COUNTY OF NAPA
PLANNING, BUILDING AND ENVIRONMENTAL SERVICES DEPARTMENT
1195 THIRD STEET SUITE 210
NAPA, CA 94559
(707) 253-4417

Initial Study Checklist
(form updated January 2019)

1. **Project Title:** Moshkelani Vineyard Track I Erosion Control Plan Application (ECPA) #P21-00331-ECPA

2. **Property Owner(s):** Saeid Moshkelani and Azin Shahzamani

3. **Contact Person, Phone Number and Email:** Dana Morrison, Supervising Planner, (707) 253-4437, dana.morrison@countyofnapa.org

4. **Project Location and APN:**

   805 Greenfield Road, St. Helena
   APNs: 025-390-009-000 and 025-380-016 (**Figure 1 and Figure 2**)
   NW¼ and NE¼ of the SW¼ of Section 26, & SW¼ of the NW¼ of Section 26, Township 8 North, Range 5 West, Mt. Diablo Principal Meridian
   Longitude - 122° 23' 18.6"W; Latitude 38°30' 48.816"N

5. **Project Sponsor:** Napa Valley Vineyard Engineering Inc. (NVVE)
   Agent: Drew Aspegren (Registered Professional Engineer No. 31418)
   176 Main Street, Suite B
   St. Helena, CA 94574

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

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

8. **Background & History:**

   The project is located on a designated SFAP parcel (Separated for Assessment Purposes: two connected un-splitable APNs, essentially considered one parcel, but assessed with different tax rates) consisting of approximately a combined total of 48.52-acres (APNs 025-390-009 and 025-380- 016; Address - 805 Greenfield Road). The approximately 49-acre SFAP parcel is currently developed with a single-family residence, accessory dwelling unit, guest house, garage, workshop, pool, tennis court, two wells (residential uses only), water storage tanks, driveways, three (3) reservoirs, existing vineyard, and associated landscaping. There are 4.10 net acres of existing vineyard on the subject parcel which are highlighted in pink on the ECPA plan set and noted as “existing vineyard” or “P08-00591”; 2.39 acres of the existing vines have been in place since the 1980s (prior to 1993) and were replanted with a Track II permit #03135 in 2003; the remaining 1.71 acres of existing vineyard were installed in 2009 under an approved ECPA (P08-00591) for a 5.0-acre agricultural project with various vegetation, this section is part of the identified Block A being considered under this current ECPA. There are no changes proposed to the two “existing vineyard” blocks, though Block A, which includes the vineyard installed under P08-00591, is proposed to be expanded under this current project. This project specifically proposes to expand Block A with an additional 4.81 acres of new land for vineyard, which will consist of converting 3.06 acres of land approved under P08-00591 from the planting of various vegetation (flowers and fruit trees) to the planting of vineyard, replanting 1.67 acres (of the 1.71 acres) of vineyard already installed, and abandonment of 0.04 acres (of the 1.71 acres) of vineyard installed within a stream setback. The project also involves a 0.2 acre staging area at the southern portion of Block A which is included in the total area allocated to Block A and installation of 2.09 acres of new vineyard located within (Blocks B, C, and D). This will all result in a total area of 14.02 acres of vineyard on-site post project (2.39 acres of existing + 11.63 of new and replant). The project will result in a total disturbed area of 11.67 gross acres, as 0.04 acres of vines located within a stream setback are being removed, and 7.64 net acres of new vines (9.31 total net vine acres - 1.67 replacement vine acres = 7.64 new net acres).

9. **Description of Project:**

   The proposed project involves the clearing of vegetation, earthmoving, and installation and maintenance of erosion control measures associated with the abandonment of 0.04 acres of vineyard, replanting of 1.67 acres of existing approved vineyard (P08-00059), and conversion to vineyard of 9.96 gross acres (for a total disturbed acreage of 11.67 acres) within 4 vineyard blocks, located on an SFAP parcel with a combined acreage of 48.52 acres (i.e., project site) (**Figure 3**). Average slopes within the development range from gently to steeply sloped (4-45%), with 1.11 acres occurring on slopes over 30% confined to small areas within the vineyard blocks. There are of 23.6 acres of mixed oak

woodland located on the parcel, consisting predominantly of live oaks, black and blue oaks. The project proposes to remove 2.38 acres of the mixed oak woodland; 1.62 acres removed from APN: 025-390-009 and 0.76 acres from APN: 025-380-016. The project proposes to permanently preserve 5.88 and 3.13 acres, including a 0.45-acre replanting area (total of 9.01 acres) of Oak woodland to achieve consistency with the Napa County Code (NCC) vegetation canopy preservation policy 18.108.020.D + E and newly adopted Bay Area Air Quality Management District (BAAQMD) requirements whereby projects must result in no net decrease in Greenhouse Gas (GHG) sequestration. A total of 4.24 acres are located on slopes less than 30% and outside of required water resource setbacks, and additional 6.03 acres are located on slopes between 30-50% (**Exhibit B-1**). A Report from a qualified Biologist was submitted by the applicant demonstrating how the proposed mitigation and replanting area provides the best water quality and biological resources protections (**Exhibit B-2**). Rock generated as a result of site preparation will be used to construct vineyard avenues or erosion control features (85%), stacked and stored on site (10%), or utilized as decorative landscaping features (5%). Temporary rock stockpiles and staging areas would be located inside of proposed clearing limits. No grading activities or ground disturbance would occur outside of the proposed clearing limits. The vineyard would be irrigated with water sourced from three (3) on-site reservoirs, which are filled utilizing an existing Diversion and Use of Water Permit #21024 (**Exhibit E**). Permit # 21024 was granted in 1997 by the State of California - California Environmental Protection Agency State Water Resources Control Board and permits the drawing of 25-acre feet per year (af/yr) of water between the months of December 15th to March 31st from an unnamed blue line stream located on the parcel. The proposed Block C is outside of the identified Place of Use Map for the Diversion and Use of Water Permit, as such the applicant will need to revise the Place of Use Map and Water Permit to include this vineyard block, or, if approval is not granted then the ECPA will be revised to remove Block C from the proposed vineyard development; this has been included as a Mitigation Measure (**HYDRO-1**). The project site is located with the Lake Hennessey Sensitive Domestic Water Supply drainage and, as such, the local water purveyor was contacted as part of the review process for this project (**Exhibit G**). The local water purveyor raised no issues or concerns regarding the proposed project. Irrigation and pipelines would be located in existing roadways, vineyard avenues and/or within the proposed clearing limits. Chemicals for vineyard development and maintenance will be stored off-site, while chemical mixing will occur in the loading area by main line and cleaning/washing of chemical application equipment will occur inside one of the existing sheds (currently located within the proposed footprint of Block B and which will be relocated). Per the Hazards Materials Condition of Approval (**Section IX**) the new storage shed location will need to be more than 100 feet away from water sources. There is some existing wildlife exclusion fencing already located on the parcel, the project proposes to tie into the existing wildlife fencing and enclose the new vineyard blocks with deer fencing. (**Exhibit A)**

Erosion Control Measures: Temporary erosion control measures include fiber rolls, and the application of straw mulch at a rate of 2 tons per acre; though as an alternative to mulch, the seeded area may be irrigated through germination until the onset of winter rains. Permanent erosion control measures include cleaning, repairing and replacing existing drainage features (as needed), construction of water bars, construction of rock disposal avenues, construction and maintenance of diversion ditches, installation of fiber rolls, laying of straw mulch, and a permanent no-till cover crop maintained at a minimum vegetation cover density of 75% (all Blocks). Details of the proposed erosion control measures are provided in the Moshkelani Family Vineyard ECP #P21-00331-ECPA, dated December 1, 2021, prepared by Drew Aspegren (Registered Professional Engineer No. 31418) of Napa Valley Vineyard Engineering INC., Napa, California (**Exhibit A**).

Earthmoving*:* Earthmoving and grading activities associated with the installation of erosion control measures and subsequent vineyard operation include, but are not limited to vegetation removal, soil ripping (maximum depth 24"), rock removal, disking, and development of erosion control measures.

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

a. Installation of vineyard trellis and drip irrigation systems, and planting rootstock with the following vinerow spacing pattern: 6' for Block A, 10' for Block B, 8' for Block C, and 7' for Block D and 4' by 7' spacing pattern (Block 2 and Block 3) for an approximate vine density ranging between ±1,556 and ±2,178 vines per acre.
b. Ongoing inspection and maintenance of temporary and permanent erosion and runoff control measures.
c. Ongoing operation and maintenance of the vineyard, which includes: vine management (pruning, fertilization, pest and disease control), weed control, cover crop mowing, irrigation and trellis system maintenance, and fruit harvesting. No pre-emergent herbicides would be used and contact or systemic herbicides may be applied in the spring. The width of the spray strip shall be no wider than 1 foot in order to achieve 75% vegetative cover.
d. Installation of deer fencing to enclose vineyard Blocks.

Table 1 lists a general schedule for the construction of the proposed project as identified in #P21-00331-ECPA and **Table 2** outlines typical general ongoing vineyard operations. The final implementation schedule is pending action on #P21-00331-ECPA.

Table 1 – Implementation Schedule

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

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

Table 2 – Annual Operations Schedule

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

Project construction activities are anticipated to require up to approximately two (2) one-way worker trips per day. Approximately four (4) additional one-way trips are anticipated for project mobilization and demobilization for equipment and materials delivery and pick up. Construction equipment is anticipated to include a crawler tractor (D-8 or larger), tractor/trailers, backhoes, trencher, and pickup trucks, passenger vehicles, and other small to medium service vehicles.

Vineyard operations, including pruning and harvest is anticipated to require up to approximately eight (8) one-way worker trips per day during peak times (approximately 14 workers who will carpool). Approximately four (4) additional one-way trips per day are anticipated for grape haul trucks during harvest, which is expected to be two (2) days. This is a total of 12 trips per day during peak operations, which is less than the recent 110 trip threshold set by BAAQMD under which projects are considered to have a less than significant impact on greenhouse gas (GHG) levels. Equipment for vineyard operations is anticipated to include a tractor/trailer, grape trucks, pickup trucks, passenger vehicles and other small to medium service vehicles, and ATVs; manual and hand labor is also anticipated.

Implementation of the proposed project would be in accordance with the Moshkelani Family Vineyard ECP prepared by NVVE Engineering (December 2021 - **Exhibit A**). The proposed project is further described in the application materials including the Supplemental Project Information sheets (**Exhibit I**). All documents are incorporated herein by reference and available for review in the Napa County Department of Planning, Building and Environmental Services (PBES).

10. Describe the environmental setting and surrounding land uses.

The proposed project would occur on a SFAP parcel totaling approximately 48.52 acres and located at 805 Greenfield Road in Napa County, California (**Figures 1-3**). The project site is located approximately 2.75 miles northeast of the City of Saint Helena. The parcel consists of a single-family residence, garage, guesthouse, accessory dwelling unit, pool, tennis court, onsite wells, water storage tanks, three (3) reservoirs, existing vineyard and associated infrastructure, landscaping and access roads, as well as undeveloped areas, consisting of nonnative grassland and predominantly blue oak woodland. Surrounding land uses include rural residences, opens space (grassland and woodland) and vineyards.

The project site is located within the Conn Creek Watershed which is located within the Lake Hennessey Sensitive Domestic Water Supply Drainage. An unnamed blue-line stream starts below the western most reservoir and runs southeast for 0.75 miles at which point it merges with Conn Creek. The project site also contains two (2) primary ephemeral drainages, which flow southwestward and eventually merge with the unnamed blue-line stream. As proposed, the project will maintain the required 35-foot setback from the ephemeral drainages and a 105-foot setback from the un-named stream, consistent with the Conservation Regulations section 18.108.025. Conn Creek drains to Lake Hennessey thence leaving the lake as Conn Creek again before later merging with the Napa River and eventually draining into the San Pablo Bay.

General topography of the parcel is gently to steeply sloped with all aspects represented, and elevations ranging from 675 to 910 feet above mean sea level (msl), within the eastern hills of Napa Valley north of Lake Hennessey and west of Greenfield Road. The project site contains slopes within the development area that are gently to steeply sloped on south-facing slopes (Block A, C and D) and a north-facing slope (Block B), with elevations ranging from approximately 705 to 850 feet above msl.

The closest active faults are the West Napa, Hunting Creek and Green Valley Faults. These are approximately 11 miles, 12 miles and 23 miles from the project site, respectively. One unnamed, inactive fault runs in a northwest-southeast direction approximately 0.3 miles east of the project parcel. No landslides or areas of instability have been identified within the project site. Soils on the project site have been classified according to the Soil Survey of Napa County (USDA 1978) as Haire loam 2-9% slopes and Sobrante loam with 30-50% slopes, which are characterized as developing on sedimentary rocks and sandstone, respectively. (**Exhibit F**)

The vegetation types in the project parcel generally consist of developed and landscaped (2.0-acres), existing vineyard (3.0-acres), non-native annual grassland (19.91-acres) and mixed oak woodland (23.61-acres). A blue-line stream (unnamed) is located on the southwest section of the property line; no vineyard development is proposed within approximately 105 feet of the existing creek. There are also two identified and unnamed ephemeral drainages on the parcel. The eastern most drainage transitions to a County definitional stream along the eastern most property line before cutting through the center of the parcels and heading southwest. Setbacks vary from 35 feet at the smallest (when the stream is classified as an ephemeral drainage) and increase to between 55–105-foot setbacks depending on the slope of the bank consistent with NCC 18.108.025. A 50-foot setback is also maintained from the three (3) existing on site reservoirs/ponds. The 11.63 gross acres of project

area proposed for conversion to vineyard consists of 7.73 acres of ruderal grassland (consisting of 4.65-acres of new vineyard and 3.06-acres of already approved vineyard and a 0.2 acre staging area), 2.38-acres of mixed-oak woodland, and 1.67 acres of existing vineyard (to be replanted).

