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:** Winrod Vineyard Conversion Agricultural Erosion Control Plan (ECPA) #P20-00247-ECPA

2. **Property Owner(s):** Winrod Family Trust, c/o Michael A. Winrod

3. **Contact Person, Phone Number and Email:** Pamela Arifian, Planner III, (707) 259-5934, Pamela.Arifian@countyofnapa.org

4. **Project Location and Assessor's Parcel Number (APN):** 3465 State Highway 128, Calistoga, CA 94515, Assessor's Parcel Number (APN) 017-110-038 (**Figures 1** and **2**)

5. **Project Sponsor:** Winrod Family Trust
   c/o Michael A. Winrod
   3465 State Highway 128
   Calistoga, CA 94515

   Agent: Richard Paxton, P.E. (RPE No. 84634)
   Bartelt Engineering
   1303 Jefferson Street, Suite 200 B
   Napa, CA 94559

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

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

8. **Background:** A majority of the parcel burned in the 2017 Tubbs Fire. The fire-damaged trees were removed under a Notice of Emergency Timber Operations (1-18EM-063-NAP), which permitted timber removal from May 22, 2018 through May 21, 2019. Due to fire damage, the project is subject to the Disaster Recovery Ordinance (Napa County Code (NCC) Section 8.80) and specifically NCC Section 8.80.130 (Conservation Regulations for fire-damaged properties), which requires the Vegetation Retention Requirements analysis (per NCC Section 18.108.020(c)) be based on the conditions as configured on the property on June 19, 2018 aerial.

   The parcel includes approximately 6 gross acres (4.6 net acres) of existing vineyard that was planted between 1997 and 2009 without benefit of a permit and partially within stream setbacks. The existing driveway within the stream setback and existing vineyard within the stream setbacks would be removed and replanted as part of the proposed project and areas of the stream setbacks would be revegetated with a native seed blend as part of the proposed project. The relocation of the existing driveway from within the stream setback would be processed further under a separate grading permit.

9. **Description of Project:** The proposed project involves the clearing of vegetation, earthmoving, and installation and maintenance of erosion control measures associated with the development of approximately 16.5 gross acres of vineyard (i.e., development area, project area or proposed clearing limits) with approximately 13.0 net planted acres in three vineyard blocks located on a 104.8-acre property (i.e., project site). This includes approximately 6.0 gross acres (4.6 net acres) of existing vineyard that was installed without benefit of an approved Erosion Control Plan (ECP) (Blocks 1 and 2). Portions of Block 2 would be removed from the stream setback and the area revegetated with a native seed blend. Proposed Block 1 would include 2.0 gross acres (1.4 net acres), proposed Block 2 would include 6.3 gross acres (5 net acres), and proposed Block 3 would include 8.2 gross acres (6.6 net acres) of new vineyard. Slopes within the development area range from 9 percent (%) to 24%, with 0.5 acre on slopes greater than 30%. An estimated 692 trees with a diameter-at-breast-height (dbh) greater than six (6) inches are proposed for removal with development of the proposed project, including blue oak (*Quercus douglasii*), California black oak (*Quercus kelloggii*), coast live oak (*Quercus agrifolia*), Oregon white oak (*Quercus garryanna var. garryanna*), and Pacific madrone (*Arbutus menziesii*), resulting in removal of a total of approximately 8.83 acres, which includes approximately 6.07 acres of mixed oak woodland, 2.76 acres of blue oak woodland, and 1.05 acres of Pacific madrone forest. Rock removed during the clearing and development of the land would be used as part of the erosion control measures, including the graveled vineyard avenue and rock outfalls. There would be no transport of spoils off-site. The vineyard would be irrigated with approximately 6.2 acre-feet per year (AF/year) of groundwater. New wildlife exclusion fencing would connect with existing fencing in the project site to enclose the proposed vineyard blocks. The project includes relocation of the existing driveway and revegetation of approximately 0.46-acre within the stream setback using a native seed blend as detailed in **Exhibit A**.

   Erosion Control Measures: Temporary erosion control measures include installation of silt fences and/or straw wattles, application of straw mulch at a rate of 4,000 pounds per acre, and other practices as needed. Permanent erosion control measures include: installation of waterbars with rock, a rock-energy dissipater, and a permanent cover crop maintained at a minimum vegetation cover density of 75% for the proposed blocks. Details of the proposed erosion control measures are provided in the Winrod Vineyards Vineyard Development and Erosion Control Plan, May 2021, prepared by Bartelt Engineering (**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, rock removal, disking, trenching for irrigation pipelines, and the development of erosion and runoff control measures.

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

a. Removal of existing 2,500-gallon water tank and installation of a new 50,000-gallon water storage tank at southwestern corner of proposed Block 3, accessed by a 20' wide graveled vineyard avenue located outside of stream setback.
b. Installation of two gravel staging areas, both located outside of stream setbacks; one staging area would be located in an existing vineyard area between the proposed realigned driveway and the northern parcel line east of the creek; the second staging area would be located on the existing access area adjacent to the existing agricultural building located west of Block 1. The staging areas would remain in place for vineyard operations. The acreage of these staging areas is included in the proposed gross development area.
c. Installation of vineyard trellis and drip irrigation systems, and planting rootstock in a 4-foot by 7-foot spacing pattern for an approximate vine density of ±1,556 vines per acre.
d. Avenues that require turnaround would be 20-feet wide and may be narrower (10 feet) parallel to vine rows.
e. Ongoing inspection and maintenance of temporary and permanent erosion and runoff control measures.
f. Ongoing operation and maintenance of the vineyard, which includes: vine management (pruning, fertilization, and pest and disease control), weed control, cover crop mowing, irrigation and trellis system maintenance, and fruit harvesting. Pre-emergent herbicides would not be strip sprayed in the vine rows for weed management. Contact or systemic herbicides may be applied annually between March and July to ensure adequate vegetative cover in the spray strips for the remainder of the rainy season. The width of the spray strips would be no wider than 18 inches in order to achieve 75% vegetative cover.

Table 1 lists a general construction schedule for the proposed project as identified in #P20-00247-ECPA and **Table 2** outlines typical general ongoing vineyard operations. The vineyard would be developed in three phases, with construction occurring up to six months during each construction year (2022-2027). The final implementation schedule is pending action on #P20-00247-ECPA.

Table 1 – Implementation Schedule

Phase 1 – Vineyard Block 3	
Year 1	
April 1 – October 15	Remove existing vegetation, complete ripping, grading and discing.
October 15[1]	All winterization complete, including seeding, straw mulching, and straw wattle installation.
October 16 – March 31	Maintain erosion and sediment control devices, inspect after all rain events producing significant runoff, re-seed temporary cover crop as needed to maintain appropriate cover.
Year 2	
April 1 – October 15	Complete grading as needed, install vineyard avenues and permanent erosion control measures, install irrigation system, trellis system, and plant rootstock.
October 15[1]	All winterization complete, including seeding, straw mulching, and straw wattle installation.
Phase 2 – Vineyard Block 2	
Year 3	
April 1 – October 15	Remove existing vegetation, complete ripping, grading and discing.
October 15[1]	All winterization complete, including seeding, straw mulching, and straw wattle installation.
October 16 – March 31	Maintain erosion and sediment control devices, inspect after all rain events producing significant runoff, re-seed temporary cover crop as needed to maintain appropriate cover.
Year 4	
April 1 – October 15	Complete grading as needed, install vineyard avenues and permanent erosion control measures, install irrigation system, trellis system, and plant rootstock.
October 15[1]	All winterization complete, including seeding, straw mulching, and straw wattle installation.
Phase 3 – Vineyard Block 1	
Year 5	
April 1 – October 15	Remove existing vegetation, complete ripping, grading and discing.
October 15[1]	All winterization complete, including seeding, straw mulching, and straw wattle installation.
October 16 – March 31	Maintain erosion and sediment control devices, inspect after all rain events producing significant runoff, re-seed temporary cover crop as needed to maintain appropriate cover.
Year 6	
April 1 – October 15	Complete grading as needed, install vineyard avenues and permanent erosion control measures, install irrigation system, trellis system, and plant rootstock.
October 15[1]	All winterization complete, including seeding, straw mulching, and straw wattle installation.

[1] During the winter months (October 15 to April 1 of the succeeding year), no earthmoving work is allowed by the Napa County Code (NCC) Section 18.108.070(L).

Table 2 – Typical Annual Operations Schedule

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

Construction equipment for vineyard development is expected to include a crawler tractor (D-8 or larger), tractor-trailers, backhoe/excavator, trencher, end-post driver, and pickup trucks, passenger vehicles, and other small to medium service vehicles. Equipment and vehicle trips during development would include up to four trips per day with a peak of eight trips per day during material supply deliveries, staking, and planting operations. Standard equipment for vineyard operations is expected to include tractor-trailers for equipment deliveries, farming tractors with grape hauling trailers or discing attachments, a forklift, ATVs, passenger vehicles and/or light duty trucks. Equipment and vehicle trips during normal vineyard operations would include up to two round trips per day for large equipment and up to eight passenger vehicles arriving and leaving the site per day. Equipment and vehicle trips during harvest would include up to three round trips per day for large equipment and up to ten passenger vehicles arriving and leaving the site per day.

Implementation of the proposed project would be in accordance with the Winrod Vineyards Vineyard Development and Erosion Control Plan prepared by Bartelt Engineering (May 2021 - **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, and at https://www.countyofnapa.org/2876/Current-Projects-Explorer).

10. Describe the environmental setting and surrounding land uses.

The 104.8-acre project site is located at 3465 State Highway 128, approximately 4 miles west of the City of Calistoga, California (**Figures 1-3**). Existing facilities include a residence, garage, access roads, approximately 4.6 acres of unpermitted vineyard, an olive orchard, a water storage tank, and an existing well. Surrounding land uses include vineyard and wineries, residential, and undeveloped land. The land cover types in the project site include Douglas fir, mixed oak woodland, blue oak woodland, coast redwood forest, Pacific madrone forest, wild oat grassland, knobcone pine forest, existing vineyard, and ruderal. The project site contains wildlife exclusion fencing, as shown in the Winrod Vineyards Vineyard Development and Erosion Control Plan (**Exhibit A**).

Elevations in the project site range from approximately 480 to 1,240 feet above mean sea level (msl). The western portion of the project site consists predominately of wooded areas and slopes greater than 50%. The eastern portion of the project site consists of vineyards, an orchard and residential improvements. The closest active fault is approximately 1.75 miles south of proposed Block 3 (Napa County GIS Faults Layer). No landslides or areas of instability have been identified within the development area (Napa County GIS Landslide Layers). Soils in the project site have been classified according to the Soil Survey of Napa County (USDA 1978) as Aiken loam, 15 to 30 percent slopes, Bale clay loam, 2 to 5% slopes, Forward silt loam, 5 to 39% and 12 to 57% slopes, and Kidd loam, 30 to 75 percent slopes. The project site contains 0.78 acre of waters of the U.S., consisting of a perennial stream and several ephemeral streams in the Blossom Creek Drainage within the Napa River watershed.

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

Responsible (R) and Trustee (T) Agencies
California Department of Fish and Wildlife (CDFW) (T)
Regional Water Quality Control Board (Regional Water Board) (R)

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

12. 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 October 12, 2020. Based on an email response from Middletown Rancheria on October 23, 2020, a site inspection occurred on February 20, 2021 to address cultural concerns. Middletown Rancheria also provided the County with Middletown Rancheria's Standard Monitoring Mitigation Measures on February 18, 2021. Those mitigation measures will be incorporated into project-specific mitigation measures for the proposed project, should the application be approved. On May 11, 2022, the County replied to Middletown Rancheria and closed the consultation invitation because the Tribe and the County reached an agreement. No further communication was received from the tribes from whom consultation was requested within the 30-day notification period. The County sent consultation closure notices to Mishewal Wappo Tribe of

Alexander Valley and Yocha Dehe Wintun Nation on December 14, 2020. 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 proposed development area.

Other sources of information used in the preparation of this Initial Study include site-specific studies conducted and filed by the applicant in conjunction with ECP #P20-00247-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, or at https://www.countyofnapa.org/2876/Current-Projects-Explorer.

- Bartelt Engineering, May 2021 (Revised May 2023), Winrod Vineyards Vineyard Development and Erosion Control Plan, APN 017-110-038 (**Exhibit A**)
- Northwest Biosurvey, September 5, 2019, Updated September 8, 2020, Biological Resource Assessment with Botanical Surveys and Delineation of Waters of the U.S. for the Winrod Vineyards Project, APN 017-110-038, Calistoga, CA (**Exhibit B-1**)
- Northwest Biosurvey, May 10, 2023, Letter Response for Request for Assessment of Woodland and Forest Cover Preservation Sites for Winrod Vineyard Project (#P20-00247-ECPA) (**Exhibit B-2**)
- Bartelt Engineering, May 2021 (Revised), USLE Analysis (**Exhibit C**)
- Bartelt Engineering, October 2021 (Revised April 2023), Water Availability Analysis for Winrod Vineyards, 3465 State Highway 128, Napa County, CA, APN 017-110-038 (**Exhibit D-1)**
- O'Connor Environmental, Inc., May 9, 2023, Tier 3 Water Availability Analysis for Winrod Vineyards, 3465 State Highway 128, Napa County, CA (**Exhibit D-2**)
- Bartelt Engineering, May 2021 (Revised), Hydrology and Hydraulic Analysis for Winrod Vineyards, 3465 State Highway 128, Napa County, CA, APN 017-110-038 (**Exhibit E**)
- Archaeological Resource Service, July 21, 2020, A Cultural Resources Evaluation of Three Proposed Vineyard Blocks at 3465 CA-128, Calistoga, Napa County, California (APN 017-110-038)
- CalFIRE, May 25, 2018, Notice of Emergency Timber Harvest (**Exhibit F**)
- Application Submittal Materials & Correspondence (**Exhibit G**)
- Project Revision Statement (**Exhibit H**)
- Site inspection conducted by Napa County Conservation and Engineering Division staff on February 10, 2021
- 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	Date
Pamela Arifian	Napa County Planning, Building and Environmental Services
Printed Name	

		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)	In non-urbanized areas, 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 approximately 0.5 mile southwest of State Highway 128, which is a Napa County-designated scenic roadway (Napa County GIS, Scenic Corridors Layer). Block 1 in the project site is located on the edge of the scenic corridor of State Highway 128. However, the development area is not visible from State Highway 128 or the surrounding area due to the topography and woodland between them. Additionally, visual impacts related to construction equipment and activities at the development area would be short-term and temporary in nature.

Existing vineyards are located within and surrounding the project site. As described in the Project Description and in **Section IV (Biological Resources)**, trees would be removed during project construction; however, the majority of the trees are not visible from public viewpoints and this would not result in damage to a scenic resource.

The project site is not located on a prominent hillside or a major ridgeline. The western edge of the project parcel is located on a minor ridgeline, which is approximately 2,400 feet west of Block 1 and 1,800 feet west of Block 3 (Napa County GIS, Ridgelines Layer). As this minor ridgeline is outside the development area, the proposed project would not have a significant impact. There are no historic buildings on site and no significant rock outcroppings or geologic features in the project site that would be impacted by the proposed project. Therefore, for the reasons described above, the proposed project would have a less than significant impact on a scenic vista, scenic highway, historic buildings, scenic trees, or rock outcrops.

c. The proposed project would result in the removal of existing vegetation within the development area and includes the development of new vineyard. The proposed project is consistent with the Napa County AWOS land use designation and with adjacent land uses, which include other vineyards, wineries, and rural residential uses. Although trees would be removed, as explained in questions a-b above (and discussed in **Section IV [Biological Resources]** below), the majority of the trees are not visible from public viewpoints, and their removal would not substantially degrade the existing visual character or quality of public views of the site or its surroundings. For these reasons, the impact would be less than significant.

d. Proposed agricultural operations in the project site would require some lighted nighttime activities consistent with the nighttime activity already occurring in the project site and in the surrounding area, which includes vineyard and agricultural uses. Lighting would be in the form of headlights or downward direction lights on equipment being used during nighttime harvest. The proposed project would include harvest activities (typically occurring in September and October), that could include nighttime activity (typically from 10 p.m. to 7 a.m.). The proposed project would include sulfur applications that could occur between 10 p.m. and 9 a.m. approximately 12 times per year. Although some nighttime activity would occur for limited periods, the proposed project would not introduce a new source of substantial light or glare, and the type of nighttime lighting would be consistent with surrounding land uses. Therefore, the proposed project would result in a less than significant impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY 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 Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) 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 project site is not mapped as Prime Farmland, Unique Farmland, or Farmland of Local Importance by the California Department of Conservation; the project site is designated as "Other Land" by the Farmland Mapping and Monitoring Program (FMPP). The proposed project would result in an increase in agricultural land; therefore, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, and there would be no impact.

b. The project site has an AWOS General Plan designation and is zoned Agricultural Watershed (AW). Therefore, the establishment of vineyard totaling approximately 16.5 gross acres (13.0 net acres) is consistent with project site's land use and zoning designations. The project site does not have a Williamson Act contract associated with it. Therefore, implementation of the proposed project would not change the primary agricultural activity within the development area and the proposed project would not conflict with its land use designation or a Williamson Act contract. This impact would be less than significant.

