**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:** Shafer Blodgett Vineyards, Agricultural Erosion Control Plan (ECPA) Application #P20-00117-ECPA

2. **Property Owner(s):** Shafer Vineyards, Shafer Family LLC., and Bradford Shafer Tr.

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

4. **Project Location and APN:** 5096 Silverado Trail, Napa, CA 94558, APNs 039-051-019, -021, -023 and -033 (**Figures 1** and **2**)
   Sections 9 & 10, Township 6 North, Range 4 West, Mt. Diablo Base
   Longitude 38° 22' 42.02" N / Latitude 122° 18' 00.49" W

5. **Project Sponsor:** Shafer Vineyards
   Attn: David Ilsley
   6154 Silverado Trail
   Napa, CA 94558

   **Agent:** James R. Bushey (RPE No. 49931)
   PPI Engineering
   2800 Jefferson Street
   Napa, CA 94558

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

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

8. **Description of Project:** The proposed project involves the clearing of vegetation, earthmoving, and installation and maintenance of erosion control measures and agricultural infrastructure in connection with the development of 28.3 gross acres of vineyard (i.e. development area, project area or proposed clearing limits) with 19.7 net planted acres, within 10 vineyard blocks located on a 215.44-acre holding (i.e. project site). The acreages of each proposed vineyard block is indicated in **Table 1**. Average slopes within the development area range from 14% to 25% with approximately 1.2 acres on slopes over 30%. An estimated 1,708 trees on 14.7 acres are proposed for removal (with 6,205 trees retained outside the development area, or 78%). Rock removed during the clearing and development of the land will be crushed and used in erosion and runoff control devices, and to surface existing roads where needed. There would be no transport of spoils off-site: rock that is not used immediately would be stored at an existing rock disposal area for future use inside the proposed clearing limits. The vineyard would be irrigated with groundwater from existing irrigation wells, with any new irrigation pipelines located in existing roads and vineyard areas, and/or within the proposed clearing limits. New deer fencing would be installed to supplement existing deer fencing in order to fence individual or groups of proposed vineyard blocks (**Exhibit A, Figure 5**).

**Table 1 – Proposed Vineyard Block Acreage**

| Block Number | Gross Acreage | Net Acreage | Block Number | Gross Acreage | Net Acreage |
|---|---|---|---|---|---|
| 2A | 3.5 | 2.0 | 6 | 0.9 | 0.4 |
| 2B | 1.2 | 0.5 | 7 | 4.3 | 3.1 |
| 3 | 1.5 | 1.0 | 8A | 1.8 | 1.2 |
| 4 | 10.1 | 8.2 | 8B | 1.1 | 0.6 |
| 5 | 2.5 | 2.0 | 9 | 1.4 | 0.8 |

**Erosion Control Measures:** Temporary erosion control measures include straw wattles and the application of straw mulch at a rate of 3,000 pounds per acre. Permanent erosion control measures include: rock filed avenues and rock filled level spreaders (used in tandem or individually), rocked crossing over an existing roadside ditch, drop inlets and surface drainage pipelines, the repair and maintenance of existing diversion ditches, and a permanent cover crop maintained at a minimum vegetation cover density of 75% for Blocks 8A and 9, 80% for Blocks 2A, 5 and 7, 85% for 2B, 3, 4, and 8B, and 90% for Block 6. Details of the proposed erosion control measures are provided in the Shafer Vineyards Blodgett Vineyard ECPA, revised September 2020, prepared by James R. Bushey (Registered Professional Engineer No. 49931) of PPI 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 and tree removal, soil ripping, rock removal and storage, disking, 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. Ephemeral and intermittent streams have been provided with a minimum 35 foot setback buffer, and County Definitional Streams pursuant to NCC Section 18.108.030 have been provided stream setback buffers compliant with NCC Section 18.108.025(B), which range from 65 feet to 85 feet. Wetlands have been provided with a 50 foot setback buffer.
b. Installation of vineyard trellis and drip irrigation systems, and planting rootstock in a 5-foot by 7-foot spacing pattern for an approximate vine density of ±1,245 vines per acre.
c. Ongoing inspection and maintenance of temporary and permanent erosion and runoff control measures.
d. Ongoing operation and maintenance of the vineyard, which includes: vine management (pruning, fertilization, pest and disease control, and frost protection), weed control, cover crop mowing, irrigation and trellis system maintenance, and fruit harvesting. Pre-emergent herbicides would not be strip sprayed in the vine rows for weed management. Contact or systemic herbicides may be applied in the spring (no earlier than February 15) to ensure adequate vegetative cover in the spray strips for the remainder of the rainy season. The width of the spray strips would be no wider than 18 inches in order to achieve 75% vegetative cover in Blocks 8A and 9. The width of the spray strips would be no wider than 12 inches in order to achieve 80% vegetative cover in Blocks 2A, 5 and 7. No strip spraying would be performed in Blocks 2B, 3, 4, 6, or 8B.

**Table 2** lists a general schedule for the construction of the proposed project as identified in #P20-00117-ECPA and **Table 3** outlines typical general ongoing vineyard operations. The final implementation schedule is pending action on #P20-00117-ECPA.

**Table 2 – Implementation Schedule**

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

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

**Table 3 – Annual Operations Schedule**

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

Vineyard construction would require six truck trips delivering heavy equipment during the first two weeks of construction and over the last two months of the construction. Up to six passenger vehicle round trips per day would occur during construction. Anticipated construction equipment would include a tractor and disk, excavators, bulldozers, loaders, water truck, and farm tractors with trailers.

Pruning would require up to 12 workers and harvest would require up to 30 workers. Up to six passenger vehicle round trips per day would occur seasonally during operation. Up to two truck round trips per day would occur during harvest. Anticipated equipment for vineyard operations would include a tractor with trailer, a forklift, and ATVs and passenger vehicles and/or light trucks.

Implementation of the proposed project would be in accordance with the Shafer Vineyards Blodgett Vineyard ECPA prepared by PPI Engineering (September 2020 - **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://pbes.cloud/index.php/s/LnPS8Kz2sYAbJYB

**9. Describe the environmental setting and surrounding land uses.**

The project site includes four parcels totaling approximately 215 acres located at 5096 Silverado Trail in Napa, California (**Figures 1-3**). The project site consists of approximately 126 acres of undeveloped land, approximately 77 acres of existing vineyard, a residence, six groundwater wells, ranch and vineyard access roads, and associated infrastructure. Surrounding land uses include rural residential, wineries, and agriculture (livestock grazing and vineyards). The land cover types on the project site include non-native annual grassland, chamise chaparral, blue oak woodland, and coast live oak woodland, seasonal wetland, and streams. Nearly the entire project site was burned in the Atlas Fire of October 2017.

The project site is fenced with wildlife exclusion fencing general around the limits of existing vineyards and residence located on APN 039-051-033 (5096 Silverado Trail), as shown on the ECPA's October 2020 Deer Fence Figure, (PPI Engineering, September 2020: Revised October 2020 - **Exhibit A, Appendix E, Figure 5**).

The project site is approximately 3.5 miles southeast of the Town of Yountville and 6.25 miles north of central Napa. It is situated in the Howell Mountains, southwest of Atlas Peak, within the Soda Creek watershed. The project site contains one intermittent drainage and four ephemeral tributaries. The main drainage runs for the entire wet season and receives groundwater discharge to the channel and dries out by late spring/early summer. It flows from the east and exits on the western edge of the project site where it flows under Silverado Trail and enters Napa River approximately 4,000 feet downstream. The ephemeral streams run during and following rain events.

General topography of the project site is gently to moderately sloped with all aspects represented, and elevations range from approximately 130 to 450 feet above mean sea level (msl). The Soda Creek fault bisects the project site (north-south) and the next closest active fault is the West Napa Fault, approximately 2.5 miles west of the project site (Napa County GIS Faults Layer, and Slade and Associates, March 2020). No landslides or areas of instability have been identified within the development area (Napa County GIS Landslide Layers). Soils on the project site have been classified according to the Soil Survey of Napa County (USDA 1978) as Haire loam, 2 to 9% slopes; Sobrante loam, 5 to 30% slopes; Sobrante loam, 30 to 50% slopes; Hambright-Rock Outcrop complex, 30 to 75% slopes; and Rock Outcrop-Hambright complex, 50 to 75% slopes.

**10. Background**

The proposed project originally included 30.5 gross acres of proposed vineyard (20.9 net acres). The proposed vineyard acreage has since been reduced to 28.3 gross acres (19.7 net acres) through the removal of then proposed Block 1 and an associated stream crossing (from Block 2), and a reduction in the acreage of Block 2A to avoid populations of Nodding harmonia and Greene's narrow-leaved daisy. These revisions also avoided potential direct impacts to foothill yellow-legged frogs (FYLF) as well as reducing potential indirect impacts to potential FYLF habitat.

This application was submitted after the effective date of the Water Quality and Tree Protection Ordinance (WQTPO - Ordinance #1438, effective on May 9, 2019); therefore, processing and review of this application will be subject to the County Conservations Regulations (NCC Chapter 18.108) as amended by the WQTPO.

Because the project parcels were affected by the October 2017 wildfires, pursuant to Napa County Code 8.80.130 (Conservation regulations for fire-damaged properties), the 2018 conditions are used as the baseline for Vegetation Retention Requirements pursuant to Napa County Code (NCC) Section 18.108.020(B). For the purposes of this initial study, any oak woodland areas affected by fire where vegetation was removed for fire safety reasons or debris removal after the October 2017 Wildfires will be considered as oak woodland, in that, this type of removal does not modify or otherwise convert oak woodlands (or associated vegetation mapping units) to something other than oak woodland. No oak trees or oak woodland are known to have been removed from the project parcel as a result of fire safety reasons or debris removal.

**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** | **Other Agencies Contacted** |
|---|---|
| California Department of Fish and Wildlife (CDFW) (T) | Middletown Rancheria |
| Regional Water Quality Control Board (Regional Water Board) (R) | 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 the Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, and Yocha Dehe Wintun Nation on May 1, 2020. The County received a response letter from Yocha Dehe Wintun Nation on May 8, 2020, indicating that the project area is not within the aboriginal territories of the Yocha Dehe Wintun Nation, and the letter requested that correspondence be deferred to the Mishewal Wappo Tribe of Alexander Valley. On May 1, 2020, the County replied to the Yocha Dehe Wintun Nation and closed the consultation invitation because the Tribe did not request consultation and more than 30 days had elapsed since the County's consultation invitation was received.

The Mishewal Wappo Tribe of Alexander Valley and Middletown Rancheria did not request consultation within the 30-day notification period. Because no response to the May 1, 2020 consultation invitation was received, on June 15, 2020, the County sent consultation closure notices to the Mishewal Wappo Tribe of Alexander Valley and Middletown Rancheria. 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 by the applicant and filed by the applicant in conjunction with ECPA #P20-00117-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://pbes.cloud/index.php/s/LnPS8Kz2sYAbJYB

- PPI Engineering Inc., Revised September 2020, Shafer Vineyards Blodgett Vineyard Erosion Control Plan (**Exhibit A**).
- WRA, Inc., January 2020, Biological Resources Reconnaissance Survey Report, 5050 Silverado Trail, St. Helena, Napa County (039-051-019, -021, -023, -033) (**Exhibit B-1**).
- WRA, Inc., August 14, 2020, Response to Comments (Biology) – Shafer Vineyards, Blodgett Vineyard Conversion Agricultural Erosion Control Plan (ECPA) File No. P020-00117-ECPA; 5096 Silverado Trail: APNs 039-051-09, -021, -023, and -033 (**Exhibit B-2**).
- WRA, Inc., October 23, 2020, Response to Comments (Tree Removal) Shafer Vineyards, Blodgett Vineyard Conversion Agricultural Erosion Control Plan (ECPA) File No. P020-00117-ECPA; 5096 Silverado Trail: APNs 039-051-09, -021, -023, and -033 (**Exhibit B-3)**
- PPI Engineering, September 1, 2020, Shafer Blodgett Vineyard Track I ECP, #P20-00117-ECPA, 5096 Silverado Trail APNs 039-051-019, 039-051-021, 039-051-023, and 039-051-033, Revised Soil Loss Analysis (**Exhibit C**).
- Richard C. Slade and Associates LLC, March 24, 2020, Draft Memorandum Re: Results of Napa County Tier 1 Water Availability Analysis, New Vineyard Development, Shafer Vineyards-Blodgett Property, , California (**Exhibit D**).
- PPI Engineering Inc., September 2, 2020, Shafer Blodgett Vineyard Track I ECP, #P20-00117-ECPA, 5096 Silverado Trail, APNs 039-051-019, 039-051-021, 039-051-023, and 039-051-033, Revised Hydrologic Analysis (**Exhibit E**).
- Flaherty Cultural Resource Services, May 3, 2019, Cultural Resource Reconnaissance of 40 +/- Acres, Napa County, California.
- Site inspection conducted by Napa County Planning Division staff (D. Barrella, Planner III) and Engineering Division staff (D. Hornet, Assistant Engineer) on May 14, 2020.
- Napa County Geographic Information System (GIS) sensitivity maps/layers.

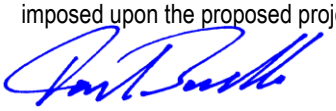
☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ 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

November 19, 2021
Date

Donald Barrella
Printed Name

Napa County Planning, Building and Environmental Services

## ENVIRONMENTAL CHECKLIST FORM

| | | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **I.** | **AESTHETICS.** Except as provided in Public Resources Code Section 21099, would the project: | | | | |
| | a) Have a substantial adverse effect on a scenic vista? | ☐ | ☐ | ☒ | ☐ |
| | b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | ☐ | ☐ | ☒ | ☐ |
| | c) 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. A portion of the project site (APN 039-051-021) borders Silverado Trail, which is a Napa County-designated scenic roadway (Napa County General Plan, 2008). This parcel includes existing vineyard land; the use is consistent with the Napa County General Plan designation for the site and it would remain vineyard land after the project is implemented. While construction equipment and activities at the project site may disrupt views from the county-designated scenic roadway, visual impacts related to construction would be short-term and temporary in nature.

A majority of the project site is also within the GIS "Scenic Corridor" buffer. This project is consider an agricultural infill project, as existing vineyards are located within and surrounding the project site. Only minor topographic modifications would be necessary to install and sustain the proposed vineyard blocks. 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 or minor ridgeline (Napa County GIS, Ridgelines Layer) and there are no historic buildings on the site. There are no significant rock outcroppings or geologic features on the project site that would be impacted by the project. Therefore, for the reasons described above the proposed project would have a less than significant impact on a scenic vista, scenic highway, or scenic resources such as historic buildings, scenic trees, or rock outcrops.

c. The proposed project would result in the removal of existing vegetation within the development area and it includes the development of new vineyard. The proposed project is consistent with the Napa County AWOS and Agricultural Resource land use designations 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, 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 on the project site would require some lighted nighttime activities consistent with the nighttime activity already occurring on the project site and in the surrounding area, which includes vineyard and agricultural uses. Lighting would be in the form of headlights or downward direction lights on equipment being used during nighttime harvest. The proposed project would include harvest activities (typically occurring in September and October), that could include nighttime activity (typically from 3 a.m. to 6 a.m.). The proposed project would include sulfur applications (that could occur from 3 a.m. to 6 a.m.) approximately 8 times per year. Although some nighttime activity would occur for limited periods, the proposed project would not introduce a new source of substantial light or glare, and the type of nighttime lighting would be consistent with surrounding land uses. Therefore, the proposed project would result in a less than significant impact.

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **II. AGRICULTURE AND FOREST RESOURCES.** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project: | | | | |
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide 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 California Department of Conservation's Important Farmland Finder identifies the project site as Unique Farmland, Farmland of Statewide Importance, and Grazing Land. The proposed project includes vineyard development within land that is already designed as Important Farmland as well as land that is Grazing Land, resulting 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 AWOS and Agricultural Resources General Plan designations and is zoned Agricultural Watershed (AW). Therefore, the establishment of vineyard totaling approximately 28.3 gross acres (19.7 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, the proposed project would not conflict with its land use designation or a Williamson Act contract, resulting in no impact.

c-d. "Forest Land" is defined in California Public Resource Code Section 12220(g) as "land that can support 10% native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." The project site does not contain forest land or coniferous forest (Napa County GIS). 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 (BAAQMD) Board of Directors unanimously adopted thresholds of significance to assist in the review of projects under the California Environmental Quality Act (CEQA). These guidelines were updated in May 2017 to address the California Supreme Court's 2015 opinion in Cal. Bkdg. Indus. Ass'n vs. Bay Area Air Quality Mgmt. Dist., 62 Ca 4th 369. These thresholds are designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA, and were posted on the BAAQMD website and included in the BAAQMD updated CEQA Guidelines (BAAQMD CEQA Guidelines, May 2017). The thresholds are advisory and may be followed by local agencies at their own discretion.

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

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

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

a-b. The project site is generally situated on the hillsides of Howell Mountain, southwest of Atlas Peak on the eastern 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 construction equipment, and vehicular haul and worker trips. In the long term, potential air quality impacts would likely result from ongoing activities associated with the operation and maintenance of the proposed vineyard. Operational-related emissions, which are seasonal in nature, are primarily generated from vehicular trips associated with workers going to and from the site and equipment necessary for ongoing vineyard maintenance. Refer to **Section XVII (Transportation)** for the anticipated number of construction- and operation-related trips.

The impacts associated with implementation of the proposed project were evaluated consistent with guidance provided by BAAQMD. Ambient air quality standards have been established by state and federal environmental agencies for specific air pollutants most pervasive

in urban environments. These pollutants are referred to as criteria air pollutants because the standards established for them were developed to meet specific health and welfare criteria set forth in the enabling legislation. The criteria air pollutants emitted by development, traffic, and other activities anticipated under the proposed development include ozone ($O_3$), ozone precursors oxides of nitrogen and reactive organic gases ($NO_x$ and ROG), carbon monoxide (CO), nitrogen dioxide ($NO_2$), and suspended PM of ten micrometers or less and two and a half micrometers or less ($PM_{10}$ and $PM_{2.5}$). Other criteria pollutants, such as lead (Pb) and sulfur dioxide ($SO_2$), would not be substantially emitted by the proposed development or associated traffic, and air quality standards for them are being met throughout the Bay Area.

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

The thresholds of significance identified in **Table 4** are consistent with the BAAQMD CEQA Guidelines, and are used to determine if an air quality impact would be significant.

In order to assess potential air quality and GHG emissions, a review of the emissions analysis associated with vineyard development/construction and operations performed for three certified Environmental Impact Reports (EIR) in Napa County was completed: Suscol Mountain Vineyards[1] for an approximately 560-acre vineyard development, Walt Ranch Vineyard[2] for an approximately 507-acre vineyard development, and Circle-S Ranch Vineyards[3] for an approximately 400-acre vineyard development[4].

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

**Table 4** shows the approximate anticipated construction emissions associated with the development of vineyards of the sizes described above. Also shown in **Table 4** 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.

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

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

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

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

**Table 4 – Emissions from Vineyard Development and Operation**

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

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

Because the proposed project's 28.3 gross acre vineyard 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 4** and therefore below identified thresholds. Additionally, project approval, if granted, would be subject to the standard Air Quality condition described below, which includes standard air quality and construction best management practices (BMPs) consistent with BAAQMD measures identified in Table 8-2 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. Additionally, potential air quality impacts are anticipated to be less that disclosed with implementation of **Mitigation Measure BR-1,** which would reduce project by 1.8-acres.

**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 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[5] or the PERP website[6].

Installation of the proposed project is expected to generate emissions that are below the thresholds presented in **Table 4**, 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 4** during both installation and operation (see **Section XVII [Transportation]** for anticipated project trips). Therefore,

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

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

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.

Land uses adjacent to the project site include agriculture (vineyards and livestock grazing), wineries and rural residences, with a majority of the land located to the north and east of the project site being relatively undeveloped. The project site consists of approximately 215 acres of land with approximately 126 acres of undeveloped areas and approximately 77 acres of existing vineyard, a residence, ranch roads, groundwater wells, and associated ranch infrastructure. The closest schools are located approximately 2.5 miles south (Sunrise Montessori-Napa Valley School) within the City of Napa and approximately 3.6 miles northwest of the project site (Yountville Elementary School) in the Town of Yountville (Napa County GIS, Schools Layer). The closest offsite residences are located approximately 400 feet of proposed vineyard Block 2B (to the east), Block 4 and Block 9 (to the west). The closest residential area is the City of Napa located approximately 2.8 miles south of the project site (as measured to the city limits).

During installation of the ECPA, 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 2.8 miles from the closest residential neighborhood, providing dilution of pollutants and odors. For the reasons identified above, the proposed project would not expose sensitive receptors or a substantial number of people to pollutants or objectionable odors, resulting in a less than significant impact.

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **IV. BIOLOGICAL RESOURCES.** Would the project: | | | | |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | ☐ | ☒ | ☐ | ☐ |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service? | ☐ | ☒ | ☐ | ☐ |
| c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | ☐ | ☒ | ☐ | ☐ |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | ☐ | ☐ | ☒ | ☐ |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | ☐ | ☐ | ☒ | ☐ |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | ☐ | ☐ | ☐ | ☒ |

**Discussion**

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

- WRA, Inc., January 2020, Biological Resources Reconnaissance Survey Report, 5050 Silverado Trail, St. Helena, Napa County (039-051-019, -021, -023, -033) (**Exhibit B-1**)
- WRA, Inc., August 14, 2020, Letter Re: Response to Comments (Biology) – Shafer Vineyards, Blodgett Vineyard Conversion Agricultural Erosion Control Plan (ECPA) File No. P020-00117-ECPA; 5096 Silverado Trail: APNs 039-051-09, -021, -023, and -033 (**Exhibit B-2**)

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

WRA conducted an assessment of biological resources on the project site on April 11, 12, June 7, and December 19, 2018. At the time of the WRA surveys, the proposed project included 30.5 gross acres of proposed vineyard (20.9 net acres). The proposed vineyard acreage has since been reduced to approximately 28.3 gross acres (approximately 19.7 net acres) through the removal of proposed Block 1 and an associated stream crossing, and a reduction in the acreage of Block 2A to avoid populations of Nodding harmonia and Greene's narrow-leaved daisy: the areas removed from the original design/proposal are shown on Plan Sheets 1 and 2 in **Exhibit A**. These project reductions also resulted in the avoidance of approximately 1 acre of Nodding harmonia (including an approximate 0.06-acre population of Greene's narrow-leaved daisy); the avoidance of approximately 0.25-acres of oak woodland containing approximately 15 to 20 trees, and the avoidance and minimization of potential impacts to foothill yellow-legged frogs (FYLF) and its potential habitat.

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, 2018b; USFWS, 1996). Plants were identified using Baldwin et al. (2012) and Jepson Flora Project (Jepson eFlora, 2020) 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 CNDDB (CDFW, 2020a), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS, 2020a), and the USFWS List of Federal Endangered and Threatened Species (USFWS, 2020b) that may be affected by projects in the Saint Helena, Chiles Valley, Lake Berryessa, Rutherford, Yountville, Capell Valley, Sonoma, Napa, and Mount George quadrangles.

The project site consists of the following biological communities (or habitat types): non-native annual grassland, chamise chaparral, interior live oak woodland, blue oak woodland, seasonal wetlands, and developed land. Oak woodland and wetlands are considered sensitive habitat types. The habitats and their acreages are shown in **Table 5**.

**Table 5 – Biological Communities and Habitat Types on the Project Site**

| Biological Communities or Habitat Type | Approximate Pre-Project Conditions (acres) |
|---|---|
| Developed | 91.07 |
| Non-Native Annual Grassland | 15.45 |
| Chamise Chaparral | 7.03 |
| Blue Oak Woodland | 18.6 |
| Coast Live Oak Woodland | 83.99 |
| Seasonal Wetland | 0.74 |
| **Total** | **216.88**[7] |

Source: WRA, August 2020 (Exhibit B-2)

a. Special-Status Plants: Based upon a review of the resources databases listed in **Exhibit B-1**, 82 special-status plant species have been documented in the vicinity of the project site, 28 of which have the potential to occur in the project site. Occurrence records of these species in CNDDB within a 3-mile radius of the project site are depicted in **Exhibit B-1** Figure A-2. Results of a protocol-level plant survey determined that three special-status plant species are present within the project site: Greene's narrow-leaved daisy (*Erigeron greenei*), nodding harmonia (*Harmonia nutans*), and green monardella (*Monardella viridis*) (**Exhibit B-1**). Greene's narrow-leaved daisy is a CNPS California Rare Plant Rank (CRPR) List 1B species, which is considered "Rare, Threatened, or Endangered in California and Elsewhere" and are fairly threatened in California (i.e., moderate degree/immediacy of threat). Nodding harmonia and green monardella are CRPR List 4 species, meaning that they are of limited distribution or infrequent throughout a broader area of California; although they are not considered under CEQA, impacts to these species may be considered sensitive by Napa County.

   CRPR List 1B species meet the definition of Section 1901, Chapter 10 of the Native Plant Protection Act, or Sections 2062 and 2067 of the California Endangered Species act of the California Fish and Game Code (CFGC), and are eligible for state listing. While Greene's narrow-leaved daisy are not state or federally listed species at this time, this species and its associated habitat are of limited distribution locally within Napa County and warrant protection through applicable General Plan Goals and Policies. Protecting the continued presence of special-status species, including special-status plants, special-status wildlife, and their habitats is encouraged by Napa County General

[7] The project site acreage total identified in **Tables 5** and **6** differ slightly from the total identified on County Assessor's Parcel Maps (215 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.

Plan Goal CON-3.[8] Additionally, pursuant to Napa County General Plan Policy CON-13,[9] the County shall require that all discretionary agricultural projects consider and address impacts to wildlife habitat and avoid impacts to habitat supporting special-status species to the extent feasible, and where impacts to special-status species and their habitat cannot be avoided, projects shall include effective mitigation measures and management plans to provide protection for habitat supporting special-status species through buffering or other means, and enhance existing habitat values particularly for special-status species through restoration and replanting as part of the project or its mitigation.

Greene's narrow-leaved daisy is a perennial forb in the sunflower family (Asteraceae) that blooms from May to September. It typically occurs on rocky substrate derived from volcanics or serpentine within shrubby vegetation in chaparral habitat at elevations ranging from 260 to 3,270 feet above msl. Approximately 15 individuals (covering approximately 0.06 acres) in three subpopulations are located in the project site. One subpopulation was located in proposed Block 2A as originally designed, but the proposed project was redesigned to retain the entire population and provide it with a 25 foot buffer; therefore no Greene's narrow-leaved daisy are located in the development area (WRA, January 2020 – **Exhibit B-1**; WRA, August 2020 – **Exhibit B-2**).

Nodding harmonia is an annual forb in the sunflower family (Asteraceae) that blooms from March through May. It typically occurs on rocky or gravelly substrates derived from volcanic rock within chaparral and cismontane woodland habitat at elevations ranging from 240 to 3,170 feet above msl. Approximately 11,815 individuals (covering approximately 4.96 acres) in six subpopulations are located in the project site. One subpopulation was located in Block 1 as originally designed, but the proposed project was redesigned to eliminate Block 1, which resulted in the retention of 0.05 acres of this plant species. Additional nodding harmonia individuals (covering approximately 0.95-acres) were also retained when proposed Block 2A was redesigned to avoid the Greene's narrow-leaved daisy. Approximately 2.32 acres of nodding harmonia are located in the development area (WRA, January 2020 – **Exhibit B-1**; WRA, August 2020 – **Exhibit B-2**).

Green monardella is a perennial forb in the mint family (Lamiaceae) that blooms from June through September. It typically occurs on serpentine substrates in chaparral, cismontane woodland, and broadleaf upland forest habitat at elevations ranging from 325 to 3,285 feet above msl. Approximately 21 individuals (covering approximately 0.004 acre) in three subpopulations are located in the project site, with about five individuals occurring within the eastern vineyard avenue (turn around area) of Block 4 and the center of Block 5 (covering approximately 0.002 acre) (WRA, January 2020 – **Exhibit B-1**; WRA, August 2020 – **Exhibit B-2**). The third population is located approximately 300 feet east of Block 5.

The project as proposed would remove approximately 25% of the green monardella population and 47% of the nodding harmonia population occurring within the project site. This would be a significant impact as a result of the project given the rarity of Green monardella and extent of Nodding harmonia removal in relation to its occurrence and distribution within the project site (also see **Tables 6** and **6A** and the discussion below). The removal of these special-status plant species and their habitat would also be inconsistent with the following Napa County General Plan Conservation Element Goals and Policies and Zoning Ordinance: General Plan Goal CON-3 as it does not protect for the continued presence of special-status plant species or its habitat; Policy CON-13 in that impacts to special-status habitat can be avoided while allowing for up to approximately 26.5 acres of agriculture on the project site (as further disclosed and assessed below); Policy CON-17[10] because the removal and disturbance of a sensitive natural plant community that contains special-status plant species is not prevented; and, the purpose and intent of the Conservation Regulations (NCC Chapter 18.108) in that it does not preserve natural habitat or existing vegetation, and adversely affects sensitive, rare, threatened or endangered plants. This would also be a significant impact.

Furthermore, because the project site's oak woodland, grassland, and chamise chaparral habitats (or biological communities) contain special-status species (Greene's narrow-leaved daisy, nodding harmonia and green monardella), these habitats are also considered to be potential special-status species habitat, because they contain the biological and ecological characteristics necessary to support these plant species, in addition to containing the special-status plant species populations and individuals. The project site contains approximately 83.99 acres of coast live oak woodland, with approximately 17.61 acres (approximately 21%) occurring within the development area. The project site contains approximately 18.6 acres of blue oak woodland, with approximately 2.97 acres (approximately 16%) occurring within the development area. The project site contains approximately 7.03 acres of chamise chaparral, with approximately 4.30 acres (approximately 61%) occurring within the development area. The project site contains approximately 15.45 acres of non-native annual grassland, with approximately 2.97 acres (approximately 19%) occurring within the development area. The project as proposed would remove approximately 27.85 acres of the project site's approximately 215 acres (or approximately 13%) of potential special-status plant

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

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

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

species habitat. This, in conjunction with the removal of approximately 25% to 47% of the individual special-status plants and/or populations within the project site (as detailed above) would be a significant impact.

Specific to oak woodland, 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 habit, slope stabilization, soil protection and species diversity. Policy CON-24c[11] specifically calls for the preservation of oak woodland (on an acreage basis) at a 2:1 ratio. The project site contains approximately 102.59 acres of oak woodland, with 20.58 acres occurring in the development area. In order to maintain 2 acres preserved for 1 acre impacted in compliance with Policy CON-24c, 2:1 preservation ratio, approximately 34.20 acres can be converted to vineyard to comply with this policy. The proposed project would retain/preserve more than the 2 acres for each acre impacted; therefore, the project is consistent with the policy. See **Mitigation Measure BR-1** and question e below for further discussion.

To reduce potential impacts to special-status species and associated habitat to a less than significant level **Mitigation Measure BR-1** will be implemented. The acreages of each biological community (or habitat type) and the approximate number of each special-status plant species to be removed within the development area as a result of implementation of **Mitigation Measure BR-1** are listed in **Table 5**. The overall effects to the footprint of implementation of **Mitigation Measure BR-1** are show in **Figure 4 (Mitigated Project Map)**.

**Table 6 – Retention of Biological Communities and Special-Status Species with Proposed Project[12]**

| Biological Feature | Total Acres in the Project Site | Proposed Vineyard Blocks | | Mitigated Vineyard Blocks | |
|---|---|---|---|---|---|
| **Special-status plants** | | **Acreage** | **% Retention** | **Acreage** | **% Retention** |
| Green monardella | 0.004 | 0.001[1] | 75% | 0.001[2] | 75% |
| Greene's narrow-leaved daisy | 0.06 | 0.00 | 100% | 0.00 | 100% |
| Nodding harmonia | 4.96 | 2.32 | 53% | **1.42** | 71% |
| **Biological Communities** | | **Acreage** | **% Retention** | **Acreage** | **% Retention** |
| Developed | 91.07 | 0.49 | 100% | 0.49 | 100% |
| Non-Native Annual Grassland | 15.45 | 2.97 | 81% | 2.97 | 81% |
| Chamise Chaparral | 7.03 | 4.30 | 39% | **3.6** | 49% |
| Blue Oak Woodland | 18.6 | 2.97 | 84% | 2.97 | 84% |
| Coast Live Oak Woodland | 83.99 | 17.61 | 79% | 17.61 | 79% |
| Seasonal Wetland | 0.74 | 0.00 | 100% | 0.00 | 100% |

[1] Containing two population(s)
[2] Containing one population(s)
Source: WRA, January and August 2020 (**Exhibit B-1** and **B-2**).

To reduce potential impacts to special-status plant species to a less than significant level, **Mitigation Measure BR-1** would be implemented to avoid and retain special-status plant species and associated habitat, in particular Green monardella and Nodding harmonia and its habitat as further described below and shown in **Table 6A** (Occupied and Potential Special-status Plant Habitat Area). Given the rarity of Green monardella and extent of Nodding harmonia removal in relation to its occurrence and distribution within the project site, the subpopulation of green monardella in Block 4 would be removed from the development area and would be protected with a minimum 25-foot buffer and encompassing 0.9-areas of associated chaparral habitat[13], and 0.9-acers of occupied nodding harmonia habitat located at the western end of Block 2A of the would be removed from the development area. The areas removed as a result of this mitigation measure would be preserved in a special-status plant Habitat Preservation Area, in addition to the nodding harmonia located in previously proposed Block 1 boundary, the nodding harmonia and Greene's narrow-leaved daisy avoided by the revised Block 2A boundary, and the green monardella avoided by mitigation and located east of Block 5. The special-status plant Habitat Preservation Area shall include a combination of no less than 4.26 acres of occupied and suitable habitat to achieve a 3:1 removal preservation ratio for the removal of 1.42 acers of Nodding harmonia.

[11] Policy CON 24(c): Provide replacement of lost oak woodlands or preservation of like habitat at a 2:1 ration when retention of existing vegetation is found to be infeasible. Removal of oak species limited in distribution shall be avoided to the maximum extent feasible.
[12] The acreages identified in **Table 5** may differ slightly from acreages identified in the ECPA (**Exhibit A)** due to, mapping platforms, spatial characters, rounding, differences between canopy cover and land cover type mapping, and project revisions. Because approximate biological/plant communities and project acreages have been corroborated through County GIS mapping, the values disclosed herein are considered by the County to be adequate for CEQA review and disclosure purposes of the subject application
[13] Chaparral is a preferred habitat type for all the sensitive plant species found within the project site. Avoided chaparral habitat can be discontinuous.

With respect to special-status plant species habitat, a more specific study of potential plant habitat occurring on the project site shows that the project as designed avoids approximately 62% to 70% of the identified special-status species habitat (**Exhibit B-2** and **Table 6A**: WRA August 2020). The proposed project with implementation of **Mitigation Measure BR-1** would not only result in the avoidance of approximately 70% to 100% of the special-status plants on the project site, it would also avoid at least 70% of their identified habitats on the project site. Retention of the special-status plants and connected habitat within the project site, as proposed and mitigated are expected to maintain viable populations both on the property and more broadly in the region, and reduce potential cumulative impacts to a less than significant level (also see the discussion under question d below).

**Table 6A - Occupied and Potential Special-status Plant Habitat Area**

| Species | Occupied Habitat | Potential Habitat | Proposed Removed Habitat[1] | Proposed Remaining Habitat | Mitigated Remaining Habitat |
|---|---|---|---|---|---|
| green monardella | 0.004 acre | 48.87 acres | 15.62 acres | 33.25 acres<br>68% | 34.15 acres<br>69.9% |
| Greene's narrow-leaved daisy | 0.06 acre | 10.81 acres | 4.12 acres | 6.69 acres<br>62% | 7.59 acres<br>70.2% |
| nodding harmonia | 4.96 acres | 39.88 acres | 12.02 acres | 27.86 acres<br>70% | 28.76 acres<br>72% |

[1] Identified habitats my overlap.
Source: WRA, August 2020 (**Exhibit B-2**).

To reduce potential impacts to potential special-status species habitat, and to reduce impacts to the oak woodland biological community to a less than significant level, and comply with Napa County General Plan Conservation Element Policy CON-24 (discussed further under question e), **Mitigation Measure BR-1** would be implemented to. The project site contains approximately 102.59 acres of oak woodland. In order to maintain 2 acres preserved for 1 acre impacted in compliance with Policy Con 24(c) (2:1 preservation ratio), 41.16 acres would be preserved as a result of removal of 20.58 acres located in the development area (clearing limits).

Implementation of **Mitigation Measure BR-1** would reduce impacts to special-status plant species and associated habitat, and oak woodland to a less than significant level in that it would: i) avoid approximately 80% of the project site's oak woodland special-status plant species habitat and preserve approximately 40%, ii) avoid and preserve approximately 71% to 100% of the project site's special-status plant populations/individuals, iii) result in consistency with General Plan Goal CON-3, Policies CON-13 and CON-17, and Conservation Regulations (NCC Chapter 18.108), because it would preserve the special-status plants and their habitat, and iv) result in consistency with Goal CON-2[14] because it would assist in maintaining the existing level of biodiversity in the County, as well as contribute to minimization of potential cumulative impacts associated with the loss of special-status plant species and associated habitat due to agricultural conversion projects. Implementation of this mitigation measure would also effectively offset the loss of special-status plants and habitat located within the mitigated project; therefore, plant replacement is not included in this measure. Measure **BR-1(e)** would be implemented in conjunction with **Mitigation Measure BR-4** to provide permeant protection of special-status species habitat, oak woodland, and vegetative cover canopy consistent with the Conservation Regulations and applicable General Plan Goals and Policies, and would preserve in total 44.1 acers of cover canopy that includes 41.16-acres of oak woodland and associated special-status plant species habitat. Under this mitigation measure preserved oak woodland, vegetation cover canopy and special-status plant habitat may overlap.

Furthermore, implementation of **Mitigation Measure BR-1** would not substantially affect the feasibility of the proposed project or the continued viability of agricultural use of the project site, in that it would allow the owner/permittee to develop approximately 26.5 gross acres of new vineyard on the approximately 215 acre project site.

**Mitigation Measure BR-1:** The owner/permittee shall implement to following measures to minimize and avoid potential impacts to special-status plant species and their habitat (i.e., green monardella, Greene's narrow-leaved daisy, nodding harmonia, and Chamise Chaparral), and to oak woodlands. Under this mitigation measure preserved oak woodland, vegetation cover canopy and special-status plant habitat may overlap:

a. Revise Erosion Control Plan #P20-00117-ECPA prior to approval consistent with the modified block configuration as shown in the Napa County Mitigated Project Figure (**Figure 4**) to i) avoid the subpopulation of green monardella in Block 4 and provide it with a minimum 25-foot setback and avoids no less than 0.9-acers of associated Chamise chaparral habitat (avoided habitat can be discontinuous); ii) avoid no less than 0.9-acers of occupied nodding harmonia habitat located at the western end of Block 2A, and ii) modify proposed wildlife exclusion fencing layout to limit any new wildlife exclusion fencing to the periphery of Blocks 2A and 4 as modified by this mitigation measure.
b. Revise Erosion Control Plan #P20-00117-ECPA prior to approval to i) identify a special-status plant Habitat Preservation Area consisting of combination of no less than 4.26 acres of occupied and suitable habitat that includes the nodding harmonia and

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

Greene's narrow-leaved daisy avoided in Block 2A, and the green monardella avoided in Block 4 pursuant to **Mitigation Measure BR-1(a)**, the nodding harmonia outside the previously proposed Block 1 boundary, and the green monardella east of Block 5, and ii) identify a 41.16 acre Oak Woodland Preservation Area on the project site.

c. The special-status plants and associated habitat in the special-status plant Habitat Preservation Area, as specified and shown on #P20-00117-ECPA, shall be flagged in the field by a qualified biologist or the project engineer, and protective construction fencing shall be installed along the boundary. Construction fencing shall be inspected and approved by the County prior to the commencement of vegetation removal and earth-disturbing activities. No equipment or work shall be allowed within the plant habitat avoidance area. The protective construction fencing shall be maintained and remain in place until all grading and erosion control measure installation are complete.
d. The protective constructive fencing shall be replaced with a permanent means of demarcation and protection around the habitat area (such as permanent fence or rock barrier) so that the plant avoidance area is not encroached upon or disturbed as part of ongoing vineyard operations.
e. The owner/permittee shall implement the following measure to permanently preserve special-status plant species and associated habitat within the project holding, and to comply with Policy CON-24(c), 2:1 preservation ratio. The special-status plant Habitat Preservation Area and the 41.16-acre Oak Woodland Preservation Area shall be designated for preservation in a mitigation easement with an organization such as the Land Trust of Napa County as the grantee, or other means of permanent protection acceptable to the County. Land placed in protection shall be restricted from development and other uses that would degrade the quality of the habitat (including, but not limed to conversion to other land uses such as agriculture or urban development, and excessive off-road vehicle use that increases erosion) and should be otherwise restricted by the existing goals and policies of Napa County. The owner/permittee shall record the mitigation easement within 60 days of approval of #P20-00117-ECPA by the County; however, in no case shall the ECPA be initiated until said mitigation easement is recorded.
f. In accordance with Napa County Code Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) any green monardella, Greene's narrow-leaved daisy, or nodding harmonia plants/populations inadvertently removed as a result of vineyard development authorized under # P20-00117-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 the special-status plans specie(s) being removed including sizes and/or application rates: seed mixes shall not contain species known to be noxious weeds 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) and monitoring schedule for a period of at least three years to ensure success criteria are met.

Special-Status Animals: A total of 58 special-status wildlife species have been documented in Napa County. Four of these species have a moderate or high potential to occur within the project site: foothill yellow-legged frog (*Rana boylii*), pallid bat (*Antrozous pallidus*), fringed myotis (*Myotis thysanodes*), and white-tailed kite (*Elanus leucurus*). One foothill yellow-legged frog was observed on the project site during the April 2018 survey. 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.

Foothill yellow-legged frog historically occurred in coastal and mountain stream from southern Oregon to Los Angeles County, but has declined in many parts of this range. This species is strongly associated with rivers and perennial creaks, and prefers shallow, flowing water with a rocky substrate. Foothill yellow-legged frog individuals do not typically move overland and are rarely observed far from a source of permanent water (typically less than ten feet). Aquatic breeding sites are in-stream, often near confluences, with eggs typically deposited behind or sometimes under rocks in low-flow areas with cobble and/or gravel (Thomson et al. 2016). Metamorphosis takes at least 15 weeks. The lower reach of the intermittent stream within the project site provides a rocky substrate and may be occupied when the stream is flowing; any individuals present would presumably retreat downstream when flow ceases. The lower portion of the intermittent stream may support breeding, but the upper reaches likely draw down too early in the season to support breeding. During the April 2018 survey, one adult was observed in a sizable pool in the lower reach of the northern intermittent stream located north of Block 2A. Since the survey, the proposed project was redesigned to eliminate Block 1 and the associated stream crossing and proposed Block 2A was redesigned to avoid the Greene's narrow-leaved daisy, which reduces the potential to directly impact to foothill yellow-legged frog because the frogs rarely stray from the wetted portions of channels and stream setbacks (WRA, January 2020 – **Exhibit B-1**; WRA, August 2020 – **Exhibit B-2**). However, given their potential to be within the proximity of the project area there is the potential to impact foothill yellow-legged frog, which is considered a significant impact.

Pallid bats are distributed from southern British Columbia and Montana to central Mexico, and east to Texas, Oklahoma, and Kansas. This species occurs in a number of habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous forests. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of manmade structures, including vacant and occupied buildings. Tree roosting has been documented within snags and basal hollows of conifers, and within bole cavities in oak trees. Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight. Prey items include arthropods such as scorpions, ground crickets, and cicadas in flight (WBWG, 2020). Trees within the project site may contain cavities or snags

suitable for roosting by this species, and there are CNDDB occurrences in the vicinity (CDFW, 2020a). The species and bat roosting habitat were not observed during a daytime roost survey that assessed all trees and substrates within the development area (WRA, January 2020 – **Exhibit B-1**; WRA, August 2020 – **Exhibit B-2**). No significant impacts to special-status bat species would occur.

Fringed myotis ranges through much of western North America from southern British Columbia, Canada, south to Chiapas, Mexico and from Santa Cruz Island in California, east to the Black Hills of South Dakota. The species occurs in a number of habitats ranging from desert scrubland, grassland, sage-grass steppe, old growth forest and subalpine coniferous and mixed deciduous forest. Oak and pinyon-juniper woodlands are most commonly used. The fringed myotis roosts in colonies from 10 to 2,000 individuals, although large colonies are rare. Caves, buildings, underground mines, rock crevices in cliff faces, and bridges are used for maternity and night roosts, while hibernation has only been documented in buildings and underground mines. Tree-roosting has also been documented in Oregon, New Mexico, and California (WBWG, 2020). The trees within the project site may contain cavities or exfoliating bark suitable for roosting. The species and bat roosting habitat were not observed during a daytime roost survey that assessed all trees and substrates within the development area (WRA, January 2020 – **Exhibit B-1**; WRA, August 2020 – **Exhibit B-2**). No significant impacts to special-status bat species would occur.

White-tailed kite is resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities (Dunk, 1995). Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk, 1995). This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates. The project site and adjacent areas provide suitable year-round habitat for white-tailed kites, including stands of oaks for nesting and open areas in close proximity for foraging. This species was not observed during the reconnaissance-level biological survey; however, a bird survey was not specifically performed (WRA January 2020 – **Exhibit B-1**). Potential direct and indirect impacts to white-tailed kite would be significant.

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. These are considered potentially significant impacts.

To reduce potentially indirect significant impacts to foothill yellow-legged frog and special-status bird species as a result of the project to a less than significant level, **Mitigation Measures BR-2** and **BR-3** would be implemented to include a pre-construction foothill yellow-legged frog survey and measures to avoid impact to the species and a pre-construction nesting bird survey and measures to avoid any nests with an exclusion buffer.

**Mitigation Measure BR-2:** The owner/permittee shall revise Erosion Control Plan #P20-00117-ECPA prior to approval to include the following measures to minimize impacts associated with the potential to foothill yellow-legged frog:

a. A qualified biologist (defined as having demonstrable qualifications and experience with the particular species for which they are surveying) shall conduct a pre-construction survey to identify determine if the streams in the project site are wetted. The survey shall be conducted at least 14 days in advance of project initiation. A copy of the survey findings shall be provided to the Napa County Conservation Division and CDFW prior to commencement of work.
b. If the streams are wetted during the pre-construction survey, the qualified biologist shall conduct two surveys along the intermittent and ephemeral streams at least 14 days prior to project initiation. The surveys must have remarkably different light angles (e.g., early morning and early afternoon), but can be conducted on the same day. Survey areas (streams) will be systematically walked upstream, zig-zagging between the bank and the thalweg in wide areas, and bank-to-bank in narrow areas. All areas along the streams that could support frogs will be searched, including rocks, ledges, woody debris, overhanging vegetation, etc. as well as accessible natural cover within 50 feet of the wetted perimeter where frogs could be present. The qualified biologist will use binoculars to reduce disturbing frogs and flashlights for searching darkened crevices and shaded areas. Slow-moving and/or still waters will be closely inspected for the presence of tadpoles. If no foothill yellow-legged frogs are present during the pre-construction survey, no additional measures are warranted.
c. If foothill yellow-legged frogs are present, one daytime survey shall be completed within 48 hours of project initiation. If foothill yellow-legged frogs are or will likely be present at the time of ground-breaking, protective measures such as installation of exclusion fencing, presence of an on-site biologist during ground disturbance activities, and implementation of a worker education program, shall be implemented. Exclusion fencing will be installed along the inhabited stream(s) immediately adjacent to the vineyard blocks, extending 100 feet beyond the terminus of the proposed vineyard blocks in each direction. The on-site biologist will be present to perform a survey of the vineyard blocks in the morning prior to that day's ground-breaking activities. If a foothill yellow-legged frog is present within the vineyard block, individual frogs shall be allowed to leave the disturbance area of their own accord, as confirmed by the biologist. Alternatively, other measures shall be derived and approved in coordination with CDFW. The worker education program will consist of a qualified biologist providing construction personnel with information regarding the identification and ecology of foothill yellow-legged frog, the potential for occurrence of the species within work areas,

the legal status of the species and ramifications for take, the specific measures being implemented to avoid impacts to foothill yellow-legged frogs, and the role of the on-site biologist.

**Mitigation Measure BR-3:** The owner/permittee shall revise Erosion Control Plan #P20-00117-ECPA prior to approval to include the following measures to minimize impacts associated with the potential loss and disturbance of special-status and nesting birds and raptors consistent with and pursuant to California Fish and Game Code Sections 3503 and 3503.5:

a. For earth-disturbing activities occurring between February 1 and August 31 (which coincides with the grading season of April 1 through October 15 – NCC Section 18.108.070.L, and bird breeding and nesting seasons), a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local avian resources with the potential to occur at the project site) shall conduct a preconstruction surveys for nesting birds within all suitable habitat on the project site, and where there is potential for impacts adjacent to the project areas (typically within 500 feet of project activities). The preconstruction survey shall be conducted no earlier than seven (7) days prior to when vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than seven (7) days from the survey date, surveys shall be repeated. A copy of the survey shall be provided to the Napa County Conservation Division and the CDFW prior to commencement of work.
b. After commencement of work if there is a period of no work activity of seven (7) days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.
c. In the event that nesting birds are found, the owner/permittee shall identify appropriate avoidance methods and exclusion buffers in consultation with the County Conservation Division and the U.S. Fish and Wildlife Service (USFWS) and/or CDFW prior to initiation of project activities. Exclusion buffers may vary in size, depending on habitat characteristics, project activities/disturbance levels, and species as determined by a qualified biologist in consultation with County Conservation Division and the USFWS and/or CDFW.
d. Exclusion buffers shall be fenced with temporary construction fencing (or the like), the installation of which shall be verified by Napa County prior to the commencement of any earthmoving and/or development activities. Exclusion buffers shall remain in effect until the young have fledged or nest(s) are otherwise determined inactive by a qualified biologist.
e. Alternative methods aimed at flushing out nesting birds prior to preconstruction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or chemical (i.e., spraying nesting birds or their habitats) would be considered an impact to nesting birds and is prohibited. Any act associated with flushing birds from project areas should undergo consultation with the USFWS/CDFW prior to any activity that could disturb nesting birds.

b-c. The project site contains coast live oak woodland, blue oak woodland, and wetlands, which are considered sensitive habitats. Coast live oak woodland occurs in the outer and inner Coast Ranges, Transverse Ranges, and southern coast from norther Mendocino County south to San Diego County, typically situated on terraces, canyon bottoms, slopes, and flats underlain by deep, well-drained sandy or loam substrates with high organic content. Blue oak woodland occurs on valley bottoms, foothills, and rocky outcrops underlain by moderately to excessively drained shallow, rocky, low-fertile substrate. The project site contains approximately 102.6 acres of oak woodland, with 20.6 acres occurring in the development area (approximately 20% of the total community type on the project site). The project site contains approximately 0.74 acre of seasonal wetland, which falls entirely outside of the development area (WRA January 2020 – **Exhibit B-1**). Wetlands have been provided setbacks consistent with NCC Section 18.108.026 (General provisions - Wetlands).

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

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

With the implementation of **Mitigation Measure BR-1**, potential impacts to oak woodland would be reduced to a less than significant level by permanently preserving 41.16 acres of woodland onsite (consistent with the 2:1 preservation ratio requirement).

Seasonal wetlands are known from a variety of topographic positions and soil types where surface waters collect and flows are reduced, or subsurface waters approach the soil surface as a rising water table or seep. The approximately 0.74 acre seasonal wetland on the project site is located outside the development area. The wetland areas have been avoided and provided with a minimum 50-foot buffer; therefore, impacts to seasonal wetlands would be less than significant.

The project site contains one primary, intermittent drainage and four ephemeral tributaries. The main intermittent drainage is an unnamed dashed blue-line stream on the Yountville 7.5-minute quadrangle (USGS, 1978). The drainage flows from the east and exits on the western edge of the project site, where it flows under Silverado Trail and enters the Napa River approximately 4,000 river feet downstream (WRA - January 2020, **Exhibit B-1**).

Flows in the intermittent stream runs for the entire wet season and receives groundwater discharge to the channel extending the surface hydrology later in the season, but dries out by late spring/early summer. The ephemeral streams run during and following rain events, but draw down quickly after storms have subsided. The upper reaches of the drainages are moderate-to high gradient, while the intermittent stream in the central portion of the project site is moderate to low-gradient. The banks of all of the drainages are shallow, steep, and primarily stable, fine sediments (clays, loams), while the beds contain a mix of sorted sands, gravels, and cobbles with exposed bed rock and sizable boulders (WRA - January 2020, **Exhibit B-1**).

The streams on the project site are considered sensitive natural resources. The intermittent drainage meets the Napa County definition of a stream because it is a USGS blue-line stream and the ephemeral drainages do meet the County's definition of a stream pursuant to NCC 18.108.025. The proposed project has been designed to avoid the intermittent stream 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. 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.

d. The proposed project involves the installation of eight vineyard blocks totaling approximately 28.3 gross acres (19.7 net acres) across portions of four parcels comprising the property. The project site has existing deer fencing (**Exhibit A** Figure 5) located in all four parcels of the project site and proposed deer fencing would fence proposed blocks individually and in clusters (**Exhibit A** Figure 5).

The project site is not located within a mapped "Essential Connectivity Area" (Conservation Biology Institute, 2021). The project site borders the southern portion of mapped essential connectivity area. At the scale of landscape linkages, this tract provides connectivity between baylands of San Pablo Bay and areas from northern Napa County northward. Given the relatively small size of the project site and it being located adjacent to the southern boundary of an essential connectivity area, and the lack of apparent development impacts within the more central portion of this tract, agricultural expansion within the project site is in and of itself unlikely to result in any significant impacts to wildlife movement or migration at the landscape linkage scale. At a more local scale, the project site provides connectivity between a patchwork of undeveloped lands consisting primarily of woodland and grassland, and low-density residential and agricultural developments. While the proposed vineyard blocks would result in portions of the site having reduced potential for on-site wildlife movement, the preservation/avoidance of streams within the project site, as well as the condition of the surrounding lands, would continue to allow for movement through the vicinity. The proposed wildlife exclusion fencing would not interfere substantially with wildlife movement and impacts are expected to be less than significant.

In addition, with the implementation of **Mitigation Measure BR-1**, the preservation of special-status plant populations and 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 provide a revised Deer Fencing Plan for #P20-00117-ECPA (**Appendix E, Figure 5**), to be reviewed and approved by the Planning Department, that shall be incorporated into Erosion Control Plan #P20-00117-ECPA. The revised Deer Fencing Plan shall be submitted within 30 days of approval of #P20-00117-ECPA. New Deer fencing (i.e. Wildlife Exclusion Fencing) shall generally be limited to the periphery of each Development Area as modified by **Mitigation Measure BR-1** 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 #P20-00117-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. Based on the Biological Resources Reconnaissance Survey, project site contains a total of 102.59 acres of coast live oak and blue oak woodland (20.58 acres within the development area). The proposed project would result in the removal of 20.58 acres of oak woodland (80% retention). Approximately 1,708 trees with a diameter at breast height greater than 6 inches are proposed for removal within the 28.3 gross acre development area and approximately 6,205 trees would be retained outside of the development area.

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

Napa County General Plan Conservation Element Policy CON-24 requires that oak woodland be maintained and/or improved to the extent feasible to provide for oak woodland and wildlife habitat, slope stabilization and soil protection, and species diversity. General Plan Conservation Element Policy CON-24c specifically provides for the preservation of oak woodland (on an acreage basis) at a 2:1 ratio where feasible, where preservation/avoidance of oak woodland is not feasible replacement of oak woodland at a 2:1 ratio is required. Removal of more than 1 acre of oak woodland for every 2 acres preserved would be a significant impact. As proposed, the project would preserve more than 2:1 of the oak woodland on site; therefore, the proposed project would be in compliance with Policy CON-24 and impact would be less than significant. In addition, **Mitigation Measure BR-1** listed in question a above would permanently preserve a minimum of 41.16 acres of oak woodland on the project site.

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[15] based on the on-site canopy present on June 16, 2016. Because the project parcels were affected by the October 2017 wildfires, pursuant to Napa County Code 8.80.130 (Conservation regulations for fire-damaged properties), the 2018 conditions are used as the baseline for Vegetation Retention Requirements pursuant to Napa County Code (NCC) Section 18.108.020(B).

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; 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, etc. NCC Section 18.108.020(E) (Preserved Vegetation Canopy Cover) requires preserved vegetation canopy cover to be protected (or otherwise enforceable restricted) thorough a perpetual protective easement or deed restriction preserving and conserving the preserved vegetation canopy cover.

The project proposes to retain approximately 49-acres (or 77%) of the tree canopy (or vegetation canopy cover) that existed on the subject parcel on areas under 50% slope and outside of stream setbacks in 2018, exceeding the 70% retention requirement and the 3:1 tree preservation ratio (**Exhibit A**, Appendix C: Vegetation Retention Calculations).

While the project as proposed would exceed the canopy cover retention requirements, it 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. This would be considered a potentially significant impact. Implementation of **Mitigation Measure BR-4** would require #P20-00117-ECPA be revised, prior to approval, to include a 44.1[16]-acre vegetation removal mitigation preservation area. With implementation of **Mitigation Measures BR-1** through **BR-4** and standard conditions of approval, the proposed project would have less than significant impacts on special-status plants and wildlife and their habitat, oak woodland, 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**), the project, as proposed, would reduce the amount of soil loss due to erosion by 9.43 tons per acre, or by 31% when compared to the existing condition, and would result in the same or no net increase in runoff post-project conditions. Therefore, the findings can be made that highest biological and water quality protections have been incorporated into the

[15] 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)."
[16] 44.1 acres is 70% of the total avoided canopy: 49 acres is 77% of the avoided canopy.

project, as proposed, with incorporation **of Mitigation Measures BR-1** through **BR-4** and standard conditions of approval, resulting in less than significant impacts.

**Mitigation Measure BR-4:** The Owner/Applicant, prior to approval, shall revise #P20-00117-ECPA to include the following provisions to reduce potential impacts to oak woodland and associated vegetation cover canopy, and to achieve consistency with the Napa County Conservation Regulations 18.108:

a. A Preservation Area encompassing no less than 44.1 acres of cover canopy located outside of the boundaries of the existing and proposed developed area shall be designated as such in a 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 applicant shall record the deed restriction or conservation easement prior to construction or within 90 days of project approval, whichever comes first. The area to be preserved shall be of like kind and quality to the coniferous forest being impacted as a result of the proposed project, as follows: areas to be preserved shall take into account the type of vegetation being removed, and species diversity and species that are limited within the project property and Napa County; the acreage included in the preservation area should be selected in a manner that minimizes fragmentation of forest within the project property, protects special-status species such as the redwood lily populations; and the preservation area should not include portions of the property already subject to development restrictions (i.e., within creek setbacks or on slopes over 50%). The area to be preserved shall be determined by a qualified biologist with knowledge of the habitat and species and shall obtain final approval from Napa County.

b. Prior to any earthmoving activities temporary fencing shall be placed at the edge of the dripline of trees to be retained that are located adjacent to the project site (typically within approximately 50-feet of the project site). The precise locations of said fences shall be inspected and approved by the Planning Division prior to the commencement of any earthmoving activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated protection areas for the duration of erosion control plan and vineyard installation.

c. The Owner/Permittee shall refrain from severely trimming the trees (typically no more than 1/3$^{rd}$ of the canopy) and vegetation to be retained adjacent to the vineyard conversion area.

d. 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 #P20-00117-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 percent 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.

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

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

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **V. CULTURAL RESOURCES.** Would the project: | | | | |
| a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? | ☐ | ☐ | ☒ | ☐ |
| 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:

- Flaherty Cultural Resources Services, May 3, 2019, Cultural Resource Reconnaissance of 40+/- Acres Near Napa, Napa County, California

Flaherty Cultural Resource Services conducted an archeological evaluation of the project site which included a check of information on file with the California Historical Resources Information System Northwest Information Center to determine presence or absence of previously recorded historic or prehistoric cultural resources; a check of relevant historic references to determine the potential for historic era archaeological deposits or structure; and a surface reconnaissance survey of approximately 40 acres on the project site to locate any visible signs of potentially significant historic or prehistoric cultural deposits.

a-b. The cultural resource reconnaissance (Flaherty Cultural Resource Services, May 2019) identified no cultural resources within the development area.

Although no cultural resources were found within the project site, 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.

c. The cultural resource reconnaissance survey 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 six months. Construction activities and corresponding fuel energy consumption would be temporary and localized. In addition, there are no unusual project characteristics that would cause the use of construction equipment or haul vehicles that would be less energy efficient 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? | ☐ | ☐ | ☐ | ☒ |

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

| | | | | | |
|---|---|---|---|---|---|
| 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? | ☐ | ☐ | ☐ | ☒ |
| e) | Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | ☐ | ☐ | ☐ | ☒ |
| f) | Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | ☐ | ☐ | ☒ | ☐ |

**Discussion**

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

   i) The Soda Creek fault bisects the project site (north-south). 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 next closest active fault to the project site is West Napa Fault, approximately 2.5 miles west of the project site (Napa County GIS faults and earthquakes layers, and Richard C. Slade and Associates, March 2020). Given the agricultural nature of the proposed project, it would not directly or indirectly cause potential substantial adverse effects involving fault rupture and less than significant impact would occur.

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

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

   iv) Active landslides have not been identified within the development area (landslide deposits occur outside the development area) (Richard C. Slade and Associates, March 2020 – **Exhibit D** and Napa County GIS, Landslide Layers) 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 five soil mapping units: Haire Loam, 2 to 9% slopes; Sobrante loam, 5 to 30% slopes; Sobrante loam, 30 to 50% slopes; Hambright-Rock Outcrop complex, 30 to 75%slopes; and Rock Outcrop-Hambright complex, 50 to 75%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 no-till cover crops with vegetative cover densities of at least 75% to 90% as specified in the ECPA: vineyard avenues and turnaround spaces would also have vegetative cover densities of at least 75% to 90% as specified. The cover crop provides the ability to trap eroded soils onsite, thereby reducing soil loss and sedimentation potential.

Based on USLE modeling calculations prepared by PPI Engineering (**Exhibit C**), the proposed conversion of approximately 28.3 acres of grassland, chaparral and oak woodland to vineyard and vineyard avenues is anticipated to reduce soil loss, or surface erosion, within the project site as compared to existing conditions (**Table 7**). Under existing conditions, the annual soil loss is anticipated to average 30.7 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 9.4 tons per acre per year, or a reduction of approximately 31% as compared to existing conditions.

**Table 7 – USLE Soil Loss Analysis**

| Vineyard Block | Pre-project Soil Loss (tons/year) | Post-project Soil Loss (tons/year) | Difference | Percent Change (approximate) |
|---|---|---|---|---|
| 2A | 4.74 | 4.08 | 0.66 | -14% |
| 2B | 1.82 | 1.40 | 0.42 | -23% |
| 3 | 2.36 | 2.10 | 0.26 | -11% |
| 4 | 12.56 | 6.63 | 5.93 | -47% |
| 5 | 1.23 | 1.19 | 0.05 | -3% |
| 6 | 0.07 | 0.07 | 0.00 | 0% |
| 7 | 3.58 | 2.42 | 1.16 | -32% |
| 8A | 2.90 | 2.19 | 0.70 | -24% |
| 8B | 0.71 | 0.50 | 0.21 | -30% |
| 9 | 0.69 | 0.65 | 0.05 | -6% |
| **Total** | **30.66** | **21.23** | **9.43** | **-31%** |

Source: PPI Engineering, September 1, 2020, Revised Soil 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 rock filed avenues and rock filled level spreaders (used in tandem or individually), rocked crossing, and permanent no-till cover, straw mulching, straw wattles, and other practices as needed.

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

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

The following conditions shall be incorporated by referenced into Erosion Control Plan #P20-00117-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 rock filed avenues and rock filled level spreaders (used in tandem or individually), drop inlets and subsurface drainline, repaired diversion ditches, rocked crossing, 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 #P20-000117-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 Blocks 8A and 9, 80% within Blocks 2A, 5 and 7, 85% in Blocks 2B, 3, 4 and 8B, and 90% in Block 6, and the associated vineyard avenues. The cover crop may be strip sprayed, with a strip no wider than 18 inches wide at the base of vines in Blocks 8A and 9 and 12 inches wide at the base of vines in Blocks 2A, 5 and 7, with post-emergent herbicides: no pre-emergent sprays shall be used. Spot spraying in Blocks 2B, 3, 4, 6 and 8B may occur in the spring (no earlier than February 15) if the 80% or 90% vegetative is achieved. Should the permanent no till cover crop need to be replanted/renewed during the life of the vineyard, cover crop renewal efforts shall follow the County "Protocol for Replanting/Renewal of Approved Non-Tilled Vineyard Cover Crops" July 19, 2004, or as amended.

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

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

Additionally, implementation of **Mitigation Measure BR-1,** which would reduce project by 1.8-acres, is not anticipated to increase soil loss above modeled conditions.

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

d. Soils of the project site consist of Haire Loam, Hambright-Rock Outcrop complex and Rock Outcrop-Hambright complex, which exhibit low shrink-swell potential, and Sobrante loam, which exhibits potential low strength shrink-swell potential, which exhibits low shrink-swell potential (USDA, 1978). In addition, no structures are proposed as part of the project and expansive soils pose little risk to vineyards and related agricultural improvements. Therefore, there would be no impacts associated with expansive soils.

e. The proposed project involves the development of 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. There are no unique geologic features on the project site. Due to the nature of the soils in the project site and the nature of the proposed project (which would involve 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.

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

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

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

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

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

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

GHGs are the atmospheric gases whose absorption of solar radiation is responsible for the greenhouse effect, including carbon dioxide ($CO_2$), methane, ozone, and the fluorocarbons, which contribute to climate change. $CO_2$ is the principal GHG emitted by human activities, and its concentration in the atmosphere is most affected by human activity. It also serves as the reference gas to which to compare other GHGs. Agricultural sources of carbon emissions include forest clearing, land-use changes, biomass burning, and farm equipment and management activity emissions. Equivalent Carbon Dioxide ($CO_{2e}$) is the most commonly reported type of GHG emission and a way to get one number that approximates total emissions from all the different gasses that contribute to GHG, as described in BAAQMD's CEQA Guidelines. In this case $CO_2$ is used as the reference atom/compound to obtain atmospheric carbon $CO_2$ effects of GHG. Carbon stocks

are converted to $CO_{2e}$ by multiplying the carbon total by 44/12 (or 3.67), which is the ratio of the atomic mass of a carbon dioxide molecule to the atomic mass of a carbon atom (http://ncasi2.org/COLE/faq.html).[17]

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

In addition to the one-time Construction Emissions, "Operational Emissions" of the vineyard are also quantified and include: i) any reduction in the amount of carbon sequestered by existing vegetation that is removed as part of the project (referred to as Operational Sequestration Emissions below); and ii) ongoing emissions from the energy used to maintain and farm the vineyard, including farm equipment and vehicles (such as tractors, haul trucks, backhoes, pick-up trucks, and ATVs) and worker vehicle trips (referred to as Operational Equipment Emissions below). See **Section XVII (Transportation)** for anticipated number of operational trips. Operational Emissions from the proposed vineyard would be modest when compared to one-time construction emissions (as discussed below), and a quantitative estimate would require many assumptions about what would happen during the next 100 years onsite under "project" and "no project" conditions (e.g., the life expectancy of the proposed vineyard and existing site vegetation, incidences of disease and fire, etc.).

**Construction Emissions:**

Equipment Emissions: As discussed in **Section III (Air Quality)**, three County Certified EIRs assessed and analyzed potential air quality and GHG emissions associated with vineyard development. Within those EIRs potential GHG emissions associated with construction equipment were calculated and disclosed. An estimation of potential construction equipment emissions per acre of vineyard development was derived using the most generous emissions results from these EIRs. The Circle-S Ranch EIR anticipated approximately 4,293 metric tons (MT) $CO_{2e}$ of construction equipment emissions for a 459-acre vineyard development, resulting in approximately 9.4 MT $CO_{2e}$ of construction equipment emissions per acre of vineyard development.[18] Using this emission factor it is anticipated that Construction Equipment Emissions associated with the proposed 28.3 gross acres of vineyard development would be approximately 266.0 MT $CO_{2e}$ (28.3 acres multiplied by 9.4 MT $CO_{2e}$).

Project Site Emissions: Project site emissions are emissions resulting from vegetation removal and soil preparation associated with the conversion of approximately 28.3 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 2,031.7 MT C or approximately 7,456.23MT $CO_{2e}$ (**Table 8**).

**Table 8 – Estimated Development Area Carbon Stocks/Storage**

| Vegetation Type/Carbon Storage | Development Area Acreage | Carbon Storage/Stock per Acre (MT C/acre)[1] | Total Carbon Storage (MT) | Total Carbon Storage in MT CO2e |
|---|---|---|---|---|
| Grassland | 2.97 | 1.4 | 4.16 | 15.27 |
| Chaparral (Shrublands) | 4.30 | 16.2 | 69.66 | 255.65 |
| Oak Woodland | 20.58 | 95.1 | 1,957.16 | 7,182.78 |
| Developed | .49 | 1.4 | 0.69 | 2.53 |
| **Total** | | | **2,031.7** | **7,456.23** |

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%.[19] Using 50% as a more conservative estimate, the proposed

[17] "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).

[18] 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.

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

project could result in one-time development area construction emissions from vegetation removal and soil preparation (i.e., grading and soil ripping) of approximately 6,968.6 MT $CO_{2e}$ (**Table 9**).

**Table 9 – 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 | 2.97 | 0.8 | 2.4 | 8.8 |
| Chaparral (Shrublands) | 4.30 | 12.1 | 52.0 | 190.8 |
| Oak Woodland | 20.58 | 89.6 | 1,844.0 | 6,767.5 |
| Developed | 0.49 | 0.8 | 0.4 | 1.5 |
| **Total** | | | **1,898.8** | **6,968.6** |

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 28.3-acre agricultural development would be approximately 19.0 MT $CO_{2e}$ (28.3 multiplied by 0.67 MT $CO_{2e}$).

Operational Sequestration Emissions: Emissions associated with loss of sequestration due to land use change (i.e., the conversions of existing vegetation to vineyard) have been calculated based on the Annual Carbon Sequestration Factors within the 2012 Draft CAP, which indicates that oak woodlands sequester 0.425 $CO_2$ 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 9.2 MT C per year or 33.8 MT $CO_{2e}$ per year.[20]

Grapevines are photosynthetic plants and therefore have value in terms of carbon capture. Additionally, the use of cover crops, which are also photosynthetic plants, tends to result in less soil $CO_2$ loss from vineyard soils. Carbon sequestration loss would be further offset by the proposed vineyard, which would likely act as a sink for atmospheric $CO_2$, depending on the longevity of grapevine roots and the quantity of carbon stored in deep roots. In addition to vines, the sequestration of atmospheric carbon is also achieved by the soil between vine rows through cover-cropping.

**Project Emissions:**

Based on the above estimates, the proposed project could result in one-time construction emissions of up to 7,234.6 MT CO2e and annual ongoing emissions associated with vineyard operations (including loss of sequestration) estimated to be approximately 52.8 MT $CO_{2e}$ per year (**Table 10**).

**Table 10 – 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 | 266.0 | Vehicles and Equipment | 19.0 |
| Vegetation and Soil | 6,968.6 | Loss of Sequestration | 33.8 |
| **Total** | **7,234.6** | **Total** | **52.8** |

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 7,234.6 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

[20] 20.58 acres of oak woodland times 0.425 MT C = 8.75 MT C, and 7.76 acres of grassland, chaparral and developed times 0.057 MT C = 0.44, totaling 9.19 MT C

environmental review, except as might be necessary to examine whether there are project-specific effects which are peculiar to the proposed project or its site.

In the context of 12,500 acres of projected vineyard development, the proposed project would constitute less than approximately 0.2% 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 52.8 MT $CO_{2e}$ per year, which is well below the threshold of 1,100 MT $CO_{2e}$ per year that BAAQMD has defined as significant for CEQA purposes when considering land development projects. Therefore, ongoing project emissions, including loss of sequestration, due to the proposed project are considered less than significant.

Additionally, potential GHG Emission impacts are anticipated to be less that disclosed with implementation of **Mitigation Measure BR-1,** which would reduce project by 1.8-acres.

| | 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 ECPA 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).

A chemical mixing and storage location exists southeast of proposed Block 9 (**Figure 6, Exhibit A:** *Chemical Mixing & Storage Location*, September 2020), which is located approximately 50 feet from an ephemeral stream. This Ag Barn was constructed in 2006 under Building Permit No B06-00483 (Issued June, 12, 2006: Finaled October 13, 2006). Fertilizers would be applied as necessary to the vineyard and to ensure the specified percent vegetative cover crop is achieved. No pre-emergent herbicides would be strip sprayed in the vinerows for weed management. Project storage and staging areas would be located within proposed clearing limits.

The intermittent stream and County Definitional stream located north of proposed Vineyard Block 2 have been avoided with a minimum 35 foot setback and setbacks consistent with NCC Section 18.108.025 (respectively): definitional stream setbacks range from 65 to 85 feet. The intermittent drainage located east of proposed Vineyard Block 9 is over 200 feet from the proposed clearing limits.

The risk of potentially hazardous materials reaching or affecting adjacent water courses or other aquatic resources is significantly reduced because: i) the proposed project would maintain buffers of at least 50 feet from potential wetlands; ii) the proposed project would provide setbacks buffers of between 35 feet and 85 feet to ephemeral and definitional streams in conformance with code provisions; and iii) only federal and/or California approved chemicals would be applied to the vineyard in strict compliance with applicable state and federal law. Project approval, if granted, would also be subject to the following standard conditions 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.

**Hazardous Materials – Conditions of Approval:**

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

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

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

c. The closest school (Sunrise Montessori-Napa Valley) is located approximately 2.5 miles south of the project site. There are no schools proposed within 0.25 mile of the project site. Therefore, no impact would occur.

d. The project site is not on any of the lists of hazardous waste sites enumerated under Government Code Section 65962.5 (Napa County GIS hazardous facility layer). Therefore, no impact would occur.

e. The closest public airport to the project site is the Napa County Airport, located approximately 11 miles south of the project site. No portion of the proposed project is within an airport compatibility zone identified in the Airport Compatibility Plan (Napa County Airport Land Use Compatibility Plan, and Napa County GIS Airport layer). Therefore, no impact would occur.

f. During construction, there would be negligible numbers of workers visiting the project site on a temporary basis to implement the ECPA and install vineyards. Approximately 30 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 an area identified as having moderate fire severity (CALFIRE 2007 - https://egis.fire.ca.gov/FHSZ/). 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**

On April 21, 2021, Governor Gavin Newsom declared a drought emergency in the state of California and as of July 8, 2021, 50 counties are under the drought state of emergency, including Napa County. The Governor directed the Department of Water Resources to increase resilience of water supplies during drought conditions. The County of Napa has not adopted or implemented any mandatory water use restrictions. The County requires all discretionary permit applications (such as use permits and ECPAs) to complete necessary water analyses in order to document that sufficient water supplies are available for the proposed project and to implement water saving measures to prepare for periods of limited water supply and to conserve limited groundwater resources.

The project site is located in the Soda Creek watershed upstream of the Napa River. 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[21]"; 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[22]. There is one intermittent drainage and four ephemeral tributaries within the project site, outside of the development area.

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 #P20-00117-ECPA includes BMPs that are consistent with NCC Section 18.108.080(c), as well as with Regional Water Board guidance from the Stormwater Best Management Practice Handbooks for Construction and for New Development and Redevelopment, and the Erosion and Sediment Control Field Manual. Therefore, the proposed project is not anticipated to violate any water quality standards or otherwise substantially degrade surface or groundwater quality, and this impact would be less than significant.

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

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

   In 2009, Napa County began a comprehensive study of its groundwater resources to meet identified action items in the County's 2008 General Plan update. The study, by Luhdorff and Scalmanini Consulting Engineers (LSCE), emphasized developing a sound understanding of groundwater conditions and implementing an expanded groundwater monitoring and data management program as a foundation for integrated water resources planning and dissemination of water resources information. The 2011 baseline study by LSCE,

[21] 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.

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

which included over 600 wells and data going back over 50 years, concluded that "the groundwater levels in Napa County are stable, except for portions of the MST district". Most wells elsewhere within the Napa Valley floor with a sufficient record indicate that groundwater levels are more affected by climatic conditions, are within historical levels, and seem to recover from dry periods during subsequent wet or normal periods.

The proposed vineyard would be irrigated using groundwater from four of the existing wells on the project site. A Water Availability Analysis (WAA) was prepared in order to determine the effects of the increase in water demand on groundwater as a result of the proposed project (Richard C. Slade and Associates, March 2020 - **Exhibit D**). The WAA estimates the onsite groundwater recharge, overall availability, and use, both existing and proposed, in order to assess potential impact on groundwater. There are no wells within 500 feet of the project wells. A WAA that includes a Tier 2 analysis (Well and Spring Interference Criterion) is not necessary for this project because there are no known non-project wells located within 500 feet of the project well (**Exhibit D**).

Water demands for the existing vineyard and onsite residence are currently being met by pumping groundwater from the existing onsite wells. The approximately 77 acres of existing vineyard is irrigated with 23.16 acre-feet of water per year (AF/year) and the existing residential demand is 0.75 AF/year. Therefore, the total existing water demand is 23.91 AF/year.

Typically, the annual irrigation season ranges from late May to September. Water use for frost protection is not proposed. After full development, the proposed project would result in approximately 6.27 AF/year of new groundwater demand to irrigate the approximately 19.7 net acres of new vineyard. With the 0.75 AF/year demand for the existing residential use and the 23.16 AF/year demand for the existing 77-acre vineyard, the total future groundwater demand for the project site would be approximately 30.18 AF/year (**Table 11**).

**Table 11 – Pre- and Post-Project Site Water Use**

| Project Site Water Use | Pre-project (acre-feet/year) | Post-project (acre-feet/year) |
|---|---|---|
| Vineyard irrigation | 23.16 | 29.43 |
| Residential | 0.75 | 0.75 |
| **Total** | **23.91** | **30.18** |

Source: Richard C. Slade and Associates, March 2020 - **Exhibit D**

Groundwater Recharge: Long-term average groundwater recharge can be estimated as the percentage of rainfall that falls on the project site that percolates into the underlying aquifer. The percentage of rain that has the potential to infiltrate varies depending on factors such as rates of evaporation and transpiration, soil type and geology that exists at the site, and average annual rainfall. Based on available climatological data, site-specific information, and other available data and analysis relevant to potential recharge, the WAA, which uses an average annual rainfall of 28.2 inches per year over the approximately 214 acres[23] of the project site's land area available for recharge and a 17% deep percolate recharge estimate, estimates the average annual groundwater recharge of project site to be approximately 85.50 AF/year (see **Exhibit D** for details and calculations). The average annual rainfall utilized in the recharge analysis includes times of below-average and above-average rainfall, and therefore inherently includes drought year conditions.

To determine the annual average rainfall in the WAA several data sources were considered as identified in **Table 11A** (Comparison of Rainfall Date Sources). The use of 28.2 inches per year is based on the data source with a relatively long period of record (29 years), and is more site-specific, when compared to the other rainfall data sources listed in Table 11A, which exist at different elevations that the project site, and/or are located at a significant distance from the project site, and/or have a shorter period of available data (Richard C. Slade and Associates, March 2020). If the more conservative average annual rainfall (23.20 inches) were utilized the estimated annual average recharge would be approximately 70.20 AF/yr.

**Table 11A - Comparison of Rainfall Data Sources**

| Rain Gage / Data Source | Years of Available Rainfall Record | Average Annual Rainfall in-Inches (feet) | Elevation of Rain Gauge (feet asl)[1] | Distance from Project Site |
|---|---|---|---|---|
| Napa OneRain Milliken Reservoir | Water Year (WY) 2000-01 to WY 2019-19 | 23.20 (1.93) | 930 | 4 miles |
| Napa OneRain, Napa River @ Yountville Cross Rd | WY 2000-01 to WY 2018-19 | 30.50 (2.54) | 94 | 4 miles |
| WRCC Napa State Hospital | 1893 through December 2019 | 23.50 (1.96) | 240 | 7 miles |
| PRISM | 1981 to 2010 | 28.20 (2.35) | -- | -- |
| Napa County Isohyetal Map | 1900 to 1960 | 27.50 (2.29) | -- | -- |

[1] The subject property is located at elevations between ±100 and ±460 feet above sea level (asl).
Source: Richard C. Slade and Associates, March 2020 - **Exhibit D**

[23] The WAA assumed infiltration in areas with slopes greater than 30% on the project site (or about 1.42 acres of the project site) was 0%.

As proposed the project is estimated to have an annual onsite future groundwater demand of 30.18 AF/year, which is below the estimated average annual recharge volume of 85.50 AF/year identified in the WAA, and below the average annual recharge volume of 70.20 AF/year using a more conservative annual average rainfall amount.

The WAA also estimated the potential groundwater in storage and the effects of a prolonged drought to assist in evaluating potential groundwater impacts of the project. The estimated groundwater in storage beneath the project site (as of February 2019) is approximately 1,733 AF, and a "prolonged" drought period" would last six years where rainfall would be 48% of the average annual rainfall.

To meet six years of proposed groundwater demand for the proposed project and existing water uses, a total onsite groundwater extraction of 181.08 AF is estimated to be required for the subject property (30.18 AF/yr. times 6 years). Assuming groundwater recharge is reduced to 48% of the average annual recharge during such a theoretical "prolonged drought period", the resulting total of groundwater recharge that might occur during the six-year drought period for the subject property is estimated to be approximately 246.24 AF (41.04 AF/yr. times 6 years). Therefore, assuming a theoretical six-year drought period during which only 48% of the average annual rainfall might occur, a conservative estimate of the total drought-period recharge at the subject property (246.24 AF) would be nearly 1.5 times greater than the estimated total onsite groundwater demand (181.08 AF) that may occur over the same six-year period (Richard C. Slade and Associates, March 2020)

Considering: i) anticipated annual water use of the project site for existing and proposed use of approximately 30.18 AF/year is below the project site's anticipated annual groundwater recharge rate of approximately 85.50 AF/year; ii) existing and proposed water use (30.18 AF/yr.) is below a more conservative groundwater recharge rate of approximately 70.20 AF/yr. based on lower annual rainfall; iii) overall water use during a theoretical six year drought period (181.08 AF) would be less that anticipate recharge of approximately 246.24 AF during the same period; iv) there is no evidence to date indicating that there are groundwater problems or declining well production in the this area of the County; and v) incorporation of the standard water use condition below to reduce potential impacts associated with water use as a result of vineyard establishment and ongoing vineyard operations and maintenance (if approved), the proposed project is anticipated to result in less than significant impacts to groundwater supplies, groundwater recharge, and local groundwater aquifer levels.

Additionally, potential water use and impacts are anticipated to be less than disclosed with implementation of **Mitigation Measure BR-1,** which would reduce project by approximately 1.8-acres.

> **Groundwater Management, Wells – Conditions of Approval:**
>
> This condition is implemented jointly by the Public Works and PBES Departments:
>
> The owner/permittee shall be required (at the permittee's expense) to record well monitoring data (specifically, static water level no less than quarterly, and the volume of water no less than monthly). Such data shall be provided to the County, if the PBES Director determines that substantial evidence indicates that water usage is affecting, or would potentially affect, groundwater supplies. If data indicates the need for additional monitoring, and if the owner/permittee is unable to secure monitoring access to neighboring wells, onsite monitoring wells may need to be established to gauge potential impacts on the groundwater resource utilized for the project. Water usage shall be minimized by use of best available control technology and best water management conservation practices.
>
> In order to support the County's groundwater monitoring program, well monitoring data as discussed above shall be provided to the County if the Director of Public Works determines that such data could be useful in supporting the County's groundwater monitoring program. The project well shall be made available for inclusion in the groundwater monitoring network if the Director of Public Works determines that the well could be useful in supporting the program.
>
> In the event that changed circumstances or significant new information provide substantial evidence that the groundwater system referenced in the ECPA would significantly affect the groundwater basin, the PBES Director shall be authorized to recommend additional reasonable conditions on the owner/permittee, or revocation of this permit, as necessary to meet the requirements of the Napa County Code and to protect public health, safety, and welfare.

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

Erosion control measures and plan features that are not anticipated to affect drainage patterns but would assist in minimizing the potential for increased erosion and water runoff include a no-till cover crop with vegetative cover densities of between 75% and 90% (including vegetated avenues and turnaround avenues), and the annual application of straw mulch cover on all disturbed areas at a rate of 3,000 pounds per acre. Cover densities as specified for the individual vineyard blocks are as follows: 75% for Blocks 8A and 9; 80% for Blocks 2A, 5, and 7; 85% for Blocks 2B, 3, 4, and 8B; and 90% for Block 6. 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 rock filed avenues and rock filled level spreaders (used in tandem or individually), drop inlets and surface drainline, the repair and maintenance of existing diversion ditches, and straw wattles. These features, in conjunction with the use and maintenance of existing diversion ditches within the project site 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 on 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 Hydrologic Analysis for the proposed project was prepared by the PPI Engineering (PPI Engineering, September 2020 - **Exhibit E**). The development area is contained within eight watershed basins. Watersheds 1-4 and 7-8 flow into unnamed swales off the project site where they eventually cross Silverado Trail and eventually flow into the Napa River. Flow from Watershed 5 travels into a reservoir off the project site before eventually flowing into the Napa River after crossing Silverado Trail. Flow from Watershed 6 travels into an unnamed swale acting as a tributary of Soda Creek (**Exhibit E**). The Hydrologic Analysis utilized the Natural Resource Conservation Service Technical Release 20 (TR-20) method to conclude that there would not be an increase in peak flow for all watersheds in the development area (**Table 12**).

**Table 12 – HydroCAD Hydrologic Modeling Calculations (TR-20) Results: Runoff Rates**

| | Peak Discharge Flow (cfs) by 24-hour Storm Event Frequency Return Interval (cubic feet/second) | | | |
|---|---|---|---|---|
| | **2-year** | **10-year** | **50-year** | **100-year** |
| **Watershed 1** | | | | |
| Pre-project conditions | 21.36 | 46.99 | 75.65 | 88.04 |
| Post-project conditions | 20.38 | 44.99 | 72.52 | 84.44 |
| Change (cfs) | -0.98 | -2.00 | -3.13 | -3.60 |
| Change (%) | -4.60 | -4.30 | -4.10 | -4.10 |
| **Watershed 2** | | | | |
| Pre-project conditions | 11.01 | 26.34 | 44.00 | 51.74 |
| Post-project conditions | 11.01 | 26.34 | 44.00 | 51.74 |
| Change (cfs) | 0 | 0 | 0 | 0 |
| Change (%) | 0 | 0 | 0 | 0 |
| **Watershed 3** | | | | |
| Pre-project conditions | 15.32 | 33.72 | 54.36 | 63.28 |
| Post-project conditions | 14.35 | 31.69 | 51.16 | 59.59 |
| Change (cfs) | -0.97 | -2.03 | -3.20 | 3.69 |
| Change (%) | -6.30 | -6.00 | -5.90 | -5.80 |
| **Watershed 4** | | | | |
| Pre-project conditions | 13.06 | 29.41 | 47.82 | 55.82 |
| Post-project conditions | 13.00 | 28.65 | 46.16 | 53.74 |
| Change (cfs) | -0.06 | 0.76 | 1.66 | 2.08 |
| Change (%) | -0.50 | -2.60 | -3.50 | -3.70 |
| **Watershed 5** | | | | |
| Pre-project conditions | 13.67 | 31.58 | 51.98 | 60.86 |
| Post-project conditions | 13.67 | 31.58 | 51.98 | 60.86 |
| Change (cfs) | 0 | 0 | 0 | 0 |
| Change (%) | 0 | 0 | 0 | 0 |
| **Watershed 6** | | | | |
| Pre-project conditions | 10.02 | 25.75 | 44.30 | 52.52 |
| Post-project conditions | 10.02 | 25.75 | 44.30 | 52.52 |
| Change (cfs) | 0 | 0 | 0 | 0 |
| Change (%) | 0 | 0 | 0 | 0 |
| **Watershed 7** | | | | |
| Pre-project conditions | 3.52 | 7.52 | 11.94 | 13.84 |
| Post-project conditions | 3.52 | 7.52 | 11.94 | 13.84 |
| Change (cfs) | 0 | 0 | 0 | 0 |
| Change (%) | 0 | 0 | 0 | 0 |
| **Watershed 8** | | | | |
| Pre-project conditions | 4.97 | 9.79 | 14.99 | 17.20 |
| Post-project conditions | 4.89 | 9.67 | 14.79 | 16.97 |
| Change (cfs) | -0.08 | -0.12 | -0.20 | -0.23 |
| Change (%) | -1.60 | -1.20 | -1.3 | -1.30 |

Source: PPI Engineering, September 2020 (**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. Potential runoff impacts are not anticipated to change from project modeling disclosed herein with implementation of **Mitigation Measure BR-1,** which would reduce project by 1.8-acres.

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.[24] 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 ECPA adjacent watercourses would facilitate increased water infiltration so that chemicals and potentially hazardous materials associated with project implementation and operation can be trapped and degraded in buffer vegetation and soils to protect water quality. The limited application of agricultural chemicals generally occurring during the non-rainy season would also minimize the amounts of chemicals that could effect on or offsite water resources. Because the 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 9.43 tons/year, have no effect on runoff rates, and maintain project site drainage characteristics as compared to existing conditions. The ECPA includes BMPs that are consistent with NCC Section 18.108.080(c), as well as with Regional Water Board guidance from the Storm Water Best Management Practice Handbooks for Construction and for New Development and Redevelopment, and the Erosion and Sediment Control Field Manual.

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

**Water Quality – Condition of Approval:**

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

[24] 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**).

prior to this ECPA approval, unless previous authorized under other entitlement and the site has a County Hazardous Materials Business Plan (HMBP) or adequate equivalent.

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

| | | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|---|
| **XI.** | **LAND USE AND PLANNING.** Would the project: | | | | |
| a) | Physically divide an established community? | ☐ | ☐ | ☐ | ☒ |
| b) | Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☒ | ☐ | ☐ |

**Discussion**

a. The proposed site is in a rural area of Napa County and the nearest established community, Napa, is approximately 2.8 miles south of the project site. Therefore, the proposed vineyard and subsequent vineyard operations would not physically divide an established community and no impact would occur.

b. The project site is zoned as Agricultural Watershed and is designed under the Napa County General Plan as AWOS and Agricultural Resource. Surrounding land uses consist predominantly of undeveloped land, scattered rural residential, wineries, and agricultural land (livestock grazing and vineyards). Surrounding parcels are zoned Agricultural Watershed and Agricultural Preserve 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 9.4 tons per year and maintain runoff conditions as compared to existing conditions.
- The proposed project is consistent with Policies CON-48 and CON-50c, which require pre-development sediment erosion conditions and runoff characteristics following development not be greater than predevelopment conditions. As discussed in **Section VII (Geology and Soils)** and **Section X (Hydrology and Water Quality)** the project as proposed would reduce soil loss, sedimentation, and maintain runoff characteristics as compared to existing conditions.
- The proposed project with implementation of **Mitigation Measures BR-1** through **BR-4** is consistent with Policies CON-13 and CON-16, which require discretionary projects consider and avoid impacts to fisheries, wildlife habitat, and special-status species through evaluation of biological resources. A Biological Resources Reconnaissance Survey was prepared for the proposed project. The proposed project as proposed would avoid potential direct, indirect, and cumulative impacts to special-status plant species and associated habitat occurring on the project site. With implementation of **Mitigation Measures BR-2** and **BR-3** potential impacts to foothill yellow-legged frog and special-status bird species would be avoided. Furthermore, implementation of these measures would not affect the feasibility of the proposed project in that, impacts to special-status species and their habitat can be avoided.
- With implementation of **Mitigation Measures BR-1** through **BR-4** and the fencing and tree/woodland conditions of approval, the proposed project is consistent with Goals CON-2 and CON-3, which require the continued enhancement of existing levels of biodiversity and protection of special-status species and habitat, and the County Conservation Regulations through preservation of natural habitats and existing vegetation. With these measures and conditions, the proposed project would maintain levels of biodiversity and would avoid impacts to special-status plant and animal species.
- With implementation of **Mitigation Measures BR-1** through **BR-4** and the fencing and tree/woodland conditions of approval, the proposed project is consistent with Policy CON-13, which requires discretionary projects to consider and avoid impacts to fisheries, wildlife habitat, and special-status species, and Policy CON-17, which requires the preservation and protection of native grasslands, sensitive biotic communities, and habitats of limited distribution and no net loss of sensitive biotic communities.
- The proposed project is consistent with CON-16, which requires discretionary projects prepare an evaluation of biological resources. A Biological Resources Reconnaissance Survey was prepared for the proposed project (**Exhibits B-1** and **B-2**).

- The proposed project is consistent with Policy CON-30, which encourages the avoidance of wetlands, as there are no wetlands within the project site.
- The proposed project 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 7.8 miles south of the project site. Proposed site improvements and development of vineyard on the project site would not physically preclude future mining activities from occurring. Therefore, no impact would occur.

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **XIII. NOISE.** Would the project: | | | | |
| a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | ☐ | ☐ | ☒ | ☐ |
| b) Generation of excessive groundborne vibration or groundborne noise levels? | ☐ | ☐ | ☒ | ☐ |
| c) For project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☐ | ☒ |

**Discussion**

a-b. The project site is located in a rural setting where surrounding parcels are generally undeveloped, in agriculture (planted with vineyards and used for livestock grazing) and contain wineries. The nearest residences are located approximately 400 feet 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, excavator, dump truck, trencher, backhoe, and small trucks. **Table 13** characterizes typical equipment noise levels at a reference distance of 50 feet. As identified in Table 10, equipment used for vineyard development could produce a maximum of 89 (A-weighted decibels) dBA at a distance of 50 feet.

**Table 13 – Construction Equipment Noise Emission Levels**

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

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

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

**Table 14 – 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 65 and 70 dBA at the nearest existing offsite residences.

Noise related to farming activities and equipment typically ranges from 75 dBA to 95 dBA, with an average of approximately 84 dBA (Toth 1979 and Napa County Baseline Date Report, Version 1, November 2005). These noise levels should be reasonably representative of noise levels from wheeled and tracked farm equipment. Noise sources associated with ongoing vineyard operation and maintenance include a variety of vehicles and equipment, such as ATV's, tractors, grape haul trucks, passenger cars, and light trucks, which would occur on a temporary and seasonal basis. **Table 15** characterizes the typical reduction of farming activity noise levels as the distance increases from the source using a noise source level of 84 dBA.

**Table 15 – Estimated Distance to dBA Contours from Farming Activities [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 60 dBA at the closest existing offsite residences.

Napa County considers construction noise levels up to 75 dBA during daytime hours (7 a.m. to 7 p.m.) and 60 dBA during nighttime hours (7 p.m. to 7 a.m.) as compatible with residential uses (NCC Section 8.16.080), and ongoing (or established use) noise levels of approximately 55 dBA as compatible with residential uses (NCC Section 8.16.070). As the closest offsite residence would experience construction noise levels of approximately 65 to 70 dBA, noise and vibration impacts associated with project development are anticipated to be less than significant. Noise levels from routine operation and maintenance activities at the nearest offsite residence would be less than typical for compatible uses, and the temporary and ongoing noise sources and levels are considered typical and reasonable for agricultural development and operational activities, consistent with the County's "Right to Farm" ordinance (NCC Chapter 2.94 and General Plan Agricultural Preservation and Land Use Policy AG/LU-15), and are therefore exempt from compliance with the noise ordinance. NCC Section 8.16.090.E (Exemptions to Noise Regulations) exempts agricultural operations from noise regulations. Additionally, the proposed project would not result in a permanent increase in ambient noise levels over what currently exists in the project vicinity, resulting in a less than significant impact on ambient noise levels of the area.

During site preparation and vineyard installation, the use of heavy equipment could result in a temporary increase in ambient noise levels in the vicinity of the project site as described above. Compliance with measures identified in the County's noise ordinance for construction-related noise, such as a limitation of hours of construction activity and muffling of equipment, would result in temporary less than significant noise and vibration impacts, and would result in no permanent increase in ambient noise levels in the vicinity of the 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? | ☐ | ☐ | ☐ | ☒ |

**Discussion**

a-b. Currently, the project site is developed with approximately 77 acres of existing vineyard, a residence, a network of existing ranch roads, and associated ranch infrastructure. The project site is accessed from Silverado Trail. Trucks and other equipment would use County roads or State highways for short periods during construction and subsequent vineyard operation.

In accordance with Senate Bill 743, the California Natural Resources Agency adopted the new State CEQA Guidelines Section 15064.3(b) in December 2018. These revisions to the State CEQA Guidelines' criteria for determining the significance of transportation impacts focus primarily on projects in transit priority areas. The revisions shift the focus from driver delay to reduction of greenhouse gas emissions, creation of multimodal networks, and promotion of a mix of land uses. Vehicle miles traveled, or VMT, is a measure of the total number of miles driven to or from a development and is sometimes expressed as an average per trip or per person. The newly adopted guidance provides that a lead agency may elect to be governed by the provisions of Section 15064.3(b) immediately. The provisions of Section 15064.3(b) became effective statewide on July 1, 2020.

Although General Plan Policy CIR-7 addresses VMT reduction efforts specific to development projects or modifications, Napa County has not yet formally adopted updated transportation significance thresholds or updated procedures for analyzing transportation impacts related to VMT. Because Napa County has not finalized or adopted the regulations of Senate Bill 743, this initial study analysis relies on guidance from the California Governor's Office of Planning and Research's December 2018 Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Guidelines) to determine the significance of transportation impacts (OPR 2018).

The transition to VMT was not required of lead agencies until July 1, 2020. However, in anticipation of the transition, the Circulation Element includes new policies that reflect this new regulatory framework for transportation impact assessment, along with a draft threshold of significance that is based on reduction of VMT compared to the unmitigated project rather than the regional average VMT (Draft Policies CIR-7 through CIR-9). Staff believes this alternative approach to determining the significance of a project's transportation impacts would be better suited to this County's rural context, while still supporting the efforts of the County to achieve the greenhouse gas emissions goals of its pending Climate Action Plan. The reduction in VMT and, correspondingly, GHG emissions from the transportation sector, is also necessary for Napa County, the region, and the state to achieve long-term, statewide mandates targeted toward reducing GHG emissions. Such mandates include, but are not limited to Executive Orders S-3-05 and B-16-12, which respectively, set a general statewide GHG emissions reduction target of 80 percent below 1990 levels by 2050, and an 80 percent GHG emissions reduction below 1990 levels (also by 2050) specifically for the transportation sector.

As defined in State CEQA Guidelines Section 15064.3(a), VMT refers to the amount and distance of automobile travel attributable to a project. The Technical Guidelines further explain that in Section 15064.3, the "automobile" "refers to on-road passenger vehicles, specifically cars and light trucks." For this reason, the focus of this VMT analysis is on trips by passenger vehicles (i.e., cars and light trucks) generated by the proposed project. However, this Initial Study also includes an analysis of greenhouse gas emissions associated with heavy truck traffic generated by the proposed project (as well as other traffic); it also addresses potential impacts of all project vehicles, including heavy trucks, related to air quality and greenhouse gas emissions (See Section III *Air Quality*, and Section VIII *Greenhouse Gas Emissions*, respectively.)

The proposed project is expected to generate approximately six passenger vehicle/truck round trips per day during construction, six days a week from April to October. Six truck trips would deliver and remove heavy equipment at the start and end of project construction. Typical construction equipment anticipated for construction includes a tractor and disk, excavators, bulldozers, loaders, water truck, and farm tractors with trailers. Pruning would occur between January and March approximately 15 days of the year and is anticipated to require up

to 12 workers, resulting in approximately three round trips per day during pruning. Weed control would occur between February and August (outside of pruning months) four times a year and would require up to five workers. Harvest would occur on approximately six days during the year and is anticipated to require up to 30 workers, and two grape haul during harvest resulting in up to 20 round trips per day during harvest. Vehicular equipment for ongoing vineyard maintenance is anticipated to include a tractor with trailer, a forklift, an ATV, and passenger vehicles and/or light trucks. Some of this traffic already exists onsite due to the operation and maintenance of the existing vineyard. Construction traffic would be intermittent during non-peak hours, generally arriving between 6 a.m. and 7 a.m. and departing between 2 p.m. and 3 p.m. Traffic associated with routine vineyard operation and maintenance, including harvest, would also be intermittent during the non-peak hours, generally arriving around 3 a.m. and departing around 6 a.m.

As indicated above, Technical Guidelines provide a screening criterion that could be used to determine whether a VMT analysis is warranted for small projects, which are defined as projects that would generate fewer than 110 trips per day and may generally be assumed to cause less-than-significant transportation impacts. As indicated above, construction of the proposed project would generate up to approximately six round trips per day, and periodically up to eight one-way truck trips per day. And vineyard operation would generate during harvest up to approximately seven to eight one-way worker trips, and two one-way truck trip per day (resulting in up to 20 round trips per day): other typically vineyard operations (as outlined above) are anticipated to generate up six 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. Additionally, daily trips associated with the project would be temporary and seasonal in nature, further supporting conformance and observance of this screening criterion.

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

c. The proposed project would utilize the existing site access off Silverado Trail for project development (**Figures 1-3**). The proposed project does not include roadway improvements and/or modifications to Silverado Trail, 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.

| | 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 the Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, and Yocha Dehe Wintun Nation on May 1, 2020. The County received a response letter from Yocha Dehe Wintun Nation on May 8, 2020, indicating that the project area is not located within the aboriginal territories of the Yocha Dehe Wintun Nation, and requested that correspondence be deferred to the Mishewal Wappo Tribe of Alexander Valley. On May 1, 2020, the County replied to the Yocha Dehe Wintun Nation and closed the consultation invitation because the Tribe did not request consultation and more than 30 days had elapsed since the County's consultation invitation was received.

The Mishewal Wappo Tribe of Alexander Valley and Middletown Rancheria did not request consultation within the 30-day notification period. Because no response to the May 1, 2020 consultation invitation was received, on June 15, 2020, the County sent consultation closure notices to the Mishewal Wappo Tribe of Alexander Valley and Middletown Rancheria.

a-b. As discussed in **Section V (Cultural Resources)** the proposed project's cultural resource reconnaissance survey (Flaherty Cultural Resource Services, May 2019), identified no cultural resources within the vineyard blocks and clearing boundaries. Furthermore, no resources that may be significant pursuant to Public Resources Code Section 5024.1(c) have been identified or are anticipated onsite. The Cultural Resources conditions of approval discussed in **Section V (Cultural Resources)** would avoid and reduce potential impacts to unknown resources.

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

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **XIX. UTILITIES AND SERVICE SYSTEMS.** Would the project: | | | | |
| a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | ☐ | ☐ | ☒ | ☐ |
| 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, 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 four existing groundwater wells would provide irrigation water to the vineyard. 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 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.

b. The 28.3 gross acres of vineyard (approximately 19.7 net acres) would be irrigated by four existing wells located within the project site. The WAA conducted by Richard C. Slade and Associates (**Exhibit D**) concluded that after full development, water use for the 19.7 net acres of vineyard and onsite residence is estimated to be 30.18 AF/year, which is an increase of 6.27 AF/year from the current onsite water use. Based on site-specific recharge and analysis the project site is estimated to have a total groundwater recharge of 85.50 AF/year. The project site's estimated water demand of 30.18 AF/year with the proposed project represents 35% of the groundwater allotment. The WAA estimated approximately 1,733 AF of groundwater is currently in storage beneath the project site, and that during a prolonged drought (estimated to last six years), groundwater recharge would be reduced to 48% of the average annual recharge, or 41.04 AF/year (246.24 AF in six years). To meet six years of groundwater demand, the proposed project (with existing and future water demands) would require 181.08 AF. Based on these estimates, there would be a recharge deficit of 65.16 AF during a prolonged drought. Water to meet a prolonged drought would be available during drought periods from the approximately 1,733 AF of groundwater estimated to be in storage beneath the project site. Removing approximately 181.08 AF of deficit over the entire six-year period may cause water levels to decrease beneath the project site. However, the removal of such a small percentage of groundwater from storage over a six-year period is not expected to significantly impact groundwater levels. Therefore, the proposed project would have a less than significant impact on water supplies. Water availability and water use are discussed in greater detail in **Section X (Hydrology and Water Quality)**.

c. Given the small number of 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 including rock-filled avenues, rock level spreaders, or on existing roads where needed. Any leftover rocks would be stored at an existing rock disposal area for future use inside the proposed clearing limits. 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 Moderate Fire Hazard Severity Zone (CALFIRE, 2007; Napa County GIS CalFire Layers, Fire Protection Responsibility Areas and Fire Hazard Severity Zone). The project site is generally located in the Howell Mountains, southwest of Atlas Peak and is comprised mainly by south-trending and west-trending ridgelines. Moderate slopes occur in the southern portion of the project site, and moderate to steep slopes are present in the northern portion of the project site (**Exhibit D-1**). Elevations within the project site range from approximately 130 to 450 feet above msl. Nearly the entire project site, including the residence, was burned in the Atlas Fire of October 2017. The fire intensity was at a level which charred trees and large shrubs and cleared the herbaceous layer.

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 due to the short duration of construction (approximately six months). Operation and maintenance activities would be similar to activities already occurring on the project site with the existing vineyard. The proposed project does not include any infrastructure that would exacerbate fire risk. 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 and could include burning cane, 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]**). The onsite residence is located on gently to steeply sloped terrain. Therefore, there are no structures or people that would be exposed to downslope or downstream flooding or landslides and the impact would be less than significant.

| | Potentially Significant Impact | Less Than Significant Impact With Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| **XXI. MANDATORY FINDINGS OF SIGNIFICANCE.** Would the project: | | | | |
| a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | ☐ | ☒ | ☐ | ☐ |
| 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 #P20-00117-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-4** would avoid potential direct and indirect impacts to special-status plans species and their habitat, foothill yellow-legged frog, and special-status bird species and their habitat. The proposed new vineyard blocks would be fenced individually and in clusters where appropriate. Given the relatively small size of the project site (relative to the width of the corridor tract) and the lack of apparent development impacts within the more central portion of this tract, agricultural expansion within the project site is in and of itself unlikely to result in any significant impacts to wildlife movement or migration at the landscape linkage scale. While the proposed project (vineyard blocks) would result in portions of the site having reduced potential for on-site wildlife movement, the retention of blocks of vegetation with direct connectivity with similar habitats on neighboring properties would allow for continued local wildlife movement. As such, the proposed 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 primary intermittent drainage and four ephemeral tributaries. To reduce impacts on water quality within the drainage, the proposed project has been designed to avoid the intermittent stream 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. With incorporation of standard conditions to protect cultural resources that may be discovered accidently, significant impacts to cultural resources are not expected (**Section V [Cultural Resources]**). Therefore, the proposed project as designed with the incorporation **Mitigation Measures BR-1** through **BR-4** and conditions of approval, would have a less than significant potential to degrade the quality of the environment.

b. The project site is located within the Soda Creek watershed. The Soda Creek drainage area contains approximately 2,966.2 acres. In 1993, vineyard acreage within this drainage was approximately 111.7 acres, or 3.8% of the drainage. Since 1993 approximately 69.8 acres of additional vineyard (or 2.4% of the drainage) have been developed to vineyard, resulting in approximately 6.1% of the drainage (or approximately 181.5 acres) containing vineyard.

It is estimated, based on evaluation of the County's GIS layer identifying Potentially Productive Soils within the Soda Creek Drainage, that there are approximately 958.6 acres (33.3% of the drainage) having the potential to be developed to vineyard. This, in conjunction with existing and approved vineyard development (approximately 181.5 acres), results in a total potential build out of approximately 1,140.1 acres or approximately 38.4% 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., Soda Creek watershed) over the last 28 years (1993-2021) were used to project an estimation of vineyard development for the next three to five years. Over the past 28 years within the Soda Creek Drainage, approximately 6.5 acres of agriculture were developed per year (181.5 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 19.5 to 32.5 acres over the next three to five years within the Soda 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 ECPA 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 (#P20-00117-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 4** (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 8** and **9**). As discussed in **Section VIII (Greenhouse Gas Emissions)**, the proposed project is not anticipated to result in substantial or significant GHG emissions, and includes the installation of grapevines and a permanent no-till cover crop, which may off-set (in whole or in part) potential impacts related to reductions in carbon sequestration. Potential contributions to air quality impacts associated with the proposed project, including GHG emissions and loss of sequestration, would be considered less than cumulatively significant through project design (i.e., scope and scale) and implementation of standard conditions of approval.

***Biological Resources - Section IV:***

A project-specific Biological Resources Reconnaissance Survey (WRA, January 2020 - **Exhibit B-1**, WRA, August 2020 - **Exhibit B-2**) was performed for the proposed project to evaluate potential habitat loss and disturbance to plant and wildlife species as a result of the

proposed project. The reconnaissance survey included a records search to identify the presence or potential presence of special-status species within the project area. The records search included the USFWS, CNDDB, and CNPS databases. As discussed in **Section IV** (**Biological Resources**), wetlands were identified in the project site outside of the development area. Three special-status plant species are present within the project site and four special-status animal species have the potential to occur within the project site; however, with the implementation of **Mitigation Measures BR-1** through **BR-4**, 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 resource reconnaissance survey (Flaherty Cultural Resource Services, May 2019) 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 cultural sensitivity training, 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, 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 9.4 tons/year as compared to existing conditions (**Table 7**). The reasons for this reduction is due to the increased vegetative cover conditions within the proposed vineyard development areas and the installation of straw wattles that reduce overland flow velocities and erosive power, and trap eroded soil on-site, thereby reducing soil loss potential. Because the proposed project would reduce soil loss as compared to existing conditions, the proposed project is not anticipated to contribute cumulatively to sediment production within the Soda 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.

***Hydrology and Water Quality - Section X:***

Water use calculations provided in the WAA prepared by Richard C. Slade and Associates (March 2020 - **Exhibit D**) indicate that the proposed development consisting of approximately 19.7 net acres of planted vineyard would result in approximately 6.27 AF/year of additional groundwater use compared to the approximately 23.91 AF/year used under current conditions, totaling approximately 30.18 AF/year (**Table 11**).

The average annual rainfall utilized in the groundwater recharge analysis includes times of below-average and above-average rainfall, and therefore inherently includes drought year conditions. Based on annual average rainfall for the area (approximately 28.2 inches per year) and the size of the project site (approximately 214 acres available for recharge), and other conditions that affect the amount of precipitation that has the potential to recharge the groundwater aquifer, such as geological conditions, runoff characteristics, and evapotranspiration, it was anticipated that approximately 17% of average rainfall or 85.50 AF/year would be available for groundwater recharge.

Considering the anticipated water use for existing uses and proposed vineyard of 30.18 AF/year is below the project site's anticipated annual groundwater recharge rate of approximately 85.50 AF/year, and with implementation of the standard water use condition, potential impacts associated with groundwater use would be further reduced and the proposed project is anticipated to result in less than significant impacts to groundwater supplies, groundwater recharge, local groundwater aquifer levels, and well interference or drawdown effects on nearby wells. Additionally, potential water use is anticipated to be less that disclosed with implementation of **Mitigation Measure BR-1,** which would reduce project by 1.8-acres

As discussed in **Section X.c (Hydrology and Water Quality)** a Hydrologic Analysis utilizing the TR-20 Runoff Model has been prepared by PPI Engineering (PPI Engineering, September 2020 - **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]**).

***Proposed Project Impacts found to be Less Than Significant***

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

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

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

**LIST OF FIGURES:**



**LIST OF TABLES:**



**LIST OF EXHIBITS:**