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:** Pritchard Hill Properties LLC Vineyard Conversion Agricultural Erosion Control Plan #P20-00205-ECPA

2. **Property Owner(s):** Pritchard Hill Properties LLC, c/o Jim Bean

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

4. **Project Location and APN:** 90, 92 & 95 Long Ranch Road, St. Helena, APNs 030-220-034 & 032-560-023 (**Figures 1** and **2**)

5. **Project Sponsor:** Applied Civil Engineering, Inc.
   Agent: Michael R. Muelrath (Registered Professional Engineer No. 67435)
   2160 Jefferson Street, Suite 230, Napa, CA 94559

   Contact: (707) 320-4968

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

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

8. **Background & History:** The proposed project is located on two parcels, which are currently developed with 11.5 acres of existing vineyards (including approximately 3.8 acres of vineyard developed prior to the Conservation Regulations and approximately 6.3 acres developed under approved permit #P07-00058-ECPA), a winery (with a permitted production capacity of approximately 10,000 gallons per year under use permit #P09-00039), two primary residences, a guest cottage, outbuildings, associated landscaping and lawn areas, utility infrastructure, a 125kW ground mount solar array, several water tanks and undeveloped areas. Some of the infrastructure on site is under easements with neighboring properties, including water tanks and well, as described where relevant herein.

   Following an initial review and analysis of the application by the County, the Applicant opted to revise the project from the original proposal of 30 gross acres of vineyard (23.2 net planted acres, including 19.2 net acres of new vines and replant of 4 net acres of vines) to 23 gross acres (18.6 net acres, including 14.6 net acres of new vines and replant of 4 acres). The revised project is analyzed herein, based on addenda to technical studies reflecting the revised project proposal and submitted with the revised project plans and application.

9. **Description of Project:** The proposed project involves the clearing of vegetation, earthmoving, and installation and maintenance of erosion control measures associated with the development of approximately 23 gross acres of new vineyard (i.e., development area, proposed clearing limits; 18.6 net acres, including approximately 14.6 net acres of new vines and replant of 4 acres of vines) within five vineyard blocks, located on two parcels totaling approximately 108.9 acres (i.e., project site) (**Figure 3**). Average slopes within the development area are gentle to moderate and range from 8 percent (%) to 26% within the proposed vineyard block areas, with an overall average slope of 16% and a total of approximately 0.99-acre on slopes over 30%. The project would convert to vineyard approximately 9 acres of oak woodland (including 8.8 acres of interior live oak woodland and 0.15-acre coast live oak woodland), as well as 1.4 acres of gray pine woodland. Vegetation removal would include a total of approximately 587 trees (including approximately 450 interior live oak, blue oak and black oak, as well as 70 foothill pine, and 67 California laurel, madrone, manzanita and olive) ranging in size from 6-inches to 36-inches diameter-at-breast-height (dbh). Rock generated as a result of site preparation may be buried as fill, used in erosion control measures (e.g., as energy dissipaters), used as decoration or stockpiled onsite for future use inside the proposed clearing limits. No long-term stockpiles of rock are anticipated. Temporary rock stockpiles and staging areas would be located inside of proposed clearing limits. Rock may also be processed (crushed to a useable size) and used for lining existing roads on the subject property. No grading activities or ground disturbance would occur outside of the proposed clearing limits. The vineyard would be irrigated with water sourced from an existing groundwater well (the "New Well" constructed under #E18-00531, finaled on April 16, 2019) located on the eastern project parcel, and would be supplemented by the existing onsite "Fitts" well. Pipelines would be located in existing roadways, vineyard avenues and/or within the proposed clearing limits. Portions of the parcels are currently enclosed by wildlife exclusion fence; the project proposes additional new wildlife exclusion fencing to enclose the new blocks and tie into existing fences (**Exhibit A**).

Erosion Control Measures: Temporary erosion control measures include straw wattles, silt fence, erosion control blankets, water bars, vegetative cover crop and the application of straw mulch at a rate of 3,000 pounds per acre. Permanent erosion control measures include permanent no-till cover crop maintained at a minimum vegetation cover density of 80%, rolling dips, rock rip-rap energy dissipators and rock-filled vineyard avenues, as well as an approximate 100 linear-foot-long rock filled runoff retention trench north of proposed Block 17. Details of the proposed erosion control measures are provided in the Pritchard Hill Properties, LLC, Vineyard ECP #P20-00205-ECPA, dated November 11, 2022 (original April 7, 2021), prepared by Michael R. Muelrath (Registered Professional Engineer No. 67435) of Applied Civil 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, rock breaking and removal as needed to a depth of approximately 24 to 48 inches, discing and harrowing, and development of erosion control measures, including vineyard avenues and access roads.

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

a. Installation (under separate building permits) of two 175,000-gallon water storage tanks to serve the project, including an "upper" water storage tank located near the New Well, and a "lower" water storage tank located east of proposed Block 17;
b. Installation of new water lines within existing and proposed roadways to connect new development to proposed water storage tanks;
c. Installation of vineyard trellis and drip irrigation systems, and planting rootstock in a 7-foot by 4-foot spacing pattern for an approximate vine density of ±1,556 vines per acre and a total of approximately 28,936 vines (subject to change);
d. Ongoing inspection and maintenance of temporary and permanent erosion and runoff control measures; and
e. 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.

Table 1 lists a general annual schedule for the phased multi-year construction of the proposed project as identified in #P20-00205-ECPA and **Table 2** outlines typical general ongoing vineyard operations. The final implementation schedule is pending action on #P20-00205-ECPA.

Table 1 – Implementation Schedule

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

[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 18.108.027(C).

Table 2 – Annual Operations Schedule

January to April	a. Prune vines. b. Weed control.
April to August	a. Sulfur application to protect again mildew. b. Mow cover crop. c. Weed control.
September to October	a. Harvest. b. Winterize vineyard and vineyard avenues by September 15.
November to April	a. Monitor and maintain erosion control measures and repair as necessary during rain events.

Implementation of the proposed project would be in accordance with the Pritchard Hill Properties, LLC Vineyard Development Erosion Control Plan Applied Civil Engineering, Inc. (Revised April 2021 - **Exhibit A**). The proposed project is further described in the application materials including the Supplemental Project Information sheets. All documents are incorporated herein by reference and available for review in the Napa County Department of Planning, Building and Environmental Services (PBES).

10. Describe the environmental setting and surrounding land uses.

The project property is comprised of two contiguous parcels located at the addresses of 90, 92, and 95 Long Ranch Road, approximately 1.4 miles south of its intersection with Sage Canyon Road, approximately 5 miles northeast of the Town of Yountville and approximately 10 miles north of the City of Napa (**Figures 1-3**). The property is currently developed with 11.5 acres of existing vineyards (including approximately 3.8 acres of vineyard developed prior to the Conservation Regulations and approximately 6.3 acres developed under approved permit #P07-00058-ECPA, a winery (with a permitted production capacity of approximately 10,000 gallons per year), two primary residences, a guest cottage, outbuildings, associated landscaping and lawn areas, utility infrastructure, and several water tanks. Undeveloped areas consisting primarily of interior live oak woodland (49.2 acres) and chamise chaparral (27.5 acres), with smaller areas of coast live oak woodland, coyote scrub brush, Foothill pine woodland, Douglas fir forest. Surrounding land uses include vineyards, wineries, rural residences, grazing and undeveloped land.

Approximately 0.8-acre of the southwestern portion of the project site is located within the Vinehill Creek Drainage, while the vast majority of the project site is located within the Lake Hennessey Domestic Water Supply Drainage. An ephemeral stream originates near the winery and traverses both parcels as it flows into a blue-line stream, which in turn flows into Lake Hennessey.

General topography of the parcels is gently to steeply sloped with generally northwest trending aspects, and elevations ranging from 800 feet above mean sea level (msl) to 1,390 feet above msl, within the eastern hills of Napa Valley.

There are no known faults on the parcels; the nearest faults are located over 1,500 feet to the south and southeast of the project parcels. 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 Henneke gravelly loam with 30 to 75 percent slopes, Sobrante loam with 5 to 30 percent slopes, Rock outcrop-Hambright complex with 50 to 75 percent slopes (Applied Civil Engineering, Revised April 2021 - **Exhibit A**).

The vegetation types in the project parcel generally consist of interior live oak woodland (49.2 acres), developed and landscaped area (26.5 acres), chamise chaparral (27.4 acres), Douglas fir forest (1.97 acres), Foothill pine woodland (1.78 acres), coyote brush scrub (1.19 acres), coast live oak woodland (0.8-acre), one blue line stream and one ephemeral stream.

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 August 26, 2020. County received a response letter from Yocha Dehe Wintun Nation dated September 4, 2020, 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. On October 27, 2020, the County mailed letters to all three of the Tribes notifying them about closure of consultation invitation. On November 5, 2020, the County received correspondence from Middletown Rancheria, which stated that the project is within the aboriginal territories of the Tribe, and requested a site visit. A site visit was performed with representatives from the Tribe, the County, Owner and Applicant Representative on January 12, 2021, and the Tribe submitted mitigation measures to the County that have been incorporated into this environmental document.

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

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

ENVIRONMENTAL IMPACTS AND BASIS OF CONCLUSIONS

The conclusions and recommendations contained herein are professional opinions derived in accordance with current standards of professional practice. They are based on a review of the Napa County Environmental Resource Maps, the other sources of information listed in the file, and the comments received, conversations with knowledgeable individuals; the preparer's personal knowledge of the area; and, 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 #P20-00205-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:

- Applied Civil Engineering, Revised November 11, 2022, Original Submittal July 2020, Erosion Control Plan, Pritchard Hill Properties LLC Vineyard Development Erosion Control Plan (**Exhibit A**).
- WRA, Inc., June 2020, Biological Resources Reconnaissance Survey Report, 90, 92 & 95 Long Ranch Road, Napa County, California (APNs: 030-220-034 & 032-560-023) (**Exhibit B-1**).
- WRA, Inc., February 2021, Response to Napa County Comments on Biological Resources Reconnaissance Survey Report (File #P20-00205-ECPA) (**Exhibit B-2**).
- WRA, Inc., May 2023, Addendum to Biological Resources Reconnaissance Survey Report – Revised Project Boundaries (File #P20-00205-ECPA) (**Exhibit B-3**)
- Applied Civil Engineering, Revised November 11, 2022, Original April 7, 2021, Vegetation Retention Analysis, Pritchard Hill Properties LLC; and Jack Neal & Son, 2023, Brand Napa Valley, Tree Survey Map, APNs 030-220-034, 032-560-023 (**Exhibit B-4**)
- Archaeological Resource Service, April 2021, Cultural Resources Evaluation, 90, 92 and 95 Long Ranch Road, St. Helena CA.
- Steiner, David A, June 2020, Soil Loss Analysis, Brand Vineyards Pritchard Hill Properties LLC, 90, 92 & 95 Long Ranch Road, St. Helena, CA, APNs: 030-220-034, 032-560-023 (**Exhibit C**).
- Steiner, David A, September 7, 2022, Memorandum Re: Effect of Changes in Proposed Vineyard Footprint on Soil Loss and Hydrologic Analyses, Brand Vineyards Pritchard Hill Properties LLC 95 Long Ranch Road, St. Helena CA (APN 030-220-034, 032-560-023) (**Exhibit C-1)**
- RGH Consultants, Revised April 17, 2020, Landslide Hazard Evaluation, Pritchard Hill Properties Vineyard Development, 92 and 95 Long Ranch Road, St. Helena, CA (**Exhibit D)**
- Steiner, David A, June 2020, Hydrologic Analysis, Pritchard Hill Properties LLC Vineyard Development, APNs: 030-220-034, 032-560-023 (**Exhibit E**).
- Richard C. Slade Associates LLC, July 2020, Results of Napa County Tier I Water Availability Analysis, Pritchard Hill Properties LLC, 90, 92 & 95 Long Ranch Road, Napa County, California (**Exhibit F-1**).
- Richard C. Slade Associates LLC, January 2023, Addendum – Results of Napa County Tier 1 Water Availability Analysis, Pritchard Hill Properties LLC, 90, 92 and 95 Long Ranch Road, Vicinity Pritchard Hill, Napa County, CA (**Exhibit F-2**)
- Richard C. Slade Associates LLC, May 2023, Response to County Comments on Water Availability Analysis, Pritchard Hill Properties LLC, APN Nos. 032-560-023 and 031-010-034 (**Exhibit F-3**)
- Application Submittal Materials and Correspondence #P20-00205-ECPA (**Exhibit G)**
- Project Revision Statement, dated July 24, 2023 (**Exhibit H**)
- Site inspections conducted by Napa County Planning Division staff conducted on September 17, 2020, January 12, 2021 and January 10, 2023
- Napa County Geographic Information System (GIS) sensitivity maps/layers.

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a (SUBSEQUENT) NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. Attached as **Exhibit H** is the signed Project Revision Statement.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature _____ Date 8/7/2023

Pamela Arifian
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 project is located on mostly northwestern sloping hillsides in the Pritchard Hill area east of the Napa Valley and approximately 0.8 mile west of Silverado Trail and approximately 1 mile south of Sage Canyon Road, the closest County viewshed roads (Napa County GIS, Scenic Corridors and Viewshed Road Layers) and eligible State Scenic Highways (Caltrans 2019 - https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways). However, the topography is such that the project site is not visible from either road; intervening hillsides block the sightline between both viewshed roads and the project site. Further, the scale of the proposed project and its location amidst similar surrounding vineyards, undeveloped land and residences, including immediately adjacent to the proposed project, would result in the proposed vineyard blending in with surrounding uses if it were visible. The site is located on gentle to moderately sloping land on and a majority on the east side of a minor ridgeline that runs east to west along and near the southern edge of the project site, and traverses a small area of the southwestern corner of Block 17 (Napa County GIS, Ridgelines Layer). The project is not located within a scenic corridor (Napa County GIS, Scenic Corridors Layer). There are no significant visible rock outcroppings or geologic features on the project site that would be impacted by the proposed project. Although trees and vegetation would be removed with the proposed project (discussed **Section IV, Biological Resources**), the project site is not visible from a state scenic highway, as there are no officially designated scenic highways in the 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 ephemeral stream and blue line stream as it flows north from the property site. The proposed project would have a less than significant impact on a scenic vista, scenic highway, historic buildings, scenic resources including trees or rock outcrops for the reasons described above.

c. The proposed project would result in the removal of existing vegetation within the proposed development area and the development of vineyard. The proposed project is consistent with the Napa County AWOS land use and with surrounding viticultural, rural residential and undeveloped land uses; therefore, the proposed project is anticipated to result in less than significant impacts to the scenic vistas, scenic resources and public views.

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 (2 a.m. to dawn) and applications of pesticide/herbicide and sulfur (from 10 p.m. to 7 a.m.) occurring approximately 20 to 22 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 Other Land (i.e., not Prime Farmland, Unique Farmland or Farmland of Statewide Importance). Therefore, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, resulting in no impact.

b. The project site has a General Plan designation of Agriculture, Watershed and Open Space (AWOS) and is zoned Agricultural Watershed (AW). Therefore, the establishment of vineyard totaling approximately 23 gross acres (14.6 net new acres) is consistent with project site's land use and zoning designations. The subject property has a Williamson Act Type H contract associated with it. Which allows agriculture and associated uses. 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 disclosure and impact assessment.