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." "Timberland" is defined in California Public Resource Code Section 4526 as "land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forests products, including Christmas Trees. Commercial species shall be determined by the board on a district basis after consultation with the district committees and others." The project site does not contain forest land or coniferous forest (Napa County GIS). The project site is not zoned forest land as defined in Public Resource Code Section 12220(g), timberland as defined in Public Resource Code Section 4526, or a Timberland Production Zone (TPZ) as defined in Government Code Section 51104(g). Therefore, no impact would occur.

e. The proposed project does not include the construction of roadways or other infrastructure that would result in the conversion of existing farmland or forestland in the area to non-agricultural or non-forestland uses. As such, the proposed project would have no 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's (BAAQMD) Board of Directors unanimously adopted thresholds of significance to assist in the review of projects under the California Environmental Quality Act. These thresholds were designed to establish the level at which the Air District believed air pollution and greenhouse gas emissions would cause significant environmental impacts under CEQA. The thresholds were posted on the Air District's website and included in the Air District's updated CEQA Guidelines (updated May 2012)[1]. 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 for implementation of the thresholds are for information purposes only to assist local agencies. Recommendations in the Guidelines are advisory and should be followed by local governments at their own discretion. These Guidelines may inform environmental review for development projects in the Bay Area, but do not commit local governments or the Air District to any specific course of regulatory action.

The Air District published a new version of the Guidelines dated May 2017, which includes revisions made to address the Supreme Court's 2015 opinion in Cal. Bldg. Indus. Ass'n vs. Bay Area Air Quality Mgmt. Dist., 62 Ca 4th 369. The May 2017 Guidelines update does not address outdated references, links, analytical methodologies or other technical information that may be in the Guidelines or Thresholds Justification Report. The Air District is currently working to revise any outdated information in the Guidelines as part of its update to the CEQA Guidelines and thresholds of significance.

These thresholds of significance changes can be used by agencies as guidelines for determining climate impacts from projects subject to CEQA. However, agencies are not required to abide by these thresholds, as they are only guidelines.

a-b. The project site is generally located in the foothills along the western side of Napa Valley, 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

[1] CEQA Thresholds and Guidelines Update (baaqmd.gov): https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines

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 potential impacts associated with implementation and operation 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 PM of ten micrometers or less and two and a half micrometers or less (PM_{10} and $PM_{2.5}$).

The thresholds of significance for use in determining whether a proposed project will have a significant impact on GHG's and climate change (BAAQMD, April 2022) did not affect the Air Quality CEQA Thresholds of Significance for the above mentioned air pollutants (i.e., ROG, NO_x, PM_{10} and $PM_{2.5}$) identified in Table 2-1 of the BAAQMD 2017 Guidelines. As such, those thresholds will be used to determine the significance of potential air quality impacts associated with air pollutant emissions. These air pollutant thresholds of significance are identified in **Table 3** below.

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 BAAQMD CEQA Guidelines described above, which outline substantial evidence supporting a variety of thresholds of significance.

In order to assess potential air quality 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[2] for an approximately 560-acre vineyard development, Walt Ranch Vineyard[3] for an approximately 507-acre vineyard development, and Circle-S Ranch Vineyards[4] for an approximately 400-acre vineyard development[5].

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

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

[3] #P11-00205-ECPA, AES March 2016, SCH #2008052075 certified August 1, 2016

[4] #P06-01508-ECPA, AES April 2011, SCH #2007062069 certified December 22, 2011

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

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 the proposed project's 16.5 gross acre vineyard (approximately 13.0 net-planted acres) is smaller than any of the projects presented above, construction and operational emissions from the proposed project that could negatively affect air quality are expected to be less that those identified in **Table 3** and therefore below identified thresholds. Additionally, project approval, if granted, would be subject to the standard Air Quality Conditions of Approval described below, which includes standard air quality and construction best management practices (BMPs) consistent with BAAQMD measures identified in Table 8-2 of the BAAQMD CEQA Guidelines that would further reduce potential air quality impacts associated with construction and ongoing operation of the proposed project. These BMPs would be incorporated into the proposed project.

Air Quality – Conditions of Approval:

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

- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. The BAAQMD's phone number shall also be visible.
- Water all exposed surfaces (e.g., parking areas, staging areas, soil piles, grading areas, and unpaved access roads) two times per day.
- Cover all haul trucks transporting soil, sand, or other loose material offsite.
- 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 miles per hour (mph).
- Idling times shall be minimized either by shutting off equipment when not in use or reducing the maximum idling time to five 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[6] or the PERP website[7].

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 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.

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

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

Land uses adjacent to the project site include vineyard and wineries, residential, and undeveloped lands. The project site consists of approximately 104.8 acres of land and existing facilities include a residence, garage, access roads, approximately 4.6 acres of vineyard, an olive orchard, a water storage tank, and an existing well. The closest schools are located approximately 2.5 miles southeast (Calistoga Elementary and Calistoga High School) within the City of Calistoga (Napa County GIS, Schools Layer). The closest offsite residences are located approximately 270 feet northeast and 740 feet southeast 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 approximately 2.5 miles from the closest school and approximately 270 feet from the nearest residence, 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. Therefore, impacts would be less than significant.

	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 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 sources were utilized in this analysis and are incorporated herein by reference and available in the project file for review:

- Northwest Biosurvey, September 5, 2019, Updated September 8, 2020, Biological Resource Assessment with Botanical Surveys and Delineation of Waters of the U.S. for the Winrod Vineyards Project, APN 017-110-038, Calistoga, CA (**Exhibit B**)
- Northwest Biosurvey, May 10, 2023, Letter Response for Request for Assessment of Woodland and Forest Cover Preservation Sites for Winrod Vineyard Project (#P20-00247-ECPA) (**Exhibit B-1**)
- Bartelt Engineering, Canopy Mitigation Area Exhibit, Winrod Vineyards Erosion Control Plan Sheet EC13, May 12, 2023 (**Exhibit A**)
- Napa County GIS layers

Northwest Biosurvey conducted an assessment of biological resources, including a botanical survey, bat habitat survey, and delineation of waters of the U.S. in the project site on May 6 and August 20, 2019. The surveys covered approximately 106 acres consisting of the project parcel.[8]

[8] The project site acreage differs slightly from the total identified on County Assessor's Parcel Map (104.8 acres) due to differing mapping platforms, spatial characters, and rounding. Because approximate biological communities identified herein are based on a project site specific biological resources report, the values disclosed herein are considered by the County to be adequate for CEQA review and disclosure purposes of the subject application. Where rounding has resulted in discrepancies, the more conservative number was used for the purpose of analysis. (Northwest Biosurvey, Updated September 2020 – **Exhibit B-1**)

The surveys were completed to document: biological communities; existing conditions and to determine if suitable habitat to support special-status plant or wildlife species exists; aquatic natural communities; and any special-status species that may be present onsite. The survey dates corresponded to blooming periods sufficient to observe and identify special-status plant species determined to have the potential to occur in the project site. The field surveys were conducted by botanists familiar with the flora of Napa County and surrounding counties. The surveys followed the protocol for plant surveys described by resource agency guidelines (CNPS, 2001; CDFW, 2018; USFWS, 1996). Plants were identified using *A Manual of California Vegetation* (Sawyer et al., 2009) and *The Jepson Manual of Higher Plants of California* (Baldwin, et al, 2012) 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 site was compiled based on data in the California Natural Diversity Database (CNDDB) and RareFind 5 databases, California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS, 2020), California Wildlife habitat Relationships System (Version 9.0), and the Napa County *Baseline Data Report* (Napa County, 2005) that may be affected by projects in the Mark West Springs and surrounding 7.5- minute topographic quadrangles.

The project site consists of the following biological communities (or habitat types): Douglas fir, mixed oak woodland, blue oak woodland, coast redwood forest, Pacific madrone forest, wild oat grassland, knobcone pine forest, existing vineyard, and ruderal. Oak woodland is considered a sensitive habitat type by Napa County, and Pacific madrone is considered a sensitive vegetation community by CDFW. The habitats and their acreages are shown in **Table 4**. These habitats were mapped according to the definitions in the CNPS *Manual of California Vegetation* and are based on post-Tubbs Fire conditions. Vegetation removal for fire safety and debris removal after the 2017 Tubbs Fire do not necessarily modify or otherwise convert vegetation communities to something other than their pre-fire condition. Therefore, for the purpose of this Initial Study, the area identified by the Biological Resources Assessment as "burned/unrecovered" habitat (approximately 53.8 acres) is still considered to include the pre-fire mapped vegetation communities, which generally includes primarily Douglas fir forest and mixed oak woodland, with smaller areas of coast redwood forest and Pacific madrone forest.

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

Biological Communities or Habitat Type	Approximate Pre-Project Conditions (acres)[1]	Approximate Pre-Tubbs Fire Conditions (acres)[2]
Burned/Unrecovered	53.8	0
Mixed Oak Woodland	22.7	37.6
Douglas Fir Forest	11.5	44.8
Vineyard	5.8	5.8
Ruderal	4.0	4
Blue Oak Woodland	3.5	4.1
Wild Oat Grassland	2.5	2.5
Cleared	0.9	0
Pacific Madrone Forest	0.8	3.4
Coast Redwood Forest	0.6	3.6
Knobcone Pine Forest	0.5	0.5
Total	**106.5**[3]	**106.3**

Notes:
[1] Post-Tubbs Fire acreage
[2] The area of each habitat/biological community type was calculated with GIS analysis of the vegetation types GIS files provided by Northwest Biosurvey, as depicted in Figure 2 of the Biological Resources Report (**Exhibit B-1**)
[3] The project site acreage differs slightly from the total identified on County Assessor's Parcel Map (104.8 acres) due to differing mapping platforms, spatial characters, and rounding. Because approximate biological communities identified herein are based on a project site specific biological resources report, the values disclosed herein are considered by the County to be adequate for CEQA review and disclosure purposes of the subject application. Where rounding has resulted in discrepancies, the more conservative number was used for the purpose of analysis.
Source: Northwest Biosurvey, Updated September 2019 (**Exhibit B-1**)

a. Special-Status Plants: Based upon a review of the resource databases listed in **Exhibit B-1**, 16 special-status plant species have the potential to occur in the plant communities identified in the project site and 27 have been documented in the same topographic quadrangle as the project site (i.e., Mark West Springs). Results of the plant survey identified 108 native and non-native plants and a population of Napa false indigo (*Amorpha californica var. napensis,* CNPS Rank 1B.2) was documented west of proposed Block 3, outside of the proposed development area (**Exhibit B-1**).

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.[9] Additionally, pursuant to Napa County General Plan Policy CON-13,[10] the County

[9] 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.

[10] 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

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.

The project as proposed would not remove special-status plants and/or populations, which is consistent with the following Napa County General Plan Conservation Element Goals and Policies and Zoning Ordinance: General Plan Goal CON-3 as it protects 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 the new development of up to approximately 16.5 acres of agriculture in the project site (as further disclosed and assessed below); Policy CON-17[11] because the removal and disturbance of a sensitive natural plant community that contains special-status plant species is prevented; and, the purpose and intent of the Conservation Regulations (NCC Chapter 18.108) in that it preserves natural habitat or existing vegetation, and does not adversely affect sensitive, rare, threatened or endangered plants.

Many special-status and native species (including Napa false indigo) that are endemic to fire-prone areas tend to proliferate following a fire. While the project as proposed would not result in impacts to the populations of Napa false indigo identified in the plant surveys conducted as part of the Biological Resources Assessment, it is plausible that the plant has proliferated or that other special-status plants have appeared since the date of the surveys. As a result, the project could result in potentially significant direct impacts to special-status plant populations. Implementation of **Mitigation Measure BR-1** would require that a plant survey of the development areas be conducted prior to project initiation to ensure protection of any special-status plants that may have appeared since the original plant survey in 2019. With implementation of **Mitigation Measure BR-1**, impacts on special status plant species are considered to be less than significant.

> **Mitigation Measure BR-1:** The Owner/Permittee shall revise Erosion Control Plan #P20-00247-ECPA prior to approval to minimize potential impacts to special-status plant species (i.e., Napa false indigo) as follows:
>
> a. Prior to commencement of earthmoving activities associated with installation of the vineyard blocks as authorized under #P20-00247-ECPA, the footprint of the disturbance areas shall be surveyed by a qualified biologist or botanist, and any special-status plants found within the footprint shall be mapped. To the fullest extent practicable, removal of special-status plants outside of those identified in the floristic surveys shall be avoided and minimized via adjustments to the project boundaries and precise installation locations to ensure that no net loss of special-status species occurs. The plant survey report and proposed adjustments to the project boundaries to avoid or minimize loss of special-status plants shall be submitted to and approved by Napa County Conservation Division prior to project initiation.
>
> b. In accordance with Napa County Code Section 18.108.100, Erosion hazard areas – Vegetation preservation and replacement any special-status plants/populations (e.g., Napa false indigo) either advertently or inadvertently removed as a result of vineyard development authorized under #P20-00247-ECPA shall be replaced on-site at a ratio of 2:1 at locations within similar habitat. For such removal, a replacement plan shall be prepared by a qualified botanist or ecologist for review and approval by the Director prior to vineyard planting. At a minimum, the replacement plan shall include i) a site plan showing the locations where replacement plants will be planted, ii) a plant pallet composed of the special-status plant species being removed including sizes and/or application rates: seed mixes shall not contain species known to be noxious weeks and any non-native grasses should be sterile varieties, iii) planting notes and details including any recommended plant protection measures, iv) invasive species removal and management specifications, v) an implementation schedule, vi) performance standards with a minimum success rate of 80%, and vii) a monitoring schedule for a period of at least three years to ensure success criteria are met.

Special-Status Animals: A total of 8 special-status animals could occur within the area of the project site. Of these, seven special-status animals have a moderate or high potential to occur within the project site: Lawrence's gold finch (*Carduelis lawrencei*), Lewis' woodpecker (*Melanerpes lewis*), loggerhead shrike (*Lanius ludovicianus*), American badger (*Taxidea taxus*), pallid bat (*Antrozous pallidus*), Townsend's western big-eared bat (*Corynorhinus townsendii* ssp. *townsendii*), and Fringed myotis (*Myotis thysanodes*). Additionally, a variety of native bird species with protections under the Migratory Bird Treaty Act and California Fish and Game Code may use vegetation within the development area for nesting.

> Lawrence's gold finch are passerine (perching birds) bird that prefer to nest in the dense foliage of oaks in dry open woodland near brushy and grassy areas or chaparral. Proximity to water is important. Their diet consists primarily of seeds but includes

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.

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

some insects. They frequently nest near other pairs during a breeding season that extends from late March through July, with birds migrating south in August. There is nesting for this bird in the oak woodlands within the project site.

Lewis' woodpecker excavate nest cavities in dead trees and dead limbs of live trees in open woodlands. They hunt insects and eat fruits and berries throughout the spring and summer and shift their diet to cached acorns and emerging insects in the fall and winter. Breeding occurs between early May and July. The open woodland habitat within the grassland community in the project site provides potential habitat for the woodpecker.

Loggerhead shrike is considered a sensitive species by the County of Napa. These passerines prefer open-canopied woodlands with grass groundcover, and grazed open pastures. Preferred habitats include valley-foothill woodlands and riparian. They build well-concealed nests in the dense foliage of oaks and shrubs. They eat large insects but are fairly unique for passerines in that they also eat small amphibians, reptiles, birds, and mammals which they may impale on thorns or barbed wire fences. Shrikes use fence posts or shrubs as observation posts. Nesting occurs between March and early July when the young are fully fledged. Potential habitat for this species may be found in the mix of grassland and oak woodlands in the project site.

American badgers are found mostly in drier open stages of shrub, forest, and herbaceous habitats with friable soils such as open grasslands, fields, and pastures. They are found from high alpine meadows to sea level and occur throughout the state except for the northern North Coast. This species is carnivorous, eating mostly fossorial rodents; they also will eat reptiles, insects, birds, eggs, and carrion. They dig burrows in friable or sandy soil for cover and nesting, and often reuse old burrows. Breeding occurs in late summer or fall. Nests are in areas with little overstory cover, often a grass-lined den, and young are born mostly in March and April. Young become independent in 5 or 6 months. Potential habitat for this species may be found in the oak woodlands and forests in the project site.

Pallid bats prefer open, dry habitats with rocky areas, but the bats are also found in oak savanna grasslands, and in open forest and woodlands with access to riparian and open water for feeding and drinking in northern California. Foraging occurs over open country. These bats prefer the cool summer temperatures of caves, crevices, and mines as roosting sites where they are known to wedge themselves into small spaces; they will also roost in buildings, bridges, and hollow trees. Preferred roosts are high above the ground and inaccessible to terrestrial predators, although they are occasionally found roosting on the ground underneath sacks and other items left by humans. No evidence of bats was found during the field surveys; however, the oak woodlands and forests in the project site provide potential habitat for this species and bats may be present in the future.

Townsend's western big-eared bat require daytime roosting habitat. This species prefers caves and mines and is easily observed when present, hanging from open surfaces in mines and caves. Less frequently it will roost in tunnels, bridges or other human-made structures, or hollow trees. Roost sites may vary from year to year. They may use separate roosting sites for day and night and prefer open roosting sites with complete darkness. These bats typically prefer relatively moist habitat such as streams near woodland habitats and may travel long distances for foraging. Most of their diet consists of moths. No evidence of bats was found during the field surveys; however, the Douglas fir forest in the project site provides potential habitat for this species and bats may be present in the future.

Fringed myotis occurs at mid-elevations over most of its range. Maternity colonies are large, up to 300 individuals, and are located in caves, mines, and buildings. Males roost separately from the maternity colonies in similar roosting features. They primarily eat beetles, but also moths, flies, crickets, lacewings, and other flying and terrestrial insects. No evidence of bats was found during the field surveys; however, the oak woodlands and redwood forests in the project site provide potential habitat for this species and bats may be present in the future.