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
U.S. Army Corps of Engineers (USACE) (R)	Mishewal Wappo Tripe of Alexander Valley
Regional Water Quality Control Board (Regional Water Board) (R)	Yocha Dehe Wintun Nation

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

Notice of the proposed project was sent to Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, and Yocha Dehe Wintun Nation on January 19, 2022. As of February 28, 2022, there was only one (1) response, from the Yocha Dehe, who did not raise concerns regarding the project. No responses were received from Middletown or the Mishewal within the comment period and, as such, the consultation period has closed.

*This is discussed in detail in **Section XVIII (Tribal Cultural Resources)**.*

ENVIRONMENTAL IMPACTS AND BASIS OF CONCLUSIONS

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

Other sources of information used in the preparation of this Initial Study include site-specific studies conducted by the applicant and filed by the applicant in conjunction with ECP #P21-00331-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:

- NVVE Engineering, December 2021, Erosion Control Plan, Moshkelani Family Vineyard LLC, 1373 Soda Canyon Road (**Exhibit A**).
- Kjeldsen Biological Consulting, December 2021, Biological Resources Survey, Moshkelani Family Vineyard: 805 Greenfield Road, Napa County, California (**Exhibit B**).
- NVVE Engineering, September 2022, Tree Mitigation Map and Vegetation Retention Maps (-009 and -016), Moshkelani Family Vineyard (**Exhibit B-1**).
- Kjeldsen Biological Consulting, April 2023, Water Quality and Biological Benefits of proposed mitigation areas (**Exhibit B-2**)
- NVVE Engineering, December 2021, Hydrology Study, Moshkelani Family Vineyard, Greenfield Road (**Exhibit C**).
- NVVE Engineering, December 2021, Universal Soil Loss Equation Analysis, Moshkelani Family Vineyard, Greenfield Road (**Exhibit D**).
- Surface Water Rights Permit and historic parcel surface water draw data (**Exhibit E**).
- Rockridge Geotechnical, December 2021, Engineering Geological and Geotechnical Evaluation – Moshkelani Family Vineyards (**Exhibit F**)
- Water Purveyor Consultation Documentation (**Exhibit G**)
- Project Revision Statement P21-00331 (**Exhibit H**)
- Application Submittal Materials and Correspondence (**Exhibit I**)
- NVVE Engineering, September 8, 2022, Water Diversion Analysis and Report – Moshkelani Family Vineyards (**Exhibit J**)
- Tom Origer & Associates, October 2021, Cultural Resources Study of a Portion of the Property at 805 Greenfield Road, St. Helena, Napa County, California.
- Site inspections conducted by Napa County Planning and Engineering Division staff conducted on December 17, 2021.
- Napa County Geographic Information System (GIS) sensitivity maps/layers.

On the basis of this initial evaluation:

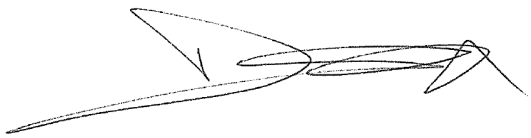
☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a *(SUBSEQUENT)* NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent (see **Exhibit H – Project Revision Statement**). A *(SUBSEQUENT)* MITIGATED NEGATIVE DECLARATION will be prepared.

☐ 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

August 18, 2023
Date

Dana Morrison
Napa County
Planning, Building and Environmental Services Department

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
I.	**AESTHETICS.** Except as provided in Public Resources Code Section 21099, would the project:				
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c)	Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion

a-b.

The proposed project would not have a substantial adverse impact on a scenic vista or on scenic resources. The project site is located approximately 2.0 miles from the Silverado Trail and 1.85 miles from Sage Canyon Road, the closest County viewshed roads. The site is not located on a prominent hillside, a major or minor ridgeline (Napa County GIS, Ridgelines Layer), or within a scenic corridor (Napa County GIS, Scenic Corridors Layer). The majority of the parcels in the area are currently developed with agricultural and residential uses, and the visibility of the project site from public roads is predominantly obscured based on existing topography, development and vegetation. The project is located on the southern side of a hill located north of Greenfield Road. The location is not considered a minor or major ridgeline (Napa County GIS, Ridgelines Layer). The highest elevation of the project site would be located approximately 910 feet above msl and would be more than 2600 feet below the nearest minor ridgeline. The nearest public road from where the proposed project would be visible, Greenfield Road, is located immediately to the east and southeast of the project site and behind scattered trees. Although portions of the proposed project site may be visible from Greenfield Road, it is not visible from Silverado Trail and Sage Canyon Road or any other identified County viewshed road. Furthermore, the scale of the proposed project and its location amidst similar surrounding vineyards and residences, including immediately adjacent to the proposed project, would result in the proposed vineyard blending in with surrounding uses. The proposed project would not substantially damage scenic resources, as there are no significant rock outcroppings or historic buildings within the proposed development area. The proposed vineyard development has been designed in a way that would complement the natural contours of the project site and would avoid the riparian habitat surrounding the existing reservoirs, ephemeral drainages and an un-named blue-line stream. The proposed project is consistent with the Napa County AWOS land use and with surrounding land uses; therefore, the proposed project is anticipated to result in less than significant impacts to the scenic vistas, scenic resources and public views.

c.

The proposed project would not substantially degrade the existing visual character of the site or its surroundings. While the proposed project would remove up to 2.38 acres of mixed oak woodland, the project would avoid a majority of the trees on the parcel, as well as the stream, ephemeral drainages, and existing reservoirs and their required buffers. In 2001, Napa County adopted a Viewshed Protection Ordinance for the purpose of preserving the scenic quality of Napa County. The ordinance provides development guidelines to 1) minimize man-made structures and grading on views of existing landscapes and open spaces as seen from designated public roads within the County; and 2) new hillside development with slope areas greater than 15% that may be within 25 vertical feet of a ridgeline. Sage Canyon Road, the closest designated scenic public road from the project, is located approximately 1.85 miles southeast of the proposed project, and the grading associated with the project would not be visible from said road based on the existing topography and vegetation. No structures are proposed as part of this project; therefore, the proposed project would not be subject to the provisions of the Viewshed Protection Ordinance. As such, the project would result in less than significant impacts.

d.

Proposed agricultural operations on the parcel would require some lighted nighttime activities consistent with the nighttime activity already occurring on the project parcel and in the surrounding area, which includes vineyard and agricultural uses. The proposed project would

include nighttime harvesting and applications of sulfur (from 4 a.m. to dawn) occurring approximately eight (8) nights per year. Lighting would be in the form of headlights or downward direction lights on equipment being used during nighttime activities. While some nighttime activities may occur for limited periods, the 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, resulting in a less than significant impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Important (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resource Code Section 12220(g)), timberland (as defined in Public Resource Code Section 4526), or timberland zoned Timberland Production (as defined in Government Code Section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Discussion

a.

The Napa County Important Farmland 2016 map prepared by the California Department of Conservation, Division of Land Resource Protection identifies the development area as Grazing Land with a small portion in Block D designated as Unique Farmland and Block C designated as both Prime Farmland and Farmland of Local Importance. The proposed project would result in conversion of existing land to agriculture; therefore, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, and no impacts are anticipated.

b.

The project site has a General Plan designation of Agriculture, Watershed and Open Space (AWOS) and is zoned Agricultural Watershed (AW). Therefore, the establishment of vineyard totaling approximately 11.63 gross acres (9.31 net vine acres; 7.64 new net vine acres) is consistent with project site's land use and zoning designations. The subject property does not have a Williamson Act contract associated with it. Therefore, the proposed project would not conflict with its land use designation or a Williamson Act contract resulting in no impact.

c-d.

"Forest Land" is defined in California Public Resource Code Section 12220(g) as "land that can support 10% native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." The project site does not contain forest land or coniferous forest (Napa County GIS; WRA October 2018). The project site is not zoned forest land as defined in Public Resource Code Section 12220(g), timberland as defined in Public Resource Code Section 4526, or a Timberland Production Zone (TPZ) as defined in Government Code Section 51104(g). Therefore, no impact would occur.

e.

The proposed project does not include the construction of roadways or other infrastructure that would result in the conversion of existing farmland or forestland in the area to non-agricultural or non-forestland uses. As such, the proposed project would not have an impact on agricultural or forest resources of Napa County.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
III.	**AIR QUALITY.** Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
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 disclosures and impact assessment.

On June 2, 2010, the Bay Area Air Quality Management District's (BAAQMD) Board of Directors unanimously adopted thresholds of significance to assist in the review of projects under the California Environmental Quality Act. These thresholds were designed to establish the level at which the Air District believed air pollution and greenhouse gas emissions would cause significant environmental impacts under CEQA. The thresholds were posted on the Air District's website and included in the Air District's updated CEQA Guidelines (updated May 2012). The thresholds are advisory and may be followed by local agencies at their own discretion.

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

In view of the Supreme Court's opinion, local agencies may rely on thresholds designed to reflect the impact of locating development near areas of toxic air contamination where such an analysis is required by CEQA or where the agency has determined that such an analysis would assist in making a decision about the project. However, the thresholds are not mandatory, and agencies should apply them only after determining that they reflect an appropriate measure of a project's impacts.

The Guidelines for implementation of the thresholds are for information purposes only to assist local agencies. Recommendations in the Guidelines are advisory and should be followed by local governments at their own discretion. These Guidelines may inform environmental review for development projects in the Bay Area, but do not commit local governments or the Air District to any specific course of regulatory action.

The Air District published a new version of the Guidelines dated May 2017, which includes revisions made to address the Supreme Court's 2015 opinion in Cal. Bkdg. Indus. Ass'n vs. Bay Area Air Quality Mgmt. Dist., 62 Ca 4th 369.

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

a-b.

The project site is generally located at the base of the hills bordering the eastern side of the Napa Valley east of the City of Saint Helena, within the Napa County climatological subregion of the San Francisco Bay Area Air Basin, which is under the jurisdiction of BAAQMD. The topographical and meteorological features of the Napa Valley subregion create the potential for air pollution. In the short term, potential air quality impacts are most likely to result from construction activities. Construction-related emissions, which are temporary in nature, mainly consist of particulate matter (PM) generated from fugitive dust during grading or other earthmoving activities and other criteria pollutants generated through the exhaust from construction equipment, and vehicular haul and worker trips. In the long term, potential air quality impacts would likely result from ongoing activities associated with the operation and maintenance of the proposed vineyard. Operational-related emissions, which are seasonal in nature, are primarily generated from vehicular trips associated with workers going to and from the site and equipment necessary for ongoing vineyard maintenance. Refer to **Section XVII (Transportation)** for the anticipated number of construction- and operation-related trips.

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

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

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

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

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

Table 3 shows the approximate anticipated construction emissions associated with the development of vineyards of the sizes described above. Also shown in **Table 3** are the BAAQMD CEQA Guidelines draft thresholds of significance for emission of the following criteria pollutants: ROG, NO_x, PM_{10}, and $PM_{2.5}$.

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

[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 3 – Emissions from Vineyard Development and Operation

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

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

Because the proposed project's 11.63 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 3** and therefore below identified thresholds. Additionally, project approval, if granted, would be subject to the standard Air Quality condition described below, which includes standard air quality and construction best management practices (BMPs) consistent with BAAQMD measures identified in Table 8-1 of the CEQA Guidelines that would further reduce potential air quality impacts associated with construction and ongoing operation of the proposed project. These BMPs would be incorporated into the proposed project.

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

- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. The BAAQMD's phone number shall also be visible.
- Water all exposed surfaces (e.g., parking areas, staging areas, soil piles, grading areas, and unpaved access roads) two times per day.
- Cover all haul trucks transporting soil, sand, or other loose material offsite.
- Remove all visible mud or dirt tracked onto adjacent public roads by using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- Idling times shall be minimized either by shutting off equipment when not in use or reducing the maximum idling time to five (5) minutes (as required by state regulations). Clear signage shall be provided for construction workers at all access points.
- Water and/or dust palliatives shall be applied in sufficient quantities during grading and other ground disturbing activities onsite to minimize the amount of dust produced. Outdoor construction activities shall not occur when average wind speeds exceed 20 mph.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator. Any portable engines greater than 50 horsepower or associated equipment operated within the BAAQMD's jurisdiction shall have either a California Air Resources Board (ARB) registration Portable Equipment Registration Program (PERP) or a BAAQMD permit. For general information regarding the certified visible emissions evaluator or the registration program, visit the ARB FAQ[5] or the PERP website[6].

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

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

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

c-d.

Land uses such as schools, playgrounds, childcare 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 rural residences, wineries, and vineyards. The project site consists of approximately 49 acres of land with 2.0 acres of developed areas, including one primary residence, a guesthouse and accessory dwelling unit, a pool, additional accessory structure and associated infrastructures, access road and landscaped areas. The closest schools are Saint Helena Montessori and Napa Valley College, which are each located approximately 3.45 and 3.55 miles west of the project site, respectively, in the City of Saint Helena (Napa County GIS, Schools Layer). The closest offsite residences are located approximately 265 feet to the northwest, 355 feet to the south, 560 feet to the west, and 780 feet to the east. The closest residential area (Saint Helena) is approximately 2.75 miles west of the project site.

During installation of the ECP, vineyard planting, and subsequent vineyard operations, airborne pollutants and odors would be created through the use of grading and farm equipment (e.g., tractors, trucks, and ATV's). These sources would be temporary and/or seasonal in nature and would occur more than two (2) miles from the closest school and over two (2) miles from the closest residential neighborhood, providing dilution of pollutants and odors. For the reasons identified above, the proposed project would not expose sensitive receptors or a substantial number of people to pollutants or objectionable odors, resulting in a less than significant impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations 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?	☐		X☐	☐
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?	☐	☐	X☐	☒
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.