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

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

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

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

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

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

a-b. The project site is generally located in the hills bordering the eastern side of the Napa Valley southeast of the City of St. 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 and GHG emissions, a review of the emissions analysis associated with vineyard development/construction and operations performed for three certified Environmental Impact Reports (EIR) in Napa County was completed: Suscol Mountain Vineyards[1] for an approximately 560-acre vineyard development, Walt Ranch Vineyard[2] for an approximately 507-acre vineyard development, and Circle-S Ranch Vineyards[3] for an approximately 400-acre vineyard development.[4]

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

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

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

Table 3 – Emissions from Vineyard Development and Operation

Emissions and Thresholds	Criteria Pollutants – Constituents			
	ROG	NO_x	$PM_{2.5}$	PM_{10}
	Construction Emissions			
Pounds per day: 150-acre vineyard development[1]	8.43 to 11.39	34.39 to 52.16	3.93 to 4.47	13.93 to14.53
Pounds per day: 150- to 250-acre vineyard development[2]	9.43 to11.03	43.85 to 53.16	3.91 to 4.62	12.87 to 17.22
Pounds per day: 127-acre vineyard development[3, 4]	4.6	42.3	5.21[4]	24.21[4]
Construction threshold	54	54	54	82
	Operational Emissions			

[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.

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 23 gross acre vineyard (approximately 14.6 net new planted acres) is smaller than any of the projects presented above, construction and operational emissions from the proposed project that could negatively affect air quality are expected to be less that those identified in **Table 3** and therefore below identified thresholds. Additionally, project approval, if granted, would be subject to the standard Air Quality 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.

c-d. Land uses such as schools, playgrounds, child care centers, hospitals and convalescent homes are considered sensitive to poor air quality, because infants and children, the elderly, and people with health afflictions, especially respiratory ailments, are more susceptible to respiratory infections and other air quality related health problems than the general public. Residential areas are also considered to be sensitive to air pollution because residents, which include children and the elderly, tend to be at home for extended periods of time.

Land uses surrounding the project site include agricultural areas, undeveloped land, and rural residential. The closest school (Yountville Elementary School) is located approximately 4.4 miles south of the project site in Yountville (Napa County GIS, School Layer). The closest offsite residences are located approximately 1,260 feet to the southeast and approximately 1,660 feet to the north. The closest residential area (Yountville) is approximately 4 miles south 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

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

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

nature and would occur more than 4 miles from the closest school and over 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?	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Discussion

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

- WRA, Inc., June 2020, Biological Resources Reconnaissance Survey Report, 90, 92 & 95 Long Ranch Road, Napa County, California (APNs: 030-220-034 & 032-560-023) (**Exhibit B-1**).
- WRA, Inc., February 2021, Response to Napa County Comments on Biological Resources Reconnaissance Survey Report (File #P20-00205-ECPA) (**Exhibit B-2**).
- WRA, Inc., May 2023, Addendum to Biological Resources Reconnaissance Survey Report – Revised Project Boundaries (File #P20-00205-ECPA) (**Exhibit B-3**)
- Applied Civil Engineering, Revised November 11, 2022, Original April 7, 2021, Vegetation Retention Analysis, Pritchard Hill Properties LLC; and Jack Neal & Son, 2023, Brand Napa Valley, Tree Survey Map, APNs 030-220-034, 032-560-023 (**Exhibit B-4**)

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, 2020a, 2021), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS, 2020a, 2021), and the USFWS List of Federal Endangered and Threatened Species 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 (USFWS, 2020b).

WRA conducted protocol level special-status plant surveys on the subject parcels resulting in a 108.9-acre 'Study Area' on March 31, April 6 and June 14, 2017, as well as a follow-up survey on October 4, 2019 to confirm mapping of holly-leaved ceanothus. 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 did 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. WRA biologists conducted sample points in suspected wetland features following the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Corps 2008).

WRA conducted an additional assessment on November 11, 2020 to assess observed ground disturbance associated with installation of the "New Well" that occurred after the original assessment within an area identified in the report as containing special status species and their habitat outside of the project area. Specifically, the assessment reported the impacts on the chamise chaparral vegetation community and the special status plants species observed within that community (**Exhibit B-2**). The following acreages of existing biological communities incorporates this re-assessment in the totals for the respective habitat.

Following project revisions, WRA conducted a re-survey of proposed Block 17 on April 15 and June 19, 2022 to assess any potential changes in location of special-status plant populations or land covers relative to existing mapping since the original surveys. The survey report noted that there were no substantive changes in the locations of those populations and land covers, nor had Block 17 been burned or subject to any other forms of ground disturbance with the potential to notably alter on-site distributions of the focal special-status plant species. The 2022 site visits also included an additional review of the disturbed Well Clearing in the "New Well" area. The survey report determined that natural regeneration within most of the well clearing area has progressed since first documented in 2020, with multiple chaparral species again observed, including several individuals of holly-leaved ceanothus; the results are included with a conservative approach in the retention total for chamise chaparral and holly-leaved ceanothus (**Exhibit B-3**).

The parcels consist of the following vegetation communities (land cover types): interior live oak woodland (49.2 acres); developed (26.5 acres; includes two residences, a winery, vineyards and infrastructure), chamise chaparral (27.5 acres), Douglas fir forest (2 acres); Foothill pine woodland (1.8 acres); coyote brush scrub (1.2 acres); coast live oak woodland (0.8-acre).[7] The parcels also include an unnamed blue-line stream and an ephemeral drainage. Oak woodland and streams are considered sensitive habitat types in Napa County. The land covers and their acreages are shown in Table 4.

Table 4 – Biological Communities/Land Cover Types on the Project Parcel

Biological Communities/Land Cover Type	Pre-Project Conditions (acres)
Interior Live Oak Woodland	49.2
Developed Area (structures, infrastructure, vineyards)	26.5
Chamise Chaparral	27.5
Douglas Fir Forest	2.0
Foothill pine woodland	1.8
Coyote Brush Scrub	1.2
Coast Live Oak Woodland	0.8

Source: WRA, June 2020 and February 2021

a. Special Status Plants

Of the special-status plants documented from the greater vicinity, the project biologist found that 56 of these plant species have the potential to occur within the project area (WRA 2020 – **Exhibit B-1**). Of these, approximately 12 species, while not observed during the protocol surveys, were determined to have a high potential to occur, primarily within the chaparral habitat on serpentine and volcanic soils. Of the 56 plant species with the potential to occur within the project area, four of these were observed within the chamise chaparral habitat onsite: narrow-anthered Brodiaea (*Grodiaea leptandra* – a perennial herb), holly-leaved ceanothus (*Ceanothus purpureus* – an evergreen shrub), Sharsmith's western flax (*Hesperolinon sharsmithiae* – an annual herb); and green monardella (*Monardella viridis* – a perennial rhizomatous herb).

Narrow-anthered brodiaea was observed in the chamise chaparral in the southeast portion of the property, where approximately 1.1-acres of the plant and associated habitat occurs[8]. The holly-leaved ceanothus is located in the chamise chaparral in the southern and eastern portion of the property, where approximately 12.5 acres of holly-leaved ceanothus occurs[9]. The Sharsmith's western flax is located in the southeast portion of the property in chamise chaparral, where approximately 1.7 acres of Sharsmith's western flax and associated habitat occur. The narrow-anthered brodiaea, holly-leaved ceanothus and Sharsmith's western flax are CNPS California Rare Plant Rank (CRPR) List 1B species, which are considered "Rare, Threatened, or Endangered in California and Elsewhere" and are fairly threatened in California (i.e., moderate degree/immediacy of threat). Green monardella is located in the southern portion of the property and is

[7] All numbers have been rounded to the nearest tenth

[8] The clearing for the "New Well" resulted in impacts to 0.2-acre each of narrow-anthered brodiae and Sharsmith's western flax; of these, the flax was observed to be regenerating.

[9] The clearing for the "New Well" resulted in impacts to 0.4-acre of holly-leaved ceanothus and 0.1-acre of green monardella, with regeneration of both populations observed (WRA 2021 – Exhibit B-2).

ubiquitous in chamise chaparral, with a distribution that is strongly associated with holly-leaved ceanothus. Green monardella (*Monardella viridis)* is CRPR List 4 species, meaning that it is of limited distribution or infrequent throughout a broader area of California; although they are not considered under CEQA, impacts to these species are considered sensitive by Napa County. The project property contains approximately 11.9 acres of green monardella site-wide.

CRPR List 1B species meet the definition of Section 1901, Chapter 10 of the Native Plant Protection Act, or Sections 2062 and 2067 of the California Endangered Species act of the California Fish and Game Code (CFGC), and are eligible for state listing. While holly-leaved ceanothus, narrow-anthered brodiaea and Sharsmith's western flax are not state or federally listed species at this time, these species and their associated habitat are of limited distribution locally within Napa County and warrant protection through applicable General Plan Goals and Policies. Protecting the continued presence of special-status species, including special-status plants, special-status wildlife, and their habitats is encouraged by Napa County General Plan Goal CON-39. Additionally, pursuant to Napa County General Plan Policy CON-13, the County shall require that all discretionary agricultural projects consider and address impacts to wildlife habitat and avoid impacts to habitat supporting special-status species to the extent feasible, and where impacts to special-status species and their habitat cannot be avoided, projects shall include effective mitigation measures and management plans to provide protection for habitat supporting special-status species through buffering or other means, and enhance existing habitat values particularly for special-status species through restoration and replanting as part of the project or its mitigation. General Plan Policy CON-13(d) and (e) provide protections for habitat through buffering or other means, and by requiring replacement of habitat of like quantity and quality on- or off-site to mitigate impacts on special status species. General Plan Policy CON-17[10] requires that the County preserve and protect sensitive biotic communities, and requires that, where avoidance, restoration or replacement of sensitive biotic habitats is not feasible, preservation of like habitat at a 2:1 ratio occurs to avoid significant cumulative loss of valuable habitats.

The proposed project would result in the removal of 0.2-acre (18% of total) of narrow-anthered brodiae[11], 2.4 acres (19% of total) of holly-leaved ceanothus, 0.3-acre (18% of total) of Sharsmith's western flax, 1.7 acres (14% of total) of green monardella. The acreages of each biological community and special-status species to be removed within the development area as proposed is listed in Table 5.

Table 5 – Retention of Biological Communities and Special-Status Plants

Biological Communities/Land Cover Type	Pre-Project Conditions (acres)	Post-Project Conditions as Proposed*	
		Acreage	Retention
Interior live oak woodland	49.2	40.4	82%
Coast live oak woodland	0.8	0.6	80%
Chamise Chaparral	27.5	22	80%
Narrow-Anthered Brodiaea	1.1	0.9	82%
Holly-Leaved Ceanothus	12.5	10.1	81%
Sharsmith's Western Flax	1.7	1.4	82%
Green Monardella	11.9	10.2	86%
Douglas Fir Forest	2	0	100%
Foothill pine woodland	1.8	0.4	22%
Coyote Brush Scrub	1.2	0.7	58%

***** Permanent impacts on narrow-anthered brodiaea resulting from installation of "New Well" are included herein as project-related impacts
WRA 2021 **Exhibit B-2** and **B-3**

Oak woodland is the most common land cover in the County occurring on approximately 162,000-acres (32% of the County's area). Approximately 1,124 acres of oak woodland or 0.7% of the total area of oak woodland in the County has been cleared for vineyard development between 1993 and 2014 (Napa County GIS, 2018). While oak woodlands may be one of the most common land covers within the County, their past conversion to residential and agricultural uses in conjunction with foreseeable oak woodland conversion to agricultural use is considered a potentially significant impact both on a project specific level and a cumulative level for projects that remove oak woodland. Napa County General Plan Conservation Element Policy CON-24 requires that oak woodland be maintained and/or improved to the extent feasible to provide oak woodland and wildlife habitat, slope stabilization, soil protection and species diversity. Policy CON-24(C) specifically calls for the preservation of oak woodland (on an acreage basis) at a 2:1 ratio. Despite the prevalence of the vegetation community in the region, the coast live oak woodland on this property is also considered sensitive, as it is the only coast live oak woodland existing on the property. The project property contains approximately 0.8-acre of coast live oak woodland, with

[10] Policy CON 17: Preserve and protect native grasslands, serpentine grasslands, mixed serpentine chaparral, and other sensitive biotic communities and habitats of limited distribution. The County, in its discretion, shall require mitigation that results in the following standards: Prevent removal or disturbance of sensitive natural plant communities that contain special-status plant species or provide critical habitat to special-status animal species.
[11] Includes the approximate 0.2-acre of permanent impacts resulting from past construction of the New Well for the purpose of irrigating the proposed vineyard development project.

approximately 0.2-acre (20%) occurring within the proposed development area, resulting in consistency with Policy CON-24(C) and less than significant impacts in this regard.

The chamise chaparral within the property are considered potential special-status species habitat because it contains the biological and ecological characteristics necessary to support special-status plant species populations and individuals. The project property contains 27.5 acres of chamise chaparral, with approximately 5.5 acres (20%) occurring within the proposed development area.

As detailed in **Exhibit B-2**, installation of the "New Well" occurred in the chamise chaparral habitat in 2018 to meet the irrigation demand for the proposed new vineyard development. The New Well is located in an area identified in the Fitts Vineyard #P07-00058-ECPA conditions of approval as an area under a Special Status Plant Protection Plan to avoid impacts to those plants; however, there was no associated deed restriction or means of permanent and enforceable preservation associated with that avoidance as part of the project approval. The installation of the infrastructure in that area resulted in temporary impacts to all special status plants, as detailed in **Exhibit B-2** (WRA 2021), with a total of 0.16-acre of permanent impacts to the chamise chaparral habitat and 0.18-acre of permanent impacts to narrow-anthered brodiaea, with regeneration observed for the remainder of the temporary impacts on special status plants and habitat. While these impacts resulted from work that occurred prior to the submittal of the proposed project application, the New Well was installed with the intention of serving the proposed project, and, therefore, the resulting impacts are considered to be directly related to the proposed project, as well as a potentially significant cumulative impact on special status plants and their habitat in the region.

As designed, the project would install two 175,000-gallon water storage tanks as indicated in **Exhibit A**; the impacts on special-status plant populations associated with this infrastructure are included in the total impacts detailed in Table 5 and in **Exhibit B-3** (WRA, 2023). While the tanks would be placed in an area identified as having special status populations and within the Special Status Plant Protection Plan area of the Fitts Vineyard #P07-00058-ECPA, the upper tank would be located within the non-regenerating portion of the New Well adjacent to the New Well and existing access road (**Exhibit B-2** and **B-3**). The lower water storage tank would be installed within the chamise chaparral habitat that contains holly-leaf ceanothus and green monardella, resulting in 0.1-acre of direct impact on these special status plant species. This direct impact is included in the total direct impacts related to the total project impacts detailed in Table 5.

Where avoidance of special-status habitat and plant species is infeasible, County practice requires that a minimum of 80% of special-status populations and their habitat be avoided to ensure consistency with Policy CON-13 and Policy CON-17. Adherence to County practice would require that the project be limited to total vegetation removal of approximately 5.5 acres of chamise chaparral, approximately 2.5 acres of holly-leaved ceanothus, and 0.3-acre of Sharsmith's western flax, 0.9-acre of narrow anthered brodiaea, and approximately 9.5 acres of green monardella. As proposed, the project would limit removal of these special status populations and their habitat to the minimum 80% threshold for each species and chamise chaparral habitat (refer to Table 5, above). The proposed avoidance of 80% of the special status populations and their habitat also results in consistency with the 2:1 preservation ratio specified in General Plan Policy CON-17.

However, as the project does not propose permanent preservation of those populations and their habitat, the removal of these special-status plant species and their habitat within the 80% minimum retention threshold as practiced by the County would be inconsistent with the following Napa County General Plan Conservation Element Goals and Policies and Zoning Ordinance: General Plan Goal Con-3[12] as it does not provide protections for the continued presence of special-status plant species or its habitat; and the purpose and intent of the Conservation Regulations (NCC Chapter 18.108) in that it does not preserve natural habitat or existing vegetation, and adversely affects sensitive, rare, threatened or endangered plants. This would be a potentially significant impact.

To reduce potentially significant cumulative impacts on special-status plants to a less than significant level, implementation of **Mitigation Measure BR-1** would require that, prior to approval, the Permittee shall identify in an exhibit prepared in consultation with a qualified biologist the Special Status Plant Preservation Areas and shall designate these areas through an enforceable restriction as acceptable by the County. The permanent preservation of a minimum of 80% of these special-status plant areas would more than account for the 2:1 mitigation ratio required by General Plan Policy CON-17 for special-status plant species that would be impacted by the proposed project, if approved. Further, the neighboring parcels to the south of Block 17 have preserved similar chamise chaparral habitats, including an adjacent 4.76-acre chamise chaparral habitat conservation area (APN 032-560-024; Berberian #98328-ECPA, approved April 22, 2003), and an approximate 6.48-acre Preservation Area (APN 030-220-044; Wappo Land Company LLC #P19-00037-ECPA, approved March 11, 2020). The preservation area that would result from implementation of **Mitigation Measure BR-1** would result in less fragmentation of on-site chamise chaparral habitat, which would provide for continued cross-pollination and gene flow between the parcels. Implementation of **Mitigation Measure BR-1** would result in permanent, enforceable protection of these special status plant populations, associated habitat and coast live oak woodland, reducing potentially significant impacts to a less than significant level.

[12] 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.

Mitigation Measure BR-1: The Owner/Permittee shall revise Erosion Control Plan #P20-00205-ECPA prior to approval to minimize potential impacts to special-status plant species (i.e., holly-leaved ceanothus, narrow-anthered brodiaea, Sharsmith's western flax, green monardella) and sensitive habitat (i.e., chamise chaparral, coast live oak woodland) as follows:

a. Prior to project approval, the Owner/Permittee shall submit for review and approval by the Director an exhibit identifying Special Status Species Preservation Areas that include a minimum of 80% of the special status plant populations and sensitive habitat as identified in the Biological Resources Reconnaissance Survey (WRA 2020 - **Exhibit B-1**) and Addenda (WRA 2022 - **Exhibit B-2**, and WRA – 2023, **Exhibit B-3**). The Preservation Areas (including those required herein and those proposed as a project design feature) may overlap and shall be selected in consultation with a qualified biologist. The Preservation Areas shall include at a minimum the total acreage for each species as follows:

   i. Coast live oak woodland: 0.6-acre
   ii. Chamise chaparral: 22 acres
   iii. Narrow-anthered brodiaea: 0.9-acre
   iv. Holly-leaf ceanothus: 10.1 acres
   v. Sharsmith's western flax: 1.4 acres
   vi. Green monardella: 9.5 acres

   The Project Special Status Species Preservation Areas shall be designated for preservation in an enforceable restriction, such as a conservation mitigation easement with an entity or organization consistent with California Civil Code Section 815.3, a deed restriction or other means of permanent protection acceptable to the County. Land placed in protection shall be restricted from development and other uses that could degrade the quality of the Preservation Area 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 enforceable restriction within 90 days of approval of #P20-00205-ECPA by the County; in no case shall earthmoving activities commence until said enforceable restriction is recorded. The area to be preserved shall be of like kind and quality to the special-status species or sensitive habitat 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 habitat within the project property, protects special-status species such as the holly-leaved ceanothus, narrow-anthered brodiaea, Sharsmith's western flax and green monardella.

b. In accordance with Napa County Code Section 18.108.100, Erosion hazard areas – Vegetation preservation and replacement) any special-status plants/populations (i.e., holly-leaved ceanothus, narrow-anthered brodiaea, Sharsmith's western flax or green monardella) inadvertently removed as a result of vineyard development authorized under #P20-00205-ECPA (including removal associated with development of the New Well) shall be replaced on-site at a ratio of 2:1 at locations within similar habitat. For such removal, a replacement plan shall be prepared by a qualified botanist or ecologist for review and approval by the Director prior to vineyard planting. At a minimum, the replacement plan shall include i) a site plan showing the locations where replacement plants will be planted, ii) a plant pallet composed of the special-status plant species being removed including sizes and/or application rates: seed mixes shall not contain species known to be noxious weeks and any non-native grasses should be sterile varieties, iii) planting notes and details including any recommended plant protection measures, iv) invasive species removal and management specifications, v) an implementation schedule, vi) performance standards with a minimum success rate of 80%, and vii) a monitoring schedule for a period of at least three years to ensure success criteria are met.

c. Prior to the commencement of earthmoving activities associated with #P20-00205-ECPA, the clearing limits shall be accurately flagged by an engineer using GPS equipment, and the vineyard boundary demarcated with temporary construction flagging/fencing. Those populations immediately adjacent to the vineyard boundary shall be demarcated with construction flagging or fencing, and incursions into the boundary shall be conducted only by qualified personnel. The precise locations of said demarcation shall be inspected and approved by the Conservation Division prior to the commencement of any earthmoving activities. No equipment or materials shall be laid down in or near the boundary. Any remediation seed mixes for bare ground should not contain species known to be aggressive weeds; non-native grasses shall be sterile varieties. The flagging/fencing may be removed following construction; however, signage at regular intervals shall be install informing vineyard personnel of the sensitivity of the Preservation Area and herbicide use shall be limited to those products that pose no negative affect to evergreen shrubs (i.e., holly-leaved ceanothus) and forbs (ie., narrow-leaved brodiaea and Sharsmith's western flax).

Furthermore, implementation of **Mitigation Measure BR-1** would not substantially affect the feasibility of the proposed project or the continued viability of agricultural use of the project parcel, in that it would allow the Owner/Permittee to develop approximately 14.6 net

acres of new vineyard. With implementation of **Mitigation Measure BR-1**, the proposed project would result in less than significant impacts on special status plants and sensitive habitats.

Special Status Animals

Of the special-status wildlife species that have been documented in the greater vicinity, only four of these species have a potential to occur in the project area or parcels: pallid bat (*Antrozous pallidus*), fringed myotis (*Myotis thysanodes*), olive-sided flycatcher (*Contopus cooperi*) and white-tailed kite (*Elanus leucurus*).

Regarding pallid bat (of which there are CNDDB occurrences in the vicinity – CDFW 2021) and fringed myotis: the trees within the parcel may contain cavities, snags or exfoliating bark suitable for roosting for the both 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-2** 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-2,** the proposed project would result in less than significant impacts on bats.

> **Mitigation Measure BR-2:** 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 with in the project area(s), no more than 6 months and no less than 14 days in advance of the planned tree removal. If the habitat assessment determines that trees proposed for removal contain suitable bat habitat, the following shall apply to potential bat habitat trees:
>
> a. Tree trimming and/or tree removal 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-2b., 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.
>
> b. 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 Conservation 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-2a, 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-2a.

Regarding special-status bird species, the parcel provides suitable year-round habitat for white-tailed kites and olive-sided flycatcher, including stands of oaks for nesting and open areas in close proximity for foraging. Neither white-tailed kites nor olive-sided flycatcher were observed during the biological assessment; however, a targeted bird survey was not performed. In addition to these special-status bird species, a variety of non-status bird species with baseline protections under the Migratory Bird Treaty Act and California Fish and Game Code may use vegetation within the project areas for nesting.

Removal of trees and grassland vegetation 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-3** 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-3**, the proposed project would result in less than significant impacts on special-status bird species.

> **Mitigation Measure BR-3:** The Permittee shall include in #P20-00205-ECPA 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.:
>
> a. For earth-disturbing activities occurring between February 1 and August 31, (which coincides with the grading season of April 1 through October 15 – NCC Section 18.108.070.L, and bird breeding and nesting seasons), a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local avian resources with potential to occur at the project site) shall conduct preconstruction surveys for nesting birds and raptors within all suitable habitat in the project area, and within a minimum of 500 feet of all project areas. The preconstruction survey shall be conducted no earlier than 7 days prior to vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than 7 days from the survey date, surveys shall be repeated. A copy of the survey results shall be provided to the Napa County Conservation Division and the CDFW prior to commencement of work.
>
> b. After commencement of work, if there is a period of no work activity of 5 days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.
>
> c. In the event that nesting birds are found, a qualified biologist shall identify appropriate avoidance methods and exclusion buffers in consultation with the County Conservation Division and the U.S. Fish and Wildlife Service (USFWS) and/or CDFW prior to initiation of project activities. Exclusion buffers may vary in size, depending on habitat characteristics, project activities/disturbance levels, and species as determined by a qualified biologist in consultation with County Conservation Division and the USFWS and/or CDFW.
>
> d. Exclusion buffers shall be fenced with temporary construction fencing (or the like), the installation of which shall be verified by Napa County prior to the commencement of any earthmoving and/or development activities. Exclusion buffers shall remain in effect until the young have fledged or nest(s) are otherwise determined inactive by a qualified biologist. Additionally, a qualified biologist shall monitor all active nests each day during construction for the first week, and weekly thereafter, to ensure that the exclusion buffers are adequate and that construction activities are not causing nest-disturbance. If the qualified biologist observes birds displaying potential nest-disturbance behavior, the qualified biologist shall cease all work in the vicinity of the nest and CDFW shall be consulted about appropriate avoidance and minimization measures for nesting birds prior to construction activities resuming. In this event, construction activities shall not resume without CDFW's written approval.
>
> e. Alternative methods aimed at flushing out nesting birds prior to pre-construction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or chemical (i.e., spraying nesting birds or their habitats) shall be prohibited.

As such, the proposed project, with implementation of **Mitigation Measures BR-1** through **BR-3** would result in less than significant impacts to special-status plants and their habitat, bird and bat species.

b-c. The project parcel contains an unnamed intermittent blue line stream and an intermittent drainage that is a tributary to the blue-line stream, which are avoided by the proposed project with required setbacks pursuant to NCC Section 18.108.025 (General provision – Intermittent/Perennial Streams). All streams drain offsite into Lake Hennessey. Flows in the intermittent stream run for the entire wet season and receives groundwater discharge to the channel; however, the stream dries out by late spring/early summer. The intermittent stream runs during and following rain events, but draws down quickly after storms have subsided. Both streams are likely jurisdictional under Section 404/401 of the CWA and Section 1602 of the CFGC, and are avoided with setbacks according to the slope from top of bank for the blue-line stream and by 35 feet for the ephemeral stream per Napa County Code Section 18.108.025(B) (General provisions – Intermittent/perennial streams). The proposed infiltration trench would be installed a minimum of 35-feet upslope from the head of the intermittent drainage. The replant of the existing vineyard in the southeastern area of Block 15 may encroach up to 21 feet from the top of bank, as this block was established prior to the Conservation Regulations.

> **Stream Protection – Standard Conditions:** The applicant/owner shall implement the following measures to prevent the inadvertent encroachment into specified stream setbacks during construction and subsequent vineyard operations:
>
> - The location of stream setbacks shall be clearly demarcated in the field with temporary construction fencing, which shall be placed at the outermost edge of required setbacks shown on the project plans. Prior to any earthmoving activities, temporary fencing shall be installed: the precise locations of said fences shall be inspected and approved by the Planning Division prior to any earthmoving and/or development activities. No disturbance, including grading, placement of fill

material, storage of equipment, etc. shall occur within the designated areas for the duration of erosion control plan installation and vineyard installation. The protection fencing shall remain in place for the duration of project implementation.

- All construction and related traffic will remain outside of the protective fencing to the maximum extent practicable to ensure that the stream, buffer zones, and associated woodland habitat remains undisturbed.

The project area does not contain any designated Critical Habitat or Essential Fish Habitat; all streams are too narrow, too shallow, and do not have an extended hydrology to support anadromous fishes. Less than significant impacts would result from project implementation on sensitive habitats and aquatic resources.

d. The project parcel includes existing deer fencing around significant portions of the property (**Exhibit A**). The existing fencing to remain already encloses the land that includes the existing and proposed vineyard blocks to the west and north of Long Ranch Road on APN 030-220-034, and that encloses the residence and existing vineyard blocks separately on APN 032-560-023 (Sheet C6 – **Exhibit A**). The southern parcel boundary where Block 17 is proposed has temporary wildlife exclusion fencing to connect to the wildlife exclusion fencing for adjacent vineyard development to the south.

The project area is located within a mapped "Essential Connectivity Area," specifically a large, north-south oriented tract of land east of Napa Valley (CDFW and Caltrans, 2010). The project area is located near the western edge of this mapped area, which is approximately 9 miles wide in that vicinity. At the scale of landscape linkages, this tract provides connectivity between baylands of San Pablo Bay and areas from northern Napa County northward. Given the relatively small size of the project area (relative to the width of the corridor tract) and the lack of apparent development impacts within the more central portion of this tract, agricultural expansion within the project 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 parcels provide connectivity between a patchwork of undeveloped lands (primarily chaparral, grassland, and woodlands), and agricultural (vineyards) and low-density, rural developments.

Furthermore, the adjacent properties are composed of the same habitats that support a similar suite of plants, including the special-status plants documented on the property. Retention of the majority of documented special-status plants and the connected habitat conservation blocks, special-status species within the area are expected to maintain viable populations both on the property and, more broadly, in the region. Implementation of **Mitigation Measure BR-1** would permanently preserve a minimum of 80% of the property's chamise chaparral habitat, including that which is host to special-status plant species directly adjacent to the identified preservation area on the Wappo Land Company LLC #P19-00037-ECPA and would result in connectivity with the conservation area in the Berberian #98328-ECPA. The mitigated project would be consistent with General Plan Policy CON-18, which encourages the reduction of impacts to habitat conservation and connectivity, resulting in less than significant impacts.

Wildlife nursery sites were not identified in the project parcel; thus the proposed project would have no impact on wildlife nursery sites. As proposed, the project would enclose the proposed vineyard blocks, and would retain wildlife corridors along the on-site streams, as well as northwest-southeast through APN 032-560-023 through the chamise chaparral habitat that would be permanently preserved following implementation of **Mitigation Measure BR-1**. Additionally, following implementation of **Mitigation Measure BR-4,** the remaining vegetation canopy cover on both project parcels would be permanently preserved as well. The permanently preserved habitats would enable larger wildlife movement connection from the preservation areas in the parcels to the south of the project parcels through APN 032-560-023 to the blue-line stream that flows towards Lake Hennessey to the north through APN 030-220-034, and from those southern adjacent neighboring parcels up to the northeast between the existing vineyard blocks in APN 032-560-023. Impacts would be less than significant following implementation of **Mitigation Measures BR-1** and **BR-4**. In order to ensure that the wildlife exclusion fencing is installed in a manner that is consistent with CDFW recommendations to minimize impacts to wildlife movement, habitat use and availability, the following condition of approval would be incorporated, should the project be approved.