The above described special-status species were not observed during the biological surveys (**Exhibit B-1**), however, habitat for some of these species exists on the parcel, including the American badger, for whom the oak woodlands and forests on the project site may provide habitat. While the biological reconnaissance surveys did not result in positive findings of American badger or evidence of their existence on the parcel, the potential remains that the species could have occupied areas of the parcel since completion of the survey. Project activities could result in potentially significant impacts to American badger if they are present on the site; this would be considered a potentially significant impact.

No evidence of bats was found during the field surveys; however, one oak tree with potential bat habitat was identified near the southwest corner of proposed Block 3 (Northwest Biosurvey, Updated September 2020 - **Exhibit B-1**). Impacts to special-status bat species during project construction would be a significant impact.

While the coast redwood and Douglas fir forests may have supported moderate habitat for northern spotted owl, these forests were severely burned and now occur as open xeric habitats not suitable for the cool, shaded forest species. Further, the nearest recorded

occurrence according to data collected and maintained by CDFW is located over 1.75 miles to the southwest of the site (Napa County GIS CNDDB owl habitat layer). Therefore, the project would result in less than significant impacts related to northern spotted owl.

Migratory birds and raptors have the potential to nest within the trees throughout and adjacent to the development area. Tree removal and temporary and intermittent increases in noise levels may cause nest abandonment and death of young or loss of reproductive potential at active nests located near project activities. Potential direct and indirect impacts to special-status and protected bird species would be significant.

To reduce potentially significant direct and indirect impacts to American badgers, bats, and special-status and protected birds, **Mitigation Measures BR-2 through BR-4** would be implemented prior to construction. Implementation of these measures would reduce potentially significant impacts as a result of the project to a less than significant level.

Mitigation Measure BR-2: The Owner/Permittee shall revise Erosion Control Plan #P20-00247-ECPA prior to approval to include the following measures to minimize impacts to the American badger:

a) A qualified biologist shall conduct a pre-construction survey for the American badger and suitable dens within the project area and adjacent suitable habitat within a minimum of 50 feet from the project area. The preconstruction survey shall be conducted no earlier than 48 hours prior to when vegetation removal and ground disturbing activities are to commence. A copy of the survey results shall be provided to the County Planning Division prior to commencement of work. Should ground disturbance commence more than 14 days from the survey date, surveys shall be repeated.

b) If any occupied burrows are discovered within the survey area, the Owner/Permittee shall implement a 50-foot construction avoidance buffer as determined by a qualified biologist and CDFW and the County shall be immediately notified. If the Project cannot avoid impacts to the occupied burrow the Project shall consult with CDFW regarding approved next steps before proceeding and implement CDFW recommendations such as preparing and implementing an American badger relocation plan.

Mitigation Measure BR-3: A Qualified Biologist (defined as having demonstrable qualifications and experience with the particular species for which they are surveying) shall conduct a habitat assessment in order to identify suitable bat habitat trees within the project area(s), no more than 6 months and no less than 14 days in advance of the planned tree removal. If the habitat assessment determines that trees proposed for removal contain suitable bat habitat, the following shall apply to potential bat habitat trees:

a) Tree trimming and/or tree removal should only be conducted during seasonal periods of bat activity (August 31 through October 15, when young would be self-sufficiently volant and prior to hibernation, and March 1 to April 15 to avoid hibernating bats and prior to formation of maternity colonies), under supervision of a qualified biologist. Note that these windows may shift with atypical temperatures or rainfall. Trees should be trimmed and/or removed in a two-phased removal system conducted over two consecutive days. The first day (in the afternoon), limbs and branches would be removed by a tree cutter using chainsaws only. Limbs with cavities, crevices and deep bark fissures would be avoided, and only branches or limbs without those features would be removed. On the second day, the entire tree would be removed.

b) For removal of bat habitat trees outside the seasonal activities identified above (between October 16 and February 28/29 of the following year or between April 16 and August 30), a qualified biologist shall conduct pre-construction survey within 14 days of project initiation and/or removal to determine absence/presence of special-status bat species. Survey methods, timing, duration, and species shall be provided for review and approval by Napa County prior to conducting pre-construction surveys. A copy of the survey shall be provided to the County Conservation Division and CDFW prior to commencement of work. If bats are not present, removal can proceed. If bats are found to be present, a plan for removal or exclusion will be developed by a qualified biologist and reviewed and approved the County Conservation Division in consultation with CDFW. The removal or exclusion plan shall be implemented upon approval of the plan by the County Conservation Division and CDFW.

Mitigation Measure BR-4: The owner/permittee shall revise Erosion Control Plan #P20-00247-ECPA prior to approval to include the following measures to minimize impacts associated with the potential loss and disturbance of special-status and nesting birds and raptors consistent with and pursuant to California Fish and Game Code Sections 3503 and 3503.5 and the California Endangered Species Act found in Fish and Game Code Section 2050 et seq.:

a) For earth-disturbing activities occurring between February 1 and August 31, (which coincides with the grading season of April 1 through October 15 – NCC Section 18.108.070.L, and bird breeding and nesting seasons), a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local avian resources with potential to occur at the project site) shall conduct preconstruction surveys for nesting birds and raptors within all suitable habitat in the project area, and within a minimum of 500 feet of all project areas. The preconstruction survey shall be conducted no earlier than 7 days prior to vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than 7 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 5 days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.

c) In the event that nesting birds are found, a qualified biologist 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. Additionally, a qualified biologist shall monitor all active nests each day during construction for the first week, and weekly thereafter, to ensure that the exclusion buffers are adequate and that construction activities are not causing nest-disturbance. If the qualified biologist observes birds displaying potential nest-disturbance behavior, the qualified biologist shall cease all work in the vicinity of the nest and CDFW shall be consulted about appropriate avoidance and minimization measures for nesting birds prior to construction activities resuming. In this event, construction activities shall not resume without CDFW's written approval.

e) Alternative methods aimed at flushing out nesting birds prior to pre-construction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or chemical (i.e., spraying nesting birds or their habitats) shall be prohibited.

b. The project parcel contains Pacific madrone habitat and oak woodlands. While Pacific madrone forest (Arbutus menziesii Forest Alliance) is not considered sensitive by Napa County, the CDFW lists these forests as sensitive (CDFW Rank: G4 S3)[12]. Napa County General Plan Policy CON-17(e) requires no net loss through avoidance, restoration, replacement, and/or preservation of other sensitive biological communities where feasible. Where avoidance is not feasible, the CDFW recommends preservation or replacement mitigation with a 3:1 ratio by acreage. Based on County GIS analysis of the pre-fire vegetation communities data provided by the biologist, the parcel contains a total of approximately 3.4 acres of Pacific madrone forest. Consistency with the CDFW mitigation recommendation ratio for this sensitive natural community and General Plan Policy CON-17 would limit project removal to a maximum of 0.8-acre of Pacific madrone forest. As proposed, the project would convert to vineyard 1.1 acres of Pacific Madrone forest, resulting in inconsistency with CDFW recommendation, and therefore a potentially significant impact on a CDFW-designated sensitive community.

Implementation of **Mitigation Measure BR-5** would require that the project be redesigned to limit removal of Pacific madrone forest to 0.8-acre. Implementation of **Mitigation Measure BR-5** would result in the permanent preservation of approximately 2.6 contiguous acres of Pacific Madrone forest on the parcel, resulting in consistency with CDFW preservation practice and General Plan Policy CON-17 as related to sensitive natural communities. With implementation of **Mitigation Measure BR-5,** impacts would be less than significant in this regard.

Mitigation Measure BR-5: The Owner/Permittee shall revise Erosion Control Plan #P20-00247-ECPA prior to approval to minimize potential impacts to CDFW-designated sensitive Pacific Madrone forest, as follows:

a) Revise the boundaries of Block 2 to remove a maximum of 0.8-acre of Pacific Madrone forest, in a manner that the retained Pacific madrone forest is contiguous with the same habitat located south of the Block 2 boundary. Retention as depicted would allow removal of approximately 0.8-acre and require retention of 2.6 acres of Pacific Madrone forest, consistent with the CDFW-recommended 3:1 by acreage preservation mitigation.

b) A Pacific Madrone Forest Preservation Area totaling 2.6 acres consistent with the vegetation community map prepared by the project biologist (**Exhibit B-1**) located outside of the boundaries of the existing and proposed developed area shall be

[12] https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities

designated as such in a perpetual deed restriction or conservation easement or other means of permanent protection. Land placed in protection shall be restricted from development and other uses that would degrade the quality of the habitat (including, but not limited to conversion to other land uses such as agriculture or urban development and excessive off-road vehicle use that increases erosion) and should be otherwise restricted by the existing goals and policies of Napa County. The Pacific Madrone Preservation Area exhibit shall be approved by the Napa County Conservation Division prior to recording. The owner/permittee shall record the deed restriction or conservation easement prior to construction or within 90 days of project approval, whichever comes first.

c) 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 development area (typically within approximately 50-feet of the development 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.

d) The owner/permittee shall refrain from severely trimming the trees (typically no more than 1/3rd of the canopy) and vegetation to be retained adjacent to the vineyard conversion area.

e) In accordance with County Code Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) trees that are inadvertently removed that are not within the boundary of the project and/or not identified for removal as part of #P20-00247-ECPA shall be replaced on-site with fifteen-gallon trees at a ratio of 2:1 at locations approved by the planning director. A replacement plan shall be prepared for county review and approval that includes at a minimum, the locations where replacement trees will be planted, success criteria of at least 80%, and monitoring activities for the replacement trees. The replacement plan shall be implemented before vineyard planting activities. Any replaced trees shall be monitored for at least three years to ensure an 80% survival rate. Replacement trees shall be installed and documented that they are in good health prior to completion and finalization of the erosion control plan.

The development area contains mixed oak woodland and blue oak woodland which are considered sensitive habitats by Napa County; refer to (e), below, for the analysis regarding oak woodland sensitive habitat.

c. The project site contains 0.8-acre of waters of the U.S., consisting of a perennial stream and several ephemeral streams (shown in Figure 2 in **Exhibit B**; Northwest Biosurvey – Updated September 2020). The streams in the project site are considered sensitive natural resources. The perennial stream meets the Napa County definition of a stream and the ephemeral drainages do not meet the County's definition of a stream pursuant to NCC Section 18.108.025. The proposed development area is not located near the ephemeral streams, and the proposed project has been designed to avoid the perennial stream with minimum 65-foot setbacks in accordance with NCC Section 18.108.025. The proposed project has also been designed to maintain existing soil loss (sedimentation) and hydrologic/runoff characteristics (i.e., result in no net increase in soils loss or runoff as compared to existing conditions); therefore, the proposed project would not result in significant impacts to these drainages.

Furthermore, project approval, if granted, would be subject to the following standard conditions to prevent the potential encroachment into stream and wetland setbacks required pursuant to Section 18.108.025 and Section 18.108.026, further protecting these aquatic resources during project implementation and operation resulting in a less than significant impact.

Stream Protection – Standard Conditions: The applicant/owner shall implement the following measures to prevent the inadvertent encroachment into specified stream setbacks during construction and subsequent vineyard operations:

- The location of creek setbacks shall be clearly demarcated in the field with temporary construction fencing, which shall be placed at the outermost edge of required setbacks shown on the project plans. Prior to any earthmoving activities, temporary fencing shall be installed: the precise locations of said fences shall be inspected and approved by the Planning Division prior to any earthmoving and/or development activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated areas for the duration of erosion control plan installation and vineyard installation. The protection fencing shall remain in place for the duration of project implementation and until wildlife exclusion fencing is installed as shown on the plans.

d. The proposed project involves the installation of vineyard totaling approximately 16.5 gross acres (13.0 net acres) in the project site. The project site has existing wildlife exclusion fencing owned by neighboring parcels along the northern parcel boundary and along the eastern part of the project parcel. There is also existing fencing located in the area of the proposed vineyard blocks, extending from Vineyard Block 1 across the stream and through parts of Vineyard Block 3 to connect to the eastern parcel line fence line. There is an additional fence that runs west-east across the stream and located just north of the existing water storage tank, which did not get captured in the aerial topographic mapping (Bartelt Engineering, Responses to Comments letter dated September 6, 2022 – **Exhibit G**). The proposed project

would remove both of these existing fences within the proposed vineyard block areas and would install wildlife exclusion fencing connecting with the existing perimeter fencing around proposed vineyard blocks, which would enclose proposed Block 1 individually and proposed Blocks 2 and 3 together (**Exhibit A**). Additionally, there is an existing fence located within the setback and near the top of bank of the stream that runs near the proposed driveway replacement north of Vineyard Block 2.

The project site is not located within a mapped wildlife corridor identified in the Napa County Baseline Data Report. The parcel is not within a linkage network, nor is within a mapped Natural Landscape Block or Essential Connectivity Area (Caltrans 2010). For local diurnal movement (daily movement between sources of food, cover, and water), wildlife generally follow stream courses when moving up and down slopes and use adjacent habitats (often preferring woodlands) for cover, browse, or hunting. The actual width of usable corridors would continually change based on the density of vegetation, steepness of adjacent slopes or presence of unsuitable habitat such as fenced vineyards and residential areas. The principal wildlife movement corridor within the project site is the tributary to Blossom Creek which loops through the northern half of the parcel; however, the tributary is blocked by an existing wildlife exclusion fence along the northern property line.

North-south wildlife movement in the existing condition is limited to the western half of the parcel along the northeast slope of the Mayacamas ridge. West-east movement across the parcel is blocked by the existing wildlife exclusion fence along the eastern parcel line that separates the subject property from the neighboring parcel (APN 017-160-036). As a result of the existing parcel line fences, the proposed development is unlikely to result in significant impacts to wildlife movement and access across the parcel. At a local scale, the avoidance and preservation of the stream and ephemeral drainages will provide for continued movement, foraging and shelter habitat for wildlife species. For these reasons, the wildlife exclusion fencing proposed as part of the project is not anticipated to substantially interfere with wildlife movement; potential impacts are expected to be less than significant.

In addition, with the implementation of **Mitigation Measure BR-6**, the preservation of stands of oak woodland would provide movement and shelter habitat for a variety of common wildlife species and include connectivity to adjacent properties. Maintaining this connectivity should provide for continued cross-pollination and gene flow, as well as local wildlife movement. The proposed project would be consistent with General Plan Policy CON-18, which encourages the reduction of impacts to habitat conservation and connectivity.

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

> **Fencing – Condition of Approval:** The owner/permittee shall revise Erosion Control Plan #P20-00247-ECPA prior to its approval to include an updated Vineyard Fencing Plan). The Vineyard Fencing Plan shall be submitted to the Planning Department for review and approval prior to its incorporation into #P20-00247-ECPA, and include the following components:
>
> - New fencing shall use a design that has 6-inch square gaps at the base (instead of the typical 3-inch by 6-inch rectangular openings) to allow small mammals to move through the fence.
>
> - Exit gates shall be installed at the corners of wildlife exclusion fencing to allow trapped wildlife to escape. Smooth wire instead of barbed wire shall be utilized to top wildlife exclusion fencing to prevent entanglement.
>
> - Any modifications to the location of wildlife exclusion fencing as specified in Erosion Control Plan #P20-00247-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 wildlife exclusion fencing location/plan would not result in potential impacts to wildlife movement.

e. The project parcel was burned in the 2017 Tubbs Fire, and was subject to timber removal pursuant to an Emergency Timber Harvest Plan. The Biological Resources Report (Exhibit B) identified vegetation communities that were "burned/unrecovered" in which vegetation was typically severely burned with most trees present as standing deadwood or logged with stumps remaining. While stump-sprouting had occurred in woody vegetation, this has been minor-to-moderate within the "burned/unrecovered" areas at the time of assessment. As shrub and tree canopies recover, possibly following one or more post-fire seral stages, the ground cover will come to resemble the pre-fire community (**Exhibit B**). As such, since the land would return to their pre-fire community in time and without disturbance, those pre-fire communities underlying the "burned/unrecovered" areas must be considered as part of the total vegetation removal analysis for a more thorough disclosure of potential impact. **Table 5** details the acreage of the vegetation communities on the parcel in pre-fire and proposed post-project conditions.

Table 5 –Vegetation Communities in Pre-Fire, and Post-Project Conditions as Proposed

Biological Communities or Habitat Type[1]	Pre-Tubbs Fire Conditions (acres)	Proposed Post-Project Conditions
Mixed Oak Woodland	37.6	31.5
Douglas Fir Forest	44.8	44.8
Vineyard	5.8	16.5
Ruderal	4	4.4
Blue Oak Woodland	4.1	1.3
Wild Oat Grassland	2.5	1.5
Pacific Madrone Forest	3.4	2.4
Coast Redwood Forest	3.6	3.6
Knobcone Pine Forest	0.5	0.5
Total	**106.3**[2]	**106.3**

Notes:
[1] The area of each habitat/biological community type was calculated with GIS analysis of the vegetation types GIS files provided by Northwest Biosurvey, as depicted in Figure 2 of the Biological Resources Report (**Exhibit B-1**)
[2] The project site acreage differs slightly from the total identified on County Assessor's Parcel Map (104.8 acres) due to differing mapping platforms, spatial characters, and rounding. Because approximate biological communities identified herein are based on a project site specific biological resources report, the values disclosed herein are considered by the County to be adequate for CEQA review and disclosure purposes of the subject application. Where rounding has resulted in discrepancies, the more conservative number was used for the purpose of analysis.
Source: Northwest Biosurvey, Updated September 2020 (**Exhibit B-1**)

Oak woodland is the most common land cover in the County occurring on approximately 162,000-acres (32% of the County's area). Approximately 1,124 acres of oak woodland or 0.7% of the total area of oak woodland in the County has been cleared for vineyard development between 1993 and 2014 (Napa County GIS, 2018). While oak woodlands may be one of the most common land covers within the County, their past conversion to residential and agricultural uses in conjunction with foreseeable oak woodland conversion to agricultural use is considered a potentially significant impact both on a project specific level and a cumulative level for projects that remove oak woodland.

