not in an area with a known mineral resource of value to the region or state or within a known mineral resource recovery area (Napa County Baseline Date Report, Figure 2-2 and Map 2-1, Version 1, November 2005; Napa County General Plan Map, December 2008; Special Report 205, Update of Mineral Land Classification, Aggregate Materials in the North San Francisco Bay Production-Consumption Region, Sonoma, Napa, Marin and Southwestern Solano Counties, California Geological Survey, 2013). The nearest known mineral resource area in Napa County is located over 8 miles to the southeast of the project site. Proposed site improvements and development of vineyard on the project site 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?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
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?	☐	☐	☐	☒

Discussion

a-b. The project site is located in a rural setting where surrounding parcels are generally undeveloped, planted with vineyards and contain rural residences. The closest offsite residences are located approximately 320 feet east, approximately 525 feet to the south, and approximately 656 feet to the north of the project site. Additionally, adjacent proprieties and properties in the immediate area contain vineyard.

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

Table 12 – Construction Equipment Noise Emission Levels

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

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

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

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

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

[1] Based on a source noise level of 90 dBA
Source: Napa County Baseline Date Report, Noise Section Table 6-13, Version 1, November 2005

Based on distances to existing residences, noise associated with project construction would be approximately 60 to 70 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 14** characterizes the typical reduction of farming activity noise levels as the distance increases from the source using a noise source level of 84 dBA.

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

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

[1] Based on a source noise level of 84 dBA
Source: Napa County Baseline Date Report, Noise Section Table 6-14, Version 1, November 2005.

Based on distances to existing residences, it is anticipated that noise due to operation and maintenance agricultural activities would be approximately 55 to 60 dBA at the closest existing offsite residences.

Napa County considers construction noise levels up to 75 dBA during daytime hours (7 a.m. to 7 p.m.) and 60 dBA during nighttime hours (7 p.m. to 7 a.m.) as compatible with residential uses (NCC Section 8.16.080), and ongoing (or established use) noise levels of approximately 55 dBA as compatible with residential uses (NCC Section 8.16.070). As the closest offsite residence would experience construction noise levels of approximately 60 to 70 dBA, noise and vibration impacts associated with project development are anticipated to be less than significant. Noise levels from routine operation and maintenance activities at the nearest offsite residence would be less than typical for compatible uses, and the temporary and ongoing noise sources and levels are considered typical and reasonable for agricultural development and operational activities, consistent with the County's "Right to Farm" ordinance (NCC Chapter 2.94 and General Plan Agricultural Preservation and Land Use Policy AG/LU-15), and are therefore exempt from compliance with the noise ordinance. NCC Section 8.16.090.E (Exemptions to Noise Regulations) exempts agricultural operations from noise regulations. Additionally, the proposed

project would not result in a permanent increase in ambient noise levels over what currently exists in the project vicinity, resulting in a less than significant impact on ambient noise levels of the area.

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 project site in excess of County standards.

b. 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

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. The proposed irrigation lines would be used solely for vineyard irrigation. 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 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?	☐	☐	☐	☒
ii. Police protection?	☐	☐	☐	☒
iii. Schools?	☐	☐	☐	☒

iv.	Parks?	☐	☐	☐	☒
v.	Other public facilities?	☐	☐	☐	☒

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 the minimal number of employees for construction and operation activities 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?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion

a-b. The proposed project does not include any recreational facilities. As discussed in **Sections 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?	☐	☐	☒	☐
b) Would the project conflict or be inconsistent with CEQA guidelines § 15064.3 subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☐	☒

Discussion

a-b. Currently, the project site is developed with approximately 0.6 acre of existing vineyard, one single-family residence with approximately 0.5 acre of landscaped areas, and an existing gravel driveway connects the project site to Mount Veeder Road.

The proposed project is expected to generate approximately six vehicle trips per day with approximately three employees per vehicle during land preparation, erosion control installation and vineyard development. An estimated six truck trips would deliver and remove heavy equipment at the start and end of project construction. Vehicular equipment anticipated for project implementation typically includes a tractor/trailer, D9 bulldozers, backhoe, excavator, dump truck, pickup trucks, water truck, flatbed trucks, and ATVs.

Pruning would occur approximately 30 days of the year during winter (December – January) and is anticipated to generate approximately eight daily employees and three vehicle trips per day. Weed control would occur between September and November and is anticipated to generate one employee and one vehicle trip per day. Harvest is anticipated to generate up to 10 daily workers and four vehicle trips per

day for 30 days. An estimated eight grape haul truck trips would be used during harvest and an additional 12 truck trips would be used during the remainder of the year.

Vehicular equipment for ongoing vineyard maintenance is anticipated to include ATVs, tractors, truck and equipment trailers, and passenger cars and/or light trucks. 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 Mount Veeder Road, approximately 5.4 miles south of its intersection with Highway 29. 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. 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 Mount Veeder Road for project development (**Figures 1-3**). The proposed project does not include roadway improvements and/or modifications to Mount Veeder Road, 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 and project area, 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	☐	☐	☒	☐
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.	☐	☐	☒	☐

Discussion

On March 19, 2019, the County notified pursuant to Public Resources Code Section 21074 (AB-52: Gatto) the Yocha Dehe Wintun Nation, Middletown Rancheria, and Mishewal Wappo Tribe of Alexander Valley of the proposed project. On March 25, 2019, the County received a response letter from Middletown Rancheria indicating they have no specific comments at this time; on May 13, 2019, the County sent notification to the Middletown Rancheria acknowledging their response letter and closing the consultation invitation.

On April 5, 2019, the County received a response letter from Yocha Dehe Wintun Nation indicating they have no specific comments at this time; on May 13, 2019, the County sent notification to the Yocha Dehe Wintun Nation acknowledging their response letter and closing the consultation invitation.

The Mishewal Wappo Tribe of Alexander Valley did not request consultation within the 30-day notification period and on May 13, 2019, the County sent a consultation closure notice to the Tribe.

a-b. As discussed in **Section V (Cultural Resources)** the proposed project's Historical Resources Study (Tom Origer & Associates, October 4, 2016), found no historical or archaeological resources within the project site, therefore no resources listed or eligible for the California Register of Historical Resources (CRHR) are present and impacts to archaeological resources as a result of the proposed project are considered to be less than significant. Furthermore, no resources that may be significant pursuant to Public Resources Code Section 5024.1(c) have been identified or are anticipated onsite. The Cultural Resources conditions of approval discussed in **Section V (Cultural Resources)** would avoid and reduce potential impacts to unknown resources.

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

	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?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

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 existing groundwater wells would provide irrigation water to the vineyard.

Water pipes would be installed within existing gravel and dirt access roads between Blocks B through F and from an existing dirt access road to Block A. The proposed project would include the installation of a limited number of onsite storm water drainage features such as straw wattles, water bars, and a permanent no-till vineyard cover crop, which have been designed to meet project-related storm water drainage needs. The effect of the proposed storm water drainage system is described in **Sections IV (Biological Resources), 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 approximate 15.12 net planted acres would be irrigated by existing onsite wells. The WAA conducted by RCS (**Exhibit E-1**) concluded that after full development, water use for the 15.72 acres of vineyard (including the 0.6 acre of existing vineyard), onsite residence and landscaping is estimated to be 9.65 AF/year, which is an increase of 9.55 AF/year from the current onsite water use. Based on site-specific recharge and analysis, the project site is estimated to have a total groundwater allotment of 32.8 AF/year. The proposed project's estimated water demand of 9.65 AF/year represents approximately 30% of the groundwater allotment. RCS estimated approximately 119.1 AF of groundwater is currently in storage beneath the project site, and that during a prolonged drought (estimated to last six years), groundwater recharge would be reduced to 48% of the average annual recharge, or 6 AF/year (36 AF in six years). To meet six years of

groundwater demand, the proposed project would require 57.9 AF. Based on these estimates, there would be a recharge deficit of 21.9 AF during a prolonged drought. Water to meet a prolonged drought would be available during drought periods from the approximately 119.1 AF of groundwater estimated to be in storage beneath the project site. Removing approximately 21.9 AF of deficit over the entire six-year period may cause water levels to decrease beneath the project site. However, the removal of such a small percentage of groundwater from storage over a six-year period is not expected to significantly impact groundwater levels. 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. 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 onsite by spreading it back into the vineyard, burning it, or a combination of the two. 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 statues 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?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slop instability, or drainage changes?	☐	☐	☒	☐

Discussion

The project site is located in a State Responsibility Area (SRA) that is designated as a Moderate Fire Hazard Severity Zone (CALFIRE, 2007, Napa County GIS Fire Hazard Layer). The project site consists of steep west-facing slopes and broader, gently sloping ridgetop areas with elevations that range from approximately 590 to 970 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 and project area. 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 5 months in two phases). The proposed project does not include any infrastructure that would exacerbate fire risk and this impact would be less than significant.

d. Although the proposed project would alter land cover and could include burning cane, 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 no significant change in peak flow in the project site (see **Section X [Hydrology and Water Quality]**). There are no offsite residences in the immediate vicinity of the project site. 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?	☐	☒	☐	☐
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)?	☐	☒	☐	☐
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?	☐	☐	☒	☐

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 #P19-00080-ECPA, with the incorporation of identified mitigation measures and conditions of approval (should the project be approved), would not have the potential to significantly degrade the quality of the environment. The installation of the 4-inch water line from the existing dirt access road to Block A has the potential to affect special-status plant species if they occur within the alignment. Purple needlegrass grasslands to be retained in the vicinity of the development area also have the potential to be impacted by the proposed project. With incorporation of **Mitigation Measure BR-1**, special-status plants and the majority of the project site's PNG Grassland special-status plant species habitat would be protected (**Table 5**).

   Implementation of **Mitigation Measures BR-1** and **BR-2** would avoid potential direct and indirect impacts to special-status plant and bird species. The project site includes some existing wildlife exclusion fencing around Block A, a portion of Block B, and to the east and south of Blocks E and F. The proposed new vineyard blocks would be fenced individually and in clusters where appropriate. Given the relatively small size of the project area, 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 generally undeveloped condition of the project site and surrounding lands would continue to allow for movement through the vicinity. As such, the proposed wildlife exclusion fencing as conditioned 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. One seasonal wetland occupies 0.12 acre of the project site. The seasonal wetland is avoided with a minimum 50-foot buffer, which includes a 25-foot no-touch area from the outer edge of the wetland and an adjacent 25-foot outsloped vegetated vineyard avenue. With incorporation of standard conditions to protect cultural resources that may be discovered accidently, 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** and **BR-2** 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 within the Pickle Canyon, Salvador Channel, and Dry Creek watersheds. The Pickle Canyon Watershed contains approximately 1,807 acres. In 1993, vineyard acreage within this drainage was approximately 276 acres, or 15% of the drainage. Since 1993 approximately 64 acres of additional vineyard (or 4% of the drainage) have been developed to vineyard, resulting in approximately 19% of the drainage (or approximately 340 acres) containing vineyard. It is estimated, based on evaluation of the County's GIS layer identifying Potentially Productive Soils (PPS) within the Pickle Canyon Watershed, that there are approximately 375 acres (21% of the drainage) having the potential to be developed to vineyard. This in conjunction with existing and approved vineyard development (approximately 340 acres) results in a total potential build out of approximately 715 acres or approximately 40% of the drainage. The PPS layer includes lands with characteristics that have been found to be suitable for potential future vineyard development; however this total does not take into consideration other site-specific limitations such as water courses requiring setbacks, wetlands, other

water features, rare or special-status plants and animal species, or cultural resources, nor does the layer take into account other factors influencing vineyard development, such as sun exposure, soil type, water availability, or economic factors.

The Salvador Channel Watershed contains approximately 4,614 acres. In 1993, vineyard acreage within this drainage was approximately 1,350 acres, or 29% of the drainage. Since 1993 approximately 424 acres of additional vineyard (or 9% of the drainage) have been developed to vineyard, resulting in approximately 38% of the drainage (or approximately 1,774 acres) containing vineyard. It is estimated, based on evaluation of the County's GIS layer identifying PPS within the Salvador Channel Watershed, that there are approximately 479 acres (10% of the drainage) having the potential to be developed to vineyard. This in conjunction with existing and approved vineyard development (approximately 1,774 acres) results in a total potential build out of approximately 2,253 acres or approximately 49% of the drainage.

The Dry Creek Watershed contains approximately 9,603 acres. In 1993, vineyard acreage within this drainage was approximately 732 acres, or 8% of the drainage. Since 1993 approximately 232 acres of additional vineyard (or 2% of the drainage) have been developed to vineyard, resulting in approximately 10% of the drainage (or approximately 964 acres) containing vineyard. It is estimated, based on evaluation of the County's GIS layer identifying PPS within the Dry Creek Watershed, that there are approximately 375 acres (4% of the drainage) having the potential to be developed to vineyard. This in conjunction with existing and approved vineyard development (approximately 964 acres) results in a total potential build out of approximately 1,339 acres or approximately 14% of the drainage.

While it is not possible to quantify precisely the acreage and location of additional vineyard development that may be proposed by property owners in these drainages in the future, it is possible to make a conservative estimate based on previous trends. To estimate the amount reasonably foreseeable vineyard that may be developed over time, the acreage of vineyard development including approved vineyard projects in the cumulative environment (i.e., Pickle Canyon, Salvador Channel, and Dry Creek drainages) 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 Pickle Canyon, Salvador Channel, and Dry Creek drainage, approximately 118 acres of agriculture were developed per year (3,078 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 354 to 590 acres over the next three to five years within the Pickle Canyon, Salvador Channel, and Dry Creek drainages are considered reasonable estimates. NCC Chapter 18.108 includes policies that require setbacks of 35 to 150 feet from watercourses (depending on slopes), and General Plan Conservation Policy CON 24c that requires the retention of oak woodland at a 2:1 ratio, which limits the amount of potential vineyard acreage that could be converted within the watershed. It has been the County's experience with ECP projects that there are generally site-specific issues, such as oak woodland preservation, wetlands, other water features, special-status plant and animal species, or cultural resources that further reduce areas that can be developed to other land uses. Additionally, the vineyard acreage projections for the next three to five years do not consider environmental factors that influence vineyard site selection, such as sun exposure, soil type, water availability, slopes greater than 30%, or economic factors such as land availability, cost of development or investment returns.

Air Quality and GHG - Sections III and VIII:

The proposed project (#P18-00808-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 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 Assessment and Rare Plant Report (WRA, July 2016 - **Exhibits B-1** and **B-2**) were 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 CNDDB, CNPS, and USFWS databases. As discussed in **Section IV** (**Biological Resources**), the installation of the 4-inch water line from the existing dirt access road to Block A has the potential to affect special-status plant species if they occur within the alignment. Purple needlegrass grasslands (a Sensitive Biotic Community and a Biotic Community of Limited

Distribution) to be retained in the vicinity of the development area also have the potential to be impacted by the proposed project. With implementation of **Mitigation Measure BR-1**, the proposed project would further avoid, protect, and re-establish this Sensitive Biotic Community/Biotic Community of Limited Distribution in retained connected habitat blocks occurring on the project site and would provide the opportunity for this species to maintain viable populations both on the project site and, more broadly, in the region, reducing potentially significant impacts to this plant species and its habitat to a less than significant level. Potential direct and indirect impacts to special-status plant and animal species and sensitive habitat would be avoided through implementation of **Mitigation Measures BR-1** and **BR-2** and incorporation of the standard conditions of approval for fencing and tree/woodland protection. Seasonal wetlands occupy 0.12 acre of the project site. The wetland is avoided with a minimum 50-foot buffer, which includes a 25-foot no-touch area from the outer edge of the wetland and an adjacent 25-foot outsloped vegetated vineyard avenue. Therefore, the proposed project would not impact wetlands, or would not contribute to a cumulatively significant impacts to special-status plants and animals or habitats.

Cultural and Tribal Resources – Sections V and XVIII:

No cultural resources were identified in the project site. With the incorporation of standard conditions to protect cultural resources that may be discovered accidently and to ensure that Tribal cultural resources are protected, significant impacts to cultural and tribal resources are not expected (see **Section V [Cultural Resources]** and **Section XVII [Tribal Cultural Resources]**). Therefore, with the incorporation of the identified conditions of approval, the proposed vineyard development project would have a less-than-significant project-specific and cumulative impact on cultural and tribal 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 3.02 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 Pickle Canyon, Salvador Channel, and Dry Creek drainages; therefore, impacts associated with soil loss and associated sedimentation are not considered cumulatively significant.

Because geologic impacts associated with future agricultural projects would receive the same scrutiny under CEQA, 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.

The project Geotechnical Investigation identified active landslides (i.e. *Qls*) within proposed vineyard development areas. Consistent with General Plan Conservation Policy CON-6, that specifies limiting development in physically hazardous areas such as steep slopes and geologically hazardous areas, and Policy SAF-10 that discourages grading on slopes over 15% where landslides are present, **Mitigation Measure GEO-1** will be implemented. With the implementation of this measure potential impacts to slope stability and associated erosion and sedimentation as a result of the proposed project would be reduced to a less-than-significant level, and result in consistency with Policy CON-6 and Policy SAF-10 by avoiding environmentally sensitive areas (i.e., geologically hazardous areas) and grading where landslides or other geologic hazards are present.

Hydrology and Water Quality - Section X:

Water use calculations provided in the WAA prepared by RCS (January 15, 2019 - **Exhibit E-1**) indicate that the proposed project would result in approximately 9.65 AF/year of groundwater use compared to the approximately .1 AF/year used under current conditions (**Table 10**).

The average annual rainfall utilized in the groundwater recharge analysis includes times of below-average and above-average rainfall, and therefore inherently includes drought year conditions. Based on annual average rainfall for the area (approximately 34.1 inches per year) over the project site's land area available for recharge, and other conditions that affect the amount of precipitation that has the potential to recharge the groundwater aquifer, such as geological conditions, runoff characteristics, and evapotranspiration, it was anticipated that approximately 10% of average rainfall or 32.8 AF/year would be available for groundwater recharge.

Considering the anticipated water use for existing uses and proposed vineyard of 9.65 AF/year is below the project site's anticipated annual groundwater recharge rate of approximately 32.8 AF/year, and with implementation of the standard water use condition, the proposed project is anticipated to result in less than significant impacts to groundwater supplies, groundwater recharge, local groundwater aquifer levels, and well interference or drawdown effects on nearby wells.

As discussed in **Section X.c (Hydrology and Water Quality)** a Hydrologic Analysis utilizing the SCS method has been prepared by Munselle Civil Engineering (July 7, 2019 - **Exhibit D**). 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 significant net increase in runoff volumes or time of concentrations are expected as compared to pre-project conditions (**Exhibit D**), 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 project site or immediate vicinity. The proposed 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 the 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 project site, 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:

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