Fencing – Condition of Approval: The owner/permittee shall revise Erosion Control Plan #P20-00205-ECPA prior to its approval to include an updated Vineyard Fencing Plan). The Vineyard Fencing Plan shall be submitted to the Planning Department for review and approval prior to its incorporation into #P20-00205-ECPA, and include the following components:

- New fencing shall use a design that has 6-inch square gaps at the base (instead of the typical 3-inch by 6-inch rectangular openings) to allow small mammals to move through the fence.

- Exit gates shall be installed at the corners of wildlife exclusion fencing to allow trapped wildlife to escape. Smooth wire instead of barbed wire shall be utilized to top wildlife exclusion fencing to prevent entanglement.

- Any modifications to the location of wildlife exclusion fencing as specified in Erosion Control Plan #P20-00205-ECPA pursuant to the Vineyard Fencing Plan required by this condition shall be strictly prohibited, and would require

County review and approval to ensure the modified wildlife exclusion fencing location/plan would not result in potential impacts to wildlife movement.

e. The parcel consists of the following vegetation communities (land cover types): interior live oak woodland (49.2 acres); developed (26.5 acres; includes two residences, a winery, vineyards and infrastructure), chamise chaparral (27.5 acres), Douglas fir forest (2 acres); Foothill pine woodland (1.8 acres); coyote brush scrub (1.2 acres); coast live oak woodland (0.8-acre) (**Exhibit B-1** and **B-2**).

Napa County Code Section 18.108.020(c) requires retention of 70% of the vegetation canopy cover (defined as oak woodland, riparian oak woodland or coniferous forest*)* that existed on AW parcels in 2016 aerial. In 2016, the project parcels contained approximately 53.7 acres of vegetation canopy cover (including interior live oak woodland, coast live oak woodland, Douglas fir forest and Foothill pine woodland). The project, as proposed, would remove approximately 10.4 acres (approximately 19.4%) of vegetation canopy cover existing in 2016, including 1.4 acres of foothill pine woodland, 0.15-acre of coast live oak woodland, and 8.8-acres of interior live oak woodland; therefore the project is consistent with NCC Section 18.108.020(C).

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

According to the project biologist, the project property contains approximately 32.2 acres of vegetation canopy cover on land containing slopes of less than 50% and outside of required stream setbacks. The project, as proposed, would remove approximately 10.4 acres of vegetation canopy cover, which would require a minimum of 31.2 acres of vegetation canopy cover to be permanently preserved. The project, as proposed, would retain and preserve a minimum of 31.2 acres of vegetation canopy cover, to exclude an approximately 1 acre of vegetation canopy cover immediately adjacent to the existing winery located on APN 032-560-023 as unpreserved area. Of the 31.2 acres proposed for preservation, approximately 11.9 acres (38%) occurs on land with slopes less than 30% and outside of stream setbacks (consistent with NCC Section 18.108.020(D)(1)) and approximately 19.3 acres (62%) occurs on land with slopes between 30% and 50% and outside of stream setbacks (consistent with NCC Section 18.108.020(D)(2)). Per the project biologist, the proposed configuration of preserved vegetation canopy cover would include contiguous blocks of native land cover spread over much of the property, including ecotones (transitional areas) between woodland/forest canopy and chamise chaparral, 100% of the on-site Douglas fir forest stand (and associated ecotones) and habitat for special-status plants north of proposed Block 17. The proposed size of most blocks would result in a relatively low perimeter-to-area ratio, reducing exposure of the interior to "edge effects." Further, with two exceptions (in or adjacent to Block 17), these canopy areas would also be contiguous with large acreages of intact live oak (and some Douglas fir) canopy on adjacent properties to the north and northwest, where existing development is relatively limited compared to neighboring parcels to the west, south and east. Additionally, the forested area west of the site's intermittent stream would be largely preserved, increasing the integrity and effective width of the stream buffer on that side, further supporting water quality protection in this area, and overall, a preservation scheme that would result in large blocks of preserved forest and high biological conservation value (WRA 2023 – **Exhibit B-3**). The approximate 1-acre of vegetation canopy cover immediately adjacent to the winery occurs mostly on slopes over 30% and would not be included in the preservation area. This area would be subject to defensible space management to protect the winery. Further, any future development applications associated with expansion of the winery footprint into that area would require a vegetation canopy cover analysis and mitigation plan. In addition to the 31.2 acres of preserved vegetation canopy cover on slopes less than 50% and outside of stream setbacks as required by the vegetation canopy cover mitigation requirements of NCC Section 18.108.020(D), the project, as proposed, includes preservation of approximately 7.7 acres of vegetation canopy cover that occur on slopes over 50% and outside of stream setbacks, resulting in contiguous preserved canopy throughout the parcel. Therefore, implementation of the project as proposed would be consistent with the requirements of NCC Section 18.108.020(D), resulting in less than significant impacts in this regard.

While the project, as proposed, would be consistent with the vegetation canopy cover retention and preservation mitigation requirements of NCC Section 18.108.020(C) and (D), as proposed, the project would not be consistent with NCC Section 18.108.020(E), which requires that preserved vegetation canopy cover area be enforceably restricted with a perpetual protective easement or perpetual deed restriction. This would be considered a potentially significant impact.

Implementation of **Mitigation Measure BR-4** would require #P20-00205-ECPA be revised, prior to approval, to include Vegetation Canopy Preservation Areas that would be enforceably restricted through a perpetual protective easement or deed restriction, to include a minimum of 11.9 acres on land with slopes less than 30% and outside of stream setbacks and a minimum of 19.3 acres on land with slopes between 30% and 50% and outside of stream setbacks. With implementation of **Mitigation Measure BR-4**, the project would result in consistency with the requirements of General Plan Policy CON-24, NCC Section 18.108.020(E) and Section 18.108.027(B), and less than significant impacts related to local policies or ordinances protecting biological resources, including tree preservation. Further, following implementation of **Mitigation Measures BR-4,** the permanent preservation of a minimum of 11.9 acres located on developable land (i.e., located on less than 30% slopes and outside of stream setbacks), is more than the total tree canopy that would be converted to vineyard resulting from the proposed project, thereby mitigating potentially significant greenhouse gas emissions to a less than significant level, as disclosed in Section VIII (**Greenhouse Gas Emissions**).

Pursuant to Napa County Code Section 18.108.027(B) (Sensitive domestic water supply drainages – Vegetation clearing) majority of the project site is located within the Lake Hennessey Sensitive Domestic Water Supply Drainage. As such, pursuant to NCC Section 18.108.027, a minimum of 70% of the tree canopy and a minimum of 40% of the brush/shrub cover existing on the parcels within the Lake Hennessey Sensitive Domestic Water Supply Drainage in 1993 is required to be retained as part of the project. Based on information provided by the Applicant and review of historical aerial imagery, the portion of historic APN 030-220-017 within the Lake Hennessey Sensitive Domestic Water Supply Drainage (where a majority of the proposed project is located) contained 56.4 acres of tree canopy and 81.6 acres of brush/shrub cover in 1993, and the portion of historic APN 032-010-023 within the same drainage contained 82.2 acres of tree canopy and 61.7 acres of brush/shrub cover in 1993. Since 1993, approximately 0.7-acre of tree canopy and 9.6 acres of brush/shrub had been removed from historic APN 030-220-017, and approximately 22.5 acres of tree canopy and 35.5 acres of brush/shrub layer had been removed from historic APN 032-010-023. The project as proposed would remove 2.1 acres of tree canopy and 12.5 acres of brush/shrub cover from historic APN 030-220-017, resulting in 95% tree canopy retention and 73% retention in brush/shrub cover since 1993 on that parcel, and would remove 0.2-acre of tree canopy and 0.02-acre of brush/grass cover from historic APN 032-010-023, resulting in 72% tree canopy retention and 42% brush/shrub cover from 1993 on that parcel (**Exhibit B-4**). Therefore, the project would be consistent with the retention requirements found in Section 18.108.027(b) of the Napa County Code. This section of code also requires perpetual protective easement or deed restriction for each parcel that describes the amount of vegetation to be retained on each parcel; however, the 1993 parcels include land that are currently in different parcel configurations and owned separately. Following implementation of the proposed project, the land available for development on the neighboring parcels that occur within the footprint of the 1993 parcels would be reduced to a combined 14.1 acres of tree canopy and 26.9 acres of brush/shrub on historic APN 030-220-017 (which includes current APNs 030-220-046 and 030-220-039) and to 2 acres of tree canopy and 1.5 acres of brush/shrub on historic APN 032-010-023 (which includes current APN 032-560-036) consistent with this Code section. Any future development proposals on these parcels submitted for County review would be assessed for consistency with NCC Section 18.108.027 during the application review period. Because the non-project parcels that were part of the 1993 parcel configuration are under separate ownership, permanent preservation of the 70% tree canopy and 40% brush/shrub on is not possible per NCC Section 18.108.027(b). However, implementation of **Mitigation Measure BR-1**, which would permanently preserve a total of 22 acres of chamise chaparral habitat (all of which is located in the Lake Hennessey Drainage) and **Mitigation Measure BR-4**, which would permanently preserve a minimum of 31.2 acres of vegetation canopy cover (all of which is located in the Lake Hennessey Drainage), resulting in contribution to the permanent preservation of the tree canopy and brush/shrub cover within the footprint of the historic 1993 parcel configuration within the Lake Hennessey Sensitive Domestic Water Supply Drainage. Less than significant impacts are anticipated in this regard following implementation of **Mitigation Measures BR-1** and **BR-4**.

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. Policy CON-24c specifically provides for the preservation of oak woodland (on an acreage basis) at a 2:1 ratio where feasible, and, where preservation/avoidance of oak woodland is not feasible, replacement of oak woodland at a 2:1 ratio is required. The property contains approximately 50 acres of oak woodland; the project, as proposed, would remove approximately 9 acres of oak woodland (interior live oak woodland and coast live oak woodland), and would retain approximately 41 acres of oak woodland. Further, with implementation of **Mitigation Measure BR-4,** a minimum of 31 acres of oak woodland would be permanently preserved, which is more than required to meet the 2:1 ratio required to be consistent with Policy CON-24c, resulting in less than significant impacts in this regard.

> **Mitigation Measure BR-4:** The Owner/Permittee shall revise Erosion Control Plan #P20-00205-ECPA prior to approval to include the following provisions to reduce potential impacts to vegetation canopy cover (oak woodland) and to achieve consistency with the Napa County Conservation Regulations Chapter 18.108:
>
> a. A Vegetation Canopy Preservation Area (consistent with Figure A-1, Land Cover Retention Analysis in WRA 2023 – **Exhibit B-3**) totaling 31.2 acres outside of the boundaries of the existing and proposed developed area shall be designated as such in a deed restriction or conservation mitigation easement or other means of permanent protection. The Vegetation Canopy

Preservation Area shall include a minimum of 11.9 acres on land with slopes less than 30% and located outside of stream setbacks and a minimum of 19.3 acres on land with slopes between 30% and 50% and located outside of stream setbacks, and may overlap with the Coast Live Oak Preservation area identified in **Mitigation Measure BR-1**. 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 mitigation easement prior to construction or within 60 days of project approval, whichever comes first. The area to be preserved shall be of like kind and quality to the vegetation canopy cover 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 subject to vegetation canopy cover mitigation (i.e., 31.2 acres total) should not include portions of the property already subject to development restrictions (i.e., within creek setbacks or on slopes over 50%). The area to be preserved shall be determined by a qualified biologist with knowledge of the habitat and species and shall obtain final approval from Napa County.

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

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

d. In accordance with County Code Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) trees that are inadvertently removed that are not within the boundary of the project and/or not identified for removal as part of #P20-00205-ECPA shall be replaced on-site with fifteen-gallon trees at a ratio of 2:1 at locations approved by the planning director. A replacement plan shall be prepared for county review and approval, that includes at a minimum, the locations where replacement trees will be planted, success criteria of at least 80%, and monitoring activities for the replacement trees. The replacement plan shall be implemented before vineyard planting activities. Any replaced trees shall be monitored for at least three years to ensure an 80 percent survival rate. Replacement trees shall be installed and documented that they are in good health prior to completion and finalization of the erosion control plan.

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 Archaeological sensitive areas and Archaeological sites layers: Archaeological Resource Services, April 3, 2021, Cultural Resource Evaluation of Six Proposed Vineyard Blocks within 90, 92 and 95 Long Ranch Road (APN 032-560-0230 and 030-220-034), St. Helena, Napa County California.

Archaeological Resource Services conducted an archaeological evaluation of the project parcels which included a check of information on file with the California Historical Resources Information System to determine presence or absence of previously recorded historic or prehistoric cultural resources; a check of relevant historic references to determine the potential for historic era archaeological deposits; contact with the Native American Heritage Commission to determine the presence or absence of listed Sacred Lands within the project vicinity; contact with all Native American organizations or individuals designated by the Native American Heritage Commission as interest parties for the project vicinity; and a surface reconnaissance survey of all accessible pars of the project area to locate any visible signs of potentially significant historic or prehistoric cultural deposits.

a-c. The cultural resource evaluation (Archaeological Resource Services, April 24, 2020) resulted in a negative finding, indicating that no artifacts or potentially significant cultural features were observed. Isolated fragments of obsidian artifacts were observed at various places in association with three of the blocks; while these fragments do not constitute a significant cultural deposit, they are indicative of a potential large hunting area, not a settlement area. The evaluation did not identify any human remains within the project site, and indicated a very slight potential that human remains may be discovered, should the project be approved. Therefore, less than significant impacts related to cultural resources and discovery of human remains are anticipated.

Further, 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 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 to seven months per phase, with multiple phases anticipated. Construction activities and corresponding fuel energy consumption would be temporary and localized. In addition, there are no unusual project characteristics that would cause the use of construction equipment or haul vehicles that would be less energy efficient compared with other similar agricultural construction sites within Napa County.

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

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

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

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

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

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) No faults have been mapped on the project parcels, and the project parcels are not located on an active fault or within an "Earthquake Fault Hazard Rupture Zone" designated by the Alquist-Priolo Earthquake Zoning Act. There are two fault traces of the Soda Creek fault existing approximately 0.4 mile southeast and approximately 0.6-mile to the southwest of the project site. 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). A Landslide Hazard Evaluation (RGH Consultants, April 2020 – **Exhibit D)** did not identify large-scale slope instabilities, slope failures or landslides within the project area, and determined that the risk of slope instability or erosional failure is low. Therefore, no impact would occur.

b. The project site's soils are mapped as Henneke gravelly loam, 30 to 75 percent slopes (Soil Series #154), Rock outcrop-Hambright complex, 50 to 75 percent slopes (Soil Series #176), Sobrante loam, 5 to 30 percent slopes (Soil Series #178) and Sobrante loam 30 to 50 percent slopes (Soil Series #179) (Applied Civil Engineering – **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 September 1 and April 1. These activities would take place during the dry season when rainstorms are less likely, resulting in negligible erosion and sedimentation during project installation.

   Soil loss calculations were prepared using the Universal Soil Loss Equation (USLE) in order to evaluate potential effects of erosion as a result of the proposed project. The USLE model evaluates the environmental conditions and physical forces that lead to the detachment and potential movement of soil particles through surface erosion. The USLE model does not describe travel distances of soil particles once dislodged. Potential soil loss and sedimentation associated with the proposed agricultural development and operations would primarily be controlled through a permanent no-till cover crop with vegetative cover densities of at least 80% for Blocks 3, 13, 14, 15, and 17, and at least 85% for Blocks 18 and 19. The cover crop provides the ability to trap eroded soils onsite, thereby reducing soil loss and sedimentation potential. Permanent measures also include rolling dips, rock rip-rap energy dissipators at the outlet of all water bars and rolling dips, and rock filled vineyard avenues.

   Based on USLE modeling calculations prepared by David A. Steiner, CPESC, CPSWQ (**Exhibit C** and **C-1**), the proposed conversion is anticipated to slightly reduce soil loss, or surface erosion, within the project site as compared to existing conditions (**Table 6**). Under existing conditions, the annual soil loss is anticipated to average approximately 28.4 tons per acre per year across the development area depending

on soil type, slope length, and gradient. Under proposed project conditions, annual soil loss is anticipated to average approximately 18.9 tons per acre per year, or a reduction of approximately 33% as compared to existing conditions.

Table 6 – USLE Soil Loss Analysis

Vineyard Block Transect	Proposed Development Acres	Pre-project Soil Loss (tons/year)	Post-project Soil Loss (tons/year)	Difference	Percent Change (approximate)
3NW	0.4	0.20	0.22	0.02	10%
3SE	0.4	0.23	0.11	-0.12	-52.17%
13	2.1	1.69	0.96	-0.73	-43.20%
14	0.8	0.65	0.31	-0.34	-52.31%
15N	3.2	4.54	3.63	-0.91	-20-04%
15S	1.6	0.66	0.31	-0.35	-53.03%
17NW	1.7	2.63	2.24	-0.39	-14.83%
17MidNorth	0.6	1.61	0.80	-0.81	-50.31%
17Mid	5	6.40	5.41	-0.99	-15.47%
17MidSouth	4	4.73	2.03	-2.7	-57.08%
17SE	4	5.04	2.92	-2.12	-42.06%
Total	**28.9**	**28.4**	**18.9**	**-9.4**	**-33%**

Source: David A. Steiner, 2020 **Exhibit C and C-1**

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

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

Erosion and Runoff Control (i.e., Hydromodification) Installation and Operation – Conditions of Approval: The following conditions shall be incorporated by referenced into Erosion Control Plan #P20-00205-ECPA pursuant to NCC Chapter 18.108 (Conservation Regulations):

- Permanent Erosion and Runoff Control Measures: Pursuant to NCC Section 18.108.070(L) installation of runoff and sediment attenuation devices and hydromodification facilities including, but not limited to, waterbars with rock, rolling dips, rock rip-rap energy dissipaters, rock-filled vineyard avenues, approximate 100 linear-foot-long rock-filled runoff retention trench north of proposed Block 17 and permanent no-till cover crop (or adequate mulch cover applied annually) at a minimum vegetation cover density of 80%, shall be installed no later than September 15 during the same year that initial vineyard development occurs. This requirement shall be clearly stated on the final Erosion Control Plan. Additionally, pursuant to NCC Section 18.108.135 "Oversight and Operation" the qualified professional that has prepared this erosion control plan #P20-00247-ECPA) shall oversee its implementation throughout the duration of the proposed project, and that installation of erosion control measures, sediment retention devices, and hydromodification facilities specified for the vineyard have be installed and are functioning correctly. Prior to the first winter rains after construction begins, and each year thereafter until the proposed project has received a final inspection from the county or its agent and been found complete, the qualified professional shall inspect the site and certify in writing to the planning director, through an inspection report or formal letter of completion verifying that all of the erosion control measures, sediment retention devices, and hydromodification facilities required at that stage of development have been installed in conformance with the plan and related specifications, and are functioning correctly.

- Cover Crop Management/Practice: The permanent vineyard cover crop shall not be tilled (i.e., shall be managed as a no-till cover crop) for the life of the vineyard and the owner/permittee shall maintain a plant residue density of 80% within the vineyard blocks and the associated vineyard avenues. Cover crop may be disked between rows and sprayed under vines or otherwise cultivated after April 1; after three years a permanent, no-till cover shall be established. Should the permanent no-till cover crop need to be replanted/renewed during the life of the vineyard, cover crop renewal efforts shall follow the County "Protocol for Replanting/Renewal of Approved Non-Tilled Vineyard Cover Crops" July 19, 2004, or as amended.

It is not expected that land preparation activities associated with the proposed vineyard, such as removal of rocks from the soil profile, would substantially affect the USLE modeling results. The USLE model evaluates the environmental conditions and physical forces that lead to the detachment and movement of soil particles. The primary goal of cultivating the soils within the development area during implementation is to prepare the site for planting, including fracturing and mixing layers of compressed soil and rock to facilitate root growth

and improve permeability, rather than to remove all the rock within the development area soils. Soil cultivation may result in a greater number of smaller rocks at the soil surface. Smaller rocks that emerge through development would be left within the vineyard, and only larger rocks that surface would be removed. Because the larger rocks that may be removed from the site are generally underneath the soil surface, the removal of larger rocks that emerge during development would not significantly alter the composition of soil. Therefore, the soil type classification utilized in the USLE calculations would remain unchanged (Oster, 2008).

For these reasons the proposed project, with incorporation of specified erosion control measures and conditions of approval, would not increase soil erosion and the loss of topsoil as compared to existing conditions, and maximize the potential for containment of detached soil particles to the project site, resulting in 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 Henneke gravelly loam, 30 to 75 percent slopes (Soil Series #154), Rock outcrop-Hambright complex, 50 to 75 percent slopes (Soil Series #176), Sobrante loam, 5 to 30 percent slopes (Soil Series #178) and Sobrante loam 30 to 50 percent slopes (Soil Series #179) which exhibit low to moderate shrink-swell potential (USDA Soil Survey of Napa County, 1978). In addition, no structures are proposed as part of the project and expansive soils pose little risk to vineyards and related agricultural improvements. Therefore, there would be no impacts associated with expansive soils.

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

f. Rock outcrops cover approximately 1,700 acres or 0.5% of the County. Over 50% of the County's rock outcrops are located in the Eastern Mountains and are generally located on the steeper ridgelines of the Sonoma Volcanics, including the proposed property. Although rock outcrops are not treated as a biological community because species composition in these sites varies greatly depending on the surrounding biological community, they do provide important habitat for special-status plants and wildlife. There are no rock outcrops providing habitat for special-status plants and wildlife proposed for removal as part of the proposed project.

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 was determined by the Project Archaeologist to be minimal. Furthermore, project approval, if granted, would be subject to the standard conditions described below that would avoid and reduce potential paleontological resource impacts. Therefore, impacts to geologic features and paleontological resources are anticipated to be less than significant.

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

- In the event that a discovery of a breas, true, and/or trace fossils are discovered during ground disturbing activities, all work within 100 feet of the fined shall be temporarily halted of diverted until the discovery is examined by a qualified paleontologist. The paleontologist shall notify the appropriate agencies to determine procedures that should be followed before ground disturbing activities are allowed to resume at the location of the find.
- All persons working onsite shall be bound by contract and instructed in the field to adhere to these provisions and restrictions.

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

Discussion

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

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

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

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

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

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

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

The TIS Guidelines also include VMT analysis requirements for projects based on trip generation, which includes a screening approach that

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

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).[14]

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

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

Construction Emissions:

Equipment Emissions: As discussed in **Section III (Air Quality)**, three County Certified EIRs assessed and analyzed potential air quality and GHG emissions associated with vineyard development. Within those EIRs potential GHG emissions associated with construction equipment were calculated and disclosed. An estimation of potential construction equipment emissions per acre of vineyard development was derived using the most generous emissions results from these EIRs. The Circle-S Ranch EIR anticipated approximately 4,293 metric tons (MT) CO_{2e} of construction equipment emissions for a 459-acre vineyard development, resulting in approximately 9.4 MT CO_{2e} of

[14] "Carbon stock" refers to the total amount of carbon stored in the existing plant material including trunks, stems, branches, leaves, fruits, roots, dead plant material, downed trees, understory, and soil organic material. Carbon stock is expressed in units of metric tons of carbon per acre. When land is cleared, some percentage of the carbon stored is released back to the atmosphere as CO_2. Land clearing or the loss of carbon stock is thus a type of GHG emission (County of Napa, March 2012, Napa County Draft Climate Action Plan).

construction equipment emissions per acre of vineyard development.[15] Using this emission factor it is anticipated that Construction Equipment Emissions associated with the proposed 30 gross acres of new vineyard development would be approximately 216 MT CO_{2e} (23 acres multiplied by 9.4 MT CO_{2e})[16].

Project Site Emissions: Project site emissions are emissions resulting from vegetation removal and soil preparation associated with the conversion of approximately 23 acres of existing vegetation to vineyard. Because there is not yet a universally accepted scientific methodology or modeling method to calculate GHG emissions due to vegetation conversion and soil disturbance, the Greenhouse Gas Emissions Checklist and associated carbon stock factors developed as part of the 2012 CAP efforts are utilized to determine potential project site carbon stocks and emissions. Utilizing the 2012 Draft CAP carbon stocks and the acreages of vegetation types within the project site, total carbon stocks for the project site are estimated to be approximately 1,034.4 MT C or approximately 3,796.3 MT CO_{2e} (**Table 7**).

Table 7 – Estimated Development Area Carbon Stocks/Storage

Vegetation Type/Carbon Storage	Project Acreage	Carbon Storage/Stock per Acre (MT C/acre)[1]	Total Carbon Storage (MT)	Total Carbon Storage in MT CO2e
Interior Live Oak Woodland	8.8	95.1	836.9	3,071.4
Coast Live Oak Woodland	0.2	95.1	19.0	69.7
Coniferous Forest[1]	1.4	58.1	81.3	298.5
Shrubland/Chaparral[2]	6.0	16.2	97.2	356.7
Total			**1,034.4**	**3,796.3**

[1] For the purpose of these GHG calculations, the carbon stocks associated with coniferous forest is applied to Foothill pine woodland.
[2] Includes chamise chaparral and coyote brush scrub vegetation types.
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%.[17] 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 3,495.7 MT CO_{2e} (**Table 8**).

Table 8 – Estimated Project Carbon Emissions Due to Vegetation Removal

Vegetation Type/Carbon Storage	Project Acreage	Carbon Loss/Emission per Acre (MT C/acre)[1]	Total Carbon Loss/Emission (MT)	Total Carbon Loss/Emission in MT CO2e
Interior Live Oak Woodland	8.8	89.6	788.5	2,893.7
Coast Live Oak Woodland	0.2	89.6	17.9	65.8
Coniferous Forest[1]	1.4	52.5	73.5	269.8
Shrubland/Chaparral[2]	6.0	12.1	72.6	266.4
Total			**952.5**	**3,495.7**

[1] Includes 50% of soil carbon stock.
For the purpose of these GHG calculations, the most conservative option was chosen; therefore, carbon stocks associated with olive orchard is applied to the Coniferous Forest vegetation type.
Sources: Napa County Draft Climate Action Plan, March 2012; Napa County Conservation Division November 2018.

Operational Emissions:

Operational Equipment Emissions: The referenced vineyard development EIRs also assessed ongoing vineyard operation emissions associated with vehicles and equipment. Estimated potential construction equipment emissions per acre of vineyard development were derived using the most generous emissions results from these EIRs. The Suscol Mountain Vineyard EIR anticipated approximately 373 MT CO_{2e} of operational emissions for a 560-acre vineyard, resulting in approximately 0.67 MT CO_{2e} of operational emissions per acre of vineyard per year. Using this emission factor, it is anticipated that Operational Equipment Emissions associated with the proposed 23 gross-acre agricultural development would be approximately 15.4 MT CO_{2e} (23 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,

[15] As discussed in Section III (Air Quality) variations or similarities in emissions modeling results between the three projects can be attributed to modeling platform and version utilized, variations in modeling assumptions and inputs (such as project acreage and vegetation types removed), and anticipated construction and equipment and duration of use.
16 This is a conservative estimate; the 23 gross project acres includes 4 acres of existing vineyard to be replanted, resulting in a slight reduction in total construction emissions.
[17] Napa County, July 12, 2010, Green House Gas Emissions Associated with Vineyard Development & Vineyard Operations, A Compilation of Quantitative Data from Three Recent Projects.

which indicates that oak woodlands sequester 0.425 CO_2 acre per year, shrubland/chaparral sequester a negligible quantity of CO_2 acre per year (essentially zero), and coniferous forest sequester 0.666 CO_2 acre per year. 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 4.7 MT C per year or approximately 81.1 MT CO_{2e} per year.[18]

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

Project Emissions:

Based on the above estimates, the proposed project could result in one-time construction emissions of up to 3,711.7 MT CO2e and annual ongoing emissions associated with vineyard operations (including loss of sequestration) estimated to be approximately 96.5 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	216	Vehicles and Equipment	15.4
Vegetation and Soil	3,495.7	Loss of Sequestration	81.1
Total	**3,711.7**	**Total**	**96.5**

Source: Napa County Conservation Division, November 2018

There is no adopted CEQA significance threshold at the state, regional, or local level for construction-related GHG emissions, and the County has therefore evaluated the significance of one-time project-generated emissions of up to approximately 5,068.06 MT CO_{2e} by considering the size of the proposed vineyard in relation to projected vineyard development in the County. The program level EIR for the 2008 Napa County General Plan Update (SCH#2005102088 certified June 3, 2008) projected 12,500 acres of new vineyard development in the County between 2005 and 2030. The County concluded in the General Plan EIR that emissions from all sources over the planning period would result in significant and unavoidable GHG emissions despite measures adopted to address the impact. Because this determination was based on emissions from all sources, not just agriculture, the General Plan did not determine that emissions solely from projected agricultural development would result in significant unavoidable impacts. Pursuant to Section 15183(a) of the California Code of Regulation (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 0.18% 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 80%, vegetated vineyard avenues, and the maintenance and establishment of grape vines. These measures in conjunction with the Air Quality conditions of approval (detailed in **Section III [Air Quality]**) would further reduce potential GHG air quality impacts associated with construction and ongoing operation of the proposed project.

As stated in **Section IV, Biological Resources,** the project would result in the removal of approximately 9 acres of tree canopy, including oak woodland and Pacific madrone canopy. With implementation of **Mitigation Measures BR-4**, the project would result in the permanent preservation of a minimum of 31.2 acres of tree canopy, including a minimum of 11.9 acres on land located outside of stream setbacks and on slopes less than 30%. With implementation of **Mitigation Measures BR-4**, the loss in carbon sequestration from the proposed removal of trees would be more than offset by permanently protecting from development the equivalent amount or more of carbon sequestering trees on developable land as would be removed by the project (if approved), resulting in consistency with the State's climate neutrality goal by 2045.

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 96.5 MT CO_{2e} per year, which is below the threshold of 1,100 MT CO_{2e} per year that BAAQMD has defined as significant for CEQA purposes when considering

[18] 9 acres of oak woodland times 0.425 MTC = 3.8 MT C, 1.4 acres of coniferous forest times 0.666 = 0.9 MT C, totaling 4.7 MT C

land development projects. Therefore, ongoing project emissions, including loss of sequestration, due to the proposed project are considered less than significant.

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

Discussion

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

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

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

Chemicals for vineyard operation would be stored at an off-site location and mixed onsite at vineyard fill pipe station located near the water tanks adjacent to the agricultural barn. The nearest water source (i.e., Hardman Creek) on the project site is a minimum of 55 to 65 feet west of the proposed vineyard as determined by slope pursuant to NCC Section 18.108.025. Fertilizers would be applied as necessary to the vineyard and to ensure the specified percent vegetative cover crop is achieved. No pre-emergent herbicides would be strip sprayed in the vinerows for weed management. Project storage and staging areas would be located within proposed clearing limits.

The risk of potentially hazardous materials reaching or affecting adjacent water courses or other aquatic resources is significantly reduced because: i) the proposed project would maintain buffers greater than 50 feet from the blue-line streams; ii) project staging and storage areas would be a minimum of 50 feet from aquatic resources; and iii) only federal and/or California approved chemicals would be applied

to the vineyard in strict compliance with applicable state and federal law. Project approval, if granted, would also be subject to the following standard conditions that would further avoid and/or reduce potential impacts associated with routine transport and use of hazardous materials during project implementation and ongoing vineyard operations and maintenance.

Hazardous Materials – Conditions of Approval: The owner/operator shall implement the following BMPs during construction activities and vineyard maintenance and operations:

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

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

c. The closest school (Yountville Elementary School) is located approximately 4.4 miles to the south of the project site in Yountville (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 Field, located approximately 8.4 miles north. 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 (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?	☐	☐	X☐	☒

c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
	i. Result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
	ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
	iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
	iv. Impede or redirect flood flows?	☐	☐	☒	☐
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Discussion

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

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

On March 28, 2022, August 9, 2022, and November 8, 2022, the Napa County Board of Supervisors adopted resolutions proclaiming a continued state of Local Emergency due to the 2021-2022 drought. On June 7, 2022, the Napa County Board of Supervisors provided direction regarding interim procedures to implement Executive Order N-7-22 for issuance of new, altered or replacement well permits and discretionary projects that would increase groundwater use during the declared drought emergency. The direction limits a parcel's groundwater allocation to 0.3 acre feet per acre per year (AF/Y), 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 vast majority of the project site is located in the Lake Hennessey Domestic Water Supply Drainage watershed, with a small (0.8-acre) area located within the Vinehill Creek Drainage, both of which flow into Napa River and San Pablo Bay. The Napa River is designated critical habitat for steelhead (Napa County GIS USFWS critical habitat layer). The Napa River is currently listed as an impaired waterbody for nutrients, pathogens, and sediment under Section 303(d) of the CWA. Historically, the construction of large dams and other impoundment structures between 1924 and 1959 on major tributaries in the eastern Napa River watershed and northern headwater areas of the Napa River has affected sediment transport processes into the mainstem of the Napa River by reducing the delivery of coarse load sediments to the river (Stillwater Science and W. Dietrich, 2002). However, the finer sediments that are not trapped by dams negatively affect salmonid habitat by reducing gravel permeability potentially affecting special-status fish species (Stillwater Science and W. Dietrich, 2002).

In response, the San Francisco Bay Regional Water Board has implemented the following programs. In 2009 the San Francisco Bay Regional Water Board adopted total maximum daily load (TMDL) for the Napa River (Order #R2-2009-0064), which calls for reductions in the amount of fine sediment deposits into the watershed to improve water quality and maintain beneficial uses of the river, including spawning and rearing

habitat for salmonid species. Several watershed stewardship groups have developed management plans and are planning or have implemented large-scale projects to enhance water quality and stream-riparian habitat with the watershed (San Francisco Bay Regional Water Board, 2009).

Because vineyard properties may pose threats to water quality by discharging sediment, nutrients, and pesticides and/or by increasing storm runoff, which consequently can cause erosion and sedimentation and otherwise impact aquatic life, in July 2018 the San Francisco Bay Regional Water board adopted a water quality control permit (or General Permit) for vineyard properties in the Napa River and Sonoma Creek watersheds (Order #R2-2017-0033). The General Permit regulates parcels (including contiguous parcels under common ownership) developed with five or more acres of vineyard located in either of these watersheds. The Napa River and Sonoma Creek TMDLs adopted by the San Francisco Bay Regional Water Board have established performance standards for sediment discharge and storm runoff to protect and restore water quality. The General Permit would require actions to control pollutant discharges including sediment and storm runoff from vineyards and unpaved roads, which are located throughout vineyard properties, and pesticides and nutrients from vineyards. The General Permit would require vineyard owners or operators of parcels that meet the enrollment criteria to do the following: develop and certify a "farm plan[19]"; implement the farm plan to achieve discharge performance standards; submit an annual report regarding plan implementation and attainment of performance standards; and participate in group or individual water quality monitoring programs.

In the General Permit the San Francisco Bay Regional Water Board identified four significant sediment sources that are associated with vineyard properties: i) vineyard soil erosion; ii) offsite erosion caused by vineyard storm runoff increases; iii) road-related sediment delivery; and iv) channel incision. Napa County ECPA requirements and standards primarily address and control two of these sources, vineyard soil erosion and vineyard storm runoff. The General Permit will fill gaps in local regulation so that all four sediment sources are effectively controlled to reduce fine sediment deposition in stream channels that provide habitat for endangered steelhead populations, locally-rare Chinook salmon populations, and exceptionally diverse assemblages of native fish species in these watersheds. Additional details on the Vineyard Properties General Permit can be obtained from the Regional Water Board[20].

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

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

   The proposed project has been designed with site-specific temporary and permanent erosion control measures and features to prevent sediment, runoff, and pollutants from leaving the project site. Agricultural Erosion Control Plan #P20-00205-ECPA includes BMPs that are consistent with NCC Section 18.108.080(c), as well as with Regional Water Board guidance from the Stormwater Best Management Practice Handbooks for Construction and for New Development and Redevelopment, and the Erosion and Sediment Control Field Manual. Therefore, the proposed project is not anticipated to violate any water quality standards or otherwise substantially degrade surface or groundwater quality, and this impact would be less than significant.

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

   A Water Availability Analysis (WAA) was prepared in order to determine the increase in water demand as a result of the proposed project (Richard C. Slade & Associates, April 22, 2020 - **Exhibit F-1**), and was updated to reflect practice changes with respect to precipitation dataset used for groundwater recharge analyses, and to reflect the changes by the project proponent to net project area from 19.2 net acres to 14.6 net new acres of vines (RCS, January 10, 2023 – **Exhibit F-2**). Following a peer review of the WAA by Ludhorff and Scalmanini Consulting Engineers per County request, a Response to County Comments on Water Availability Analysis was prepared and submitted (RCS, May 8, 2023 – **Exhibit F-3**). The WAA estimates the onsite groundwater recharge, overall availability, and existing and proposed use, in order to assess potential impacts on groundwater, and the Response to County Comments on WAA document clarifies questions related to details about the wells that are associated with the project parcels, the recharge rate used in the analysis, and the recommended groundwater monitoring program.

   The project property has three wells existing onsite, including the Fitts Well, the New Well and the Easement Well. The New Well and the Fitts Wells are located more than 1,300 feet west of the blue-line stream, and a minimum of 225 feet in elevation above the blue-line stream. The Easement Well is owned by others and does not serve the uses on the project parcels, and is currently unused; it is located at least 1,000 feet southwest of and approximately 150 feet in elevation uphill from the blue-line stream.[21] A fourth well, the Canyon Well, is located offsite and has historically met the groundwater demands for the existing onsite developments (including two primary residences,

[19] 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.

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

[21] The easement associated with the Easement Well is limited to providing water to an offsite property for residential uses; in the future, if the owner of the Easement Well decided to attempt to use the Easement Well for uses other than residential supply (such as a vineyard or a winery), that proposed use would required preparation of a new WAA associated with a discretionary permit application for that additional use (RCS, May 2023 – **Exhibit F-3**).

one with a pool, and one secondary residence and associated landscaping) on the project parcels. The New Well was constructed in 2018 to meet the irrigation demands of the proposed project, supplemented by the Fitts Well. The existing water demand for the property for the residential uses, winery, and existing vineyard and landscaping is 14.9 acre-feet per year (AF/y). There are no known offsite wells located within 500 feet of the project wells; therefore a Tier II WAA was not conducted. Further, as there are no County-identified "Significant Streams" located within 1,500 feet from the project wells, a Tier III WAA was not conducted.

For the purpose of the WAA, the Fitts Well and the New Well are considered the "project wells" because they will be used to meet the new water demands of the proposed vineyard development project. All other existing onsite water demands as noted above will continue to be supplied by groundwater pumped from the offsite Canyon Well, and will be supplemented by the Fitts Well and the New Well when necessary. The total groundwater supply from the Canyon Well (not used for proposed new vineyard areas) is approximately 10.9 AF/yto 12.9 AF/y, and is supplemented as necessary by the onsite Fitts Well by approximately 2 to 4 AF/y. The proposed vineyard (approximately 14.6 new net-acres) is anticipated to utilize approximately 7.4 AF/y. Typically, the annual irrigation season ranges from late May to September. After development (if approved), the proposed project in conjunction with existing groundwater use would result in approximately 22.3 AF/y of groundwater demand (RCS July 2020 – **Exhibit E).**

Groundwater Recharge: Long-term average groundwater recharge can be estimated as the percentage of rainfall that falls on the parcel that percolates into the underlying aquifer. The percentage of rain that has the potential to infiltrate varies depending on factors such as rates of evaporation and transpiration, soil type and geology that exists at the site, and average annual rainfall. The WAA identified the locations of dry holes that were drilled by others near the western and southern portions of the subject property and on a neighboring property to the north. As a result, the WAA conservatively assumed that rainfall recharge may be somewhat limited or diminished in these areas due to unfavorable hydrogeologic conditions. The theoretical "dry area" occupies approximately 50 acres of the project property; it was assumed in the WAA that no deep percolation of rainfall occurs within the theoretical dry area.

Based on available climatological data, site-specific information, and other available data and analysis relevant to potential recharge, the Tier I WAA Addendum, which uses an average annual rainfall of 28.14 inches per year over the approximate 58.9 acres of the property parcels' land area available for recharge and a 14% deep percolate recharge estimate, estimates the average annual groundwater recharge of the parcel to be approximately 19.3 AF/y (**Exhibits F-1, F-2 and F-3**).

The project as proposed (14.6 net new vine acres), in conjunction with existing vineyard use (11.5 net vine acres), is estimated to have an annual onsite future groundwater demand of 13.2 AF/y for vineyard irrigation. In conjunction with the existing non-vineyard irrigation demand of 9.1 AF/y, the future water demand totals 22.3 AF/y for all uses on the project parcels. However, of that demand, approximately 10.9 to 12.9 AF/y is supplied by the Canyon Well and not used for the proposed new vineyard. The increase in irrigation demand resulting from the proposed vineyard development project would be met solely by a combined increase in pumping from the Fitts Well and from the New Well, without any other changes to the existing onsite water supplies or uses. In conjunction with the approximate 2 to 4 AF/y of water from the Fitts Well that supplements the offsite Canyon Well for existing uses, the required combined production from the onsite project wells (Fitts Well and New Well) as a result of the proposed project would be 9.4 AF/y to 11.4 AF/y, which is less than the average annual groundwater recharge of 19.3 AF/y on the parcels (RCS, January 2023, Table 1 – **Exhibit F-2**).

Considering: i) anticipated annual water use of the project parcels for existing and proposed demand on the project wells (i.e., not including existing demand on the offsite "Canyon Well") is approximately 9.4 AF/y to 11.4 AF/y and is below (approximately 49% to 59% of) the parcels' anticipated annual groundwater recharge rate of approximately 19.3 AF/y; ii) there is no evidence to date indicating that there are groundwater problems or declining well production in the this area of the County; iii) incorporation of the groundwater management condition below, which includes standard items in addition to project-specific items as recommended by RCS (**Exhibit F-1** and **F-**3) to monitor water use as a result of vineyard establishment and ongoing vineyard operations and maintenance (if approved); and iv) there are no neighboring wells within 500 feet of the project wells and no County-identified "Significant Streams" within 1,500 feet of the project wells, the proposed project is anticipated to result in less than significant impacts to groundwater supplies, groundwater recharge, and local groundwater aquifer levels.

Groundwater Management, Wells – Conditions of Approval:

- The Owner/Permittee shall install water level transducers in project wells to permit the automatic, frequent, and accurate recording of water levels in those wells. The Owner/Permittee shall be required (at the permittee's expense) to record well monitoring data (specifically, static and pumping water levels, and also instantaneous flow rates and cumulative pumped volumes from each of the onsite wells via dual-reading flow meters (that records both flow rate and totalizing values, respectively) at each well. Water level data shall be collected no less than quarterly, and the volume of water no less than monthly. Such data shall be provided to the County, if the PBES Director determines that substantial evidence indicates that water usage is affecting, or would potentially affect, groundwater supplies. If data indicates the need for additional monitoring, and if the owner/permittee is unable to secure monitoring access to neighboring wells, onsite monitoring wells may need to be established to gauge potential impacts on the groundwater resource utilized for the project. Water usage shall be minimized by use of best available control technology and best water management conservation practices.

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

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

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

Temporary erosion control measures include straw wattles, silt fence, erosion control blankets, rolling dips, water bars vegetative cover crop and the application of straw mulch at a rate of 3,000 pounds per acre. Permanent erosion control measures include permanent no-till cover crop maintained at a minimum vegetation cover density of 80%, water bars, rolling dips, rock rip-rap energy dissipators and rock-filled vineyard avenues, as well as an approximate 100 linear-foot-long rock filled runoff retention trench north of proposed Block 17.

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 at least 80% (including vegetated avenues and turnaround avenues), and the annual application of straw mulch cover on all disturbed areas at a rate of 3,000 pounds per acre. 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, C-1 and E** 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, water bars, rolling dips and rock rip-rap energy dissipaters, as well as the proposed runoff infiltration trench north of proposed Block 17. 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 would have a negligible effect on existing drainage patterns in that they would not alter the existing topographic contours of the site. Erosion control features would maintain soil losses below the tolerable levels for the soil types found on the site and ensure (in conjunction with the cover crop) that no net increase in erosion sediment conditions occurs beyond pre-development conditions as a result of the proposed project. The erosion control features would not alter the existing topographic contours of the site.

A Hydrologic Analysis for the proposed project was prepared by the David A. Steiner, CPESC, CPSWQ (June 16, 2020 - **Exhibit E**). Following project revisions, a Memorandum that analyzed the changes from the original project conditions resulting from the revisions concluded that there would be no net increase runoff or peak flow from any of the watersheds involved (Steiner, September 2022 – **Exhibit C-1**). The development area is contained within five watershed basins. The Hydrologic Analysis utilized the USDA Technical Release 55 (TR-55) method to conclude that there would be no change in runoff time of concentration for sub-watersheds A-1 and B-2; however, for all other watersheds, the Analysis showed that the project would result in an increase in peak flows when compared to pre-project conditions (**Table 10**).

Table 10 – Hydrologic Modeling Calculations (WinTR-55) Results: Runoff Rates

	Peak Discharge Flow (cfs) by 24-hour Storm Event Frequency Return Interval (cubic feet/second)			
	2-year	10-year	50-year	100-year
Watershed A-1				
Pre-project conditions	2.38	4.48	6.70	7.63
Post-project conditions	2.59	4.74	6.97	7.91
Change (cfs)	0.21	0.26	0.27	0.28
Change (%)	8.8%	5.8%	4%	3.7%
Watershed A-2				
Pre-project conditions	2.85	5.57	8.48	9.71
Post-project conditions	2.85	5.57	8.48	9.71
Change (cfs)	0	0	0	0
Change (%)	0	0	0	0
Watershed A-3				
Pre-project conditions	5.53	10.99	16.87	19.35
Post-project conditions	5.42	10.77	16.54	19.35
Change (cfs)	-0.11	-0.22	-0.33	0
Change (%)	-2%	-2%	-2%	0
Watershed B-1				
Pre-project conditions	8.99	17.53	26.67	30.55
Post-project conditions	9.44	18.07	27.26	31.13
Change (cfs)	0.54	0.54	0.59	0.58
Change (%)	6%	3.1%	2.2%	1.9%
Watershed B-2				
Pre-project conditions	6.11	11.70	17.64	20.15
Post-project conditions	6.11	11.70	17.64	20.15
Change (cfs)	0	0	0	0
Change (%)	0	0	0	0

*Source: Steiner, June 2020, Hydrologic Analysis, Brand Vineyards Pritchard Hill Properties LLC, 95 Long Ranch Road, St. Helena CA APN: 030-220-034, 032-560-023 (**Exhibit E and C-1)***

Following implementation of the proposed erosion control features as designed (**Exhibit A**), including the infiltration trench north of proposed Block 17, rock-filled avenues in Blocks 13, as well as water bars and rolling dips with rock rip rap energy dissipaters, the Hydrologic Analysis concluded that there would be no net increase in peak flows compared to pre-project conditions (**Exhibit E**).[22] Further, the elimination of the originally proposed Block 18 significantly reduces the potential for the project to increase runoff in Watersheds A and B (Steiner, September 2022 – **Exhibit C-1**)

As the proposed project would not increase runoff flow rates, it is consistent with General Plan Conservation Element Policy CON-50c, which states peak runoff following development cannot be greater than predevelopment conditions. Additionally, as discussed in **Section VII (Geology and Soils)**, the proposed project is anticipated to reduce the soil loss when 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.

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

The project site is not located in an area of a planned stormwater drainage system, nor is it not directly served by a stormwater drainage system. As discussed above, no increase in runoff volume or increase in time of concentration is anticipated under post-project conditions. Therefore, the proposed project would not contribute a substantial amount of additional runoff to an existing stormwater drainage system or provide substantial additional sources of polluted or sediment laden runoff, resulting in a less than significant impact.

In addition, pursuant to NCC Section 18.108.135 (Oversight and Operation) projects requiring an erosion control plan would be inspected by the County after the first major storm event of each winter until the proposed project has been completed and stable for three years to ensure that the implemented erosion control plan is functioning properly[23]. Furthermore, pursuant to NCC Section 18.108.135 (Oversight and Operation) projects requiring an erosion control plan will be inspected by the County after the first major storm event of each winter

[22] Napa County Engineering Division approved the project Hydrologic Analysis on April 15, 2021 and the Memorandum on July 6, 2023 (**Exhibit G**)
[23] Compliance with Section 18.108.135 is achieved by including their provisions as conditions of approval for a project, if granted.

until the proposed project has been completed and stable for three years to ensure that the implemented erosion control plan is functioning properly.

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

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

   As discussed above and in **Section VII (Geology and Soils)**, the proposed project has been designed with site-specific temporary and permanent erosion and runoff control measures and features to prevent sediment, runoff, and pollutants from leaving the project site. As such, the proposed project is not anticipated to change the existing soil loss and sedimentation and would have no effect on runoff rates, and maintain project site drainage characteristics as compared to existing conditions. The ECPA includes BMPs that are consistent with NCC Section 18.108.080(c), as well as with Regional Water Board guidance from the Storm Water Best Management Practice Handbooks for Construction and for New Development and Redevelopment, and the Erosion and Sediment Control Field Manual.

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

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

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

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

Discussion

a. The proposed site is in a rural area of Napa County and the nearest established community, Yountville, is approximately 4 miles south of the project site. Therefore, the proposed vineyard and subsequent vineyard operations would not physically divide an established community and no impact would occur.

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

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

- The project as proposed is consistent with NCC Section 18.108.010, which requires that soil loss and runoff as a result of a project be minimized to protect water quality. As discussed in **Sections VII (Geology and Soils)** and **X (Hydrology and Water Quality)**, the proposed project would reduce soil loss, potential sedimentation and runoff conditions as compared to existing conditions.
- The proposed project is consistent with Policies CON 48 and CON 50c, which require pre-development sediment erosion conditions and runoff characteristics following development not be greater than predevelopment conditions. As discussed in **Section VII (Geology and Soils)** and **Section X (Hydrology and Water Quality)** the project as proposed would reduce soil loss, potential sedimentation and runoff conditions as compared to existing conditions.
- The proposed project is consistent with Policies CON-13 and CON-16, which require discretionary projects consider and avoid impacts to fisheries, wildlife habitat, and special-status species through evaluation of biological resources. A Biological Resources Reconnaissance Survey was prepared for the proposed project (**Exhibits B-1, B-2** and **B-3**). The proposed project, following implementation of **Mitigation Measure BR-1** as proposed would avoid potential direct, indirect, and cumulative impacts to special-status plant species and associated habitat occurring on the project site. With implementation of **Mitigation Measure BR-2** and **BR-3**, potential impacts to bats and special-status bird species would be avoided.
- With implementation of **Mitigation Measures BR-1,** the proposed project is consistent with Goals CON-2 and CON-3, which require the continued enhancement of existing levels of biodiversity and protection of special-status species and habitat, and the County Conservation Regulations through preservation of natural habitats and existing vegetation. With these measures and conditions, the proposed project would maintain levels of biodiversity and would avoid impacts to special-status plant and animal species.
- With implementation of **Mitigation Measures BR-1**, the proposed project is consistent with Policy CON-13, which requires discretionary projects to consider and avoid potentially significant 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.
- There are no wetlands identified within the project parcels; therefore, the project is consistent with Policy CON-30, which encourages the avoidance of wetlands.
- The proposed project, following implementation of **Mitigation Measure BR-1** and **BR-4**, is consistent with Policy CON-18, which encourages the reduction of impacts to habitat conservation and connectivity.
- 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 located over 13 miles to the south 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 consist of rural residential, vineyards, wineries and undeveloped land. The closest offsite residences are located approximately 1,660 feet to the north, 1,260 feet to the southeast of the development area. 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 9 – Construction Equipment Noise Emission Levels

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

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

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

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

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

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

Based on distances to existing residences, noise associated with project construction would be approximately 50 to 55 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 50 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 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 11.5 acres of existing vineyards (including approximately 3.8 acres of vineyard developed prior to the Conservation Regulations and approximately 6.3 acres developed under approved permit #P07-00058-ECPA), a winery (with a permitted production capacity of approximately 10,000 gallons per year under use permit #P09-00039), two primary residences, a guest cottage, outbuildings, associated landscaping and lawn areas, utility infrastructure, a 125kW ground mount solar array, several water tanks and undeveloped areas.

The proposed project is expected to generate approximately three round trips per day during construction. Four truck trips would deliver and remove heavy equipment at the start and end of project construction. Typical construction equipment anticipated for project implementation includes a medium excavator, D8 bulldozer, haul trucks, loader, and two farm tractors with trailers. Sulfuring and pruning would occur 12 days and up to 15 days per year, respectively, and is anticipated to generate up to 22 daily employees, resulting in approximately 10 to 12 round trips per day during pruning/sulfuring. Weed control would occur from January to April under the vines and in April through August between rows, and is anticipated to generate 2 to 4 workers per day for a total of 4 to 8 days, resulting in a total of approximately 3 to 11 round trips for weeding. Harvest would occur approximately 6 to 8 days per year and is anticipated to generate up to 14 daily employees, resulting in approximately 7 round trips per day during harvest. One 2-ton truck would be used during harvest, and approximately 150 additional times per year. Vehicular equipment for ongoing vineyard maintenance is anticipated to include ATVs, equipment trailers, and passenger cars and/or light trucks; the project proposes to hand farm. 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 Long Ranch Road, approximately 1.3 miles from its intersection with Sage Canyon Road (SR-128). Trucks and other equipment would use County roads or State highways for very short periods during construction and subsequent vineyard operation.

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

c. The project proposes to utilize the existing site access at Long Ranch Road for project development (**Figures 1-3**). The proposed project does not include roadway improvements and/or modifications to existing roads, or include any other design feature that would result in hazardous conditions due to a geometric design feature or incompatible uses. The installation of the vineyard is consistent with the allowed use of the property and other agricultural uses in the area. Therefore, the potential for the creation, substantial increase in hazards or hazards due to a geometric design feature and incompatible uses would be a less than significant impact.

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES. Would the project:				
Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☒	☐	☐
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

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. Notice of the proposed project was sent to Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, and Yocha Dehe Wintun Nation on August 26, 2020. County received a response letter from Yocha Dehe Wintun Nation dated September 4, 2020, 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. On October 27, 2020, the County mailed letters to all three of the Tribes notifying them about closure of consultation invitation. On November 5, 2020, the County received correspondence from Middletown Rancheria, which stated that the project is within the aboriginal territories of the Tribe, and requested a site visit. A site visit was performed with representatives from the Tribe, the County, Owner and Applicant Representative on January 12, 2021.

Due to the possibility of unearthing tribal cultural resources which include, but is not limited to, Native American human remains, funerary objects, items or artifacts, sites, features, places, landscapes or objects with cultural values to the Middletown Rancheria ("Tribe"), implementation of the project as proposed would result in potentially significant impacts on Tribal Cultural Resources. Implementation of **Mitigation Measure TCR-1** would require cultural sensitivity training for all project personnel, and that tribal monitoring take place on a full-time basis during all earth-moving activities by a qualified Tribal Cultural Advisor as defined by the Tribe, and that any potential cultural resources unearthed are treated appropriately as determined by the Tribe. Implementation of **Mitigation Measure TCR-1** would reduce potentially significant impacts related to tribal cultural resources to a less than significant level.

Mitigation Measure TCR-1: Prior to initial ground disturbance, the Owner/Permittee shall retain a project Tribal Cultural Advisor designated by the Middletown Rancheria ("Tribe"), to direct all mitigation measures related to tribal cultural resources, as follows:

a. Ground disturbing activities occurring in conjunction with the Project (including surveys, testing, concrete pilings, debris removal, rescrapes, punch lists, erosion control (mulching, waddles, hydroseeding, etc.), pot-holing or auguring, boring, grading, trenching, foundation work and other excavations or other ground disturbance involving the moving of dirt or rocks with heavy equipment or hand tools within the Project area) shall be monitored on a full-time basis by qualified tribal monitor(s) approved by the Tribe. The tribal monitoring shall be supervised by the project Tribal Cultural Advisor. Tribal monitoring should be conducted by qualified tribal monitor(s) approved by the Tribe, who is defined as qualified individual(s) who has experience with identification, collection and treatment of tribal cultural resources of value to the Tribe. The duration and timing of the monitoring will be determined by the project Tribal Cultural Advisor. If the project Tribal Cultural Advisor determines that full-time monitoring is no longer warranted, he or she may recommend that tribal monitoring be reduced to periodic spot-checking or cease entirely. Tribal monitoring would be reinstated in the event of any new or unforeseen ground disturbances or discoveries.

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

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

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

e. Should the Owner/Permittee be unsuccessful in engaging with the Middletown Rancheria within 45 days of initial request, the Owner/Permittee shall provide, for review and approval by Napa County, a Cultural Monitoring Plan prepared by a professional archaeologist certified by the Registry of Professional Archeologists (RPA). The Cultural Monitoring Plan shall outline monitoring requirements including but not limited to, sensitivity training for site workers, find procedures, and monitoring documentation and reporting procedures.

	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 negligible number of employees to the property; it is expected that the existing vineyard workforce would be employed for the installation and ongoing management of the new and existing vineyards. It is anticipated that any additional employees for the proposed project would come from the existing labor pool in the region and would not generate an increase in the population relative to the existing conditions. Therefore, the proposed project would not create a need to construct new or modified utilities and service systems. Further, implementation of the proposed project would not result in the construction or expansion of a water or wastewater treatment facility; the proposed project would not generate wastewater and one existing groundwater well would provide irrigation water to the vineyard.

   Irrigation pipelines would be located within existing roadways, vineyards and vineyard avenues, and/or within proposed clearing limits. The proposed project would include the installation of a limited number of onsite storm water drainage features such as water bars, rolling dips, an infiltration trench, 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 proposed 14.6 net acres of vineyard in conjunction with the 4 acres of replanted vineyard and the 11.5 acres of existing vineyard installed prior to the enactment of the Conservation Regulations, residential uses and winery would be supplied by the existing onsite wells. The WAA (RCS, **Exhibits F-1** through **F-3**) concluded that, after full development, water use from the wells on the project parcels is estimated to be approximately 9.4 AF/year to 11.4 AF/year (not including the existing demand from the off-site Canyon Well). Based on the site-specific recharge analysis, the project parcels are estimated to have a groundwater recharge allotment of approximately 19.3 AF/year, which would more than support the increased demand on the project parcels from the proposed uses; less than significant impacts on water supplies would result.

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

d-e. Rock generated during vineyard preparation would be utilized onsite primarily in erosion control features (i.e., rock filled avenues, infiltration trench, rip rap energy dissipaters) and 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 Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. **WILDFIRE.** If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				

a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slop instability, or drainage changes?	☐	☐	☒	☐

Discussion

The project site is located in a State Responsibility Area (SRA) that is designated as a Very High Fire Hazard Severity Zone (CALFIRE, 2007, Napa County GIS Fire Hazard Layer). The project site is gently to steeply sloped on generally northern-facing slopes and elevations range from approximately 800 to 1,390 feet above msl.

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

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

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

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

Discussion

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

a. As discussed in this Initial Study, implementation of #P20-0025-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. Special-status plant species narrow-anthered brodiaea, holly-leaved ceanothus, Sharsmith's western flax, and green monardella and their habitats have been identified on the subject parcels and within the project area. Narrow-anthered brodiaea, holly-leaved ceanothus, and Sharsmith's western flax are CNPS List 1B.2 species and green monardella is a CNPS List 4 species. As designed, the project would avoid and, following implementation of **Mitigation Measure BR-1**, would permanently preserve over 80% of the special-status plants and their habitat (**Table 5**).

   Implementation of **Mitigation Measures BR-1** through **BR-3** would avoid potential direct and cumulative impacts to special-status plant and bird species and minimize impact to sensitive habitats, and would allow for direct connectivity with similar habitats and special status species on neighboring properties, including the adjacent preservation areas in the parcels to the south of the project. While the proposed project would result in a portion of the property having reduced potential for on-site wildlife movement, following implementation of **Mitigation Measure BR-1**, in conjunction with **Mitigation Measure BR-4**, north-south connectivity for larger wildlife would be maintained on the property as well as at the local landscape level. The proposed preservation areas would provide contiguous preserved habitat with the neighboring parcels to the south, including an adjacent 6.48-acre chamise chaparral preservation area south of proposed Block 17 (APN 030-220-044; Wappo Land Company LLC #P19-00037-ECPA, approved on March 11, 2020) and an adjacent 4.76-acre chamise chaparral habitat conservation area established to the southeast of proposed Block 17 (APN 032-010-071; Berberian #98328-ECPA, approved April 22, 2003). As such, with the implementation of **Mitigation Measure BR-1** and **BR-4**, the proposed project would maintain wildlife movement and cumulative impacts are anticipated to be less than significant. After implementation of **Mitigation Measure BR-4,** a minimum of 31.2 acres of vegetation canopy cover located on land with slopes less than 50% and outside of stream setbacks would be permanently preserved, including a minimum of 11.9 acres on land with slopes less than 30%, consistent with the vegetation canopy cover requirements of the Conservation Regulations (NCC Section 18.108.020). Further, the permanent preservation of 11.9 acres of land with slopes less than 30% and located outside of stream setbacks resulting from implementation of **Mitigation Measure BR-4** would more than offset loss of carbon sequestration resulting from the removal of 10.4 acres of tree canopy as proposed by the project, resulting in less than significant impacts related to consistency with the State's climate neutrality goal by 2045. Incorporation of **Mitigation Measure TRC-1** would require a cultural monitor during construction activities, which, with incorporation of standard cultural resources conditions, would result in the protection of tribal cultural resources that may be discovered accidentally; as a result, potentially significant impacts to cultural resources and Tribal cultural resources are not expected. (**Section V, Cultural Resources** and **Section XVIII Tribal Cultural Resources**). Therefore, the proposed project as designed with incorporation of **Mitigation Measures BR-1** through **BR-4**, **Mitigation Measure TRC-1** and in conjunction with the project's Environmental Commitments and conditions of approval, the proposed vineyard development project would have a less than significant potential to degrade the quality of the environment.

b. The subject property is located within the Lake Hennessey and Vinehill Creek drainages. The Lake Hennessey Drainage contains approximately 5,165 acres. In 1993, vineyard acreage within this drainage was approximately 318 acres, or 6.2% of the drainage. Since 1993, approximately 149 acres of additional vineyard (or 2.9% of the drainage) have been developed to vineyard, resulting in approximately 9% of the drainage (or approximately 467 acres) containing vineyard.

   It is estimated, based on evaluation of the County's GIS layer identifying Potentially Productive Soils (PPS) within the Lake Hennessey Drainage, that there are approximately 1,027 acres (20% of the drainage) having the potential to be developed to vineyard. This, in conjunction with existing and approved vineyard development (approximately 467 acres), results in a total potential build out of approximately 1,494 acres or approximately 29% of the drainage. The PPS layer includes lands with characteristics that have been found to be suitable for potential future vineyard development; however this total does not take into consideration other site-specific limitations such as water courses requiring setbacks, wetlands, other water features, rare or special-status plants and animal species, or cultural resources, nor does the layer take into account other factors influencing vineyard development, such as sun exposure, soil type, water availability, or economic factors.

   The Vinehill Creek Drainage contains approximately 2,078 acres. In 1993, vineyard acreage within this drainage was approximately 767 acres, or 37% of the drainage. Since 1993, approximately 177 acres of additional vineyard (or 8.5% 8.37% of the drainage) have been developed to vineyard, resulting in approximately 45.5% of the drainage (or approximately 944 acres) containing vineyard. It is estimated, based on evaluation of the County's GIS layer identifying PPS within the Vinehill Creek Drainage, that there is approximately 417 acres (20% of the drainage) having the potential to be developed to vineyard, this in conjunction with existing and approved vineyard development (approximately 944 acres) results in a total potential build out of approximately 1,361 acres or approximately 66% of the drainage.

There are currently four other pending Erosion Control Plans in the Lake Hennessey Drainage (Melanson #P20-0305-ECPA, Chappellet Vineyards LLC #P21-00206-ECPA, Moshkelani Family Vineyards #P21-00331-ECPA and Red Dirt Grapes #P22-00143-ECPA) that would convert a total of approximately 85.3 acres to vineyard, and two pending Erosion Control Plans in the Vinehill Creek Drainage (Oakville Farms #P18-00106-ECPA; Bevan & DeCrescenzo #P19-00056-ECPA) that would convert a total of 12.7 acres to vineyard.[24] These pending ECPs are included in the watershed conversion rates.

While it is not possible to quantify precisely the acreage and location of additional vineyard development that may be proposed by property owners in these drainages in the future, it is possible to make a conservative estimate based on previous trends. To estimate the amount reasonably foreseeable vineyard that may be developed over time, the acreage of vineyard development including approved vineyard projects in the cumulative environment (i.e., Lake Hennessey and Vinehill Creek drainages) over the last 30 years (1993-2023) were used to project an estimation of vineyard development for the next three to five years. Over the past 30 years within the Lake Hennessey and Vinehill Creek drainages, approximately 11 acres of agriculture were developed per year (149 plus 177 divided by 30).

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 35 to 58 acres over the next three to five years within the Lake Hennessey and Vinehill Creek drainages are considered reasonable estimates. NCC Chapter 18.108 includes policies that require setbacks of 35 to 150 feet from watercourses (depending on slopes), in addition to vegetation canopy cover preservation requirements and tree canopy and brush/shrub layer preservation requirements within sensitive domestic water supply drainages (i.e., Lake Hennessey) and General Plan Conservation Policy CON 24c that requires the retention of oak woodland at a 2:1 ratio, which limits the amount of potential vineyard acreage that could be converted within each 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 VII:

The project (#P20-00205-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 BAAQMD recommends that significance be based on the consideration of the control measures to be implemented (BAAQMD, 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 project would be subject to standard air quality conditions of approval (should the project be approved) that requires implementation of Air Quality BMPs to further reduce potential less than significant air quality effects of the project and ongoing operation. Conversion of existing vegetation and disturbance of soil would result in releases of carbon dioxide, one of the gasses that contribute to climate change (Tables 7 and 8). As discussed in Section VIII (Greenhouse Gas), the proposed project is not anticipated to result in substantial or significant GHG emissions, and includes the installation of grapevines and a permanent no-till cover crop, which may off-set (in whole or in part) potential impacts related to reductions in carbon sequestration. Potential contributions to air quality impacts associated with the proposed project, including GHG emissions and loss of sequestration, would be considered less than cumulatively significant through project design (i.e., scope and scale) and implementation of standard conditions of approval.

Biological Resources - Section IV:

Project specific Biological Resources Reconnaissance Survey and Addenda (WRA, June 2020, February 2021 and May 2023 - **Exhibits B-1, B-2** and **B-3**) was performed for the project to evaluate potential habitat loss and disturbance to plant and wildlife species as a result of the project. The reconnaissance survey included a records search to identify the presence or potential presence of special-status species within the project area. The records search included the CNDDB and CNPS databases. As discussed in **Section IV (Biological Resources),** four special-status plant species (narrow-anthered brodiaea, holly-leaved ceanothus, Sharsmith's western flax, and green monardella) were identified in the project area. As designed, the project would avoid a minimum of 80% of the existing special-status plant populations and their habitat, and, with implementation of **Mitigation Measure BR-1**, the project would permanently preserve a minimum of approximately 80% of the special-status plant habitats occurring on the parcels and would provide the opportunity for these species to maintain viable populations both on the parcel and, more broadly, in the region, reducing potentially significant impacts to special-status plant species and their habitat to a less than significant level. Implementation of this mitigation measure would also effectively offset the loss of special-status plants and habitat located within the mitigated project and protect sensitive habitat. Potential direct and indirect impacts to special-status plant and animal species and their habitat would be avoided and reduced through implementation of **Mitigation Measures BR-1** through **BR-4,** and the standard conditions of approval for fencing. The unnamed blue line stream and intermittent stream within the project property are outside of the proposed development area and avoided with the minimum required setbacks per NCC

[24] Total conversion for each pending project: Melanson #P20-00305-ECPA – 4.1 acres; Chappellet Vineyards LLC #P21-002206-ECPA – 41.9 acres; Moshkelani #P21-00331-ECPA – 10.32 acres; Red Dirt Grapes #P22-00143-ECPA – 29 acres; Oakville Farms #P18-00106-ECPA – 7.7 acres; Bevan & DeCrescenzo #P19-00056-ECPA – 15 acres.

Section 18.108.025, resulting in less than significant impacts. Therefore, the project would not contribute to a cumulatively significant impact to special-status plants and animals or habitats.

NCC Section 18.108.020 requires the permanent protection of a portion of the property's cover canopy and oak woodland. Potential direct, indirect and cumulative impacts to vegetative cover and oak woodlands and associated habitat would be reduced through implementation of **Mitigation Measures BR-1** and **BR-3** and incorporation of standard conditions of approval. Therefore, the project as proposed, with implementation of its environmental commitments, standard and project specific conditions of approval, and mitigation measures would not contribute to a cumulatively significant impact to woodlands, and achieve compliance with applicable General Plan Conservation Polices and the Conservation Regulations.

Cultural and Tribal Resources – Sections V and XVIII

With the incorporation of standard conditions to protect cultural resources that may be discovered accidently and with implementation of Mitigation Measure TRC-1 to ensure that Tribal cultural resources are protected, significant impacts to cultural and tribal resources are not expected (see **Section V [Cultural Resources] and Section XVII [Tribal Cultural Resources**]). Therefore, with the incorporation of the identified mitigation measure and conditions of approval, the proposed vineyard development project would have a less than significant project-specific and cumulative impact on cultural and tribal resources.

Geology and Soils - Section VII:

Soil loss and associated sedimentation resulting from implementation of the proposed project is anticipated to be reduced by approximately 33% as compared to existing conditions (**Table 6**). The reasons for this reduction is due to the increased vegetative cover conditions within the proposed vineyard development areas and the installation of temporary and permanent erosion control measures, including water bars, rolling dips, retention trench, rock energy dissipaters, straw wattles, silt fences and erosion control blankets that reduce overland flow velocities and erosive power, and trap eroded soil on-site, thereby reducing soil loss potential. Because the project would reduce soil loss as compared to existing conditions the project is not anticipated to contribute cumulatively to sediment production within the Lake Hennessey and Vinehill Creek drainages; therefore, impacts associated with soil loss and associated sedimentation are not considered cumulatively significant.

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

Hydrology and Water Quality - Section IX:

Water use calculations provided in the WAA and Addenda prepared by RCS (April 2020, January 2023, May 2023 - **Exhibits F-1, F-2 and F-3**) indicate that the proposed development consisting of approximately 14.6 net acres of new vineyard would result in an increase of approximately 7.4 AF/year to 9.4 AF/year of groundwater on the project parcels.

The average annual rainfall utilized in the groundwater recharge analysis includes times of below-average and above-average rainfall, and therefore inherently includes drought year conditions. Based on annual average annual rainfall for the area (approximately 28.14 inches per year) and the size of the subject property (approximately 108.9 acres, with a conservative 58.9 acres available for recharge), and other conditions that affect the amount of precipitation that has the potential to recharge the groundwater aquifer, such as geological conditions, runoff characteristics, and evapotranspiration, it was anticipated that approximately 14% of the average rainfall or 19.3 AF/year would be available for groundwater recharge.

The WAA and Addenda (RCS, April 2020, January 2023, May 2023 - **Exhibits F-1, F-2** and **F-3**) concluded that, after full development, water demand from wells on the project parcels is estimated to be approximately 9.4 AF/year to 11.4 AF/year.[25] Based on the site-specific recharge analysis, the project parcels are estimated to have a groundwater recharge allotment of approximately 19.3 AF/year; less than significant impacts on water supplies would result.

Considering: i) anticipated annual water use of the project parcels for existing and proposed demand on the project wells (i.e., not including existing demand on the offsite "Canyon Well") is approximately 9.4 AF/year to 11.4 AF/year and is below (approximately 49% to 59% of) the parcels' anticipated annual groundwater recharge rate of approximately 19.3 AF/year; ii) there is no evidence to date indicating that there are groundwater problems or declining well production in the this area of the County; and iii) incorporation of the groundwater management condition below, which includes standard items in addition to project-specific items as recommended by RCS (**Exhibit F-1** and **F-**3) to monitor water use as a result of vineyard establishment and ongoing vineyard operations and maintenance (if approved), the

[25] This figure does not include the existing water demand of 10.9 to 12.9 AF/year that is sourced from the off-site Canyon Well.

proposed project is anticipated to result in less than significant impacts to groundwater supplies, groundwater recharge, and local groundwater aquifer levels, and well interference or drawdown effects on nearby wells.

As described in the Water Availability Analysis and Addenda for the proposed project, the hydrogeology of the region, including Sonoma Volcanics and sedimentary rocks of the Franciscan Complex, results in wide ranges of pumping capacity and availability due to many site-specific factors; thus, the existence of a dry well hole in one location does not necessarily mean that groundwater does not exist in the region, rather may only suggest that the specific borehole did not encounter significant groundwater-bearing fractures. Pending and future projects within the watershed (including potential non-residential uses associated with the on-site Easement Well that is under separate ownership) are required to provide a site-specific Water Availability Analysis, to ensure that the project can be sustained with the water resources anticipated to be available; therefore, the proposed project, in conjunction with other existing and pending projects within the watershed would not result in significant cumulatively considerable impacts related to groundwater.

As discussed in **Section X.c. (Hydrology and Water Quality**) a Hydrologic Analysis utilizing WinTR-55 has been prepared by David A. Steiner, CPESC, CPSWQ , along with a Memorandum reflecting the revised project condition (June 2020 and September 2022 - **Exhibit E** and **C-1**). Because the project does not include diversions, create concentrated flows or otherwise alter site drainage patterns, and does not materially alter site slopes no net increase in runoff volumes or time of concentrations are expected as compared to pre-project conditions (**Exhibit C-1**), therefore no significant impacts due to changes in hydrology are expected.

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

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

Land Use and Planning - Section XI:

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

Proposed Project Impacts found to be Less Than Significant

In addition to the impact categories identified above, the following discussion summarizes those impacts considered to be less than significant with development of the 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. The periodic use of lighting at the site would not create a substantial source of light and lighting would be in the form of headlights or downward directional lights on equipment being used during nighttime harvest. The potential contribution to aesthetic impacts associated with the project is considered to be less than cumulatively considerable. The project does not conflict with any current zoning for agricultural or forestry use, nor does the project conflict with the any applicable land use plan, policies, or regulation as mitigated and conditioned. There are no known mineral resource areas within the project site or immediate vicinity. 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 project are considered less than cumulative considerable. The project does not include the construction of structures that would result in population growth or displacement of people, the project would not adversely impact current or future public services, or require the need to utilities and service systems. For these reasons, impacts associated with the 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 project with incorporation of identified mitigation measures and conditions of approval, as discussed throughout this Initial Study, is not anticipated to result in either project specific or cumulatively considerable negative impacts; therefore, impacts associated with this project that may be individually limited, but cumulatively considerable, would be less than significant.

Implementation of the project would not have any potentially significant negative effects on human beings (see discussions under **Sections III [Air Quality], IX [Hazards and Hazardous Materials], X [Hydrology and Water Quality], XIII [Noise], XIV [Population and Housing], XVII [Transportation], and XX [Wildfire]**). The proposed project, the use of the property, and reasonably foreseeable projects

would be activities at a level of intensity considered normal and reasonable for a property within Agricultural Watershed zoning district. Therefore, less than significant impacts on human beings are anticipated.

LIST OF FIGURES:

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