The oak woodlands in the project site consist of two woodland types: blue oak woodland (*Quercus douglasii*) and mixed oak woodland. The blue oak woodland in the project site is mature, xeric woodland that maintains the classic open savanna structure characteristic of these woodlands. Community edges include a mix of other oaks from the adjacent mixed oak woodland. As is common for this community, it lacks a shrub layer and occurs within a matrix of wild oat grassland. The mixed oak woodland consists of Oregon white oak (*Quercus garryanna var. garryanna*), coast live oak (*Quercus agrifolia*), and California black oak (*Quercus kelloggii*).

Napa County General Plan Conservation Element Policy CON-24 requires that oak woodland be maintained to the extent feasible to provide oak woodland and wildlife habitat, slope stabilization, soil protection and species diversity. Policy CON-24(c) specifically calls for the preservation of oak woodland (on an acreage basis) at a 2:1 ratio. Further, General Plan Policy CON-24(e) requires the maintenance of a mixture of oak species needed to ensure acorn production. The Biological Resources Reconnaissance Report (**Exhibit B**) identified approximately 53.8 acres of the parcel as "burned/unrecovered;" however, the County considers the pre-fire vegetation community to recover for the purpose of environmental impact analysis. Based on County GIS review of the mixed oak woodland and blue oak woodland GIS data (including in the "burned/unrecovered" layer) provided by the biologist, the parcel contains a total of 37.6 acres of mixed oak woodland, with 6.1 acres occurring in the proposed development area and 4.1 acres of blue oak woodland, with 2.8 acres in the proposed development area (**Table 5**).

To maintain 2 acres preserved for 1 acre impacted in compliance with the 2:1 by acreage preservation ratio found in General Plan Policy CON-24c and CON-24(e), up to approximately 12.2 acres of mixed oak woodland and approximately 1.3 acres of blue oak woodland could be converted to vineyard to comply with this policy. The proposed project would remove approximately 6.1 acres of mixed oak woodland while retaining 31.5 acres, which would result in more than 2 acres preserved for every 1 acre impacted; however, as proposed, the project would remove 2.8 acres of blue oak woodland while retaining 1.3 acres, which would result in inconsistency with Policy CON-24(c) and (e) as it relates to preservation ratio and maintenance of a mixture of oak species. This would be considered a potentially significant impact.

Implementation of **Mitigation Measure BR-6(a)** would require that the project be redesigned to limit reduce removal of blue oak woodland to a maximum of 1.3 acres, thereby retaining 1.4 acres from the project as proposed for a total retention on-site of 2.8 acres of blue oak woodland. This would result in consistency with the 2:1 by acreage retention ratio and retention of a mixture of species as required by Policy CON-24 (c) and (e). Further, redesign of Vineyard Block 3 would result in the retention of what appears to be the healthiest remaining stand of blue oak woodland (in addition to some additional interstitial grassland areas as identified by the biologist in **Exhibit B-1**), resulting in a contiguous blue oak woodland area remaining on the parcel that also occurs upslope from the drainages, thereby offering additional biological and water quality protections related to the streams pursuant to General Plan Policy CON-24. Finally, implementation

of **Mitigation Measure BR-6(c)** would result in the permanent preservation of approximately 12.2 acres of mixed oak woodland and a minimum of 2.8 acres of blue oak woodland on the parcel or replacement and preservation at a 2:1 ratio, resulting in consistency with oak woodland preservation policies found in the General Plan. With implementation of **Mitigation Measure BR-6,** impacts would be less than significant in this regard.

Napa County Code Section 18.108.030 defines "vegetation canopy cover" as "the biotic communities classified as oak woodland, riparian oak woodland, or coniferous forest based on the current Manual of California Vegetation (MCV) and as described in the Napa County Baseline Data Report (2005 or as amended)." NCC Section 18.108.020(C) (General Provisions: Vegetation Retention Requirements) requires that parcels within the AW zoning district retain 70% of the vegetation canopy cover based on the on-site canopy present on June 16, 2016. However, the project site burned in the 2017 Tubbs Fire and is therefore subject to NCC Section 8.80.130, which requires the vegetation canopy cover analysis (per NCC Section 18.108.020(c)) be based on the June 2018 aerial.

Based on a GIS analysis of the 2018 aerial, the project parcel contains approximately 90 acres of vegetation canopy cover. The project, as proposed, would remove approximately 6.5 acres of vegetation canopy cover (**Figure 4 – Eligible Vegetation Canopy Cover Preservation Areas**), resulting in a retention of approximately 92% retention of vegetation canopy cover relative to the 2018 aerial, and consistency with the requirements of NCC Section 18.108.020(C), and less than significant impacts in this regard.

Specific to vegetation removal mitigation and preservation, NCC Section 18.108.020(D) (Vegetation Removal Mitigation) requires that the removal of any vegetation canopy cover in the AW zoning district be mitigated by permanent replacement or preservation of comparable vegetation canopy cover, on an acreage basis at a minimum 3:1 ratio. NCC 18.108.020(D) prioritizes where the mitigation replacement and preservation areas should be allowed, whereby the first priority is for onsite replacement and/or preservation areas that generally occur on slopes less than 30% and outside of stream and wetland setbacks (NCC Section 18.108.020(D)(1)); if this cannot be reasonably accomplished, then onsite replacement and/or preservation may occur on slopes up to 50%, in areas that result in the highest biological and water quality protections (NCC Section 18.108.020(D)(2)); followed by off-site replacement or preservation may occur if it is within the same watershed and the habitat is of the same or better quality as determined by the director (NCC Section 18.108.020(D)(3)); or by replacement of vegetation canopy cover within stream setbacks at a minimum 2:1 preservation ratio with an approved restoration plan prepared by a qualified professional biologist has been approved by the director (NCC Section 18.108.020(D)(4)). NCC Section 18.108.020(E) (Preserved Vegetation Canopy Cover) requires preserved vegetation canopy cover to be protected (or otherwise enforceable restricted) through a perpetual protective easement or deed restriction preserving and conserving the preserved vegetation canopy cover.

As proposed, the project would remove approximately 6.5 acres of vegetation canopy cover. Following implementation of **Mitigation Measure BR-6(a)**, the mitigated project would remove a total of approximately 5.1 acres of vegetation canopy cover, which would require preservation or replacement of approximately 15.3 acres of vegetation canopy cover. Based on a GIS analysis of the slopes, streams and vegetation communities present on the parcel (Sheet EC13 - **Exhibit A**), the project parcel, under the proposed project condition, contains approximately 9.5 acres of vegetation canopy cover on slopes less than 30% and outside of stream setbacks pursuant to NCC Section 18.108.020(D)(1). Following implementation of the project as mitigated per **Mitigation Measure BR-6(a)**, which would result in the retention of an additional 1.4 acres of blue oak woodland on slopes less than 30% and outside of stream setbacks, the parcel would contain approximately 10.9 acres of eligible vegetation canopy cover pursuant to NCC Section 18.108.020(D)(1). Permanent preservation of this 10.9 acres of eligible vegetation canopy cover would allow removal of a maximum of approximately 3.6 acres of vegetation canopy cover, compared to the 6.5 acres as proposed and the 5.1 acres following implementation of **Mitigation Measure BR-6(a).**

As proposed, the parcel also contains approximately 22.8 acres of vegetation canopy cover on slopes between 30% and 50%. The project application does not make it evident that preservation of the canopy cover in those areas would result in the highest biological and water quality protections as required by NCC Section 18.108.020(D)(2). The project application requested consideration of replanting vegetation canopy cover that was lost to the fire within the stream setbacks (**Exhibit G** and **Exhibit B-2**); however, the application did not propose viable areas that would benefit from this action that are not already included as part of the project (i.e., removal of vineyard and relocation of driveway from and revegetation within stream setback on northern part of parcel). As a result, the County cannot determine that a vegetation canopy cover removal mitigation plan would achieve the highest biological and water quality protections beyond the proposed retention of 10.9 acres of vegetation canopy cover located on slopes less than 30% and outside of stream setbacks as allowed by that NCC Section 18.108.020(D)(1). Further, while the project proposes preservation of eligible vegetation canopy cover pursuant to NCC Section 18.108.020(D)(1), the project would not be consistent with NCC 18.108.020(E), which requires that preserved cover canopy area be enforceably restricted with a perpetual protective easement or perpetual deed restriction. Impacts are considered to be potentially significant related to inconsistency with NCC Section 18.108.020(D) and (E).

To reduce potentially significant impacts related to the 3:1 vegetation canopy cover removal mitigation requirement (NCC Section 18.108.020(D)) to a less than significant level, the project-related vegetation canopy cover removal must be limited to a maximum of approximately 3.6 acres, which would require preservation of all of the eligible 10.9 acres of vegetation canopy cover located on slopes less than 30% and outside of stream setbacks remaining on the parcel (following implementation of project size reduction per **Mitigation Measure BR-6(a)**). Implementation of **Mitigation Measure BR-6(b)** would require #P20-00247-ECPA be revised, prior to approval, to

remove from development a minimum of 1.5 acres of vegetation canopy cover, in addition to the 1.4 acres of blue oak woodland removal mitigation required for consistency with General Plan Policy CON-24 under **Mitigation Measure BR-6(a)**. Following implementation of this measure, the project would result in the conversion of a total of 3.6 acres of vegetation canopy cover to vineyard and would require preservation of 10.9 acres of vegetation canopy cover while allowing for the development of a total of 11.2 gross acres of vineyard on the parcel. Further, implementation of **Mitigation Measure BR-6(b)** would require that a Vegetation Canopy Cover Preservation Area totaling 10.9 acres be recorded through a perpetual deed restriction or conservation easement or other mechanism to preserve the habitat in perpetuity. With implementation of **Mitigation Measure BR-6**, project impacts related to consistency with local tree protection policies and regulations would be reduced to a less than significant level. Further, **Mitigation Measures BR-5** and **BR-6** would require permanent preservation of a total of approximately 17.6 acres of Pacific madrone, blue oak woodland and mixed oak woodland, including a minimum of 6.7 acres of tree canopy located on developable land (i.e., located on less than 30% slopes and outside of stream setbacks), which is equivalent to the total tree canopy that would be converted to vineyard, thereby mitigating potentially significant greenhouse gas emissions to a less than significant level, as disclosed in Section VIII (**Greenhouse Gas Emissions**).

Mitigation Measure BR-6: The Owner/Permittee shall revise Erosion Control Plan #P20-00247-ECPA prior to approval to minimize potential impacts to oak woodland and vegetation canopy cover consistent with General Plan Policy CON-24 and Napa County Code Conservation Regulations, as follows:

a) Revise the boundaries of Block 3 to retain (i.e., remove from development) approximately 1.4 acres of blue oak woodland from Vineyard Block 3, which would result in removal of a total of approximately 1.3 acres of habitat from that Block. Retention of the apparent healthiest and most contiguous portion of blue oak woodland shall be prioritized in the area that is contiguous with the remaining blue oak woodland habitat south of Block 3 that occurs upslope from the drainage in the southeastern area of the project parcel. Retention of this blue oak woodland would result in additional biological and water quality protections related to the drainage downslope of that woodland area consistent with General Plan Policy CON-24, including the 2:1 by acreage preservation mitigation required by that Policy.

b) Revise the boundaries of the proposed vineyard blocks to retain (i.e., remove from development) approximately 1.5 acres of vegetation canopy cover (i.e., oak woodland and/or coniferous forest). Retention of oak woodland that is located contiguous to oak woodland outside of the development and upslope from streams or drainages shall be prioritized to provide the highest biological and water quality protections, as approved by the Director. The removal of 1.5 acres of vegetation canopy cover in addition to 1.4 acres of blue oak woodland as required in (a), above, would reduce the proposed vegetation canopy cover removal to approximately 3.6 acres, which is the maximum removal available on the project site that would allow preservation of the eligible approximately 10.9 acres of vegetation canopy cover remaining on the project parcel located on slopes less than 30% and outside of stream setbacks, consistent with Napa County Conservation Regulations Section 18.108.020(D)(1).

c) Vegetation Preservation Areas located outside of the boundaries of the existing and proposed developed area shall be designated as such in a perpetual deed restriction or conservation easement or other means of permanent protection. Land placed in protection shall be restricted from development and other uses that would degrade the quality of the habitat (including, but not limited to conversion to other land uses such as agriculture or urban development and excessive off-road vehicle use that increases erosion) and should be otherwise restricted by the existing goals and policies of Napa County. The owner/permittee shall record the deed restriction or conservation easement prior to construction or within 90 days of project approval, whichever comes first.

   i) A Blue Oak Woodland Preservation Area totaling 2.8-acres located in a contiguous block up-slope of the ephemeral drainage in the southeastern area of the project parcel;
   ii) A Mixed Oak Woodland Preservation Area totaling 12.2 acres consistent with the vegetation community map prepared by the project biologist (**Exhibit B-1**); and
   iii) A Vegetation Canopy Cover Preservation Area totaling 10.9 acres on land with slopes less than 30% and outside of stream setbacks consistent with the Canopy Mitigation Area Exhibit (Sheet EC13 in **Exhibit A**) identifying eligible areas for the mitigation requirement found in Napa County Conservation Regulations Section 18.108.020(D)(1). The Vegetation Canopy Cover Preservation Area may overlap with the Blue Oak Woodland and Mixed Oak Woodland Preservation Areas, provided that a minimum of 6.7 acres of preserved oak woodland/vegetation canopy cover is located on developable land (i.e., land located on slopes less than 30% and outside of stream setbacks) for the purpose of greenhouse gas emissions mitigation.

d) 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 development area (typically within approximately 50-feet of the development 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.

e) The owner/permittee shall refrain from severely trimming the trees (typically no more than 1/3rd of the canopy) and vegetation to be retained adjacent to the vineyard conversion area.

f) In accordance with County Code Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) trees that are inadvertently removed that are not within the boundary of the project and/or not identified for removal as part of #P20-00247-ECPA shall be replaced on-site with fifteen-gallon trees at a ratio of 2:1 at locations approved by the planning director. A replacement plan shall be prepared for county review and approval that includes at a minimum, the locations where replacement trees will be planted, success criteria of at least 80%, and monitoring activities for the replacement trees. The replacement plan shall be implemented before vineyard planting activities. Any replaced trees shall be monitored for at least three years to ensure an 80% survival rate. Replacement trees shall be installed and documented that they are in good health prior to completion and finalization of the erosion control plan.

With implementation of **Mitigation Measures BR-1** through **BR-6** and standard conditions of approval, the proposed project would have less than significant impacts on special-status plants and wildlife, wildlife movement and result in conformance with policies protecting biological resources in the Napa County General Plan and Conservation Regulations. Further, as discussed in **Section VII (Geology and Soils**) and **Section X (Hydrology and Water Quality**), under existing conditions, the annual soil loss is averages 136.54 tons per acre per year across the development area depending on soil type, slope length, and gradient. Under proposed project conditions, annual soil loss is anticipated to average 63.04 tons per acre per year, or a reduction of approximately 54% as compared to existing conditions. Therefore, the findings can be made that highest biological and water quality protections have been incorporated into the project, as proposed, with incorporation of **Mitigation Measures BR-1** through **BR-6** and standard conditions of approval, resulting in less than significant impacts.

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:

- Archaeological Resource Service, July 21, 2020, A Cultural Resources Evaluation of Three Proposed Vineyard Blocks at 3465 CA-128, Calistoga, Napa County, California (APN 017-110-038)

Archaeological Resource Service conducted a cultural resources evaluation for the project site which included a record search at the Regional Office of the California Historical Resources Information System to determine presence or absence of previously recorded historic or prehistoric cultural resources; a check of relevant historic references to determine the potential for historic era archaeological deposits or structures; a surface reconnaissance survey of the development area (approximately 104.79 acres total surveyed); and Native American consultation.

a. The cultural resources evaluation (Archaeological Resource Service, 2020) identified no previously recorded prehistoric or historic resources located within the project site; therefore, the proposed project would not cause a substantial adverse change in the significance of a historical resource and the effect would be less than significant.

a. The cultural resources evaluation (Archaeological Resource Service, 2020) concluded that the proposed project will not affect a significant cultural resource. During surface examination pieces of obsidian were noted within the already existing vineyards in the central and eastern portions of the project site, including a biface, a broken projectile point, and a flake (Archaeological Resource Service, 2020). Although most of the obsidian likely comes from the nearby Blossom Creek source, the aforementioned isolates are clearly Napa Valley in origin. Additionally, many of these pieces (excluding the above-mentioned specimens) appear to be natural, showing little to no evidence of modification, and are not found in sufficient concentrations to be considered a workshop associated with an obsidian quarry. A neighboring midden site and obsidian lithic scatter (CA-NAP-2320) were examined and the soil did not indicate prehistoric cultural activities and would not be adversely affect by the proposed project. The evaluation determined that the project site does not contain a sufficient amount of modified obsidian to warrant further concern.

Although no cultural resources were found within the development area, there is the possibility that buried archaeological deposits could be present and accidental discovery could occur. Therefore, the proposed project would be subject to the standard conditions of approval identified below to protect cultural resources that may be discovered accidently. In addition, based on a site visit conducted with Middletown Rancheria on February 20, 2021, Middletown Rancheria provided the County with Middletown Rancheria's Standard Monitoring Mitigation Measures to incorporate into the mitigation measures for the project; this is addressed in **Section XVIII (Tribal Cultural Resources)**.

c. The cultural resources study did not locate any human remains in the proposed development area and does not anticipate the discovery of human remains due to implementation of the proposed project. Therefore, impacts on human remains are anticipated to be less than significant. Furthermore, the following conditions of approval would be incorporated should the proposed project be approved, which would ensure that potential impacts on human remains would be less than significant.