- Kjeldsen Biological Consulting, December 2021, Biological Resources Survey, Moshkelani Family Vineyard: 805 Greenfield Road, Napa County, California (**Exhibit B**).
- NVVE Engineering, September 2022, Tree Mitigation Map and Vegetation Retention Maps (-009 and -016), Moshkelani Family Vineyard (**Exhibit B-1**).
- Kjeldsen Biological Consulting, April 2023, Water Quality and Biological Benefits of proposed mitigation areas (**Exhibit B-2**)

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

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, 2021a), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS, 2021a), and the USFWS List of Federal Endangered and Threatened Species (USFWS, 2021b) that may be affected by projects in the Saint Helena, Chiles Valley, Lake Berryessa, Rutherford, Yountville, Capell Valley, Sonoma, Napa and Mount George USGS 7.5 minute quadrangles.

Kjeldsen conducted assessments of biological resources on the project site on March 16, April 15, May 12, June 11, and August 2021. The surveys were completed to determine: the presence of sensitive biological communities; the potential for biological communities on site to support special-status plant or wildlife species; and the presence of sensitive natural resources protected by local, state, or federal laws and regulations. The field surveys were conducted by botanists familiar with the flora of Napa County and surrounding counties. The site assessment does not constitute a formal wetland delineation; however, the surveys looked for superficial indicators of wetlands such as hydrophytic vegetation (i.e., plant communities dominated by wetland species), evidence of inundation or flowing water, saturated soils and seepage, and topographic depressions/swales.

The parcel consists of the following vegetation communities (land cover types): 2 acres of disturbed (none proposed for removal), 3 acres of existing vineyard (1.67 acres will be removed and replaced with new vines), 23.61 acres of mixed oak woodland (2.61 acres to be removed), and 19.91 acres of grassland semi-natural herbaceous stand (4.65 acre of which will be removed, of which 3.06 acres were already approved for removal under the previous ECP). The land covers and their acreages are shown in **Table 4**.

Table 4 –Land Cover Types/Biological Community Removal and Retention

Land Cover Type or Biological Community	Acreage within Parcel (Pre-Project)	Acreage Removed	Percent Removed	Percent Remaining	Post-Project Acreage
Developed/Disturbed Area	2.0	0.0	0.0%	100.00%	2.0
Grassland Semi-Natural Herbaceous Stand	19.91	4.65 (new) 3.06 (already approved)	23.4%	76.6%	15.26
Existing Vineyard	3.0	0.04 to be abandoned 1.67 acres removed and replaced	98.66%	1.34%	2.96
Mixed Oak Woodland	23.61	2.61	11.0%	89%	21.0

Sources: Kjeldsen December 2021

a.

Special Status Plants

Based upon a review of the resources databases listed in **Exhibit B**, of the special-status plant species documented in Napa County 44 have the potential to occur in project site; however, no special-status plant species were found during the floristic surveys. While habitat for the following species were noted as being present on the parcel the historic agricultural use precludes presence and no indication for presence were found during the site surveys conducted by Kjeldsen Biological Consulting: Napa False Indigo, Bent-flowered Fiddleneck, Konocti Manzanita, Jepson's Milk-Vetch, Narrow-anthered California Brodiaea, Adobe-lily, Jepson's Letosiphon, Broad-lobbed Leptosiphon, Cobb Mountain Lupine, Keck's Checkerbloom, and Napa Bluecurls. Therefore, the proposed project would not impact special-status plants or habitat, and is consistent with the following Napa County General Plan Conservation Element Goals and Policies

and Zoning Ordinance: Goal CON-2 because it would not affect the existing level of biodiversity in the County and contribute to minimization of potential cumulative impacts associated with the loss of special-status plant species and associated habitat due to agricultural conversion projects; Goal CON-3[7] as it would not affect the continued presence of special-status plant species or its habitat; Policy CON-13 in that no impacts to special-status habitat would occur with the development of up to approximately 11.67 gross acres of agriculture on the project site; Policy CON-17[8] because no removal or disturbance of a sensitive natural plant community that contains special-status plant species would occur; and, the purpose and intent of the Conservation Regulations (NCC Chapter 18.108) in that it would not affect natural habitat or existing vegetation, and adversely affect sensitive, rare, threatened or endangered plants.

Special Status Wildlife

Based upon a review of the resources databases listed in **Exhibit B**, of the special-status animal species documented in Napa County 16 have the potential to occur in project site; however, no special-status species were found during the surveys. Therefore, the proposed project would not impact special-status wildlife or wildlife habitat. Though no species were identified as part of the surveys the project includes environmental commitments for bird protection. No special-status animal species were encountered during surveys within the development area. The report notes that habitat for the western pond turtle is present on the subject parcel (though none were observed during the surveys).

> Western Pond Turtle: The western pond turtle is the only freshwater turtle native to most of California. This species is highly aquatic, typically inhabiting perennial waters including lakes, ponds/reservoirs, rivers, streams, and canals that provide submerged cover and suitable exposed basking structures such as rocks, logs and mats of emergent vegetation. Nesting usually occurs in spring to early summer, with eggs hatching in the fall; nests are excavated in upland areas with friable soil, usually on unshaded slopes within approximately 300 feet of water. Hatchlings require shallow water with relatively dense emergent and aquatic vegetation to provide forage, usually aquatic invertebrates. [**Exhibit B**].

Regarding pond turtles, because this species habitat was noted as existing onsite the project has been specifically designed to avoid the reservoir and its immediate shoreline (including basking substrates), thereby reducing the risk of harm to adult pond turtles. However, ground disturbance within the proposed vineyard block has the potential to impact turtle nests in the substrate, and adult turtles and/hatchlings moving to/from the reservoir to upland areas and as such a mitigation measure is proposed. With implementation of **Mitigation Measure BR-1**, the proposed project would result in less than significant impacts on western pond turtles.

Mitigation Measure BR-1: The Permittee shall include in #P21-00331-ECP the following measures to minimize impacts of the proposed project on western pond turtles:

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

As noted in Biological Report a lack of habitat on the subject property precludes the presence of Foothill Yellow-legged Frogs and California Red-Legged Frogs were noted as “not known within the watershed”.

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

[8] Policy CON 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.

Removal of any vegetation on the parcel could result in potentially significant direct, indirect and cumulative impacts on special-status and migratory birds through removal of shelter and foraging habitat, and indirect construction-related disturbance (e.g., noise) to nesting birds. Implementation of **Mitigation Measure BR-2** would reduce potential impacts on special-status and migratory birds by requiring that a qualified biologist conduct a preconstruction survey, followed by preparation of avoidance measures and exclusion buffers prior to project initiation. With implementation of **Mitigation Measure BR-2**, the proposed project would result in less than significant impacts on special-status bird species.

Mitigation Measure BR-2: The Permittee shall include in #P21-00331-ECP the following measures to minimize impacts associated with the loss and disturbance of nesting birds and raptors consistent with and pursuant Fish and Game Code Sections 3503 and 3503.5 and the California Endangered Species Act found in Fish and Game Code Section 2050 et seq.:

1. For earth-disturbing activities occurring between February 1 and August 31, (which coincides with the grading season of April 1 through October 15 – NCC Section 18.108.070.L, and bird breeding and nesting seasons), a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local avian resources with potential to occur at the project site) shall conduct preconstruction surveys for nesting birds and raptors within all suitable habitat in the project area, and within a minimum of 500 feet of all project areas. The preconstruction survey shall be conducted no earlier than 7 days prior to vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than 7 days from the survey date, surveys shall be repeated. A copy of the survey results shall be provided to the Napa County Conservation Division and the CDFW prior to commencement of work.
2. After commencement of work, if there is a period of no work activity of 5 days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.
3. In the event that nesting birds are found, a qualified biologist shall identify appropriate avoidance methods and exclusion buffers in consultation with the County Conservation Division and the U.S. Fish and Wildlife Service (USFWS) and/or CDFW prior to initiation of project activities. Exclusion buffers may vary in size, depending on habitat characteristics, project activities/disturbance levels, and species as determined by a qualified biologist in consultation with County Conservation Division and the USFWS and/or CDFW.
4. Exclusion buffers shall be fenced with temporary construction fencing (or the like), the installation of which shall be verified by Napa County prior to the commencement of any earthmoving and/or development activities. Exclusion buffers shall remain in effect until the young have fledged or nest(s) are otherwise determined inactive by a qualified biologist. Additionally, a qualified biologist shall monitor all active nests each day during construction for the first week, and weekly thereafter, to ensure that the exclusion buffers are adequate and that construction activities are not causing nest-disturbance. If the qualified biologist observes birds displaying potential nest-disturbance behavior, the qualified biologist shall cease all work in the vicinity of the nest and CDFW shall be consulted about appropriate avoidance and minimization measures for nesting birds prior to construction activities resuming. In this event, construction activities shall not resume without CDFW's written approval.
5. Alternative methods aimed at flushing out nesting birds prior to pre-construction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or chemical (i.e., spraying nesting birds or their habitats) shall be prohibited.

Regarding pallid bat the trees within the parcel may contain cavities, snags, or exfoliating bark suitable for roosting for all bat species. A targeted bat assessment was not performed by the biologist. Removal and trimming of trees during the bat maternity season (generally April through August) could impact bat breeding and potentially result in a take of bats, which would be considered potentially significant direct, indirect, and cumulative impacts on bats. Implementation of **Mitigation Measure BR-3** would avoid or reduce the potential for impacts on bats by requiring a bat habitat assessment prior to tree removal, as well as measures that prioritize avoidance of tree removal during the seasonal periods of bat activity (approximately August 31 through October 15), followed by, if necessary, a pre-construction survey and a phased removal to avoid accidental take of bats. With implementation of **Mitigation Measure BR-3,** the proposed project would result in less than significant impacts on bats.

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

1. Tree trimming and/or tree removal shall only be conducted during seasonal periods of bat activity (August 31 through October 15, when young would be self-sufficiently volant and prior to hibernation, and March 1 to April 15 to avoid hibernating bats and prior to formation of maternity colonies), under supervision of a qualified biologist, unless the Measure BR-3.2., below, is implemented. Note that these windows may shift with atypical temperatures or rainfall if a qualified biologist determines that bats are likely to still be active based on seasonal conditions. Trees shall be trimmed and/or removed in a two-phased removal system conducted over two consecutive days. The first day (in the afternoon), limbs and branches shall be removed by a tree cutter using chainsaws only, under the supervision of a qualified biologist who has demonstrable experience with supervising

tree removal for bats using this technique. Limbs with cavities, crevices and deep bark fissures will be avoided, and only branches or limbs without those features shall be removed. On the second day, the entire tree shall be removed.

2. If removal of bat habitat trees must occur outside the seasonal activities identified above (i.e., between October 16 and February 28/29 of the following year or between April 16 and August 30), a qualified biologist shall conduct a pre-construction survey of all potential bat habitat trees within 14 days of project initiation and/or tree removal to determine absence/presence of special-status bat species. Survey methods, timing, duration, and species shall be provided for review and approval by Napa County prior to conducting pre-construction surveys. A copy of the survey results shall be provided to the County Planning Division and CDFW for review and acceptance prior to commencement of work. If bats are not present, removal can proceed without using the two-phased removal method. If bats are found to be present the qualified biologist shall determine if a maternity colony of winter torpor bats are present. If roosting bats are present but there are no maternity colonies or winter torpor bats, the tree shall be removed using the two-phased removal method outlined in Measure BR-3a, above. If the qualified biologist determines that maternity colonies or winter torpor bats are present, or they cannot confidently determine absence of maternity colonies or winter torpor bats, then tree removal shall be delayed until during the seasonal periods of bat activity outlined in Measure BR-3a.

With implementation of **Mitigation Measures BR-1** through **BR-3,** the proposed project would result in less than significant impacts to special-status plant, turtle, bird, and bat species.

b-c.

The project parcel contains one unnamed blue line stream and two ephemeral drainages which transitions to County definitional streams as they flow south-west towards the unnamed blue line. The stream is likely jurisdictional under Section 404/401 of the CWA and Section 1602 of the CFGC and is avoided with setbacks according to the slope from top of bank per Napa County Code Section 18.108.025(B). The proposed project has been designed to maintain 35-foot setbacks from the identified ephemeral portions of the streams, a 55–105-foot setback from portions identified as streams, and a 50-foot setback from the three (3) onsite ponds/reservoirs. The proposed project has also been designed to maintain existing soil (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 this drainage. Therefore, the project has been designed to provide setbacks from aquatic features (i.e., ephemeral streams and ponds) creek setbacks consistent with code requirements. Furthermore, project approval, if granted, would be subject to the following standard conditions to prevent the potential encroachment into stream and wetland setbacks required pursuant to Section 18.108.025 and Section 18.108.026, further protecting these aquatic resources during project implementation and operation resulting in a less than significant impact.

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

1. The location of ephemeral stream and reservoir setbacks shall be clearly demarcated in the field with temporary construction fencing, which shall be placed at the outermost edge of required setbacks shown on the project plans. Prior to any earthmoving activities, temporary fencing shall be installed: the precise locations of said fences shall be inspected and approved by the Planning Division prior to any earthmoving and/or development activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated areas for the duration of erosion

The project area does not contain any designated Critical Habitat or Essential Fish Habitat.

d.

The project parcel includes some already existing deer fencing; new fencing is proposed which will tie into the existing fencing and enclose the new vineyard blocks. There are no designated migratory corridors within the project area, nor wildlife nursery sites; therefore, no impacts would result from project implementation. The project site is located over 1.25 miles southeast of mapped essential connectivity area. At the scale of landscape linkages, the nearest connectivity area provides wildlife connectivity between baylands of San Pablo Bay and areas from northern Napa County northward. Given the relatively small size of the development area and it being located over 1.25 miles southeast of an essential connectivity area, agricultural expansion within the development area 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 the ephemeral streams and unnamed blue-line streams within the project area, 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 would be less than significant. Maintaining this connectivity should provide for continued cross-pollination and gene flow, as well as local wildlife movement. The proposed project would be consistent with General Plan Policy CON-18, which encourages the reduction of impacts to habitat conservation and connectivity.

Because wildlife nursery sites were not identified in the project site, there would be no impacts to wildlife nursery sites.

While the proposed fencing would not result in significant impacts to wildlife movement and use, in order to ensure that wildlife exclusion fencing is installed in a manner that is consistent with CDFW recommendations to minimize impacts to wildlife movement, habitat use and availability, and vegetation removal the following condition of approval would be incorporated should the proposed project be approved.

Fencing – Condition of Approval: The owner/permittee shall revise Erosion Control Plan #P21-00331-ECPA prior to its approval to include wildlife exclusion fencing detail that shall include the following components:

1. 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.
2. 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.
3. Any modifications to the location of wildlife exclusion fencing as specified in Erosion Control Plan #P21-00331-ECPA required by this condition shall be strictly prohibited, and would require County review and approval to ensure the modified wildlife exclusion fencing location/plan would not result in potential impacts to wildlife movement.

e.

The project site is located in the Lake Hennessey Sensitive Domestic Water Supply Drainage; as such, pursuant to NCC Section 18.108.027(B) (Sensitive domestic water supply drainages – Vegetation Clearing), a minimum of 70% of the tree canopy and a minimum of 40% of the grass/brush cover existing on the parcel in 1993 is required to be retained as part of the project. For APN -016, based on information provided in the ECPA (Appendix C of **Exhibit A**), the project site contained 4.68 acres of tree canopy cover and 2.93 acres of brush/shrub cover in 1993. The proposed project would result in the removal of 1.04 acres (78% retained) of existing tree canopy and the removal of 1.3 acres (55% retained) of brush/grass. For APN -009, the project site contained 19.67 acres of tree canopy cover and 16.92 acres of brush/shrub cover in 1993. The proposed project would result in the removal of 1.62 acres of 1993 tree canopy (89% retained) and the removal of 10.14 acres of brush/grass (40% retained). The proposed project would result in the retention of approximately 89% on APN -016 and 78% on APN -009 of the tree canopy cover and 55% on APN -016 and 40% on APN -009 of the brush/shrub cover in 1993; therefore, the proposed project would be in compliance with Section 18.108.027(B).

Areas adjacent to the development area include oak woodland. To ensure that no trees are inadvertently removed as part of the project, and because the project will also be subject to the provisions of Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement), the following provisions will be included as conditions of approval should the proposed project be approved:

Tree/Woodland Protection – Conditions of Approval:

1. Prior to any earthmoving activities temporary fencing shall be placed at the edge of the dripline of trees to be retained that are located adjacent to the development area (typically within approximately 50-feet of the development area). No trees are proposed for removal within the development area. The precise locations of said fences shall be inspected and approved by the Planning Division prior to the commencement of any earthmoving activities. No disturbance, including grading, placement of fill material, storage of equipment, etc., shall occur within the designated protection areas for the duration of erosion control plan and vineyard installation.
2. Trees removed shall be replaced onsite with fifteen-gallon trees at a ratio of 2:1 at locations approved by the PBES director.
3. The owner/permittee shall refrain from severely trimming the trees and vegetation to be retained adjacent to the vineyard conversion area.

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

Based on the Biological Survey Report (Kjeldson Biological Consulting– Exhibit B), land cover types (or biological communities) occurring within the property include approximately

Table 5 – Vegetation Canopy Cover Retention on Project Parcels

Assessor's Parcel Number	**025-390-009 (upper parcel) [acres]**	**025-380-016 (lower parcel) [acres]**
Vegetation Canopy Cover (pre-project)	19.67	4.68

Vegetation Canopy Cover Removed	1.62	1.04
% Vegetation Canopy Cover Retained	89%	78%
3:1 Preservation Mitigation Requires (total)	5.88 of preservation + 0.45 of tree plantings = 6.33	3.13
Brush/Grass Canopy (pre-project)	16.92	2.93
Brush/Grass Canopy Removed	3.19 (proposed removal) + 6.50 (post '93 removal) _ 0.45 (additional removal for tree planting mitigation) =	1.14 (proposed removal + 0.16 (post '93 removal) = 1.3
% Brush/Grass Canopy Retained	40%	55%

Sources: Kjeldson December 2021

Consistency with General Plan

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. The policy specifically provides for the preservation of oak woodland (on an acreage basis) at a 2:1 ratio where feasible, where preservation or avoidance of oak woodland is not feasible, replacement of oak woodland at a 2:1 ratio is required. The project proposes to remove approximately 1.04 +1.62 acres-acre of oak woodland (for a total of 2.66 acres). The proposed project would retain preserve and replant 6.33 acres + 3.13 acres oak woodland (for a total of 9.45 acres), which is more than twice the required 5.32 acres of oak woodland required by that policy. General Plan Conservation Element Policy CON-24(a) also requires that projects preserve, to the extent feasible, oak trees and other significant vegetation that occur near the heads of drainages or depressions [see **Exhibits B-1** and **B-2**]. One large oak tree located within Block A is proposed to be preserved [**Exhibit A**]. As proposed, the project is consistent with General Plan Policy CON-24(a).

Consistency with Conservation Regulations

Napa County Code Section 18.108.020(c), General Provision – Vegetation Retention Requirements, requires that a minimum of 70% of the vegetation canopy cover (defined as oak woodland, riparian oak woodland or coniferous forest) as configured on the parcel in 2016 be maintained. NCC Section 18.108.020(D), Vegetation Removal Mitigation, requires that removed vegetation canopy cover be mitigated at a ratio of 3:1 on an acreage basis. As noted in Table 5, the project proposes to preserve and replant 9.45 acres of oak woodland, specifically consisting of 5.88 acres of preservation and 0.45 acres of tree plantings on APN -009, and 3.13 acres of preservation on APN -016. Given that the project proposes to remove a total of 2.66 acres of oak woodland the proposed 9.45 acres of preservation exceeds the mitigation requirement of 18.108.020.D. Some of the proposed preservation areas are located on slopes greater than 30%, as such the applicant has provided a letter from a Kjeldsen detailing why the proposed mitigation preservation and replanting plan provides the best water quality and biological benefits. Therefore, as proposed, the project is consistent with NCC Conservation Regulations 18.108.020(c) and 18.108.020(d).

The Conservation Regulations (Napa County Code Chapter 18.108) intent and purpose is to preserve the natural resources of the County and provide greater environmental protection for natural environmental resources, particularly agricultural lands, forests, wildlife habitat, and water. Additionally, the Conservation Regulations strive to accomplish the following: minimize cut, fill, earthmoving, grading operations and other such man-made effects in the natural terrain; preserve natural habitat by controlling development near streams, rivers and wetlands; minimize impacts on existing land forms by avoiding steep slopes, and preserving existing vegetation; and, reduce the loss of vegetation by protecting vegetation canopy cover and requiring minimum mitigation requirements.

The project as proposed does include a mechanism for permanent preservation as required by NCC Section 18.108.020.E and to meet the newly required no net increase in greenhouse gas emissions; therefore, the project, as proposed is consistent with NCC Section 18.108.020(E). The project proposes to permanently preserve approximately 9.45 acres of existing woodland (**Exhibits B-1** and **B-2)** Implementation of the proposed **Permanent Preservation - Condition of Approval** requires that the vegetation canopy cover area be recorded in a deed restriction or preservation easement to permanently restrict development from the areas indicated in the Vegetation Canopy Cover Preservation Area consistent with Section 18.108.020.E. With implementation of this Condition of approval, the project will be consistent.

Permanent Preservation – Condition of Approval: The Owner/Permittee shall record a permanent preservation area as detailed in **Exhibits B-1 and B-2** to achieve consistency with the NCC Section s 18.108.020.E:

1. A Vegetation Canopy Cover Preservation Area (consistent 18.108.020(E) 9.45 acres of vegetation canopy cover, 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 Owner/Permittee 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 woodland 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; 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.

2. 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 #P21-00331-ECP-Exemption 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 (3) 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.

With implementation of Permanent Preservation Condition of Approval, the proposed project would result in less than significant impacts on oak woodland protection policies and ordinances.

f.

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Discussion

See **Section XVIII (Tribal Cultural Resources)** for disclosures and the impact assessment pursuant to Pursuant to Public Resources Code 21080.3.1 (Assembly Bill 52 - Gatto).

The following was utilized in this analysis and is incorporated herein by reference, in addition to Napa County GIS Archeological sensitive areas and Archeological sites layers: Tom Origer & Associates, October 2021, Cultural Resources Study of a Portion of the Property at 805 Greenfield Road, St. Helena, Napa County, California.

Tom Origer & Associates conducted an archeological evaluation of the project site which included a check of information on file with the California Historical Resources Information System Northwest Information Center to determine presence or absence of previously recorded historic or prehistoric cultural resources; a check of relevant historic references to determine the potential for historic era archaeological deposits or structure; and a surface reconnaissance survey of the all accessible parts of approximately 8.0 net acres of the project site to locate any visible signs of potentially significant historic or prehistoric cultural deposits.

a-c.

The cultural resource reconnaissance report (Origer & Associates 2021) did not identify any cultural resources or human remains within the project site, nor are any resources or human remains anticipated due to implementation of the proposed project, if approved. The report did note that one historic-era site had been studied previously; said site is located within a quarter mile of the study area. However, this site was confirmed to be located outside of the study area and it was noted that the project would not impact the site.

Furthermore, project approval, if granted, would be subject to the standard conditions identified below to protect cultural resources that may be discovered accidently. Therefore, with incorporation of the condition of approval, below, the proposed project would result in less than significant impacts to historic or archaeological resources.

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 (RPA) and a Yocha Dehe Wintun Nation Tribal Cultural Monitor have had an opportunity to evaluate the significance of the find and suggest appropriate mitigation(s), as determined necessary.
- If human remains are encountered the Napa County Coroner shall be informed to determine if an investigation of the cause of death is required and/or if the remains are of Native American origin. Pursuant to Public Resources Code Section 5097.98, if such remains are of Native American origin the nearest tribal relatives as determined by the State Native American Heritage Commission shall be contacted to obtain recommendations for treating or removal of such remains, including grave goods, with appropriate dignity.
- All persons working onsite shall be bound by contract and instructed in the field to adhere to these provisions and restrictions.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. ENERGY. Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
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 (6) months. Construction activities and corresponding fuel energy consumption would be temporary and localized. In addition, there are no unusual project characteristics that would cause the use of construction equipment or haul vehicles that would be less energy efficient compared with other similar agricultural construction sites within Napa County.

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

b.

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

With respect to transportation energy, existing energy standards are promulgated through the regulation of fuel refineries and products such as the Low Carbon Fuel Standard (LCFS), which mandates a 10% reduction in the non-biogenic carbon content of vehicle fuels by 2020. Additionally, there are other regulatory programs with emissions and fuel efficiency standards established by USEPA and the California ARB such as Pavley II/LEV III from California's Advanced Clean Cars Program and the Heavy-Duty (Tractor-Trailer) GHG Regulation. Further, construction sites will need to comply with State requirements designed to minimize idling and associated emissions, which also minimizes use of fuel. Specifically, idling of commercial vehicles and off-road equipment would be limited to five minutes in accordance with the Commercial Motor Vehicle Idling Regulation and the Off-Road Regulation[13]. The proposed project would comply with these State requirements and the Air Quality conditions of approval present in Section III (Air Quality). Napa County has not implemented an energy action plan. Therefore, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency or impede progress towards achieving goals and targets, and impacts would be less than significant.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒

c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
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 closest active faults are the West Napa, Hunting Creek and Green Valley Faults. These are approximately 11 miles, 12 miles and 23 miles from the project site, respectively. One unnamed, inactive fault runs in a northwest-southeast direction approximately 0.3 miles east of the project parcel. No landslides or areas of instability have been identified within the project site. Soils on the project site have been classified according to the Soil Survey of Napa County (USDA 1978) as Haire loam 2-9% slopes and Sobrante loam with 30-50% slopes, which are characterized as developing on sedimentary rocks and sandstone, respectively. Therefore, no impact would occur.

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

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

iv) Landslides, landslide deposits, and areas of instability have not been identified within the project site (Napa County GIS landslide layer). Therefore, no impact would occur.

b.

The project site is underlain by two soil-mapping units: Haire loam with 2-9% slope and Sobrante loam with 30-50% slopes (NVVE Engineering, November 2021 - **Exhibit A**). 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; in municipal watersheds earthmoving activities cannot be performed between September 15 and April 1 pursuant to NCC Section 18.108.027(C). 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 80% as specified in the ECP. 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 NVVE (**Exhibit D**), the proposed conversion of approximately 11.63 gross acres of grass and mixed woodland is anticipated to reduce soil loss, or surface erosion, within the project site as compared to existing conditions (**Table 5**). Under existing conditions, the annual soil loss is anticipated to average 35.46 tons 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 30.63 tons per year, or a reduction of approximately 14% as compared to existing conditions.

Soil loss calculations were prepared using the Universal Soil Loss Equation (USLE) in order to evaluate potential effects of erosion as a result of the proposed project. The USLE model evaluates the environmental conditions and physical forces that lead to the detachment and potential movement of soil particles through surface erosion. The USLE model does not describe travel distances of soil particles once dislodged. Potential soil loss and sedimentation associated with the proposed agricultural development and operations would primarily be controlled through a no-till cover crop with vegetative cover densities of at least 75%. The cover crop provides the ability to trap eroded soils onsite, thereby reducing soil loss and sedimentation potential.

Table 6 – USLE Soil Loss Analysis

Vineyard Block Transect	Pre-project Soil Loss (tons/year)	Post-project Soil Loss (tons/year)	Difference	Percent Change (approximate)
A1	3.74	3.61	-0.13	-3.5%
A2	7.87	7.87	-0.00	0%
A3	8.75	7.30	-1.45	- 17%
B	5.34	4.67	-0.67	-12%
C	1.72	1.06	-0.66	-38%
D	8.04	6.12	-1.92	-24%
Total	**35.46**	**30.63**	**-3.17**	**-14%**

Source: NVVE Engineering, Revised January 2021, **Exhibit D**

Other proposed erosion control features that are anticipated to further reduce potential soil loss as a result of the proposed project are: *permanent no-till cover, straw mulching, straw wattles, and other practices as needed.*

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

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

c.

As discussed above, the project site is not located in an area prone to landslides, ground failure or liquefaction. The proposed project identifies the soil types in the project site and addresses any potential soil instability. Therefore, impacts from offsite landslides, lateral spreading, subsidence, liquefaction or collapse would be less than significant.

d.

Soils of the project site consist of Haire loam with 2-9% slope and Sobrante loam with 30-50% slopes (USDA Soil Survey of Napa County, 1978). In addition, no structures are proposed as part of the project and expansive soils pose little risk to vineyards and related agricultural improvements. Therefore, there would be no impacts associated with expansive soils.

e.

The proposed project involves the development of vineyard. No septic tanks or alternative wastewater disposal systems are needed or proposed at the project site. Therefore, no impact would occur with regard to soils supporting septic tanks or alternative wastewater disposal systems.

f.

There are no unique geologic features on the project site. Due to the nature of the soils in the project site and the nature of the proposed project (which would involve relatively shallow vineyard), the probability of encountering paleontological resources within the project site is minimal. Furthermore, project approval, if granted, would be subject to the standard conditions described below that would avoid and reduce potential paleontological resource impacts. Therefore, impacts to geologic features and paleontological resources are anticipated to be less than significant.

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

1. 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.
2. All persons working onsite shall be bound by contract and instructed in the field to adhere to these provisions and restrictions.

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

Discussion

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

On April 20, 2022, the BAAQMD adopted updated thresholds of significance for climate impacts (CEQA Thresholds for Evaluating the Significance of Climate Impacts, BAAQMD April 2022) [9]. The updated thresholds to evaluate GHG and climate impacts from land use projects are qualitative and geared toward building and transportation projects. Per the BAAQMD, all other projects should be analyzed against either an adopted local Greenhouse Gas Reduction Strategy (i.e., Climate Action Plan (CAP)) or other threshold determined on a case-by-case basis by the Lead Agency. If a project is consistent with the State's long-term climate goals of being carbon neutral by 2045, then a project would have a less-than-significant impact as endorsed by the California Supreme Court in Center for Biological Diversity v. Department of Fish & Wildlife (2015) *62 Cal. 4th 204). There is no proposed construction-related climate impact threshold at this time. Greenhouse gas (GHG) emissions from construction represent a very small portion of a project's lifetime GHG emissions. The proposed thresholds for land use projects are designed to address operational GHG emissions which represent the vast majority of project GHG emissions.

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

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

carbon stock and sequestration factors in the Draft CAP to assess and disclose potential GHG emissions associated with project development and operation pursuant to CEQA.

In July 2015, the County re-commenced preparation of the CAP to: i) account for present day conditions and modeling assumptions (such as but not limited to methods, emission factors, and data sources), ii) address the concerns with the previous CAP effort as outlined above, iii) meet applicable State requirements, and iv) result in a functional and legally defensible CAP. On April 13, 2016, the County, as the part of the first phase of development and preparation of the CAP, released Final Technical Memorandum #1: 2014 Greenhouse Gas Emissions Inventory and Forecast, April 13, 2016. This initial phase included: i) updating the unincorporated County's community-wide GHG emissions inventory to 2014, and ii) preparing new GHG emissions forecasts for the 2020, 2030, and 2050 horizons. On July 24, 2018, the County prepared a Notice of Preparation of a Draft Focused EIR for the Climate Action Plan. The review period was from July 24, 2018, through August 22, 2018. The Draft Focused EIR for the CAP was published May 9, 2019. Additional information on the County CAP can be obtained at the Napa County Department of Planning, Building and Environmental Services or online at https://www.countyofnapa.org/589/Planning-Building-Environmental-Services. The County's draft CAP was placed on hold, when the Climate Action Committee (CAC) began meeting on regional GHG reduction strategies in 2019. The County is currently preparing an updated CAP to provide a clear framework to determine what land use actions will be necessary to meet the State's adopted GHG reduction goals, including a quantitative and measurable strategy for achieving net zero emissions by 2045.

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

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

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

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

a-b.

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

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

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

GHGs are the atmospheric gases whose absorption of solar radiation is responsible for the greenhouse effect, including carbon dioxide (CO_2), methane, ozone, and the fluorocarbons, which contribute to climate change. CO_2 is the principal GHG emitted by human activities, and its concentration in the atmosphere is most affected by human activity. It also serves as the reference gas to which to compare other GHGs. Agricultural sources of carbon emissions include forest clearing, land-use changes, biomass burning, and farm equipment and management activity emissions. Equivalent Carbon Dioxide (CO_{2e}) is the most commonly reported type of GHG emission and a way to get one number that approximates total emissions from all the different gasses that contribute to GHG, as described in BAAQMD's CEQA Guidelines. In this case CO_2 is used as the reference atom/compound to obtain atmospheric carbon CO_2 effects of GHG. Carbon stocks are converted to CO_{2e} by multiplying the carbon total by 44/12 (or 3.67), which is the ratio of the atomic mass of a carbon dioxide molecule to the atomic mass of a carbon atom (http://ncasi2.org/COLE/faq.html)[10].

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 (referred to as Equipment Emissions below).

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

"Operational Emissions" of the vineyard are quantified and include: i) any reduction in the amount of carbon sequestered by existing vegetation that is removed as part of the project (referred to as Operational Sequestration Emissions below); and ii) ongoing emissions from the energy used to maintain and farm the vineyard, including vehicles (such as haul trucks, pick-up trucks) and worker vehicle trips (referred to as Operational Equipment Emissions below). 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[11]. Using this emission factor it is anticipated that Construction Equipment Emissions associated with the proposed 11.63 gross acres of new vineyard development would be approximately 109.32 MT CO_{2e} (11.63 acres multiplied by 9.4 MT CO_{2e})[12].

Project Site Emissions: Project site emissions are emissions resulting from vegetation removal and soil preparation associated with the conversion of approximately 11.63 acres of existing developed area, non-native grassland and mixed woodland vegetation to vineyard. Because there is not yet a universally accepted scientific methodology or modeling method to calculate GHG emissions due to vegetation conversion and soil disturbance, the Greenhouse Gas Emissions Checklist and associated carbon stock factors developed as part of the 2012 CAP efforts are utilized to determine potential project site carbon stocks and emissions. Utilizing the 2012 Draft CAP carbon stocks and the acreages of vegetation types within the project site, total carbon stocks for the project site are estimated to be approximately 2,280.2 MT C or approximately 8,368.3 MT CO_{2e} (**Table 7**).

[10] "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).

[11] 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.

[12] For the purpose of these GHG calculations the carbon stock associated with Grassland (0.89-acre) is applied to Ruderal/Developed lands.

Table 7 – Estimated Development Area Carbon Stocks/Storage

Vegetation Type/Carbon Storage	Project Acreage	Carbon Storage/Stock per Acre (MT C/acre)[1]	Total Carbon Storage (MT)	Total Carbon Storage in MT CO2e
Ruderal/Developed[10]	2.0	1.4	2.8	10.28
Non-Native Grassland and Existing Vineyard	19.91 + 3 = 22.91	1.4	32.1	117.7
Mixed Woodland	23.61	95.1	2,245.3	8240.3
Total			**2280.2**	**8,368.3**

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

There is currently no scientific agreement about the percentage of carbon that would be lost (or emitted) from soils through grading. Some analyses have suggested 20-25% while others have suggested 50% [13]. Using 50% as a more conservative estimate, the proposed project could result in one-time project site construction emissions from vegetation removal and soil preparation (i.e., grading and soil ripping) of approximately 877 MT CO_{2e} (**Table 8**).

Table 8 – Estimated Project Carbon Emissions Due to Vegetation Removal

Vegetation Type/Carbon Storage	Project Area for removal	Carbon Loss/Emission per Acre (MT C/acre)	Total Carbon Loss/Emission (MT)	Total Carbon Loss/Emission in MT CO2e
Ruderal/Developed	0.0	0.8	0.00	0.00
Non-Native Grassland and Existing Vineyard	6.32	0.8	5.06	18.6
Mixed Woodland	2.61	89.6	233.9	858.4
Total			**238.96**	**877**

Sources: Napa County Draft Climate Action Plan, March 2012; Napa County Conservation Division March 2022.

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 11.63 gross-acre agricultural development would be approximately 7.79 MT CO_{2e} (11.63 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, grasslands and shrublands sequester a negligible quantity of CO_2 acre per year (essentially zero). The developed land use is not identified by the 2012 Draft CAP and is considered similar to grasslands (essentially zero). Because the 2012 Draft CAP does not identify sequestration factors for the grassland and shrubland vegetation type, the sequestration factor for Croplands of 0.057 MT C per acre per year has been attributed to the grasslands and shrublands that are proposed for removal to provide the most conservative GHG emission estimate. Utilizing these factors, it is anticipated that the annual emissions associated with changes in carbon sequestration as a result of land use changes would be approximately 1.46 MT C per acre per year or 5.36 MT CO2e per year [6.2 acres of grassland times 0.057 MT C = 0.35 MT C plus 2.61 acres of woodland times 0.425 MT C = 1.11 MT C].

Further, 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.

[13] 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 Emissions:

Based on the above estimates, the proposed project could result in one-time construction emissions of up to 986.32 MT CO2e and annual ongoing emissions associated with vineyard operations (including loss of sequestration) estimated to be approximately 13.15 MT CO_{2e} per year (**Table 9**).

Table 9 – Estimated Overall Project-Related GHG Emissions

Construction Emissions in Metric Tons of $C0_{2e}$		Annual Ongoing Emissions in Metric Tons of $C0_{2e}$	
Source	**Quantity**	**Source**	**Quantity**
Vehicles and Equipment	109.32	Vehicles and Equipment	7.79
Vegetation and Soil	877	Loss of Sequestration	5.36
Total	**986.32**	**Total**	**13.15**

Source: Napa County Conservation Division, March 2022

There is no adopted CEQA significance threshold at the state, regional, or local level for construction-related GHG emissions, and the County has therefore evaluated the significance of one-time project-generated emissions of up to approximately 1,553.25 MT CO_{2e} by considering the size of the proposed vineyard in relation to projected vineyard development in the County. The program level EIR for the 2008 Napa County General Plan Update (SCH#2005102088 certified June 3, 2008) projected 12,500 acres of new vineyard development in the County between 2005 and 2030. The County concluded in the General Plan EIR that emissions from all sources over the planning period would result in significant and unavoidable GHG emissions despite measures adopted to address the impact. Because this determination was based on emissions from all sources, not just agriculture, the General Plan did not determine that emissions solely from projected agricultural development would result in significant unavoidable impacts. Pursuant to Section 15183(a) of the California Code of Regulation (CCR), projects that are consistent with the general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific effects which are peculiar to the proposed project or its site.

In the context of 12,500 acres of projected vineyard development, the proposed project would constitute less than approximately 0.096% 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 13.15 MT CO_{2e} per year. The updated BAAQMD thresholds of significance for land use projects are qualitative, with no "bright-line" (quantitative) level below which to mitigate. Projects should be analyzed against either an adopted local Greenhouse Gas Reduction Strategy (i.e., Climate Action Plan (CAP)) or other threshold determined on a case-by-case basis by the Lead Agency. If a project is consistent with the State's long-term climate goals of being carbon neutral by 2045, then a project would have a less-than-significant impact as endorsed by the California Supreme Court in *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) (62 Cal. 4th 204). As stated in **Section IV, Biological Resources,** the proposed project would result in the removal of approximately 2.66 acres of tree canopy and would retain approximately 89% (APN -009) and 78% (APN -015) of the tree canopy on the parcel. With implementation of the **Permanent Preservation - Condition of Approval** (**Section IV**), the project would result in the permanent preservation of approximately 9.44 acres of tree canopy located on developable land (i.e., outside of stream setbacks and on land with slopes less than 30%) pursuant to the 1:1 canopy cover preservation requirements identified by the PBES Department to meet the no net loss in GHG. Therefore, the loss in carbon sequestration from the proposed removal of trees is more than offset after incorporation of **Permanent Preservation Condition of Approval**, by permanently protecting from development one (1) times the amount of lost carbon sequestration due to tree removal.

Further, as stated above, per the OPR Technical Advisory, the addition of 110 or fewer daily trips could be presumed to have a less than significant VMT impact. As detailed in **Section XVII (Transportation),** vineyard operations, including pruning and harvest is anticipated to require up to approximately eight (8) one-way worker trips per day for work crews of approximately 14 workers who are anticipated to carpool. Approximately four (4) additional one-way trip per day are anticipated for grape haul trucks during harvest which is expected to be two (2) days. Equipment for vineyard operations is anticipated to include a tractor/trailer, a forklift, grape trucks, pickup trucks, passenger vehicles and other small to medium service vehicles. Vineyard operations would result in a maximum of 24 trips per day during peak days (harvest, pruning, weeding, etc.). This is less than the 110 daily trips designated by the Bay Area Air Quality Management District (BAAQMD), whereby projects are considered to have a less than significant impact on transportation GHG levels.

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

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

Discussion

a-b.

Installation of the proposed ECP and subsequent vineyard operation and maintenance would require a variety of equipment and vehicles that use fuel and other petroleum-based products such as oil and transmission fluids, which are considered hazardous materials. Ongoing vineyard operations would also involve the transport and use of chemicals such as herbicides, mildewcides, and fertilizers to the site that are considered hazardous materials. Herbicide applicators must be licensed by the state, and the Napa County Agricultural Commissioner enforces application of pesticides and regulates applicators.

A detailed listing of fertilizers and other chemicals, application methods, application amounts, number of annual applications, and annual amounts of chemicals that are anticipated to be utilized for ongoing vineyard maintenance and operation of the existing and proposed vineyard is provided within Supplemental Project Information forms on file at the Planning Department.

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

Chemicals for vineyard development and maintenance will be stored off-site, while chemical mixing will occur in the loading area by main line and cleaning/washing of chemical application equipment will occur inside one of the existing shed accessory structures which is proposed to be relocated as it currently sits within proposed Block B. 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.

One unnamed blue lined stream and two ephemeral drainages are located on the subject parcel. Vineyard development would occur outside the 35-foot setbacks to the ephemeral drainages and between 55 to 105-foot setbacks from the blue-lined stream, depending on

slopes. Additionally, there are three (3) ponds/reservoirs on the subject parcel, all vineyard development maintains a 50-foot setback to these resources.

The risk of potentially hazardous materials reaching or affecting adjacent water courses or other aquatic resources is significantly reduced because: i) the proposed project would maintain buffers greater than 50 feet from the blue-line streams and 35 feet from ephemeral drainages; ii) project staging and storage areas would be a minimum of 50 feet from aquatic resources; and iii) only federal and/or California approved chemicals would be applied to the vineyard in strict compliance with applicable state and federal law. Project approval, if granted, would also be subject to the following standard conditions that would further avoid and/or reduce potential impacts associated with routine transport and use of hazardous materials during project implementation and ongoing vineyard operations and maintenance.

Hazardous Materials – Conditions of Approval: The owner/operator shall implement the following 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.
- Chemical mixing shed shall be located at least 100 feet from watercourses, groundwater well(s) and any other water resource.

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

c.

The closest schools are Saint Helena Montessori and Napa Valley College, which are each located approximately 3.45 and 3.55 miles west of the project site in Saint Helena (Napa County GIS, Schools Layer). 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 Angwin-Parrett Airfield, located approximately 4.5 miles north 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.

The proposed project is anticipated to introduce a small number of workers visiting the project site on a temporary basis for ECPA and vineyard installation and on a seasonal basis for subsequent vineyard operations, resulting in a minor increase in the number of people working or residing at the project site. However, given the relatively small size of the proposed project, it is not anticipated that the minor increase would impair implementation of or physically interfere with any adopted emergency response plan or emergency evacuation plan; therefore, no impact would occur.

g.

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Discussion

The County requires all discretionary permit applications (such as use permits and ECPAs) to complete necessary water analyses in order to document that sufficient water supplies are available for the proposed project and to implement water saving measures to prepare for periods of limited water supply and to conserve limited groundwater resources.

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. On June 8, 2021, the Napa County Board of Supervisors adopted a resolution declaring a Proclamation of Local Emergency due to drought conditions which are occurring in Napa County. On October 19, 2021, the Governor issued a proclamation extending the drought emergency statewide. The County requires all discretionary permit applications (such as use permits and ECPAs) to complete necessary water analyses in order to document that sufficient water supplies are available for the proposed project and to implement water saving measures to prepare for periods of limited water supply and to conserve limited groundwater resources

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

On March 28, 2022, August 9, 2022, and November 8, 2022, the Napa County Board of Supervisors adopted resolutions proclaiming a continued state of Local Emergency due to the 2021-2022 drought. On June 7, 2022, the Napa County Board of Supervisors provided direction regarding interim procedures to implement Executive Order N-7-22 for issuance of new, altered or replacement well permits and discretionary projects that would increase groundwater use during the declared drought emergency. The direction limits a parcel's groundwater allocation to 0.3 acre feet

per acre per year (af/ac/yr), or no net increase in groundwater use if that threshold is exceeded already for parcels located in the GSA Subbasin. For parcels not located in the GSA Subbasin (i.e., generally located in the hillsides), a parcel-specific Water Availability Analysis would suffice to assess potential impacts on groundwater supplies. Although the Governor, through Executive Order No. N-5-23, rolled back some of the drought emergency provisions in late March 2023, due to current water conditions, the Governor's Emergency Order N-7-22 remains in place and the remaining criteria for the County's interim actions and procedures also remain. On May 30, 2023, the Napa County Board of Supervisors terminated the Local Emergency due to the 2021-2022 drought but acknowledged that there are still adverse conditions that will continue to affect the Napa Valley groundwater subbasin and the need to continue groundwater management efforts including the interim actions and procedures still exists.

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

In response, the San Francisco Bay Regional Water Board has implemented the following programs. In 2009 the San Francisco Bay Regional Water Board adopted total maximum daily load (TMDL) for the Napa River (Order #R2-2009-0064), which calls for reductions in the amount of fine sediment deposits into the watershed to improve water quality and maintain beneficial uses of the river, including spawning and rearing habitat for salmonid species. Several watershed stewardship groups have developed management plans and are planning or have implemented large-scale projects to enhance water quality and stream-riparian habitat with the watershed (San Francisco Bay Regional Water Board, 2009).

Because vineyard properties may pose threats to water quality by discharging sediment, nutrients, and pesticides and/or by increasing storm runoff, which consequently can cause erosion and sedimentation and otherwise impact aquatic life, in July 2018 the San Francisco Bay Regional Water board adopted a water quality control permit (or General Permit) for vineyard properties in the Napa River and Sonoma Creek watersheds (Order #R2-2017-0033). The General Permit regulates parcels (including contiguous parcels under common ownership) developed with five or more acres of vineyard located in either of these watersheds. The Napa River and Sonoma Creek TMDLs adopted by the San Francisco Bay Regional Water Board have established performance standards for sediment discharge and storm runoff to protect and restore water quality. The General Permit would require actions to control pollutant discharges including sediment and storm runoff from vineyards and unpaved roads, which are located throughout vineyard properties, and pesticides and nutrients from vineyards. The General Permit would require vineyard owners or operators of parcels that meet the enrollment criteria to do the following: develop and certify a "farm plan"; implement the farm plan[14] 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[15].

As noted in earlier sections, there are two (2) ephemeral drainages located and one (1) unnamed blue lined stream located on the subject parcel. Vineyard development would occur outside the required 35-foot setbacks to the ephemeral drainages and between 55 to 105-foot setbacks from the blue-lined stream, depending on slopes; consistent with NCC 18.108.025. Additionally, there are three (3) ponds/reservoirs on the subject parcel, all vineyard development maintains a 50-foot setback to these resources.

a.

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

Agricultural Erosion Control Plan #P21-00331-ECPA includes BMPs that are consistent with NCC Section 18.108.080.c, as well as with

[14] 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.

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

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. While the proposed project has been designed with site-specific temporary and permanent erosion and runoff control measures and features to control soil loss and runoff as a result of the project, as discussed in **Section IX** (**Hazards and Hazardous Materials**), a water quality Condition of Approval (see below) is being implemented to ensure that polluted runoff, as a result of hazardous material use associated with ongoing vineyard operations, does not negatively affect water quality.

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

Therefore, the proposed project with implementation of the identified condition of approval is not anticipated to violate any water quality standards or otherwise substantially degrade surface or groundwater quality, resulting in a less than significant impact to water quality.

b.

The County requires all ECPA applicants to complete necessary water analyses in order to document that sufficient water supplies are available for a proposed project.

The proposed vineyard will be watered using surface water stored within the three (3) onsite pond/reservoirs. The total post-project water use for vineyard irrigation will be 6.44 af/yr. This water demand will be met utilizing an existing water permit granted in 2003 which allows for the drawing of 25 af/yr between December 15 and March 31 of each year, said water is then stored in on site ponds per the existing Diversion and Use of Water Permit #21024. 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).

Due to the project not proposing to utilize groundwater a WAA was not required. However, pre- and post- water use was provided by NVVE and a Water Diversion Analysis was also prepared by NVVE (**Exhibit J**) which provide details regarding the water supply and which demonstrates that the existing Water Permit and three (3) reservoirs provide adequate water to supply the proposed vineyard development. Furthermore, considering the proposed project is not utilizing groundwater the project is anticipated to result in no impact to groundwater supplies, groundwater recharge, and local groundwater aquifer levels. To ensure that the proposed vineyard is irrigated only with water from the exiting water rights (and not from existing on-site wells), the following condition of approval would be incorporated should the project be approved:

> **Vineyard Irrigation – Condition of Approval:** The owner/permittee shall implement the following to ensure that the vineyard is irrigated with surface water permitted under the existing Diversion and Use of Water Permit #21024 and not from on-site wells:
>
> 1. No new or existing on-site or off-site water sources, other than that evaluated as part of the ECPA (i.e., surface water) shall be used for vineyard irrigation. Any other proposed irrigation source, including but not limited to wells, imported water, new or existing ponds/reservoir(s) or other surface water impoundments, to serve the vineyard, shall not be allowed without additional environmental review, if necessary, and may be subject to modification to this ECPA.
> 2. The owner/permittee shall (at the owner/permittee's expense) maintain a record of groundwater use on the residential parcel through monthly monitoring and reporting that will be submitted to the County annually. Such data shall include total groundwater used/pumped, water extraction volumes, and static well level(s) of the parcel's well(s). All monitoring shall commence upon commencement of the vineyard development authorized by this ECPA and shall be submitted to the Conservation Division no later than January 31st every calendar year thereafter and available upon the County's request at any other time.
> 3. The permittee shall be required to include the residential well(s) in the County's Groundwater Monitoring program.

However, the proposed Block C vineyard appears to be located outside of the Place of Use Map identified for the project. As such, to be able to include Block (C) in the proposed development the owner/permittee will be required to apply to amend the existing State of California Division of Water Rights Permit for Diversion and Use of Water (Permit #21024) so that the area proposed for development of Block C falls within the Place of Use Map. If approval is not granted by the Division of Water Rights, then the ECPA P21-00331 shall be revised to remove Block C from the plans and the area will not be developed. With implementation of **Mitigation Measure HYDRO 1**- Revise Diversion and Use of Water Permit #21024, or the removal of Block C (if modification of Permit #21024 is not granted) then project will have a less than significant impact on ground water and groundwater recharge supplies:

Water Rights Mitigation Measure HYDRO 1- To avoid any potential impacts to groundwater, prior to any work occurring with the proposed Block C vineyard development the owner/permittee shall do the following:

1. Amend the State of California Division of Water Rights Permit for Diversion and Use of Water (Permit #21024) so that the area proposed for development of Block C falls within the Place of Use Map for said permit.
    a. The owner/permittee shall provide the approved amended Water Rights Permit to the County of Napa to save to the project file.
2. If the amendment is not approved by the State of California, the owner/permittee shall submit a revised Erosion Control Plan and narrative for #P21-00331-ECPA which removes the proposed Block C vineyard development.

While precipitation amounts may vary from year to year, resulting in drought and wet year cycles, the data supports that historical hydrologic conditions are similar to more recent hydrologic conditions, and that there will be sufficient surface water supply reliability to support the proposed project. After planting of the proposed vineyard should lower surface water diversion and storage occur, any impacts an agricultural crop may suffer due to dry-farming is outside the scope of CEQA, because not irrigating a commercial crop is not considered to cause a significant environmental impact. To ensure that the new vineyard would not use groundwater if no surface water under the water rights is available (i.e., the proposed project would not irrigate when no water is available) and that there is adequate water to initiate the proposed vineyard, the project would be subject to the condition of approval above (if approved) specifying that no other irrigation source, including but not limited to wells, or imported water, shall be used to serve the vineyard without additional environmental review, if necessary

Considering i) anticipated annual surface water use of the proposed project and existing uses of approximately 6.44 AF/yr is below the project Parcel's Water Rights storage capacity of 25 AF ii) that implementation HYDRO conditions of approval and Mitigation Measure HYDRO-1 would eliminate groundwater use from the proposed project; and iii) incorporation of the water supply and use conditions below (if approved), the proposed project is anticipated to result in less than significant impacts to groundwater supplies, groundwater recharge, and local groundwater aquifer levels.

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 project does not propose any alteration to a stream, river, or drainage course, or include the creation of impervious surfaces that would concentrate runoff. Erosion control measures and plan features that are not anticipated to affect drainage patterns but would assist in minimizing the potential for increased erosion and water runoff include a no-till cover crop with vegetative cover density of 75% (including vineyard avenues and turnarounds/turn-spaces), and the annual application of straw mulch cover on all disturbed areas at a rate of 2,000 pounds per acre. These features would slow and filter surface runoff water, thereby minimizing sediment, nutrients, and chemicals from leaving the project site and entering nearby aquatic resources. Refer to **Exhibits A, C** and **D** for details related to the following discussion.

Proposed erosion control and project features that have the potential to alter natural drainage patterns include straw wattles and water bars. Straw wattles would be placed on contour at various locations around the perimeter of the vineyard blocks and within vineyard avenues to slow and maintain surface/sheet flow. Straw wattles are spaced according to the USLE to maintain soil losses below the tolerable levels for the soil types found on the site and to ensure (in conjunction with the cover crop and other runoff control features) that no net increase in erosion sediment conditions occurs beyond pre-development conditions as a result of the project. The design and location of straw wattles and water bars would have a negligible effect on existing drainage patterns in that they would not alter the existing topographic contours of the site.

Proposed diversion ditches and outfalls have a greater potential to alter drainage patterns, in that they are designed to capture sheet flow before reaching erosive velocities and divert it to other locations (including a rock apron) within the project area. While this erosion control measure would have the potential to divert water to other locations within the project area, their limited use (none proposed), and that they do not divert water into different drainage areas or drainage courses, this feature is not anticipated to substantially alter the overall drainage patterns within the project site or the surrounding area.

A Hydrologic Analysis for the project was prepared by the Project Engineer (NVVE, December 2021 - **Exhibit C**). The Analysis identifies five (5) watershed basins (or drainage basins) within the project area, and utilizes the HydroCad CA-1 hydrologic analysis method. The Analysis concluded that there would be a very minor reduction in runoff for all watersheds. Pre- and post-project runoff calculations for each watershed, taking into account the detention basin, are summarized in **Table 10**[16]

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

			Peak Discharge Flow (cfs) by 24-hour Storm Event Frequency Return Interval (cubic feet/second)			
	2-year	5-year	10-year		50-year	100-year
Watershed UA						
Pre-project conditions	3.15	4.55	5.73	7.53	8.89	10.33
Post-project conditions	3.04	4.43	5.61	7.4	8.77	10.21
Change (cfs)	0.11	0.12	0.12	0.13	0.12	0.12
Change (%)	-3.5%	-2.6%	-2.1%	-1.8%	-1.4%	-1.2%
Watershed UB						
Pre-project conditions	4.72	6.93	8.82	11.69	13.88	16.2
Post-project conditions	4.72	6.93	8.82	11.69	13.88	16.2
Change (cfs)	0	0	0	0	0	0
Change (%)	0%	0%	0%	0%	0%	0%
Watershed LA						
Pre-project conditions	1.28	1.78	2.2	2.84	3.31	3.82
Post-project conditions	1.28	1.78	2.2	2.84	3.31	3.82
Change (cfs)	0	0	0	0	0	0
Change (%)	0%	0%	0%	0%	0%	0%
Watershed LB						
Pre-project conditions	0.85	1.23	1.54	2.03	2.39	2.78
Post-project conditions	0.85	1.23	1.54	2.03	2.39	2.78
Change (cfs)	0	0	0	0	0	0
Change (%)	0%	0%	0%	0%	0%	0%
Watershed LC						
Pre-project conditions	2.38	3.41	4.28	5.59	6.58	7.63
Post-project conditions	2.38	3.41	4.28	5.59	6.58	7.63
Change (cfs)	0	0	0	0	0	0
Change (%)	0%	0%	0%	0%	0%	0%

Source: NVVE Engineering, December 2021, Hydrologic Analysis, Moshkelani Vineyard Track I ECP (**Exhibit C)**

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

The project site is not located in an area of a planned stormwater drainage system, nor is it not directly served by a stormwater drainage system. As discussed above, no increase in runoff volume or decrease in time of concentration is anticipated under post-project conditions. Furthermore, as discussed in **Section VII (Geology and Soils)**, a reduction in soil loss and sedimentation is anticipated under post-project conditions. Therefore, the proposed project would not contribute a substantial amount of additional runoff to an existing stormwater drainage system or provide substantial additional sources of polluted or sediment laden runoff, resulting in a less than significant impact.

In addition, pursuant to NCC Section 18.108.135 (Oversight and Operation), projects requiring an erosion control plan would be inspected by the County after the first major storm event of each winter until the project has been completed and stable for three years to ensure that the implemented erosion control plan is functioning properly[17].

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.

[16] In March 16, 2022, the County Engineering Division determined the project's modeling technical adequate.
[17] Compliance with Section 18.108.135 is achieved by including their provisions as conditions of approval for a project, if granted.

e.

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

As discussed above and in **Section VII (Geology and Soils**), the proposed project has been designed with site-specific temporary and permanent erosion and runoff control measures and features to prevent sediment, runoff, and pollutants from leaving the project area. As such, the proposed project is anticipated to reduce soil loss and sedimentation, 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 HYDRO Water Quality Condition of Approval (noted earlier in this section), in addition to the Erosion and Runoff Control (i.e., Hydromodification) Installation and Operation conditions of approval identified in **Section VII (Geology and Soils),** which would further reduce and avoid potential impacts to water quality as a result of the project and ongoing operations.

Furthermore, consistent with the standard conditions identified in the **Hazards and Hazardous Materials Section (Section IX)**, all operational activities that include the use or handling of hazardous materials, such as but not limited to agricultural chemical storage and washing, portable restrooms, vehicular and equipment refueling/maintenance and storage areas, soil amendment storage and the like, shall occur at least 100 feet from groundwater wells, water courses, streams and any other water resource to avoid the potential risk of surface and groundwater contamination, whether or not such activities have occurred within these areas prior to this ECPA approval.

Therefore, the proposed project as designed, in conjunction with identified conditions of approval (should the proposed project be approved), would not adversely conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan; resulting in no impact.

		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, Saint Helena, is approximately 2.5 miles west of the project site. Therefore, the proposed vineyard and subsequent vineyard operations would not physically divide an established community and no impact would occur.

b.

Surrounding land uses include rural residences, vineyards, and open space. Surrounding parcels are zoned Agricultural Watershed (AW) and designated Agriculture, Watershed and Open Space (AWOS) in the Napa County General Plan Land Use Element. Vineyards and associated improvements are permitted uses under these designations.

The proposed project has been analyzed for consistency with applicable sections of the NCC and with the Napa County General Plan. With inclusion of the mitigation measures and conditions of approval, the proposed project has been found consistent with applicable code requirements and General Plan Goals and Policies, including but not limited to the following:

- The proposed project is consistent with Policies CON-13 and CON-16, which require discretionary projects consider and avoid impacts to fisheries, wildlife habitat, and special-status species through evaluation of biological resources. Biological Resources Reconnaissance Survey was prepared for the proposed project. The project, as proposed, would avoid potential direct, indirect, and cumulative impacts to special-status plant species and associated habitat occurring on the project site and vegetation m. Furthermore, implementation of this measure would not affect the feasibility of the proposed project in that, impacts to special-status species and their habitat can be avoided while allowing for agriculture to be developed and operated on the project site.
- The project as proposed and conditioned would avoid the existing wetlands with a 50-foot setback and would retain mature trees located upslope from the blue-line stream and wetland habitat. Implementation of **Mitigation Measures BIO 1, BIO 2 and BIO 3** would ensure that any potential impacts to pond turtles, nesting birds and raptors, as well roosting bats are mitigated to less than significant level. As a result, 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 of approval, the proposed project would maintain levels of biodiversity and would avoid impacts to special-status plant and animal species.
- The project as proposed and conditioned would avoid the existing wetlands with a 50-foot setback and would retain mature trees located upslope from the blue-line stream and wetland habitat. As a result, the proposed project is consistent with Policy CON-13, which requires discretionary projects to consider and avoid impacts to fisheries, wildlife habitat, and special-status species, and Policy CON-17, which requires the preservation and protection of native grasslands, sensitive biotic communities, and habitats of limited distribution and no net loss of sensitive biotic communities.
- As proposed, the project is consistent with CON-16, which requires discretionary projects prepare an evaluation of biological resources. A Biological Resources Reconnaissance Survey was prepared for the proposed project (**Exhibit B**).
- The proposed project would avoid all four wetland areas on site with a minimum 50-foot setback; therefore, the project is consistent with Policy CON-30, which encourages the avoidance of wetlands.
- The proposed project as proposed is consistent with Policy CON-18, which encourages the reduction of impacts to habitat conservation and connectivity. The project as proposed does include changes to the existing fencing, as indicated by the ECPA plan set new wildlife fencing will be installed to tie into existing fencing; fencing is proposed around each individual vineyard Block.
- The project as proposed is consistent with NCC Section 18.108.010, which requires that soil loss and runoff as a result of a project be minimized to protect water quality. As discussed in **Sections VII (Geology and Soils)** and **X (Hydrology and Water Quality)**, the proposed project would reduce soil loss, potential sedimentation and runoff conditions as compared to existing conditions. Implementation of the HYRDO Conditions of Approval and **Mitigation Measure HYDRO-1** would ensure less than significant impacts to water quality and ground water.
- The proposed project is consistent with Policies CON-48 and CON-50c, which require pre-development sediment erosion conditions and runoff characteristics following development to be no greater than pre-project conditions. As discussed in **Section VII (Geology and Soils)** and **Section X (Hydrology and Water Quality)**, with incorporation of the Permanent Erosion and Runoff Control Measures condition of approval, the proposed project would reduce soil loss and sedimentation, and result in no change to runoff.
- The project as proposed is consistent with Policy CON-65b. Due to the proposed project's scope and scale, its construction and operational GHG emissions, as disclosed in **Section VIII (Greenhouse Gas Emissions)**, are anticipated to be less than significant.
- The project as proposed is consistent with Policy AG/LU-1, which states that agricultural and related activities are the primary land uses in Napa County, as the proposed project is vineyard development and would increase agriculture uses in the County.
- The project as proposed is consistent with General Plan land use designation of Agricultural, Watershed and Open Space (AWOS), and is therefore consistent with Policy AG/LU-20.

For these reasons, the proposed project, with the mitigation measures and conditions of approval incorporated, would not be in conflict with applicable County regulations, policies, or goals and is anticipated to have a less than significant impact with respect to applicable County regulations, policies, or goals.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact

XII. MINERAL RESOURCES. Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
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 Syar Napa Quarry, located approximately 19 miles southeast of the project site. Proposed site improvements and development of vineyard on the parcel would not physically preclude future mining activities from occurring. Therefore, no impact would occur.

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

Discussion

a-b.

The project site is located in a rural setting where surrounding parcels are generally undeveloped, planted with vineyards and contain wineries. The closest offsite residences are located approximately 260 feet to the south, 355 feet to the north, 560 feet to west, and 780 feet to the east. Additionally, adjacent proprieties and properties in the immediate area contain vineyard.

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

Table 11 – Construction Equipment Noise Emission Levels

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

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

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

Table 11 – Estimated Distance to dBA Contours from Construction Activities [1]

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

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

Based on distances to existing residences, noise associated with project construction would be approximately 75-60 dBA at the nearest existing offsite residences.

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

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

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

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

Based on distances to existing residences, it is anticipated that noise due to operation and maintenance agricultural activities would be 70 to 55 dBA or below at the closest existing offsite residences.

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

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

c.

The project site is neither located within an area covered by an airport land use plan, nor is it within two (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 of the proposed project would generate a minimal number of employees to the project site on a temporary basis, and ongoing vineyard operation and maintenance would generate a minimal number of employees to the project site on an ongoing basis. It is anticipated that these employees would come from the existing labor pool in the region. Therefore, the proposed project would not induce unplanned population growth in the proposed project vicinity or greater region, either directly or indirectly. No impact would occur.

b.

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

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. RECREATION. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
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 existing dirt and paved roads, a single-family residence, accessory dwelling unit, guesthouse, garage, workshop, pool, tennis court, three (3) ponds/reservoirs, wells, utilities, and associated residential landscaping.

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

The County's General Plan Circulation Element contains a policy statement (Policy CIR-7) indicating that the County expects development projects to achieve a 15% reduction in project-generated VMT to avoid triggering a significant environmental impact. Specifically, the policy

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

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

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

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

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

Project construction activities are anticipated to require up to approximately two (2) one-way worker trips per day. Approximately four (4) additional one-way trips are anticipated for project mobilization and demobilization for equipment and materials delivery and pick up. Construction equipment is anticipated to include a crawler tractor (D-8 or larger), tractor/trailers, backhoes, trencher, and pickup trucks, passenger vehicles, and other small to medium service vehicles.

Vineyard operations, including pruning and harvest is anticipated to require up to approximately eight (8) one-way worker trips per day during peak times (approximately 14 workers who will carpool). Approximately four (4) additional one-way trips per day are anticipated for grape haul trucks during harvest, which is expected to be two (2) days. This is a total of 12 trips per day during peak operations, which is less than the recent 110 trip threshold set by BAAQMD under which projects are considered to have a less than significant impact on green house gas (GHG) levels. Anticipated equipment for vineyard operations is anticipated to include a tractor/trailer, a forklift, grape trucks, pickup trucks, passenger vehicles and other small to medium service vehicles, and ATVs. Construction traffic would be intermittent during non-peak hours, generally arriving between 6 a.m. and 7 a.m. and departing between 2 p.m. and 3 p.m. Traffic associated with routine vineyard operation and maintenance, including harvest, would also be intermittent during the non-peak hours, generally arriving around 6 a.m. and departing around 3 p.m.

The project site is accessed from Greenfield Road. Trucks and other equipment would use County roads or State highways for very short periods during construction and subsequent vineyard operation.

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

c.

The project proposes to utilize the existing dirt access road and paved driveway, which connect to Greenfield Road, for project development (**Figures 1-3**). The proposed project does not include roadway improvements and/or modifications to said existing roadways or include any other design feature that would result in hazardous conditions due to a geometric design feature or incompatible uses. The installation of the vineyard is consistent with the allowed use of the property and other Agricultural Watershed and Agricultural Preserve zoned properties as

well as agricultural uses in the area. Therefore, the potential for the creation, substantial increase in hazards or hazards due to a geometric design feature and incompatible uses would be a less than significant impact.

d.

The existing roads would continue to provide adequate emergency access to the project site, resulting in no impact.

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

Discussion

Notice of the proposed project was sent to Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, and Yocha Dehe Wintun Nation on December 20, 2021. The County received a response letter from Yocha Dehe Wintun Nation dated February 4, 2021, indicating that the project site is not within the aboriginal territories of the Yocha Dehe Wintun Nation, and declined to comment. The Mishewal Wappo Tribe of Alexander Valley and Middletown Rancheria did not request consultation within the 30-day notification period, and because no response to the consultation invitation was received, the consultation time period elapsed.

a-b.

As discussed in **Section V (Cultural Resources**), the proposed project's Cultural Resource Reconnaissance did not identify any historical or archaeological resources within the project area, although the probability of encountering cultural resources was determined to be high. Therefore, the proposed project would result in less than significant impacts to Tribal Cultural Resources, including those that may be eligible for the CHRIS or local register or cultural resources as defined in Public Resources Code Section 5024.1(c).

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒

d)	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☒
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

Discussion

a.

The proposed project would generate a minimal number of employees to the property on a temporary basis, and ongoing vineyard operation and maintenance would generate a minimal number of employees to the property on an ongoing basis. It is anticipated that these employees would come from the existing labor pool in the region and would not generate an increase in the population relative to the existing conditions. Therefore, the proposed project would not create a need to construct new or modified utilities and service systems. Further, implementation of the proposed project would not result in the construction or expansion of a water or wastewater treatment facility; the proposed project would not generate wastewater and no groundwater is proposed, nor will well water be permitted to provide irrigation water to the vineyard.

Irrigation pipelines would be located within existing roadways, vineyards and vineyard avenues, and/or within proposed clearing limits. The proposed project would include the installation of a limited number of onsite storm water drainage features such as straw wattles and a permanent no-till vineyard cover crop, which have been designed to meet project-related storm water drainage needs. The effect of the proposed storm water drainage system is described in **Sections IV (Biological Resources), VII (Geology and Soils),** and **X (Hydrology and Water Quality)**. As discussed in the referenced sections, the environmental impacts of construction of these features, with incorporation of standard conditions identified in **Sections III (Air Quality), IV (Biological Resources), V (Cultural Resources)** and **IX (Hazards and Hazardous Materials)**, would result in a less than significant impact.

b.

The approximately 11.63 gross acres of vineyard (approximately 9.31 net acres; 7.64 new net acres) would be irrigated by surface water from the existing onsite ponds/reservoirs. No groundwater is proposed as part of this project; however, it should be noted that the existing on-site residence and accessary structures utilize groundwater to meet the residential and domestic water supply for the property and that no new groundwater uses are anticipated for the near future. The existing vineyard contains 3,718 vines and irrigation has historically averaged 5 gallons per week for 20 weeks per year for a total average irrigation use of ±1.14 AF/yr). P08-00591 was approved with an estimated water use of ±3.0 AF/yr for a total pre-project irrigation demand of 4.14 AF/yr. It is expected that the new vineyard, part of which will replace the area covered by P08-00591, will require the same amount of irrigation as the existing vineyard. Thus, 9.5 ac x 1815 vines/ac x 5 gal/vine x 20 weeks = 5.30 AF. As such, the post-project water use is anticipated to increase by 2.30 AF/yr, from 4.14 to approximately 6.44 AF/yr. The surface water permit, granted in 2003, allows for the drawing of 25 AF/yr of water from the unnamed blue-line stream. The proposed water use of 6.44 AF/yr is below the 25 AF/yr permitted to be stored in the reservoirs. Furthermore, if a prolonged drought occurs that applicant is required (per their surface water permit) to comply with State mandated requirements in regard to water reduction. Also see **Section X (Hydrology and Water Quality)** for additional disclosures and analysis.

c.

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

d-e.

Minimal rock is expected to be generated by vineyard development. Rock generated during vineyard preparation would be utilized onsite primarily in landscaping. Rock that is not used immediately would be stockpiled for future use inside the proposed clearing limits. Solid waste generated during construction activities (e.g., broken pipe, fittings, trellis, end posts, etc.) would be negligible. Implementation of the proposed project would include pruning and harvesting activities which would generate waste material (cane). This material would generally be disposed of by being chipped and disposed of onsite. Therefore, the proposed project would not generate a volume of waste that would need to be disposed of at a landfill that would exceed the permitted capacity of applicable landfills serving the project area. Furthermore, all waste would be disposed of in accordance with federal, State, and local statues and regulations. Therefore, no impact would occur.

	Potentially Significant Impact	Less Than Significant Impact With	Less Than Significant Impact	No Impact

		Mitigation Incorporated		
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 and is within a State Responsibility Area (CALFIRE, 2007, Napa County GIS Fire Hazard Layer). General topography of the parcel is gently to steeply sloped with all aspects represented, and elevations ranging from 675 to 910 feet above mean sea level (msl), within the eastern hills of Napa Valley.

a.

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

b-c.

Project construction would require the use of vehicles and heavy equipment for grading and other activities, and these vehicles and equipment could spark and ignite flammable vegetation. During construction, the risk of igniting a fire would be low because vegetation would be cleared prior to developing the vineyard, and the risk would be temporary due to the short duration of construction (approximately six months). Operation and maintenance activities would be similar to activities already occurring on the project site with the existing vineyard. The proposed project does not include any infrastructure that would exacerbate fire risk. The proposed project would not exacerbate wildfire risk and this impact would be less than significant.

d.

Although the proposed project would alter land cover, the proposed project includes temporary and permanent erosion control measures which would reduce the impact of stormwater runoff or drainage changes being discharged on or offsite and there would be a decrease in peak flow in the development area (see **Section X [Hydrology and Water Quality]**). The onsite residence and residence closest to the proposed vineyard are located on relatively flat terrain. Therefore, there are no structures or people that would be exposed to downslope or downstream flooding or landslides and the impact would be less than significant.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE. Would the project:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐

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 #P21-00331-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 conditions of approval would avoid potential direct and indirect impacts to special-status, bird and turtle species and their habitat. Given the small size of the project, 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; access to both the ephemeral drainage and un-named blue line stream will be maintained. As such, the proposed deer fencing would not introduce any new movement barriers to wildlife and impacts to wildlife movement are expected to be less than significant, and the range of special-status plant species would not be restricted, cumulative impacts are anticipated to be less than significant. The blue-line stream onsite is avoided with minimum buffers, and an area of vines are proposed to be removed and revegetated with native species and will be maintained for 5 years, increasing the overall health of the streams riparian corridor. With incorporation of standard conditions and a Mitigation Measure (**Cultural Resources 1**) requiring compliance with the Monitoring Agreement (**Exhibit H**) will provide protection of any cultural resources that may be discovered accidently, and, as such, significant impacts to cultural resources are not expected (**Section V [Cultural Resources**]). Therefore, the proposed project as designed with the incorporation of conditions of approval, the proposed vineyard development project would have a less than significant potential to degrade the quality of the environment.

b.

The project site is located within the Conn Creek Drainage, which is part of the Lake Hennessey Sensitive Domestic Water Supply Drainage. The Conn Creek Drainage contains approximately 5,165 acres. In 1993, vineyard acreage within this drainage was approximately 317.8 acres, or 6.15% of the drainage. Since 1993 approximately 148.8 acres of additional vineyard (or 2.86% of the drainage) have been developed (or approved) to vineyard, resulting in approximately 9.03% of the drainage (approximately 466.6 acres) containing vineyard.

It is estimated, based on evaluation of the County's GIS layer identifying Potentially Productive Soils (PPS) within the Lake Hennessey Water Supply Drainage, that there are approximately 1027.4 acres (19.9% of the drainage) having the potential to be developed to vineyard. In conjunction with existing and approved vineyard development (approximately 466.6-acres), this results in a total potential build out of approximately 1,494 acres or approximately 28.9% of the drainage. The PPS layer includes lands with characteristics that have been found to be suitable for potential future vineyard development; however this total does not take into consideration other site-specific limitations such as water courses requiring setbacks, wetlands, other water features, rare or special-status plants and animal species, or cultural resources, nor does the layer take into account other factors influencing vineyard development, such as sun exposure, soil type, water availability, or economic factors.

While it is not possible to precisely quantify the acreage and location of additional vineyard development that may be proposed by property owners in this drainage in the future, it is possible to make a conservative estimate based on previous trends. To estimate the amount of reasonably foreseeable vineyard that may be developed over time, the acreage of vineyard development including approved vineyard projects in the cumulative environment (i.e., Lake Hennessey drainage) over the last 29 years (1993-2022) were used to project an estimation of vineyard development for the next three to five years. Over the past 29 years within the Lake Hennessey drainage, approximately 5.13-acres of agriculture were developed per year (148.8 divided by 29). 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 15.39 to 25.65-acres over the next three to five years within the Lake Hennessey drainage are considered reasonable estimates. NCC Chapter 18.108 includes policies that require setbacks of 35 to 150 feet from watercourses (depending on slopes), setbacks of 50 feet from wetlands, and retention

of 70% of a property's cover canopy, and General Plan Conservation Policy CON 24c that requires the retention of oak woodland at a 2:1 ratio, all of which limit the amount of potential vineyard acreage that could be converted within the watershed. It has been the County's experience with ECP projects that there are generally site-specific issues, such as oak woodland preservation, wetlands, other water features, special-status plant and animal species, or cultural resources that further reduce areas that can be developed to other land uses. Additionally, the vineyard acreage projections for the next three to five years do not consider environmental factors that influence vineyard site selection, such as sun exposure, soil type, water availability, slopes greater than 30%, or economic factors such as land availability, cost of development or investment returns.

Air Quality and GHG - Sections III and VIII:

The proposed project (#P21-00331-ECPA) includes the removal of vegetation and installation of vineyard and erosion control measures concurrent with other projects in the air basin that would generate emissions of criteria pollutants, including suspended particulate matter (PM) and equipment exhaust emissions. For construction-related dust, impacts the Regional Water Board recommends that significance be based on the consideration of the control measures to be implemented (Regional Water Board, May 2017). As discussed in **Section III (Air Quality**) and shown in **Table 3** (Emissions from Vineyard Development and Operation) criteria pollutant emissions associated with development and operations are anticipated to be well below identified thresholds, and therefore are not expected to result in project or cumulatively significant impacts. Additionally, the proposed project would be subject to standard air quality conditions of approval (should the proposed project be approved) that requires implementation of Air Quality BMPs to further reduce potential less than significant air quality effects of the proposed project and ongoing operation. Conversion of existing vegetation and disturbance of soil would result in releases of carbon dioxide, one of the gases that contribute to climate change (**Tables 5 and 6**). As discussed in S**ection 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. Furthermore, a total of 0.45 acres trees will be planted to mitigate for some of the trees that will be removed; these trees will be monitored and maintained to ensure an 80% survivability after 5 years as detailed in **Exhibit B-2**. 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 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**), no special-status plant species and habitat for only one wetland species were identified on the project site (western pond turtle). The project has been specifically designed to avoid the reservoir and its immediate shoreline (including basking substrates), thereby reducing the risk of harm to adult pond turtles. However, ground disturbance within the proposed vineyard block has the potential to impact turtle nests in the substrate, and adult turtles and/hatchlings moving to/from the reservoir to upland areas and as such a mitigation measure is proposed. With implementation of **Mitigation Measure BR-1**, the proposed project would result in less than significant impacts on western pond turtles. The potential impacts associated with the removal of potential nesting/roosting habitat for birds and bats, as well as potential indirect impacts to habitat would be reduced through implementation of **Mitigation Measures BR-2** and **BR-3.** Implementation of Conditions of Approval would ensure that the wetlands on site are protected from project activity by the required 50-foot setback, and implementation of the **Permanent Preservation COA** would require the owner/permittee to record a permanent preservation area of the vegetation canopy mitigation and replanting areas proposed and discussed in **Exhibits B-1** and **B-2.** 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:

No potential cultural resources were identified in the project site (i.e., a structural debris and depression). With the incorporation of the cultural resources condition of approval to ensure protection of cultural and tribal cultural resources that may be discovered accidently, 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 as compared to existing conditions (**Table 4**). 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, and by drainage ditches, rock apron, and grassy swale, which would capture sediment and slow runoff, 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 Sarco Creek Drainage; therefore, impacts associated with soil loss and associated sedimentation are not considered cumulatively significant.

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

Hydrology and Water Quality - Section X:

A water use of approximately 6.44 af/yr would be needed to irrigate the 14.02 acres of existing and proposed vineyard. Given that the proposed project will be irrigated entirely with surfaces waters (granted from the State) of which 25 AF are stored in on-site reservoirs, no potential impacts associated with groundwater use would occur and the proposed project would result in less than significant impacts to groundwater supplies, groundwater recharge, and local groundwater aquifer levels. Condition of Approvals (discussed in **Section X**) to ensure no groundwater is utilized for vineyard irrigation and water quality protections will be implemented, if the project is approved, have been included. Additionally, a **Mitigation Measure (Hydro-1)** has been included to ensure that Block C is located within the Place of Use Map covered under the existing state water rights permits. If the applicant/owner is unable to amend the existing water rights permit to include the proposed Block C, then the ECPA will need to be revised to removed Block C.

As discussed in **Section X (Hydrology and Water Quality**) a Hydrologic Analysis utilizing the HydroCad Cal-1 Runoff Model has been prepared by NVVE Engineering (December 2021). The project does not include the creation of concentrated flows, or materially alter site drainage patterns, or materially alter site slopes no change in runoff volumes or time of concentrations are expected as compared to pre-project conditions, therefore no significant impacts due to changes in hydrology are expected.

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

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

Land Use and Planning - Section XI:

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

Proposed Project Impacts found to be Less Than Significant

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

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

c.

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

LIST OF FIGURES:

LIST OF TABLES:

LIST OF EXHIBITS:

Exhibit A - NVVE Engineering, Submittal November 2021, Erosion Control Plan, Moshkelani Family Vineyard LLC, 1373 Soda Canyon Road.

Exhibit B - Kjeldsen Biological Consulting, December 2021, Biological Resources Survey, Moshkelani Family Vineyard: 805 Greenfield Road, Napa County, California.

Exhibit B-1 - NVVE Engineering, September 2022, Tree Mitigation Map and Vegetation Retention Map, Moshkelani Family Vineyard.

Exhibit B-2 – Water Quality and Biological Benefits of proposed Mitigation Areas

Exhibit C - NVVE Engineering, December 2021, Hydrology Study, Moshkelani Family Vineyard, Greenfield Road.

Exhibit D - NVVE Engineering, December 2021, Universal Soil Loss Equation Analysis, Moshkelani Family Vineyard, Greenfield Road.

Exhibit E - Surface Water Rights Permit and historic parcel surface water draw data + Place of Use Map.

Exhibit F - Rockridge Geotechnical, December, 2021, Engineering Geological and Geotechnical Evaluation – Moshkelani Family Vineyards

Exhibit G - Water Purveyor Consultation Documentation.

Exhibit H - Project Revision Statement P21-00331

Exhibit I - Application Submittal Materials and Correspondence.

Exhibit J - NVVE Engineering, September 8, 2022, Water Diversion Analysis and Report – Moskelani Family Vineyards.