Cultural Resources – Conditions of Approval:

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

- 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 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 five years in three phases

lasting up to six months during the year (as shown in Table 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 when 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 28% of total statewide energy consumption in 2019 (U.S. Energy Information Administration 2020). 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 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 mandated 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 United States Environmental Protection Agency 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 and the Air Quality conditions of approval presented in **Section III (Air Quality)**. 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, 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 impacts would be less than significant. Additional information supporting this conclusion is identified below.

i) 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 is approximately 1.75 miles south of proposed Block 3 (Napa County GIS Faults Layer). Given the agricultural nature of the proposed project, it would not directly or indirectly cause potential substantial adverse effects involving fault rupture and impacts would be less than significant.

ii) Although the project site is located in an area that may be subject to strong or very strong seismic ground shaking potential during an earthquake (California Geological Society, 2016), the proposed project does not include construction of any new residences or enclosed areas where people would congregate. Therefore, this impact would be less than significant.

iii) The project site is not in an area subject to high liquefaction potential. The Napa County General Plan identifies the project site as having very low liquefaction potential (Napa County, 2009). Further, as noted above, the proposed project would not result in a substantial increase in the number of people or add structures onsite. Therefore, this impact would be less than significant.

iv) Active landslides have not been identified within the development area (Napa County landslide shapefile) and therefore, is considered to be a less than significant impact (also see question c below for additional discussion regarding slope stability and landslides).

b. The project site is underlain by the following soil mapping units: Aiken loam, 15 to 30 percent slopes, Bale clay loam, 2 to 5 percent slopes, Forward silt loam, 5 to 39 percent and 12 to 57 percent slopes, and Kidd loam, 30 to 75 percent slopes. Installation and implementation of the ECPA would involve vegetation removal and earthmoving activities within the proposed vineyard areas. Pursuant to NCC Section 18.108.070(L) (Erosion Hazard Areas), earthmoving activities cannot be performed between October 15 and April 1. These activities would take place during the dry season when rainstorms are less likely, resulting in negligible erosion and sedimentation during project installation.

Soil loss calculations were prepared using the Universal Soil Loss Equation (USLE) in order to evaluate potential effects of erosion as a result of the proposed project. The USLE model evaluates the environmental conditions and physical forces that lead to the detachment and potential movement of soil particles through surface erosion. The USLE model does not describe travel distances of soil particles once dislodged. Potential soil loss and sedimentation associated with the proposed agricultural development and operations would primarily be controlled through cover crops with a minimum vegetative cover density of 75% as specified in the ECP. For the first three years, the cover crop may be disked or otherwise cultivated after April 1; after the three years a no-till cover crop would be established. 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 Bartelt Engineering (**Exhibit C**), the proposed conversion of approximately 16.5 acres of woodland, forest, grassland, vineyard and ruderal to vineyard and vineyard avenues is anticipated to reduce soil loss, or surface erosion, within the project site as compared to existing conditions (**Table 6**). Under existing conditions, the annual soil loss is anticipated to average 136.54 tons per acre per year across the development area depending on soil type, slope length, and gradient. Under proposed project conditions, annual soil loss is anticipated to average 63.04 tons per acre per year, or a reduction of approximately 54% as compared to existing conditions.

Table 6 – USLE Soil Loss Analysis

Slope Section[1]	Pre-project Soil Loss (tons/acre/year)	Post-project Soil Loss (tons/acre/year)	Difference	Percent Change (approximate)
Vineyard Block 1				
A-A	8.89	3.21	5.68	-64%

B-B	16.02	4.81	11.21	-70%
Vineyard Block 2				
C-C	9.75	3.39	6.36	-65%
D-D	14.62	4.38	10.24	-70%
E-E	23.6	7.53	16.07	-68%
Vineyard Block 3				
F-F	17.86	11.14	6.72	-38%
G-G	18.27	11.40	6.87	-38%
H-H	12.48	7.79	4.69	-38%
I-I	8.58	5.35	3.23	-38%
J-J	6.47	4.04	2.43	-38%
Total	**136.54**	**63.04**	**73.50**	**-54%**

Note: [1] Slope section locations are shown on the Track I Vineyard Development and Erosion Control Plan prepared by Bartelt Engineering (May 2021 - Exhibit A)
Source: Bartelt Engineering, May 2021, USLE Analysis (**Exhibit C**)

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 development and establishment, consist of waterbars with rock, a rock-energy dissipater, silt fences and/or straw wattles, and permanent no-till cover, straw mulching, other practices as needed.

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

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

The following conditions shall be incorporated by referenced into Erosion Control Plan #P20-00247-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, waterbars with rock, a rock-energy dissipater, and permanent no-till cover crop (or adequate mulch cover applied annually), 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 #P20-00247-ECPA) shall oversee its implementation throughout the duration of the proposed project, and that installation of erosion control measures, sediment retention devices, and hydromodification facilities specified for the vineyard have be installed and are functioning correctly. Prior to the first winter rains after construction begins, and each year thereafter until the proposed project has received a final inspection from the county or its agent and been found complete, the qualified professional shall inspect the site and certify in writing to the planning director, through an inspection report or formal letter of completion verifying that all of the erosion control measures, sediment retention devices, and hydromodification facilities required at that stage of development have been installed in conformance with the plan and related specifications, and are functioning correctly.
- Cover Crop Management/Practice: The permanent vineyard cover crop shall not be tilled (i.e., shall be managed as a no-till cover crop) for the life of the vineyard and the owner/permittee shall maintain a plant residue density of 75% within the vineyard blocks and the associated vineyard avenues. Cover crop may be disked between rows and sprayed under vines or otherwise cultivated after April 1; after three years a permanent, no-till cover shall be established. Should the permanent no-till cover crop need to be replanted/renewed during the life of the vineyard, cover crop renewal efforts shall follow the County "Protocol for Replanting/Renewal of Approved Non-Tilled Vineyard Cover Crops" July 19, 2004, or as amended.

It is not expected that land preparation activities associated with the proposed vineyard, such as removal of rocks from the soil profile, would substantially affect the USLE modeling results. The USLE model evaluates the environmental conditions and physical forces that lead to the detachment and movement of soil particles. The primary goal of cultivating the soils within the development area during implementation is to prepare the site for planting, including fracturing and mixing layers of compressed soil and rock to facilitate root growth and improve permeability, rather than to remove all the rock within the development area soils. Soil cultivation may result in a greater number of smaller rocks at the soil surface. Smaller rocks that emerge through development would be left within the vineyard, and only larger rocks that surface would be removed. Because the larger rocks that may be removed from the site are generally underneath the soil surface, the removal of larger rocks that emerge during development would not significantly alter the composition of soil. Therefore, the soil type classification utilized in the USLE calculations would remain unchanged (Oster, 2008).

For these reasons, the proposed project, with incorporation of specified erosion control measures and conditions of approval, would not increase soil erosion and the loss of topsoil as compared to existing conditions, and maximize the potential for containment of detached

soil particles to the project site, resulting in less than significant impact with regard to soil erosion, soil loss, and sedimentation. Also see **Section IX (Hazards and Hazardous Materials)** and **Section X (Hydrology and Water Quality)** for additional disclosures related to water quality. Additionally, as shown in the soil loss modeling following development, overall soil loss is anticipated to be less than pre-development conditions. This is consistent with General Plan Conservation Element Policy CON-48, which requires post-development sediment erosion conditions (i.e., soil loss) be less than or equal to pre-development conditions.

c. As discussed above, the development area is not in an area prone to landslides, ground failure or liquefaction and the proposed project would address any potential soil instability. Therefore, the proposed project would not result in any significant impacts of on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse.

d. Soils in the development area have been classified according to the Soil Survey of Napa County (USDA 1978) as Aiken loam, 15 to 30 percent slopes, Bale clay loam, 2 to 5 percent slopes, Forward silt loam, 5 to 39 percent and 12 to 57 percent slopes, and Kidd loam, 30 to 75 percent slopes.. These soils have low shrink-swell potential. No structures are proposed as part of the project and development is not proposed on expansive soils. Therefore, there would be no impacts associated with expansive soils.

e. The proposed project involves the development of a 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. The proposed project would not destroy any unique geologic features in the project site. Due to the nature of the soils in the project site and the nature of the proposed project (which would involve a relatively shallow vineyard), the probability of encountering paleontological resources within the project site is minimal. Furthermore, project approval, if granted, would be subject to the standard conditions described below that would avoid and reduce potential paleontological resource impacts. Therefore, impacts to geologic features and paleontological resources are anticipated to be less than significant.

Paleontological Resources – Conditions of Approval:

Discovery of paleontological resources during construction, grading, or other earth moving activities:

- In the event that a discovery of a breas, true, and/or trace fossils are discovered during ground disturbing activities, all work within 100 feet of the fined shall be temporarily halted 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.

On April 20, 2022, the BAAQMD adopted updated thresholds of significance for climate impacts (CEQA Thresholds for Evaluating the Significance of Climate Impacts, BAAQMD April 2022).[13] The updated thresholds to evaluate GHG and climate impacts from land use projects are qualitative and geared toward building and transportation projects. Per the BAAQMD, all other projects should be analyzed against either an adopted local Greenhouse Gas Reduction Strategy (i.e., Climate Action Plan (CAP)) or other threshold determined on a case-by-case basis by the Lead Agency. If a project is consistent with the State's long-term climate goals of being carbon neutral by 2045, then a project would have a less-than-significant impact as endorsed by the California Supreme Court in Center for Biological Diversity v. Department of Fish & Wildlife (2015) *62 Cal. 4th 204). There is no proposed construction-related climate impact threshold at this time. Greenhouse gas (GHG) emissions from construction represent a

[13] https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, April 2022

very small portion of a project's lifetime GHG emissions. The proposed thresholds for land use projects are designed to address operational GHG emissions which represent the vast majority of project GHG emissions.

Napa County has been working to develop a Climate Action Plan (CAP) for several years. In 2012, a Draft CAP (March 2012) was recommended using the emissions checklist in the Draft CAP, on a trial basis, to determine potential greenhouse gas (GHG) emissions associated with project development and operation. At the December 11, 2012, Napa County Board of Supervisors (BOS) hearing, the BOS considered adoption of the proposed CAP. In addition to reducing Napa County's GHG emissions, the proposed plan was intended to address compliance with CEQA for projects reviewed by the County and to lay the foundation for development of a local offset program. While the BOS acknowledged the plan's objectives, the BOS requested that the CAP be revised to better address transportation-related greenhouse gas, 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 best management practices 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 re-commenced preparation of the CAP to: i) account for present day conditions and modeling assumptions (such as but not limited to 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. On April 13, 2016, the County, as the part of the first phase of development and preparation of the CAP, released Final Technical Memorandum #1: 2014 Greenhouse Gas Emissions Inventory and Forecast, April 13, 2016. This initial phase included: i) updating the unincorporated 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. The Draft Focused EIR for the CAP was published May 9, 2019. 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/589/Planning-Building-Environmental-Services. The County's draft CAP was placed on hold, when the Climate Action Committee (CAC) began meeting on regional GHG reduction strategies in 2019. The County is currently preparing an updated CAP to provide a clear framework to determine what land use actions will be necessary to meet the State's adopted GHG reduction goals, including a quantitative and measurable strategy for achieving net zero emissions by 2045.

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.

Regarding operational emissions, as part of the statewide implementation of Senate Bill (SB) 743, the Governor's Office of Planning and Research (OPR) settled upon automobile vehicle miles of travel (VMT) as the preferred metric for assessing passenger vehicle-related impacts under CEQA and issued revised CEQA Guidelines in December 2018, along with a Technical Advisory on Evaluating Transportation Impacts in CEQA to assist practitioners in implementing the CEQA *Guidelines* revisions. The CEQA *Guidelines* and the OPR Technical Advisory concluded that, absent substantial evidence otherwise, the addition of 110 or fewer daily trips could be presumed to have a less than significant VMT impact.

The County maintains a set of Transportation Impact Study Guidelines (TIS Guidelines) that define situations and project characteristics that trigger the need to prepare a TIS. The purpose of a TIS is to identify whether the project is likely to cause adverse physical or operational changes on a County roadway, bridge, bikeway or other transportation facility, to determine whether the project should be required to implement or contribute to improvement measures to address those changes, and to ensure that the project is developed consistent with the County's transportation plans and policies. Per the County's current TIS Guidelines, a project is required to prepare a TIS if it generates 110 or more net new daily vehicle trips.

The TIS Guidelines also include VMT analysis requirements for projects based on trip generation, which includes a screening approach that provides a structure to determine what level of VMT analysis may be required for a given project. For a new project that would generate less than 110 net new daily vehicle and truck trips, not only is the project not required to prepare a TIS, it is also presumed to have a less than significant impact for VMT. However, applicants are encouraged to describe the measures they are taking and/or plan to take that would reduce the project's trip generation and/or VMT. Projects that generate more than 110 net new passenger vehicle trips must conduct a VMT analysis and identify feasible strategies to reduce the project's vehicular travel; if the feasible strategies would not reduce the project's VMT by at least 15%, the conclusion would be that the project would cause a significant environmental impact.

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.[14]

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

As stated above, the April 2022 update to BAAQMD thresholds of significance do not include construction-related impact thresholds, as GHG emissions associated with the energy used to develop, prepare and plant the project area represent a very small portion of a project's lifetime GHG emissions. The construction emissions analysis below is for disclosure purposes only, as there is no threshold against which to analyze the potential significance of impact.

"Operational Emissions" of the vineyard are 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 vehicles (such as haul trucks, pick-up trucks) and worker vehicle trips (referred to as Operational Equipment Emissions below).

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.[15] Using this emission factor it is anticipated that Construction Equipment Emissions associated with the proposed 16.5 gross acres of vineyard development would be approximately 155.1 MT CO_{2e} (16.5 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 16.5 acres of existing vegetation to vineyard. Because there is not yet a universally accepted scientific methodology or modeling method to calculate GHG emissions due to vegetation conversion and soil disturbance, the GHG Emissions Checklist and associated carbon stock factors developed as part of the 2018 Draft CAP efforts are utilized to determine potential project site carbon stocks and emissions. Utilizing the 2018 Draft CAP carbon stocks and the acreages of vegetation types within the development area, total carbon stocks for the development area are estimated to be approximately 568.77 MT C or approximately 2,087.38 MT CO_{2e} (**Table 7**).

Table 7 – Estimated Development Area Carbon Stocks/Storage

[14] "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).

[15] 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.

Vegetation Type/Carbon Storage	Development Area Acreage	Carbon Storage/Stock per Acre (MT C/acre)	Total Carbon Storage (MT)	Total Carbon Storage in MT CO2e
Grassland[1]	6.05	1.4	8.47	31.08
Oak Woodland	5.52	95.1	524.95	1,926.57
Coniferous Forest[2]	0.52	58.1	30.21	110.88
Vineyard	4.28	1.2	5.14	18.85
Total			**568.77**	**2,087.38**

[1] For the purpose of these GHG calculations, the most conservative option was chosen; therefore, the 3.33 acres of burned/unrecovered, 0.93 acre of ruderal, and 0.85 acre of cleared land use type in the development area was included with the 0.94 acre of grassland.

[2] For the purpose of these GHG calculations, the most conservative option was chosen; therefore, the 0.52 acre of Pacific madrone forest land use type in the development area was included as the coniferous forest land use type.

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

There is currently no scientific agreement about the percentage of carbon that would be lost (or emitted) from soils through grading. Some analyses have suggested 20 to 25% while others have suggested 50%.[16] Using 50% as a more conservative estimate, the proposed project could result in one-time development area construction emissions from vegetation removal and soil preparation (i.e., grading and soil ripping) of approximately 1,951.96 MT CO_{2e} (**Table 8**).

Table 8 – Estimated Project Carbon Emissions Due to Vegetation Removal

Vegetation Type/Carbon Storage	Development Area Acreage	Carbon Loss/Emission per Acre (MT C/acre)[1]	Total Carbon Loss/Emission (MT)	Total Carbon Loss/Emission in MT CO2e
Grassland[1]	6.05	0.8	4.84	17.76
Oak Woodland	5.52	89.6	494.59	1,815.15
Coniferous Forest[2]	0.52	52.5	27.3	100.19
Vineyard	4.28	1.2	5.14	18.86
Total			**531.87**	**1,951.96**

[1] For the purpose of these GHG calculations, the most conservative option was chosen; therefore, the 3.33 acres of burned/unrecovered, 0.93 acre of ruderal, and 0.85 acre of cleared land use type in the development area was included with the 0.94 acre of grassland.

[2] For the purpose of these GHG calculations, the most conservative option was chosen; therefore, the 0.52 acre of Pacific madrone forest land use type in the development area was included as the coniferous forest land use type.

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

Operational Emissions:

Operational Equipment Emissions: The referenced vineyard development EIRs also assessed ongoing vineyard operation emissions associated with vehicles and equipment. Estimated potential construction equipment emissions per acre of vineyard development were derived using the most generous emissions results from these EIRs. The Suscol Mountain Vineyard EIR anticipated approximately 373 MT CO_{2e} of operational emissions for a 560-acre vineyard, resulting in approximately 0.67 MT CO_{2e} of operational emissions per acre of vineyard per year. Using this emission factor it is anticipated that Operational Equipment Emissions associated with the proposed 16.5-acre agricultural development would be approximately 11.06 MT CO_{2e} (16.5 multiplied by 0.67 MT CO_{2e}).

Operational Sequestration Emissions: Emissions associated with loss of sequestration due to land use change (i.e., the conversions of existing vegetation to vineyard) have been calculated based on the Annual Carbon Sequestration Factors within the 2012 Draft CAP, which indicates that oak woodlands sequester 0.425 CO_2 acre per year, while grasslands, shrublands and developed are essentially zero. Utilizing these factors it is anticipated that the annual emissions associated with changes in carbon sequestration as a result of land use changes would be approximately 3.04 MT C per year or 11.57 MT CO_{2e} per year.[17]

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:

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

[17] 6.05 acres of grassland times 0.057 MT C = 0.34, 5.52 acres of oak woodland times 0.425 MT C = 2.35 MT C, 0.52 acres of coniferous forest times 0.666 MT C = 0.35 MT C, and 4.28 acres of vineyard times 0.00 MT C = 0.00, totaling 3.04 MT C

Based on the above estimates, the proposed project could result in one-time construction emissions of up to 2,107.06 MT CO_2e and annual ongoing emissions associated with vineyard operations (including loss of sequestration) estimated to be approximately 22.63 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	155.10	Vehicles and Equipment	11.06
Vegetation and Soil	1,951.96	Loss of Sequestration	11.57
Total	**2,107.06**	**Total**	**22.63**

Source: Napa County Conservation Division, November 2018

There is no adopted CEQA significance threshold at the state, regional, or local level for construction-related GHG emissions, and the County has therefore evaluated the significance of one-time project-generated emissions of up to approximately 2,107.06 MT CO_{2e} by considering the size of the proposed vineyard in relation to projected vineyard development in the County. The program level EIR for the 2008 Napa County General Plan Update (SCH#2005102088 certified June 3, 2008) projected 12,500 acres of new vineyard development in the County between 2005 and 2030. The County concluded in the General Plan EIR that emissions from all sources over the planning period would result in significant and unavoidable GHG emissions despite measures adopted to address the impact. Because this determination was based on emissions from all sources, not just agriculture, the General Plan did not determine that emissions solely from projected agricultural development would result in significant unavoidable impacts.

Pursuant to Section 15183(a) of the California Code of Regulation, projects that are consistent with the general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific effects which are peculiar to the proposed project or its site. Further, the BAAQMD update to the thresholds of significance do not include construction-related climate impact thresholds (April 2022). GHG emissions from construction represent a very small portion of a project's lifetime GHG emissions, and the updated thresholds for land use projects were designed to address operational GHG emissions, which represent the vast majority of project GHG emissions.

In the context of 12,500 acres of projected vineyard development, the proposed project would constitute less than approximately 0.1% of the vineyard development anticipated in the General Plan EIR. The proposed project also contains measures to reduce and/or offset emissions from vineyard development and vineyard operations such as maintaining a permanent no-till cover crop density of a minimum 75%, vegetated vineyard avenues, and the maintenance and establishment of grape vines. These measures in conjunction with the Air Quality conditions of approval (detailed in **Section III [Air Quality]**) would further reduce potential GHG air quality impacts associated with construction and ongoing operation of the proposed project. For these reasons, the County does not consider one-time GHG emissions from the proposed vineyard development to be a significant impact on a project level basis or to be a "considerable" contribution to significant unavoidable cumulative impacts identified in the General Plan EIR.

As described above, total annual GHG emissions from ongoing operations are anticipated to be approximately 6.29 MT CO_{2e} per year. As stated above, the updated BAAQMD thresholds of significance for land use projects are qualitative, with no "bright-line" (quantitative) level below which to mitigate. Projects should be analyzed against either an adopted local Greenhouse Gas Reduction Strategy (i.e., Climate Action Plan (CAP)) or other threshold determined on a case-by-case basis by the Lead Agency. If a project is consistent with the State's long-term climate goals of being carbon neutral by 2045, then a project would have a less-than-significant impact as endorsed by the California Supreme Court in *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) (62 Cal. 4th 204).

As stated in **Section IV, Biological Resources,** after implementation of **Mitigation Measures BR-5** and **BR-6**, the project would result in the removal of approximately 6.7 acres of tree canopy, including oak woodland and Pacific madrone canopy. With implementation of **Mitigation Measures BR-5** and **BR-6**, the project would result in the permanent preservation of approximately 17.6 acres of tree canopy (including oak woodland and Pacific madrone), including a minimum of 6.7 acres on land located outside of stream setbacks and on slopes less than 30%, as determined by a qualified biologist and approved by the Napa County Conservation Division prior to project approval. With implementation of **Mitigation Measures BR-5** and **BR-6**, the loss in carbon sequestration from the proposed removal of trees would be more than offset by permanently protecting from development the equivalent amount or more of carbon sequestering trees on developable land as would be removed by the project (if approved), resulting in consistency with the State's climate neutrality goal by 2045.

Further, as stated above, per the OPR Technical Advisory, the addition of 110 or fewer daily trips could be presumed to have a less than significant VMT impact. As detailed in **Section XVII (Transportation),** harvest would generate up to approximately 12 one-way worker trips, and two one-way truck trips per day (resulting in up to 28 round trips per day) for approximately three days per year. Other typical vineyard operations (as outlined above) are anticipated to generate up to 12 one-way trips per day during the days these activities occur. Therefore, daily trips (including passenger vehicle trips and truck trips) generated by the proposed project would be well below the Governor's Office of Planning and Research's recommended screening criterion threshold for small projects generating fewer than 110 trips per day; therefore, less than significant impacts related to operational GHG emissions are anticipated.

Given that the proposed project would result in the permanent preservation of three times the carbon-sequestering tree canopy that it proposes to remove, and that the operational vehicle miles traveled fall well below the established threshold of 110 daily trips, the project is considered to be consistent with the State's long-term climate goals of being carbon neutral by 2045; therefore, a less than significant impact is anticipated.

	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 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).

No onsite storage of hazardous materials is proposed and materials would be brought in, as needed. No chemical mixing, storage, or cleaning and washing of chemical application equipment would occur in the project site. Fertilizers (12-26-26) would be applied via drip twice a year. Mildewcides (i.e., sulfur) would be applied up to 12 times a year and herbicides (i.e., post-emergent) would be applied twice a year. No pre-emergent herbicides would be strip sprayed in the vinerows for weed management. A project staging area would be located east of Block 1 and north of Block 2, over 65 feet from the perennial stream that flows through the area (Sheet EC5 in **Exhibit A**).

Streams delineated in the project site are shown in Figure 2 in **Exhibit B** (Northwest Biosurvey – Updated September 2020). A perennial stream occurs in the vicinity of the proposed development area and has the appropriate setbacks (65 feet minimum), determined by slope as outlined in Napa County Conservation Regulations Section 18.108.025.

The risk of potentially hazardous materials reaching or affecting adjacent water courses or other aquatic resources is significantly reduced because: i) the proposed project would provide minimum setbacks buffers of 65 feet from definitional streams in conformance with code provisions; and ii) only federal and/or California approved chemicals would be applied to the vineyard in strict compliance with applicable state and federal law. Project approval, if granted, would also be subject to the following standard conditions of approval 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. Impacts related to routine use, transportation, and application of hazardous materials described above are anticipated to be less than significant. The following conditions of approval would be implemented to reduce potential accidental release of hazardous materials, if the project is approved:

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, 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, storage, and transport of hazardous materials and accidental release of hazardous materials would be less than significant.

c. The closest schools (Calistoga Elementary and Calistoga High School) are located approximately 2.5 miles southeast of the project site. There are no schools proposed within 0.25 mile of the project site. Therefore, no impact would occur.

d. The project site is not on any of the lists of hazardous waste sites enumerated under Government Code Section 65962.5 (Napa County GIS hazardous facility layer). Storybrook Mountain Vineyard, located approximately 0.6 mile northwest of the project site, is the closest site Geotracker site. Therefore, no impact would occur.

e. The closest public airport to the project site is the Angwin-Parret Field Airport, located over 20 miles east/southeast of the project site. No portion of the proposed project is within an airport compatibility zone identified in the Airport Compatibility Plan (Napa County Airport Land Use Compatibility Plan, and Napa County GIS Airport Land Use Compatibility Plan And Airport layer). Therefore, no impact would occur.

f. During construction, there would be negligible numbers of workers visiting the project site on a temporary basis to implement the ECP and install vineyards. Approximately ten workers would also visit the site on a seasonal basis for subsequent vineyard operations. No road closures would be required to implement the project, and there would not be a permanent substantial increase in the number of people working or residing at or near 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 the impact would be less than significant.

g. No structures are proposed as part of the project. The project site is located in a State Fire Protection Responsibility Area identified as having very high fire severity (CalFire 2007 - https://egis.fire.ca.gov/FHSZ/). However, the risk of fire in vineyards is low due to limited amount of fuel, combustibles, and ignition sources that are present. Vineyards are irrigated and cover crops are typically mowed in May and August, thereby reducing the fuel loads within the vineyard. The removal of vegetation and the management of vineyard results in an overall reduction of fuel loads within the project site as compared with existing conditions. Therefore, the proposed project would not increase the exposure of people or structures to wildland fires and the impact 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

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.

In March 2022, Governor Newsom enacted Executive Order N-7-22, which requires prior to approval of a new groundwater well (or approval of an alteration to an existing well) in a basin subject to the Sustainable Groundwater Management Act and that is classified as medium- or high-priority, obtaining written verification from the GSA (Groundwater Sustainability Agency) managing the basin that groundwater extraction would not be inconsistent with any sustainable groundwater management program established in any applicable GSP (Groundwater Sustainability Plan) and would not decrease the likelihood of achieving sustainability goals for the basin covered by a GSP, or that the it is determined first that extraction of groundwater from the new/proposed well is (1) not likely to interfere with the production and functioning of existing nearby wells, and (2) not likely to cause subsidence that would adversely impact or damage nearby infrastructure. Because the project contains an existing well which is not being altered, Executive Order N-7-22 does not apply.

On March 28, 2022, August 9, 2022, and November 8, 2022, the Napa County Board of Supervisors adopted resolutions proclaiming a continued state of Local Emergency due to the 2021-2022 drought. On June 7, 2022, the Napa County Board of Supervisors provided direction regarding interim procedures to implement Executive Order N-7-22 for issuance of new, altered or replacement well permits and discretionary projects that would increase groundwater use during the declared drought emergency. The direction limits a parcel's groundwater allocation to 0.3 acre feet per acre per year, or no net increase in groundwater use if that threshold is exceeded already for parcels located in the GSA Subbasin. For parcels not located in the GSA Subbasin (i.e., generally located in the hillsides), a parcel-specific Water Availability Analysis would suffice to assess potential impacts on groundwater supplies. Although the Governor, through Executive Order No. N-5-23, rolled back some of the drought emergency provisions in late March 2023, due to current water conditions, the Governor's Emergency Order N-7-22 remains in place and the remaining criteria for the County's interim actions and procedures also remain. On May 30, 2023, the Napa County Board of Supervisors terminated the Local Emergency due to the 2021-2022 drought but acknowledged that there are still adverse conditions that will continue to affect the Napa Valley groundwater subbasin and the need to continue groundwater management efforts including the interim actions and procedures still exists.

The project site is located in the Blossom Creek watershed that flows into Napa River and San Pablo Bay. 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[18]"; 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[19].

The proposed development area is not located near the ephemeral streams onsite, and the proposed project has been designed to avoid the perennial stream with minimum 65-foot setbacks in accordance with NCC 18.108.025.

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

   The proposed project has been designed with site-specific temporary and permanent erosion control measures and features to prevent sediment, runoff, and pollutants from leaving the project site. Agricultural Erosion Control Plan #P20-00247-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 impacts 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.

   A Water Availability Analysis (WAA) was prepared in order to determine if the proposed increase in groundwater water demand as a result of the proposed project would result in a significant impact to groundwater supplies (Bartelt Engineering, October 2021 [Revised] - **Exhibit D-1**). The WAA estimates the onsite groundwater recharge, overall availability, and both existing and proposed use, in order to disclose and assess potential impacts on groundwater in accordance with the WAA Guidance Documented adopted by the County May 12, 2015. There are not any neighboring groundwater wells located within 500 feet of the project well. Blossom Creek, a blue-line stream and designated Significant Stream is located approximately 1,455 feet to the north of the proposed project site; therefore a Tier 3 WAA was performed (O'Connor Environmental, Inc. 2023 - **Exhibit D-2**).

   Groundwater is currently used to irrigate approximately 4.6 acres of existing vineyard and 1 acre of olive trees, and to supply water to the residence located on the project site. The existing water use for the project site is approximately 2.74 AF/yr (0.75 AF/yr for residential uses, 0.99 AF/yr for vineyard irrigation and 1.00 AF/yr for olive orchard irrigation). The proposed vineyard that includes approximately 13.0 net planted acres is anticipated to utilize approximately 6.21 AF/yr plus 3.25 AF/y for heat protection, and the olive orchard would be removed, resulting in an overall groundwater demand of 10.21 AF/yr: 0.75 for residential uses and 9.46 AF/yr for the proposed vineyard irrigation and heat protection.

[18] 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.

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

Table 10 – Pre- and Post-Project Site Groundwater Use

Water Use Type	Pre-Project Site Water Use (AF/year)	Post-Project Site Water Use (AF/year)
Residential	0.75	0.75
Vineyard	0.99	6.21
Heat Protection	0	3.25
Olive orchard	1.0	0.0
Total	**2.74**	**10.21**

Source: Bartelt Engineering, October 2021 – **Exhibit D-1**

Groundwater Recharge: Long-term average groundwater recharge can be estimated as the percentage of rainfall that falls on the parcel that percolates into the underlying aquifer. The percentage of rain that has the potential to infiltrate varies depending on factors such as rates of evaporation and transpiration, soil type and underlying geology that exists at the site, and average annual rainfall. Based on the precipitation data from the PRISM Climate Group at Oregon State University that provides spatial climate dataset which spans over a period of time and provides insight into normal rainfall years as well as periods that deviate into dry and wet years. The WAA used the 10-year datasets from 2012-2021, which shows that the average annual rainfall for the project parcel is 33.69 inches. The recharge area is limited to the areas with ground slopes less than or equal to 30% where precipitation is more likely to infiltrate through the soil and reach the groundwater aquifer; the WAA estimated the recharge area to be approximately 40.5 acres. Based on site-specific soils and underlying geology, precipitation data and slopes, the WAA estimated a 15% deep percolate recharge rate, which results in an average annual groundwater recharge of approximately 17.1 acre-feet per year across the project parcel (Bartelt Engineering, April 2023 [Revised] – **Exhibit D-1**). 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. The post-project site is estimated to have an annual future groundwater demand of 10.21 AF/year, which is below the estimated average annual recharge volume of 17.1 AF/year identified in the WAA. Less than significant impacts related to groundwater recharge are anticipated. Further, with implementation of **Mitigation Measure BR-5** and **BR-6,** the vineyard size would be reduced from 16.5 gross acres to 11.2 gross acres, which equates to an approximately 32% reduction in gross development area. It can be reasonably anticipated that the groundwater demand would be similarly reduced following implementation of these mitigation measures by approximately 32%, resulting in a revised project groundwater demand of approximately 6.45 AF/y.

The Tier 3 Water Availability Analysis assessed the potential effects of groundwater use on streamflow in Blossom Creek, which is located approximately 1,455 feet north of the project well. The Tier 3 WAA concluded that several factors exist that show that pumping from Well 1 would not impact flows in Blossom Creek, including the short window of time (2-13 weeks) when any hydraulic connection exists between the stream and adjacent alluvial aquifer, a time period that would most likely not overlap with the periods of high demand from the well. Based on that and the horizontal separation between Well 1 and Blossom Creek, as well as the apparent groundwater mound located under the intervening ridge between Well 1 and Blossom Creek and the low permeability of the local bedrock, it is not expected that the proposed project would have any significant impact to flows in Blossom Creek (O'Connor Environmental Inc. 2023 – **Exhibit D-2**).

Considering: i) anticipated annual water use of the proposed project and existing uses of approximately 10.21 AF/year is below the project site's anticipated average annual groundwater recharge rate of approximately 17.1 AF/year; ii) the reduction of the project size following implementation of **Mitigation Measures BR-5** and **BR-6,** which would reduce demand by approximately 3 AF/year for a total anticipated demand of approximately 6.45 AF/y; iii) there is no evidence to date indicating that there are groundwater problems or declining well production in the this area of the County; and iv) incorporation of the standard water use condition below to monitor 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.

Groundwater Management, Wells – Condition of Approval:

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 PBES Director 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 PBES Director 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 Erosion Control Plan #P20-00247-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 establishment of a no-till cover crop with vegetative cover density of 75% (including vegetated avenues and turnaround avenues), and the annual application of straw mulch cover on all disturbed areas at a rate of 4,000 pounds per acre. 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 **Exhibit E** for details related to the following discussion.

Proposed erosion control and project features that have the potential to alter natural drainage patterns include waterbars with rock, a rock-energy dissipater, and silt fences and/or straw wattles. These features are not anticipated to significantly alter the exiting topography or drainage patterns of the project site, or direct surface flows into other watersheds (as further described below). As discussed in **Section VII** (**Geology and Soils**), erosion control features would maintain soil losses below the tolerable levels for the soil types found in the project site and ensure (in conjunction with the cover crop) that no net increase in erosion sediment conditions occurs as a result of the proposed project, and that the proposed project is anticipated to decrease soil loss as compared to existing conditions.

A Hydrology and Hydraulic Analysis for the proposed project was prepared by Bartelt Engineering (May 2021 [Revised] - **Exhibit E**). The Hydrology Analysis utilized the U.S. Department of Agriculture Technical Release 55 (TR-55) model to conclude that there would not be an increase in peak flow for the project watershed (**Table 11**).

Table 11 – Hydrologic Modeling Calculations (TR-55) Results: Runoff Rates

	Runoff (cfs)			
	2-year	10-year	50-year	100-year
Sub-Watershed A1 - Peak Flow				
Pre-project conditions	18.08	34.49	52.86	61.10
Post-project conditions	17.82	34.19	52.54	60.77
Change (cfs)	-0.26	-0.30	-0.32	-0.03
Change (%)	-1.4	-0.9	-0.6	-0.05
Sub-Watershed A2 - Peak Flow				
Pre-project conditions	2.22	4.48	7.07	8.24
Post-project conditions	2.18	4.42	7.00	8.18
Change (cfs)	-0.04	-0.06	-0.07	-0.06
Change (%)	-1.8	-1.3	-1.0	-0.7
Sub-Watershed B - Peak Flow				
Pre-project conditions	53.00	106.33	167.15	194.64
Post-project conditions	52.96	106.30	167.10	194.62
Change (cfs)	-0.04	-0.03	-0.05	-0.02
Change (%)	-0.08	-0.03	-0.03	-0.01
Sub-Watershed C - Peak Flow				
Pre-project conditions	30.53	62.21	98.62	115.11
Post-project conditions	30.53	62.21	98.62	115.11
Change (cfs)	0.00	0.00	0.00	0.00
Change (%)	0	0	0	0
Sub-Watershed D - Peak Flow				
Pre-project conditions	1.34	2.59	4.01	4.64
Post-project conditions	1.26	2.50	3.90	4.54
Change (cfs)	-0.08	-0.09	-0.11	-0.10
Change (%)	-6.0	-3.5	-2.7	-2.2
Sub-Watershed E - Peak Flow				
Pre-project conditions	3.09	6.18	9.71	11.30
Post-project conditions	3.03	6.13	9.68	11.28
Change (cfs)	-0.06	-0.05	-0.03	-0.02
Change (%)	-1.9	-0.8	-0.3	-0.2
Sub-Watershed F - Peak Flow				
Pre-project conditions	1.75	3.47	5.41	6.29
Post-project conditions	1.70	3.40	5.34	6.22
Change (cfs)	-0.05	-0.07	-0.07	-0.07
Change (%)	-2.9	-2.0	-1.3	-1.1
Sub-Watershed G - Peak Flow				
Pre-project conditions	1.96	3.83	5.95	6.91
Post-project conditions	1.79	3.63	5.73	6.68
Change (cfs)	-0.17	-0.20	-0.22	-0.23
Change (%)	-8.7	-5.2	-3.7	-3.3

Source: Bartelt Engineering, Revised May 2021 (**Exhibit E**)

The proposed project would not increase runoff flow rates, consistent with General Plan Conservation Element Policy CON-50c, which states peak runoff following development cannot be greater than predevelopment 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 overall increase in runoff volume or decrease in time of concentration is anticipated under post-project conditions. Furthermore, as discussed in **Section VII (Geology and Soils)**, a reduction in soil loss and sedimentation is anticipated under post-project conditions. Therefore, the proposed project would not contribute a substantial amount of additional runoff to an existing stormwater drainage system or provide substantial additional sources of polluted or sediment laden runoff, resulting in a less than significant impact.

In addition, pursuant to NCC Section 18.108.135 (Oversight and Operation) projects requiring an erosion control plan would be inspected by the County after the first major storm event of each winter until the proposed project has been completed and stable for three years to ensure that the implemented erosion control plan is functioning properly.[20] Furthermore, pursuant to NCC Section 18.108.135 (Oversight and Operation) projects requiring an erosion control plan will be inspected by the County after the first major storm event of each winter until the proposed project has been completed and stable for three years to ensure that the implemented erosion control plan is functioning properly.

d. The project site is not located within a Federal Emergency Management Agency (FEMA) 100-year flood zone, in a dam or levee failure inundation area, or in an area subject to seiche or tsunami (Napa County GIS FEMA flood zone and dam levee inundation areas layers; Napa County General Plan - Safety Element. pg. 10-20). Therefore, no impact would occur.

e. The proposed project would not have an adverse impact on water quality because the ECPA has been designed to keep polluted runoff and sediment from leaving the project site. As discussed in **Section IX (Hazards and Hazardous Materials)**, the project proposes the use of potentially hazardous materials during implementation activities (i.e., oil, gasoline, and transmission fluids associated with construction equipment) and the application of chemicals (i.e., fertilizers) for ongoing vineyard maintenance. Only federal and/or California approved chemicals would be applied to the vineyard in strict compliance with applicable state and federal law. As discussed in **Sections IV (Biological Resources)** and **IX (Hazards and Hazardous Materials)**, buffers provided in the ECP to area wetlands and watercourses would facilitate increased water infiltration so that chemicals and potentially hazardous materials associated with project implementation and operation can be trapped and degraded in buffer vegetation and soils to protect water quality. The limited application of agricultural chemicals generally occurring during the non-rainy season would also minimize the amounts of chemicals that could impact on or offsite water resources. Because the proposed project as designed is not expected to increase overall runoff rates or decrease times of concentration in relation to existing conditions (as discussed in question c above), the proposed cover crop and buffers would be able to effectively trap and filter sediments, thereby minimizing their entry into nearby water resources.

As discussed above and in **Section VII (Geology and Soils)**, the proposed project has been designed with site-specific temporary and permanent erosion and runoff control measures and features to prevent sediment, runoff, and pollutants from leaving the project site. As such, the proposed project is anticipated to reduce soil loss and sedimentation by approximately 73.50 tons/year, have no negative effect on runoff rates, and maintain project site drainage characteristics as compared to existing conditions. The ECPA includes BMPs that are consistent with NCC Section 18.108.080(c), as well as with Regional Water Board guidance from the Storm Water Best Management Practice Handbooks for Construction and for New Development and Redevelopment, and the Erosion and Sediment Control Field Manual.

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

Water Quality – Condition of Approval:

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

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

[20] Compliance with Section 18.108.135 is achieved by including their provisions as conditions of approval for a project, if granted, as indicated **in Section VII** (**Geology and Soils**).

	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 is Calistoga, approximately 4 miles east of the project site. The project site contains existing vineyard land and, therefore, the proposed vineyard and subsequent vineyard operations is consistent with surrounding land uses and would not physically divide an established community and no impact would occur.

b. The project site is zoned as Agricultural Watershed and is designed under the Napa County General Plan as AWOS. Surrounding land uses consist predominantly of agricultural land (vineyard) and wineries, undeveloped land, and residential. Surrounding parcels are zoned Agricultural Watershed 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 proposed project 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 73.50 tons per year and reduce runoff conditions as compared to existing conditions.
- The proposed project is consistent with Policies CON-48 and CON-50c, which require pre-development sediment erosion conditions and runoff characteristics following development not be greater than predevelopment conditions. As discussed in **Section VII (Geology and Soils)** and **Section X (Hydrology and Water Quality)** the project as proposed would reduce soil loss, sedimentation, and maintain runoff characteristics as compared to existing conditions.
- With implementation of **Mitigation Measures BR-1** through **BR-5** the proposed project 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 Resource Assessment was prepared for the proposed project. The proposed project as proposed would avoid potential direct, indirect, and cumulative impacts to special-status plant species and associated habitat occurring in the project site. With implementation of **Mitigation Measures BR-2** through **BR-4** potential impacts to special-status and protected bird and bat species, and American badger would be avoided. Furthermore, implementation of these measures would not affect the feasibility of the proposed project in that, impacts to special-status species and their habitat can be avoided.
- With implementation of **Mitigation Measures BR-1** through **BR-6** and the 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** through **BR-6** and the 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 and no net loss of sensitive biotic communities.
- The proposed project is consistent with CON-16, which requires discretionary projects prepare an evaluation of biological resources. A Biological Resources Assessment was prepared for the proposed project (**Exhibit B-1**).
- The project site does not contain wetlands within its boundaries and the proposed project is consistent with Policy CON-30, which encourages the avoidance of wetlands.
- The proposed project is consistent with Policy CON-18, which encourages the reduction of impacts to habitat conservation and connectivity. With incorporation of the fencing conditions of approval, and the proposed project's small amount of proposed new fencing, wildlife movement would not be impaired.
- The proposed project is consistent with Policies CON-48 and CON-50c, which require pre-development sediment erosion conditions and runoff characteristics following development to be no greater than pre-project conditions. As discussed in **Section VII (Geology**

and Soils) and **Section X (Hydrology and Water Quality)**, with incorporation of the Permanent Erosion and Runoff Control Measures condition of approval, the proposed project would reduce soil loss and sedimentation, and result in no change to runoff.

- The proposed project 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 proposed project 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 proposed project is consistent with the General Plan land use designation of 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 the Syar Napa Quarry, located approximately 30 miles southeast of the project site. Proposed site improvements and development of vineyard in 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, agriculture (planted with vineyards), and contain wineries. The nearest residences are located approximately 270 and 740 feet, respectively, from the development areas. Additionally, adjacent proprieties and other properties in the immediate area contain vineyards. 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

and tractor with grader. **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 between approximately 60 and 75 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 between 55 and 65 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 75 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 proposed project in excess of County standards.

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. POPULATION AND HOUSING. Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
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. Construction and installation activities associated with the proposed project would generate a minimal number of workers to the project site on a temporary basis, and ongoing vineyard operation and maintenance would generate a minimal number of workers to the project site on an ongoing basis. It is anticipated that these workers would come from the existing labor pool in the region. Therefore, the proposed project would not induce unplanned population growth in the proposed project vicinity or greater region, either directly or indirectly. No impact would occur.

b. The proposed project would not displace any existing housing or people and it does not involve the construction of new homes. Therefore, no impact would occur.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
i. Fire protection?	☐	☐	☐	☒
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 these temporary workers 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?	☐	☐	☐	☒
e) Conflict with General Plan Policy CIR-14, which requires new uses to meet their anticipated parking demand, but to avoid providing excess parking which could stimulate unnecessary vehicle trips or activity exceeding the site's capacity?	☐	☐	☐	☒

Discussion

a-b. As part of the statewide implementation of Senate Bill (SB) 743, the Governor's Office of Planning and Research (OPR) settled upon automobile vehicle miles of travel (VMT) as the preferred metric for assessing passenger vehicle-related impacts under CEQA and issued revised CEQA Guidelines in December 2018, along with a Technical Advisory on Evaluating Transportation Impacts in CEQA to assist practitioners in implementing the CEQA Guidelines revisions.

The County's General Plan Circulation Element contains a policy statement (Policy CIR-7) indicating that the County expects development projects to achieve a 15% reduction in project-generated vehicle miles travelled (VMT) to avoid triggering a significant environmental impact. Specifically, the policy directs project applicants to identify feasible measures that would reduce their project's VMT and to estimate

the amount of VMT reduction that could be expected from each measure. The policy states "projects for which the specified VMT reduction measures would not reduce unmitigated VMT by 15 or more percent shall be considered to have a significant environmental impact." That policy is followed by an action item (CIR-7.1) directing the County to update its CEQA procedures to develop screening criteria for projects that "would not be considered to have a significant impact to VMT" and that could therefore be exempted from VMT reduction requirements.

The new CEQA Guidelines and the OPR Technical Advisory note that CEQA provides a categorical exemption (Section 15303) for additions to existing structures of up to 10,000 square feet, so long as the project is in an area that is not environmentally sensitive and where public infrastructure is available. OPR determined that "typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract 110-124 trips per 10,000 square feet". They concluded that, absent substantial evidence otherwise, the addition of 110 or fewer daily trips could be presumed to have a less than significant VMT impact.

The County maintains a set of Transportation Impact Study Guidelines (TIS Guidelines, February 2022) that define situations and project characteristics that trigger the need to prepare a Transportation Impact Study (TIS). The purpose of a TIS is to identify whether the project is likely to cause adverse physical or operational changes on a County roadway, bridge, bikeway or other transportation facility, to determine whether the project should be required to implement or contribute to improvement measures to address those changes, and to ensure that the project is developed consistent with the County's transportation plans and policies. Per the County's current TIS Guidelines, a project is required to prepare a TIS if it generates 110 or more net new daily vehicle trips.

The TIS Guidelines also include VMT analysis requirements for projects based on trip generation, which includes a screening approach that provides a structure to determine what level of VMT analysis may be required for a given project. For a new project that would generate less than 110 net new daily vehicle and truck trips, not only is the project not required to prepare a TIS, it is also presumed to have a less than significant impact for VMT. However, applicants are encouraged to describe the measures they are taking and/or plan to take that would reduce the project's trip generation and/or VMT.

Projects that generate more than 110 net new passenger vehicle trips must conduct a VMT analysis and identify feasible strategies to reduce the project's vehicular travel; if the feasible strategies would not reduce the project's VMT by at least 15%, the conclusion would be that the project would cause a significant environmental impact.

Currently, the project site is developed with a residence, garage, access roads, approximately 4.6 net acres of vineyard, an olive orchard, a water storage tank, and an existing well. The project site is primarily accessed from State Highway 128. Trucks and other equipment would use County roads or State highways for short periods during construction and subsequent vineyard operation.

The proposed project is expected to generate up to four passenger vehicle round trips per day during construction. Up to eight truck trips would deliver and remove heavy equipment during construction. Typical construction equipment would include a crawler tractor, tractor-trailers, backhoe/excavator, trencher, end-post driver, and pickup trucks, passenger vehicles, and other small to medium service vehicles. Pruning would occur in January approximately five days of the year and is anticipated to require up to eight workers. Weed control would occur between February and May (outside of the pruning months) up to six times a year and would require one worker. Harvest would occur approximately six days during the year and is anticipated to require up to 15 workers. Up to ten passenger vehicle round trips per day would occur seasonally during operation. Vehicular equipment for ongoing vineyard maintenance is anticipated to include tractor-trailers for equipment deliveries, farming tractors with grape hauling trailers or discing attachments, a forklift, ATVs, passenger vehicles and/or light duty trucks. Some of this traffic already exists onsite due to the operation and maintenance of the existing vineyard. Construction traffic would be intermittent during non-peak hours, generally arriving between 6 a.m. and 7 a.m. and departing between 2 p.m. and 3 p.m. Traffic associated with routine vineyard operation and maintenance, including harvest, would also be intermittent during the non-peak hours, generally arriving around 6 a.m. and departing around 3 p.m.

Because the proposed project would be expected to generate up to approximately four round trips per day and periodically up to eight truck round trips per day during construction, and up to approximately ten worker round trips per day and three truck round trips per day (resulting in up to 13 round trips per day) during operations and maintenance, below the 110 trip threshold in the Office of Planning and Research guidelines and the County's TIS Guidelines and VMT screening criteria, the project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). Impacts would be less than significant.

c. The proposed project would utilize the existing site access off State Highway 128 for project development (**Figures 1-3**). The proposed project does not include roadway improvements and/or modifications to State Highway 128, 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 project site and other agricultural uses in the area. Therefore, the potential for the creation of or substantial increase in hazards due to a geometric design feature or incompatible uses would be a less than significant impact.

d. The existing roads would continue to provide adequate emergency access to the project site, resulting in no impact. Refer to **Section IX, Hazards and Hazardous Materials**, for additional discussion related to emergency access.

e. The proposed project would generate its largest demand for parking (approximately four vehicles) during pruning and harvest periods which last up to between 3 to 6 days each. Current county ordinances do not require formal parking for agricultural projects. Parking within the proposed staging area and/or along proposed vineyard avenues would satisfy parking demands of project installation and subsequent vineyard operations. Therefore no parking impacts are anticipated.

	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

Notice of the proposed project was sent to Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, and Yocha Dehe Wintun Nation on October 12, 2020. Based on an email response from Middletown Rancheria on October 23, 2020, a site inspection occurred on February 20, 2021 to address cultural concerns. Middletown Rancheria also provided the County with Middletown Rancheria's Standard Monitoring Mitigation Measures on February 18, 2021. Recommendations from Middletown Rancheria have been incorporated into **Mitigation Measure TR-1** below. On May 11, 2022, the County replied to Middletown Rancheria and closed the consultation invitation because the Tribe and the County reached an agreement. No further communication was received from the tribes from whom consultation was requested within the 30-day notification period. The County sent consultation closure notices to Mishewal Wappo Tribe of Alexander Valley and Yocha Dehe Wintun Nation on December 14, 2020.

a-b. As discussed in **Section V (Cultural Resources)** the proposed project's cultural resources evaluation (Archaeological Resource Service, 2020), identified no cultural resources within the development area and concluded that the project would not affect a significant cultural resource. Furthermore, no resources that may be significant pursuant to Public Resources Code Section 5024.1(c) have been identified or are anticipated in the development area. The Cultural Resources conditions of approval discussed in **Section V (Cultural Resources)** would avoid and reduce potential impacts to unknown resources.

Based on a site visit conducted with Middletown Rancheria on February 20, 2021, Middletown Rancheria identified a potential for tribal cultural resources to be present on site; therefore, earthmoving activities resulting from implementation of the proposed project could result in potentially significant impacts in this regard. Implementation of **Mitigation Measure TR-1**, which incorporates the Standard Monitoring Mitigation Measures provided by Middletown Rancheria, would reduce potentially significant impacts on tribal cultural resources to a less than significant level.

Mitigation Measure TR-1: The Owner/Permittee shall revise Erosion Control Plan #P20-00247-ECPA prior to approval to include the following measures to minimize the potential to impact tribal cultural resources:

a. Prior to initial ground disturbance, the Owner or Owner's Representative shall retain a project Tribal Cultural Advisor designated by Middletown Rancheria, to direct all mitigation measures related to tribal cultural resources.

b. Ground disturbing activities occurring in conjunction with the project (including surveys, testing, concrete pilings, debris removal, rescrapes, punch lists, erosion control (mulching, wattles, hydroseeding, etc.), pot-holing or auguring, boring, grading, trenching, foundation work and other excavations or other ground disturbance involving the moving of dirt or rocks with heavy equipment or hand tools within the project area) shall be monitored on a full-time basis by qualified tribal monitor(s) approved by Middletown Rancheria. The tribal monitoring shall be supervised by the project Tribal Cultural Advisor. Tribal monitoring should be conducted

by qualified tribal monitor(s) approved by Middletown Rancheria, who is defined as qualified individual(s) who has experience with identification, collection and treatment of tribal cultural resources of value to Middletown Rancheria. The duration and timing of the monitoring will be determined by the project Tribal Cultural Advisor. If the project Tribal Cultural Advisor determines that full-time monitoring is no longer warranted, he or she may recommend that tribal monitoring be reduced to periodic spot-checking or cease entirely. Tribal monitoring would be reinstated in the event of any new or unforeseen ground disturbances or discoveries.

c. The project Tribal Cultural Advisor and tribal monitor(s) may halt ground disturbance activities in the immediate area of discovery when known or suspected tribal cultural resources are identified until further evaluation can be made in determining their significance and appropriate treatment or disposition. There must be at minimum one tribal monitor for every separate area of ground disturbance activity that is at least 30 meters or 100 feet apart unless otherwise agreed upon in writing between Middletown Rancheria and the Owner. Depending on the scope and schedule of ground disturbance activities of the project (e.g., discoveries of cultural resources or simultaneous activities in multiple locations that requires multiple tribal monitors, etc.) additional tribal monitors may be required on-site. If additional tribal monitors are needed, Middletown Rancheria shall be provided with a minimum of three (3) business days advance notice unless otherwise agreed upon between Middletown Rancheria and the Owner or Owner's Representative. The onsite tribal monitoring shall end when the ground disturbance activities are completed, or when the project Tribal Cultural Advisor have indicated that the site has a low potential for tribal cultural resources.

d. All on-site personnel of the project shall receive adequate cultural resource sensitivity training approved by the project Tribal Cultural Advisor or his or her authorized designee prior to initiation of ground disturbance activities on the project. The training must also address the potential for exposing subsurface resources and procedures if a potential resource is identified. The Owner or Owner's Representative shall coordinate with Middletown Rancheria on the cultural resource sensitivity training.

e. The Owner or Owner's Representative must meet and confer with Middletown Rancheria, at least 45 days prior to commencing ground disturbance activities on the project to address notification, protection, treatment, care and handling of tribal cultural resources potentially discovered or disturbed during ground disturbance activities of the project. All potential cultural resources unearthed by project activities shall be evaluated by the project Tribal Cultural Advisor. Middletown Rancheria must have an opportunity to inspect and determine the nature of the resource and the best course of action for avoidance, protection and/or treatment of tribal cultural resources to the extent permitted by law. If the resource is determined to be a tribal cultural resource of value to Middletown Rancheria, Middletown Rancheria will coordinate with the Owner or Owner's Representative to establish appropriate treatment and disposition of the resources with appropriate dignity, which may include reburial or preservation of resources. The Owner or Owner's Representative shall facilitate and ensure that the determination of treatment and disposition by Middletown Rancheria is followed to the extent permitted by law. No laboratory studies, scientific analysis, collection, curation, or video recording are permitted for tribal cultural resources without the prior written consent of Middletown Rancheria.

	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 workers to the project site on a temporary basis during construction, and ongoing vineyard operation and maintenance would generate a minimal number of workers to the project site on an ongoing basis. It is anticipated that these workers 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 surface water would provide irrigation water to the vineyard (see the Groundwater Management conditions of approval in **Section X [Hydrology and Water Quality]**). Irrigation pipelines would be located within existing roads, vineyard and vineyard areas and/or within proposed clearing limits.

The proposed project also would include the installation of a limited number of onsite storm water drainage features such as waterbars with rock, a rock-energy dissipater, silt fences and/or straw wattles, and a permanent vineyard cover crop, which have been designed to meet project-related storm water drainage needs. The effect of the proposed storm water drainage features 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.

c. The 16.5 gross acres of vineyard (approximately 13.0 net acres) would be irrigated by an existing groundwater well located within the project site. The project site's total estimated groundwater demand would be 10.21 AF/year. Based on site-specific recharge and analysis the project site is estimated to have a total average annual groundwater recharge of 17.1 AF/year (**Exhibit D**). The project site's estimated groundwater demand of 10.21 AF/year with the proposed project represents approximately 40.3% of the average annual groundwater allotment. Therefore, the proposed project would have a less than significant impact on water supplies. Further, following implementation of **Mitigation Measure BR-5** and **BR-6,** the vineyard size would be reduced from 16.5 gross acres to 11.2 gross acres, which equates to an approximately 32% reduction in gross development area. It can be reasonably anticipated that the groundwater demand would be similarly reduced following implementation of these mitigation measures by approximately 32%, resulting in a revised project groundwater demand of approximately 6.45 AF/y. Water availability and water use are discussed in greater detail in **Section X (Hydrology and Water Quality)**.

c. Given the small number of workers that the proposed project would generate for construction and operation, wastewater generation by the proposed project would not be substantial enough to affect wastewater treatment capacity. The proposed project would generate no wastewater that would require treatment, resulting in no impact on wastewater treatment providers.

d-e. Rock generated during vineyard preparation would be utilized onsite for erosion control measures. Solid waste generated during construction activities (e.g., trash, discarded building materials, debris, etc.) would be negligible and would be cleared daily, or as necessary. 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 Very High Fire Hazard Severity Zone (CalFire, 2007; Napa County GIS CalFire Layers, Fire Protection Responsibility Areas and Fire Hazard Severity Zone). The western portion of the project site consists predominately of wooded areas and slopes greater than 50%. Proposed vineyard development areas are sited on land with slopes ranging from 9 to 24%, with 0.5 acre with slopes greater than 30% (**Exhibit A**). Elevations within the project site range from approximately 480 to 1,240 feet above msl.

a. Project construction and operation would not require any road closures and would not substantially increase traffic in the area compared to current conditions. Existing roads would continue to provide adequate emergency access to the project site. Therefore, the proposed project would not impact an adopted emergency response plan or emergency evacuation plan. Refer to **Section IX (Hazards and Hazardous Materials)** for additional discussion related to emergency access.

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 during project construction. Operation and maintenance activities would be similar to activities already occurring in the project site with the existing vineyard. The proposed project does not include any infrastructure that would exacerbate fire risk. Although the project site is in an area that historically has experienced wildfires, the proposed project would not exacerbate wildfire risk and this impact would be less than significant.

d. Although the proposed project would alter land cover, temporary and permanent erosion control measures would be implemented for the proposed project which would reduce the impact of stormwater runoff or drainage changes being discharged on or offsite and there would not be an increase in peak flow in the development area (see **Section X [Hydrology and Water Quality]**). 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 #P20-00247-ECPA, with the incorporation of identified mitigation measures and conditions of approval (should the proposed project be approved), would not have the potential to significantly degrade the quality of the environment.

Implementation of **Mitigation Measures BR-1** through **BR-6** would avoid potential direct and indirect impacts to Pacific madrone, blue oak and oak woodland habitats, vegetation canopy cover and special-status and protected bird and bat species, American badger, and their habitat. Proposed Blocks 1 would be fenced individually and proposed Blocks 2 and 3 would be fenced together. Given the relatively small size of the project site (relative to existing wildlife corridors), as well as the existing wildlife exclusion fencing owned by neighbors on the northern and eastern parcel lines, agricultural expansion within the project site is in and of itself unlikely to result in any significant impacts to wildlife movement or migration at the landscape linkage scale. While the proposed project (vineyard blocks) would result in portions of the site having reduced potential for on-site wildlife movement, the retention of blocks of vegetation with direct connectivity with similar habitats in the project site and on neighboring properties would allow for continued local wildlife movement. As such, the proposed wildlife exclusion fencing would not introduce any new movement barriers to wildlife and impacts to wildlife movement are expected to be less than significant, and the range of special-status plant species would not be restricted, cumulative impacts are anticipated to be less than significant. The project site contains one intermittent stream and several ephemeral streams. To reduce impacts on water quality within the drainage, the proposed project has been designed to avoid streams with setbacks determined by slope as outlined in NCC 18.108.025 and the streams that do not meet the Napa County definition of a stream have been avoided with a minimum 35-foot setback in accordance with NCC 18.108.025. Further, following implementation of **Mitigation Measure BR-5** and **BR-6**, the project size would be reduced and would result in greater contiguous woodland areas, including those located upslope from drainages. With incorporation of standard conditions and **Mitigation Measure TR-1** to protect tribal cultural resources that may be discovered, significant impacts to cultural resources are not expected (**Section V [Cultural Resources]** and **Section XVIII [Tribal Cultural Resources]**). Therefore, the proposed project as designed with the incorporation of identified mitigation measures and conditions of approval, would have a less than significant potential to degrade the quality of the environment.

b. The project site is located in the Blossom Creek Drainage area, which flows into the Napa River and San Pablo Bay. The Blossom Creek Drainage area contains approximately 1,683.4 acres. In 1993, vineyard acreage within this drainage was approximately 222.9 acres, or 13.2% of the drainage. Since 1993 approximately 124.2 acres of additional vineyard (or 7.4% of the drainage) have been developed to vineyard, resulting in approximately 20.6% of the drainage (or approximately 347.1 acres) containing vineyard.

It is estimated, based on evaluation of the County's GIS layer identifying Potentially Productive Soils within the Blossom Creek Drainage, that there are approximately 484.0 acres (28.8% of the drainage) having the potential to be developed to vineyard. This, in conjunction with existing and approved vineyard development (approximately 347.1 acres), results in a total potential build out of approximately 830.8 acres or approximately 49.4% of the drainage. The Potentially Productive Soils layer includes lands with characteristics that have been found to be suitable for potential future vineyard development; however this total does not take into consideration other site-specific limitations such as water courses requiring setbacks, wetlands, other water features, rare or special-status plants and animal species, or cultural resources, nor does the layer take into account other factors influencing vineyard development, such as sun exposure, soil type, water availability, or economic factors.

While it is not possible to precisely quantify 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., Blossom Creek watershed) over the last 28 years (1993-2022) were used to project an estimation of vineyard development for the next three to five years. Over the past 28 years within the Blossom Creek Drainage, approximately 4.4 acres of agriculture were developed per year (124.2 divided by 28). 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 13.2 to 22 acres over the next three to five years within the Blossom Creek Drainage are considered reasonable estimates. NCC Chapter 18.108 includes policies that require setbacks of 35 to 150 feet from watercourses (depending on slopes), and General Plan Conservation Policy CON-24c that requires the retention of oak woodland at a 2:1 ratio, which limits the amount of potential vineyard acreage that could be converted within the watershed. It has been the County's experience with ECP projects that there are generally site-specific issues, such as oak woodland preservation, wetlands, other water features, special-status plant and animal species, or cultural resources that further reduce areas that can be developed to other land uses. Additionally, the vineyard acreage projections for the next three to five years do not consider environmental factors that influence vineyard site selection, such as sun exposure, soil type, water availability, slopes greater than 30%, or economic factors such as land availability, cost of development or investment returns.

Air Quality and GHG - Sections III and VIII:

The proposed project (#P20-00247-ECPA) includes the removal of vegetation and installation of vineyard and erosion control measures concurrent with other projects in the San Francisco Bay Area Air Basin that would generate emissions of criteria pollutants, including suspended PM and equipment exhaust emissions. For construction-related dust impacts, the Regional Water Board recommends that significance be based on the consideration of the control measures to be implemented (Regional Water Board, May 2017). As discussed in

Section III (**Air Quality**) and shown in **Table 3** (Emissions from Vineyard Development and Operation) criteria pollutant emissions associated with development and operations are anticipated to be well below identified thresholds, and therefore are not expected to result in project or cumulatively significant impacts. Additionally, the proposed project would be subject to standard air quality conditions of approval (should the proposed project be approved) that requires implementation of Air Quality BMPs to further reduce potential less than significant air quality effects of the proposed project and ongoing operation. Conversion of existing vegetation and disturbance of soil would result in releases of carbon dioxide, one of the gasses that contribute to climate change (**Tables 7** and **8**). As discussed in **Section VIII (Greenhouse Gas Emissions)**, the proposed project is not anticipated to result in substantial or significant GHG emissions, and includes the installation of grapevines and a permanent no-till cover crop, which may off-set (in whole or in part) potential impacts related to reductions in carbon sequestration. Potential contributions to air quality impacts associated with the proposed project, including GHG emissions and loss of sequestration, would be considered less than cumulatively significant through project design (i.e., scope and scale) and implementation of standard conditions of approval.

Biological Resources - Section IV:

Project-specific Biological Resources Reconnaissance Surveys (Northwest Biosurvey, Updated September 8, 2020 - **Exhibit B-1**) 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 surveys included database records searches to identify the presence or potential presence of special-status species within the project area. The database records searches included the CNDDB, CNPS, and Napa County databases. As discussed in **Section IV** (**Biological Resources**), waters of the U.S. were identified in the project site outside of the development area. No special-status plant species are present within the development area and seven special-status/protected animal species have the potential to occur within the development; however, with the implementation of **Mitigation Measures BR-1** through **BR-6**, impacts on these species would be less than significant. Therefore, the proposed project would not contribute to a cumulatively significant impact to special-status plants and animals or habitats.

Cultural and Tribal Resources – Sections V and XVIII:

The cultural resources evaluation (Archaeological Resource Service, 2020) identified no cultural resources in the development area. With the incorporation of standard conditions to protect cultural and tribal cultural resources that may be discovered accidently, and implementation of the mitigation measures recommended by Middletown Rancheria in **Mitigation Measure TR-1**, significant impacts to cultural and tribal cultural resources are not expected (see **Section V [Cultural Resources]** and **Section XVII [Tribal Cultural Resources]**). Therefore, with the incorporation of the identified conditions of approval and **Mitigation Measure TR-1**, the proposed vineyard development project would have a less than significant project-specific and cumulative impact on cultural and tribal cultural resources.

Geology and Soils - Section VII:

Soil loss and associated sedimentation resulting from implementation of the proposed project is anticipated to be reduced by approximately 73.50 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 waterbars with rock, a rock-energy dissipater, and silt fences and/or 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 and would implement erosion and runoff control conditions of approval, the proposed project is not anticipated to contribute cumulatively to sediment production within the Blossom Creek watershed. Therefore, impacts associated with soil loss and associated sedimentation are not considered cumulatively significant.

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

Hazards and Hazardous Materials - Section IX:

The proposed project would implement the identified hazardous materials conditions of approval. Impacts associated with the use, storage, and transport of hazardous materials and accidental release of hazardous materials would be less than significant and no cumulative impacts would occur.

Hydrology and Water Quality - Section X:

Water use calculations provided in the WAA prepared by Bartelt Engineering (April 2023 [Revised] - **Exhibit D-1**) indicate that the proposed development consisting of approximately 13.0 net acres of planted vineyard would result in approximately 9.46 AF/year of

additional water use (including heat protection) and 10.21 AF/yr total overall groundwater use for the project site compared to the approximately 2.74 AF/year used under current conditions. The total proposed groundwater demand is less than the annual groundwater recharge estimate of 17.1 AF/y. With the implementation of the identified groundwater management, wells condition of approval in **Section X (Hydrology and Water Quality),** the proposed project would have a less than project-specific and cumulative impact on groundwater levels. Further, following implementation of **Mitigation Measures BR-5 and BR-6**, the project size would be reduced by approximately 32%, resulting in a similar reduction in groundwater demand.

As discussed in **Section X.c (Hydrology and Water Quality)** a Hydrology and Hydraulic Analysis utilizing the TR-55 runoff model has been prepared by Bartelt Engineering (Bartelt Engineering, Revised May 2021 - **Exhibit E**). Because the proposed project does not include new diversions, create concentrated flows, or otherwise alter site drainage patterns, and does not materially alter site slopes, no net increase in runoff volumes or time of concentrations are expected as compared to pre-project conditions (**Exhibit E**). Therefore, no significant impacts due to changes in hydrology are expected.

Not increasing runoff rates is consistent with General Plan Conservation Element Policy CON-50c, which 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 to 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]**). The proposed project would not conflict with the any applicable land use plan, policies, or regulation as mitigated and conditioned.

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, 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 would not result in wasteful, inefficient, or unnecessary energy use, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency or impede progress towards achieving goals and targets. There are no known mineral resource areas within the proposed project site or immediate vicinity. This project would generate noise levels that are considered normal and reasonable for agricultural activities and consistent with the County's "Right to Farm" Ordinance. The potential contribution to noise or vibration impacts is considered less than cumulatively considerable. Traffic related to construction and farm worker trips would not increase by a discernible amount and the relatively low and off-peak vehicle trips associated with the proposed project are considered less than cumulative considerable. The proposed project does not include the construction of structures that would result in population growth or displacement of people and would not adversely impact current or future public services or recreational uses. 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 an Agricultural Watershed zoning district. Therefore, less than significant impacts on human beings are anticipated.

LIST OF FIGURES:

LIST OF TABLES:

LIST OF EXHIBITS: