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:** Babu Vineyard Track I Erosion Control Plan Application (ECP) #P21-00312-ECP

2. **Property Owner(s):** Babu Aravinth & Jayaprakasam Uma TR ETAL

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

4. **Project Location and APN:**

   3300/3600 White Sulfur Springs Road, St Helena
   APN: 027-010-033
   Lot 6, Township 7 North, Range 6 West, Mt. Diablo Principal Meridian
   Longitude - 122°30' 25.992"W; Latitude 38°29' 21.948"N

5. **Project Sponsor:** O'Connor Environmental, Inc.
   Agent: Matt O'Connor (Registered Professional Geologist No. 2449)
   PO BOX 974
   Healdsburg, CA 95448

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

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

8. **Background & History:** The approximately 67.8-acre parcel includes a driveway (which goes through the parcel to access a house on an adjacent parcel), well, catchment pond, and 2.05 acres of existing vineyard approved under a Timber Harvest Permit in 2017 (ECP #P17-00196); there is also an existing 2.36-acre permanent preservation area on the subject parcel, preservation was required as part of the 2017 ECPA approval and a larger ~20-acre preserve along the easter and southern property line which is part of a larger Iron Mine Stream protected open space easement and which crosses multiple parcels. There is also a new Agricultural Barn currently under review, building permit #BC22-01404. This structure will be located within one of the existing vineyard blocks. The parcel, and much of the forest understory was burned in the 2020 Glass Fire. Pursuant to Napa County Code Section 8.108.130, Conservation Regulations for Fire Damaged Properties, for vegetation retention requirements, the vegetation canopy cover shall be as configured on the property on June 19, 2018. The Biological Resources Reconnaissance Survey (WRA December 2019 – **Exhibit B-1**) found no appreciable change in canopy cover since 2016; therefore, Napa County's 2016 GIS Vegetation Public Habitat Mapping layer was appropriately used for the canopy retention and preservation analyses. To date approximately 0.42 acres (46 trees) of Douglas-fir Forest have been removed under an approved Emergency Timber Operations Permit (**Exhibit F**). Trees removed consisted primarily of Douglas-fir and madrone, along with some bay, oak and manzanita, and were removed in 2021. There is no history of intensive agriculture, quarrying or mining on the subject parcel; barring the existing vineyard which was approved in 2017.

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 0.42 gross acres of new vineyard (i.e., development area, proposed clearing limits; approximately 0.24 net acres of vines) within one vineyard block (Block C), located on an approximate 67.8-acre parcel (i.e., project site) (**Figure 3**). Average slopes within the development area range from 22 percent (%) to 30%, with 0.04 acres occurring on slopes over 30%. Trees within the proposed vineyard block were severely impacted by the 2020 Glass fire and a Notice of Emergency Timber Operations was granted in February 2021 for the removal of dead and dying trees. A total of 46 fire impacted trees (0.42 acres), have been harvested from the project site. However, per new Bay Area Air Quality Management District (BAAQMD) policies in regard to Greenhouse Gas (GHG) emissions, the project is required to result in no net decrease in carbon sequestration capabilities. To mitigate the loss of sequestration, due to the removal of the 46 trees, the project proposes the preservation of two (2) GHG Conservation Easement Blocks (A and B) consisting of 8.61 acres and 1.98 acres. Furthermore, the Conservation Easements Areas A and B contain a combined area of 0.45 acres of developable land under 30% slopes and outside of creek setbacks thereby meeting the no net loss in GHG (**Exhibit B-3**). An additional preservation area is proposed to comply with the Vegetation Canopy Mitigation Area required under Napa County Code (NCC) Section 18.108.020.D and E, identified as Area C

in Exhibit B-3. Mitigation Area C identifies 1.29 acres of comparable forest to preserve, a Biological Report of the proposed Preservation Easement was provided (**Exhibit B-4)**, achieving consistency with Napa County Code (NCC) Section 18.108.020.D and E. In total 11.88 acres of additional land will be permanently preserved on the subject parcel. Additionally, the project applicant has planted 2,000 Douglas-fir seedlings on the parcel, in an attempt to help regenerate trees lost due to the fire. All temporary debris, vegetation, soil and soil amendment stockpiles, as well as storage areas, if needed, will be located within the proposed vineyard development area and clearing limits. Rock generated as a result of site preparation will be disposed of within the development footprint by being buried in the vineyard roads or will be placed in the permanent stump and rock disposal area. Rock may also be processed and used for lining existing roads within the vineyard development. Temporary rock stockpiles and staging areas would be located inside of proposed clearing limits. No grading activities or ground disturbance would occur outside of the proposed clearing limits. The project proposes 117 cubic yards of cut with 104 cubic yards of fill to create runoff attenuation; all excess soil will be distributed within Block C. The vineyard would be irrigated with water sourced from an existing groundwater well, and pipelines would be located in existing roadways, vineyard avenues and/or within the proposed clearing limits. An attenuation basin is also proposed at the eastern corner of the new vineyard block. There is deer fencing enclosing the two existing vineyard blocks and the project proposes to fence in the entirety of the new vineyard block (0.42 acres). Said fencing will be outside of the required stream setbacks. All roads required to provide access to the project site are existing and no new roads are planned as part of this project. (**Exhibit A**)

Erosion Control Measures: Temporary erosion control measures include straw wattles, seeding and straw mulching of all disturbed areas at a rate of 2,000 pounds per acre.

Permanent erosion control measures include cross-slope diversion ditches, rock lined ditches, water bars and rock slope protection, as well as a permanent no-till cover crop maintained at a minimum vegetation cover density of 85%. Details of the proposed erosion control measures are provided in the Babu Vineyard ECP #P21-00312-ECP, dated November 2021, prepared by Matthew O'Connor (Registered Professional Geologist No. 2449) of O'Connor Environmental Inc., Healdsburg, California (**Exhibit A**).

Earthmoving*:* Earthmoving and grading activities associated with the installation of erosion control measures and subsequent vineyard operation include, but are not limited to vegetation removal, cut and fill (221 cubic yards total) soil ripping, rock removal, disking, and development of erosion control measures.

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

a. Clearing and grubbing of existing vegetation (grass, shrubs, trees, etc.) and root systems
b. Minor re-contouring of existing topography to promote sheet flow
c. Ripping as needed to fracture subsoils and rock to a depth of approximately 36 to 48 inches to prepare soil for planting and to incorporate soil amendments (ripping to be limited to vineyard block areas shown on the plans)
d. Mechanical and hand rock raking to remove loose rocks from the ground surface
e. Discing and harrowing to prepare seedbed for vegetative erosion control measures
f. Installation of vineyard trellis and drip irrigation systems, and planting rootstock in a six (6) foot spacing pattern
g. Ongoing inspection and maintenance of temporary and permanent erosion and runoff control measures.
h. Ongoing operation and maintenance of the vineyard, which includes the following: vine management (pruning, fertilization, pest and disease control), weed control, cover crop mowing, irrigation and trellis system maintenance, and fruit harvesting. No pre-emergent herbicides would be used and contact or systemic herbicides may be applied in the spring. The width of the spray strip shall be no wider than 18 inches in order to achieve 85% vegetative cover (based on a 6-foot row spacing).

Table 1 lists a general schedule for the construction of the proposed project as identified in #P21-00312 and **Table 2** outlines typical general ongoing vineyard operations. The final implementation schedule is pending action on #P21-00312.

Table 1 – Implementation Schedule

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

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

Table 2 – Annual Operations Schedule

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

Project construction activities are anticipated to require up to approximately eight (8) two-way worker trips per day for work crews of two (2) to eight (8) people split between two (2) - four (4) vehicles, which includes trips anticipated for project mobilization and demobilization for equipment, as well as materials delivery and pick up. Construction equipment is anticipated to include a D-7 size bulldozer, an excavator, tractor/trailers, backhoes, trencher, and pickup trucks, passenger vehicles, and other small to medium service vehicles.

Vineyard operations, including pruning and harvest is anticipated to require up to a maximum of approximately eight (8) two-way worker trips per day for work crews of approximately two (2) to eight (8) workers who are anticipated to carpool. Approximately two (2) additional two-way trips per day are anticipated for a grape haul truck during harvest which is expected to be one (1) day. Equipment for vineyard operations is anticipated to include a tractor/trailer, grape trucks, pickup trucks, ATVS, passenger vehicles and other small to medium service vehicles. Vineyard operations would result in a maximum of 20 trips per day, which is less than the 110 trips noted by the BAAQMD CEQA transportation greenhouse gas (GHG) threshold; whereby projects with fewer than 110 trips per days are considered to have a less than significant impact.

Implementation of the proposed project would be in accordance with the Babu Vineyard ECP prepared by O'Connor Environmental, Inc. (December 2021 - **Exhibit A-1**). 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 proposed project would occur on one (1) parcel totaling approximately 67.8 acres located at 3300 White Sulfur Springs Road near Saint Helena, California within Napa County (**Figures 1-3**). The project site is located approximately 1.6 miles west of the City of Saint Helena. The parcel consists of an access road, 2.05 acres of existing vineyard, as well as undeveloped areas, consisting of predominantly Douglas-fir Forest, along with some small communities of coast live oak woodland and forest, as well as mixed chaparral and riparian areas along the existing streams. Surrounding land uses are predominantly open space, with some vineyard and rural residential development.

The project site lies about one (1) mile east of the ridge separating the Sulphur Canyon/Napa River watershed and the headwaters of the Santa Rosa Creek watershed to the west. The project site is located within the Sulphur Creek Watershed, Western Mountains Subarea. There are two (2) streams, Sulfur Creek and Iron Mine Creek, located on the parcel. Iron Mine Creek runs along the southern property line while Sulphur Creek enters the parcel from the northwest corner, cutting through the northern portion in a southeast direction before running along the approximate eastern property line. Iron Mine Creek merges with Sulphur Creek just south of the parcel; Sulphur Creek drains to the Napa River which empties into the San Pablo Bay, which is part of the San Francisco Bay Watershed. In addition, the site contains a number of unnamed ephemeral drainages. The project proposes setbacks of 35' from the ephemeral drainages and a varying range of setbacks (125 feet to 210 feet) from the top of banks of the Sulfur Creek and Iron Mine Creek, dependent on bank slopes, consistent with NCC 18.108.125 (**Exhibit A**, **A-1, and A-2**).

General topography of the parcel is moderately to steeply sloped with all aspects represented, and elevations ranging from 470 to 847 feet above mean sea level (msl), within the western hills of Napa Valley. The project site contains slopes within the development area that are steeply sloped (22%-30%) on a southeastern-facing slope, with elevations ranging from approximately 679 to 770 feet above msl. Napa County GIS Parcel Reports indicate that landslides are present on the project parcel. Per the Landslide Hazard Evaluation (LHE) (**Exhibit G)**, landslides deposits in the area were mapped by Wagner and Gutierrez (2010) as part of the ECPA approval for Blocks A and B. A recent regional landslide mapping effort by the California Geological Survey (the California Landslide Inventory, CGS 2019) has compiled several landslide mapping efforts across the state. One (1) of these prior landslide mapping projects, in the vicinity of the subject parcel, identified landslides on the Kenwood 7.5 Minute Quadrangle using aerial photos (USGS 1976) which show several large landslides near and on the project parcel (**Exhibit G**). Two (2) questionable large landslide deposits are mapped intersecting the project parcel (questionable is defined as "50% confident it is a landslide" by the USGS study). The larger of the two (2), Landslide Number 13405, covers approximately 170 acres and the second, Landslide Number 13407, is located within the first slide and covers about 23 acres; this is the same landslide evaluated in the previous LHE. The previous LHE described this landslide as a relatively stable dormant translational/rotational rockslide that did not pose a threat to Babu Vineyard Blocks A and B. Proposed vineyard Block C is located within the larger of the two (2) landslides (13405) near its southern boundary. Due to the proximity of proposed vineyard Block C to mapped landslides and the proximity of slopes greater than 65% downslope a site-specific assessment of slope stability was conducted. Several smaller landslides were identified within the vicinity of proposed Block C during site visits conducted in the autumn 2021. The report concluded that development of the proposed 0.42 acres vineyard is not expected to reactivate or otherwise destabilize any landslides mapped near the proposed vineyard Block C, including portions of the previously mapped large dormant rockslide (USGS 13405) underlying the project site. In addition, the project avoids areas with slopes greater than 35-40%, and all project runoff that would otherwise flow to the active and historically active landslides will be collected in cross field ditches, directed to rock lined ditches along the vineyard perimeter and the routed through a small flow attenuation basin to a level spreader on the eastern edge of the vineyard block. The depth of the surface of rupture of the previously mapped dormant rockslide was determined to likely be far below the rooting zone, so there is no direct stabilizing influence of vegetation as would be expected in relation to shallow landslide potential (**Exhibit G**).

The surrounding area consists of primarily undeveloped land, with some rural residential and vineyard development. The nearest wineries are Newton Vineyard (approximately 1.0 miles northeast of the project site), Spring Mountain Vineyards (approximately 1.1 miles north of the project site), Smith Family Winery (approximately 1.7 miles to the northwest of the project site), Cain Cellars (approximately 1.5 miles to the northwest) and Heath Canyon Winery (approximately 1.4 miles to the southeast of the project site). The nearest known schools Saint Helena Primary, Saint Helena Elementary, Saint Helena High, and Robert Louise Stevenson Intermediate are approximately 2.3-miles, 2.35-miles, 2.6-miles and 2.2 miles, respectively, to the east of the project site. The Iron Mine Stream protected open space easement is approximately 210 feet south, and 350 feet east of the project site.

The nearest active faults are the Rogers Creek, approximately ten (10) miles to the west, and the West Napa, approximately ten (10) miles to the southeast. In addition, there is one (1) inactive and unnamed fault located approximately six (6) miles west of the project site. Soils on the project site have been classified according to the Soil Survey of Napa County (USDA 2014, USDA 1978, and USDA 1972) as boomer-forward-felta complex 5 to 30% slopes and felton gravelly loam 30 to 50% slopes (**Exhibit G**).

The vegetation types in the project parcel generally consist of Douglas fir forest (40.58 acres), coast live oak woodland (4.72), mixed chaparral (2.05 acres), and coast live oak forest (7.8), developed/vineyard (2.24), and streams/ephemeral drainages (10.5 acres). The 0.42 acres of project area proposed for conversion to vineyard consist of the following community types: Douglas fir forest (0.42-acres). None of the identified mixed chaparral, coast live oak forest or woodland communities are situated within the proposed vineyard development area.

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

Responsible (R) and Trustee (T) Agencies	**Other Agencies Contacted**
California Department of Fish and Wildlife (CDFW) (T)	Middletown Rancheria
U.S. Army Corps of Engineers (USACE) (R)	Mishewal Wappo Tripe of Alexander Valley
Regional Water Quality Control Board (Regional Water Board) (R)	Yocha Dehe Wintun Nation

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

Notice of the proposed project was sent to Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, and Yocha Dehe Wintun Nation on January 19, 2022. As of July 15, 2022, there was only one response, from the Yocha Dehe, who did not raise concerns regarding the project. The consultation period has since closed.

Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

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

ENVIRONMENTAL IMPACTS AND BASIS OF CONCLUSIONS

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

Other sources of information used in the preparation of this Initial Study include site-specific studies conducted by the applicant and filed by the applicant in conjunction with ECP #P21-00312 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:

- O'Connor Environmental, Inc., Dated November 2021 (Resubmittal June 2022), Erosion Control Plan Sheets 1 and Sheets 2, Babu Vineyard Block C, 3300 White Sulphur Springs Road (**Exhibit A**).
- O'Connor Environmental, Inc., November 2021, Erosion Control Plan Narrative, Babu Vineyard Block C, APN: 027-010-033 (**Exhibit A-1**).
- Wildlife Research Associates (WRA), Inc. and Jane Valerius Environmental Consulting, May 2017, Habitat Assessment, Babu Vineyard: 3600 White Sulphur Springs Road, Saint Helena, California (**Exhibit B**).
- Wildlife Research Associates (WRA), Inc., June 2017, Addendum to Habitat Assessment – Babu Vineyard, Napa, California (**Exhibit B-1**)
- Jane Valerius Environmental Consulting, October 2021, Special Status Plant Survey Report, Babu Vineyard Block C, 3600 White Sulphur Springs Road (**Exhibit B-2**)
- O'Connor Environmental, Inc., March 2023, Mitigation Areas for GHG and Vegetation Canopy Cover (**Exhibit B-3**).
- Wildlife Research Associates (WRA), Inc. and Jane Valerius Environmental Consulting, June 2022, 3300, Block C Vegetation Canopy Cover Mitigation Conservation Area Analysis, White Sulphur Springs Road (**Exhibit B-4**)
- O'Connor Environmental, Inc., October 2021, Hydrologic Analysis – Babu Vineyard Block C, APN: 018-050-072 (**Exhibit C**).
- O'Connor Environmental, Inc., August 2021 (Resubmittal June 2022), Erosion Analysis, Babu Vineyard, 3300 White Sulphur Springs Road, APN: 027-010-033 (**Exhibit D**).
- O'Connor Environmental, Inc., May 2017 (Revised November 2021), Water Availability Analysis, Babu Vineyard, 3300 and 3600 White Sulphur Springs Road (APN: 027-010-033), Saint Helena, California (**Exhibit E**).
- Jacqueline Harrington and Thomas Origer, June 2016, A Cultural Resource Survey for Babu Vineyard Project, Saint Helena, California.
- Notice of Emergency Timber Operations (**Exhibit F**)
- O'Connor Environmental, Inc., October 2021, Geologic Assessment of Slope Stability, Proposed Babu Vineyard Block C, 3300 White Sulfur Springs Road (**Exhibit G**)
- Project Revision Statement (pending) (**Exhibit H**)
- Application Submittal Materials and Correspondence (**Exhibit I**)
- Site inspections conducted by Napa County Planning and Engineering Division staff conducted on December 9, 2021.
- Napa County Geographic Information System (GIS) sensitivity maps/layers.

On the basis of this initial evaluation:

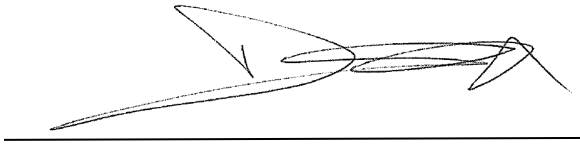
☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a *(SUBSEQUENT)* NEGATIVE DECLARATION will be prepared.

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

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



5/5/2023

Signature

Date

Dana Morrison, Planner III
Napa County
Planning, Building and Environmental Services Department

ENVIRONMENTAL CHECKLIST FORM

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

Discussion

a-b.

The proposed project would not have a substantial adverse impact on a scenic vista or on scenic resources. The project site is located approximately 2.5 miles west of Highway 29/Saint Helena Highway and 1.5 miles southwest of Spring Mountain Road, the closest County viewshed roads. The vineyard development site is not located on a prominent hillside, a major or minor ridgeline (Napa County GIS, Ridgelines Layer), or within a scenic corridor (Napa County GIS, Scenic Corridors Layer). There are two (2) minor ridgelines approximately 3,425 feet north and approximately 4,250 feet south of the project site. The majority of the parcels in the area are currently either dedicated open space, or undeveloped land or developed with agricultural and some rural residential uses. Given the existing minor ridgeline, the visibility of the project site from public roads is nonexistent as it is shielded from view by the existing minor ridgelines, topography, and vegetation. The highest elevation of the project site would be located approximately 757 feet above msl and would be more than 468 feet and 943 feet below the nearest minor ridgelines. The proposed project would not substantially damage scenic resources, as there are no significant rock outcroppings or historic buildings within the proposed development area. The proposed vineyard development has been designed in a way that would complement the natural contours of the project site and would avoid the riparian habitats bordering Sulphur Creek and Iron Mine Creek. The proposed project is consistent with the Napa County AWOS land use designation and with surrounding land uses; therefore, the proposed project is anticipated to result in less than significant impacts to the scenic vistas, scenic resources, and public views.

c.

The proposed project would not substantially degrade the existing visual character of the site or its surroundings. While the proposed project would install 0.42 gross acres of vineyard, the existing landscape was already impacted by the 2020 Glass Fire and 0.42 acres of trees were removed under an approved Timber Harvest Permit authorized in February of 2021. Species removed were a combination of standing dead trees consisting of predominantly Douglas-fir, the project would avoid a majority of the trees on the parcel (67.38 acres), as well as the existing ephemeral drainages and streams in addition to their required setbacks. In 2001, Napa County adopted a Viewshed Protection Ordinance for the purpose of preserving the scenic quality of Napa County. The ordinance provides development guidelines to 1) minimize man-made structures and grading on views of existing landscapes and open spaces as seen from designated public roads within the County; and 2) new hillside development with slope areas greater than 15% that may be within 25 vertical feet of a ridgeline. Spring Mountain Road and Highway 29/Saint Helena Highway, the closest designated scenic public roads from the project, are located approximately 1.5 miles northeast and 2.5 miles east of the proposed project, and the grading associated with the project would not be visible from these roads due to existing topography, vegetation, and development. No structures are proposed as part of this project; therefore, the proposed project would not be subject to the provisions of the Viewshed Protection Ordinance. Less than significant impacts are anticipated.

d.

As per the ECPA prepared by O'Connor Environmental Inc., the proposed agricultural operations on the parcel would not require nighttime activities consistent with the nighttime activity already occurring on the project parcel and in the surrounding area, which includes vineyard and agricultural uses. While some nighttime activities may occur during harvest., 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

"Forest land" is defined by the State as "land that can support 10-percent 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." (Public Resources Code Section 12220(g)) The Napa County General Plan anticipates and does not preclude conversion of some "forest land" to agricultural use, and the program-level EIR for the 2008 General Plan Update analyzed the impacts of up to 12,500 acres of vineyard development between 2005 and 2030, with the assumption that some of this development would occur on "forest land." In that analysis specifically, and in the County's view generally, the conversion of forest land to agricultural use would constitute a potentially significant impact only if there were resulting significant impacts to sensitive species, biodiversity, wildlife movement, sensitive biotic communities listed by the California Department of Fish and Wildlife, water quality, or other environmental resources addressed in this checklist.

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 (X). 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 0.42 gross acres (0.24 net vine acres) is consistent with project site's land use and zoning designations. The subject property does not have a Williamson Act contract associated with it. Therefore, the proposed project would not conflict with its land use designation or a Williamson Act contract resulting in no impact.

c-d.

As noted above, "Forest Land" is defined by in California Public Resource Code Section 12220(g) as "land that can support 10-percent 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." Based on the Napa County Geographic Information (GIS) vegetation layers and the Biological Resources Reconnaissance Survey Report (WRA Environmental Consultants, 2017) and the Special Status Plant Survey Report (Jane Valerius Environmental Consulting, October 2021), the project area is composed primarily of coniferous forest with some non-native grassland. While the coniferous forest potentially meets the State's definition of "forest land," this coniferous forest does not qualify as timberland under Public Resource Code Section 4526 because the project site does not contain any Commercial Species, as defined by California Forest Practice Rules (California Department of Forestry and Fire Protection, 2022). Furthermore, the subject parcel and project area are not zoned forest land as defined in Public Resource Code Section 12220(g), timberland as defined in Public Resource Code Section 4526, or a Timberland Production Zone (TPZ) as defined in Government Code Section 51104(g). Therefore, the conversion of approximately 0.42-acres of coniferous forest to vineyard would not have an impact on forestland or the conversion of forestland in Napa County. Refer to **Section IV (Biological Resources)** for additional discussion of on-site vegetation communities and tree removal.

e.

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

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
III.	**AIR QUALITY.** Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d)	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Discussion

See **Section VIII (Greenhouse Gas Emissions)** for the greenhouse gas (GHG) emissions disclosures and impact assessment.

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

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

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

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

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

a-b.

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

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

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

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

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

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

[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.

Mountain EIR analysis anticipated vineyard development in phases of either approximately 150 or 250 acres, which would generate approximately 50 to 60 15-mile one-way trips per day, and annual vineyard operations generating up to approximately 116 15-mile one-way trips occurring during harvest.

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

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

Table 3 – Emissions from Vineyard Development and Operation

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

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

Because the proposed project's 0.42 gross acre vineyard (approximately 0.24 net-planted acres) is smaller than any of the projects presented above, construction and operational emissions from the proposed project that could negatively affect air quality are expected to be less than 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 8-2 of the BAAQMD CEQA Guidelines that would further reduce potential air quality impacts associated with construction and ongoing operation of the proposed project. These BMPs would be incorporated into the proposed project.

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

i. 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.
ii. Water all exposed surfaces (e.g., parking areas, staging areas, soil piles, grading areas, and unpaved access roads) two times per day.
iii. Cover all haul trucks transporting soil, sand, or other loose material offsite.
iv. 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.
v. All vehicle speeds on unpaved roads shall be limited to 15 mph.
vi. Idling times shall be minimized either by shutting off equipment when not in use or reducing the maximum idling time to five minutes (as required by state regulations). Clear signage shall be provided for construction workers at all access points.
vii. 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.
viii. 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 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, childcare centers, hospitals, and convalescent homes are considered sensitive to poor air quality, because infants and children, the elderly, and people with health afflictions, especially respiratory ailments, are more susceptible to respiratory infections and other air quality related health problems than the general public. Residential areas are also considered to be sensitive to air pollution because residents, which include children and the elderly, tend to be at home for extended periods of time.

Land uses adjacent to the project site include rural residences (lost in fire, but planned for reconstruction), open space, and vineyards. The project site consists of approximately 67.8 acres of land with 2.05 acres of existing vineyard, an access road, and a well. The nearest known schools Saint Helena Primary, Saint Helena Elementary, Saint Helena High, and Robert Louise Stevenson Intermediate are approximately 2.3-miles, 2.35-miles, 2.6-miles and 2.2 miles, respectively, to the east of the project site (Napa County GIS, Schools Layer). The closest offsite residences are located approximately 560 feet and approximately 1,425 feet to the west of the project site; the closest of which was lost in the 2020 Glass Fire. The closest residential area (Saint Helena) is approximately 1.6 miles east of the project site.

During installation of the ECP, vineyard planting, and subsequent vineyard operations, airborne pollutants and odors would be created through the use of grading and farm equipment (e.g., tractors, trucks, and ATV's). These sources would be temporary and/or seasonal in nature and would occur more than two (2) miles from the closest school and over 1.6 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?	☐	☐	☐	☒

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

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

Discussion

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

- Wildlife Research Associates (WRA), Inc. and Jane Valerius Environmental Consulting, May 2017, Habitat Assessment, Babu Vineyard: 3600 White Sulphur Springs Road, Saint Helena, California (**Exhibit B**).
- Wildlife Research Associates (WRA), Inc., June 2017, Addendum to Habitat Assessment – Babu Vineyard, Napa, California (**Exhibit B-1**).
- Jane Valerius Environmental Consulting, October 2021, Special Status Plant Survey Report, Babu Vineyard Block C, 3600 White Sulphur Springs Road (**Exhibit B-2**).
- O'Connor Environmental, Inc., March 2023, Mitigation Areas for GHG and Vegetation Canopy Cover (**Exhibit B-3**).
- Wildlife Research Associates (WRA), Inc. and Jane Valerius Environmental Consulting, June 2022, 3300, Block C Vegetation Canopy Cover Mitigation Conservation Area Analysis, White Sulphur Springs Road (**Exhibit B-4**)

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

A list of special-status plant and animal species that have the potential to occur within the vicinity of the project site was compiled based on data in the CNDDB (CDFW, 2021a), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS, 2021a), and the USFWS List of Federal Endangered and Threatened Species (USFWS, 2021b) that may be affected by projects in the Saint Helena, Chiles Valley, Lake Berryessa, Rutherford, Yountville, Capell Valley, Sonoma, Napa and Mount George USGS 7.5 minute quadrangles.

WRA conducted assessments of biological resources on the project site on May 2017, as well as March, April, and June of 2021. As noted in report the study area did not cover the entire 67.8-acre parcel, the study area for the assessment was performed within the location of the proposed vineyard block and surrounding area. The surveys were completed to determine: the presence of sensitive biological communities; the potential for biological communities on site to support special-status plant or wildlife species; and the presence of sensitive natural resources protected by local, state, or federal laws and regulations. The field surveys were conducted by botanists familiar with the flora of Napa County and surrounding counties. The site assessment does not constitute a formal wetland delineation; however, the surveys looked for superficial indicators of wetlands such as hydrophytic vegetation (i.e., plant communities dominated by wetland species), evidence of inundation or flowing water, saturated soils and seepage, and topographic depressions/swales.

The vegetation types in the project parcel generally consist of Douglas fir forest (40.58 acres), coast live oak woodland (4.72), mixed chaparral (2.05 acres), and coast live oak forest (7.8), developed and landscaped area (2.25), and streams/ephemeral drainages (10.5 acres). The 0.42 acres of project area proposed for conversion to vineyard consist of the following community types: Douglas fir forest (0.42-acres). None of the identified mixed chaparral, coast live oak forest or woodland communities are situated within the proposed vineyard development area. The project area (vineyard and clearing limits) has been intentionally sited to avoid all aquatic resources and reduce potential impacts to forest/woodland habitat.

Based on the Biological Resources Reconnaissance Survey Report (WRA 2017, Addendum 2017, and Special Status Plant Survey – **Exhibits B, B-1 and B-2**), land cover types (or biological communities) occurring within the property can be found in **Table 4**.

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

Land Cover Type or Biological Community	Acreage within Parcel (Pre-Project)	Acreage Removed	Percent Removed	Percent Remaining	Post-Project Acreage
Developed Area	2.25	0.0	0.0%	100%	2.25
Coast live oak woodland	4.72	0.0	0.0%	100%	4.72
Mixed Chaparral	2.05	0.0	0.0%	100%	2.05
Coast live oak forest	7.8	0.0	0.0%	100%	7.8
Douglas fir forest	40.58	0.65	1.6%	98.4%	39.93

Aquatic Resources	10.4	0	0.0%	100%	10.4

Sources: WRA

a.

Special Status Plants

Of the 75 special-status plants documented from the greater vicinity, the project biologist found that nine (9) of these plant species have the potential to occur within the project area. Of the nine (9) plant species with the potential to occur within the project area none were observed during the field surveys. Nine special status plants have known occurrences within 3-miles of the study area (Appendix C). These are Napa false indigo (*Amorpha californica* var. *napensis*), Clara Hunt's milk-vetch (*Astragalus claranus*), narrow-anthered brodiaea (*Brodiaea leptandra*), Rincon Ridge ceanothus (*Ceanothus confusus*), Calistoga ceanothus (*Ceanothus divergens*), Sonoma ceanothus (*Ceanothus sonomensis*), Green's narrow-leaved daisy (*Erigeron greenei*), Colusia layia (*Layia septentrionalis*), and Calistoga popcornflower (*Plagiobothrys strictus*).

The proposed project would not result in the removal of special-status plant species or their habitat, and would be consistent with the following Napa County General Plan Conservation Element Goals and Policies and Zoning Ordinance: General Plan Goal CON-2[7] because it would assist in maintaining the existing level of biodiversity in the County, as well as contribute to minimization of potential cumulative impacts associated with the loss of special-status plant species and associated habitat due to agricultural conversion projects; Goal CON-3[8] as it would protect the continued presence of special-status plant species or habitat; Policy CON-13[9] in that impacts to special-status habitat would be avoided; Policy CON-17[10] because the removal and disturbance of a sensitive natural plant community that contains special-status plant species would be prevented; and, the purpose and intent of the Conservation Regulations (NCC Chapter 18.108) in that it would preserve natural habitat or existing vegetation, and would not adversely affects sensitive, rare, threatened or endangered plants.

Special-Status Wildlife

Of the 40 special-status wildlife species that have been documented in the greater vicinity, 18 of these species have a potential to occur in the project area but only seven (7) had the necessary habitat present on the project parcel. The following species were identified to have the potential to occur within the parcel and have suitable habitat: California red-legged frog (Rana draytonii), northern spotted owl (strix occidentalis caurina), coopers hawk (Accipiter cooperii), red-shouldered hawk (Buteo lineatus), pallid bat, townsend's big-eared bat, and western red bat.

California Red Legged Frog:

As noted in the report breeding habitat for this frog is primarily in ponds, but they will also breed in slow moving streams, or deep pools in intermittent streams. Inhabited ponds are typically permanent and contain emergent and shoreline vegetation. Sufficient pond depth and shoreline cover are both critical because they provide means of escape from predators for the frogs. The closest reported sighting of CRF is approximately 4,980 feet southwest of Block A, at the headwaters of the tributary to Sulphur Creek. No suitable breeding habitat for California red-legged frog occurs within the project area. However, dispersal habitat does occur within these two blocks. The project areas are located outside the Napa 1 Critical Habitat Unit located along HWY 128 and east of Hwy 121.

Northern Spotted Owl (*Strix occidentalis caurina*)

As noted in the report, this species is an uncommon permanent resident in heavily forested areas in the northwestern portion of California and in the Sierra Nevada, west of the Cascade Range. Typical habitats for this species include dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir habitats. Summer roosts in California have been noted on northwest or northeast inclinations, on slopes over 35%, and in stands with tall (65 foot) conifer canopy. No spotted owl site analysis was conducted as part of this habitat assessment. However, review of the CNDDB (2016) shows that spotted owls have been reported within 1,629 feet southeast of study area (NAP0006).

As the site was heavily impacted by fire there is little in the way of suitable habitat within the proposed development Block C; the project area was also subject to an Emergency Timber Harvest permit which removed much of the existing tree canopy which had been damaged

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

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

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

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

by the fires. Since the trees within the project area have already been harvested with an Emergency Timber Harvest Permit it not feasible to require mitigation monitoring of existing vegetation removal.

Nesting Raptors: red-shouldered hawk (*Buteo lineatus*), Cooper's hawk (*Accipiter cooperii*):

Raptors nest in a variety of substrates including, cavities, ledges and stick nests. For example, Cooper's hawks are small bird hunters, hunting on the edges of forests in broken forest and grassland habitats where passerines forage for seeds and insects. Nests occur in heavily forested areas near a water source. Research sites on nesting Cooper's hawks rarely show the nests more than a quarter of a mile away from water, whether it is a cattle tank, stream, or seep. Trees typically used by Cooper's hawks include coast live oaks, cottonwoods, and black oaks, as well as second growth conifer stands or deciduous riparian areas. In general, the breeding season for raptors occurs in late March through June, depending on the climate, with young fledging by early August. No nesting bird surveys were conducted as part of this habitat assessment based on the length of time before breaking ground (i.e., approximately 2 years). An adult Cooper's hawk was observed giving territorial calls when surveying. Since the trees within the project area have already been harvested with an Emergency Timber Harvest Permit it not feasible to require mitigation monitoring of existing vegetation removal, however, vineyard installation activities could result in potential indirect and cumulative impacts and as such a Mitigation Measure for details on avoidance and mitigation for nesting raptors is included later in this section.

Roosting bats – including pallid bat, Townsend's big-eared bat, and western red bat (*Lasiurus blossevillii)*

Bats in this region of California are not active year-round. During the maternity season, non-volant young of colonial bats remain in the roost until late summer (end of August), after which they may disperse from the natal roost or remain into or throughout the winter. Obligate tree-roosting bat species, and to some extent, colonial bats, may switch tree roosts frequently, particularly after young are volant, but are sometimes faithful for longer periods (weeks). Colonial bats differ from solitary, obligate tree-roosting bats in that they form colonies, whereas solitary bats roost singly, except when females are raising pups – generally in foliage. A solitary bat species in this area is the western red bat, which roosts in trees with large leaf foliage. During winter months, roosting bats typically enter torpor, rousing only occasionally to drink water or opportunistically feed on insects. The onset of torpor is dependent upon environmental conditions, primarily temperature and rainfall. To prevent direct mortality of either non-volant young or torpid bats during winter months, roosts must not be disturbed or destroyed until bats are seasonally active, and only after they have been provided a means of escape from the roost, either by humane bat eviction (i.e., from structures), or two-step removal (trees). Since the trees within the project area have already been harvested with an Emergency Timber Harvest Permit it not feasible to require mitigation monitoring of existing vegetation removal, however, vineyard installation activities could result in potential indirect and cumulative impacts and as such a Mitigation Measure for details on avoidance and mitigation for roosting bat is included later in this section.

Vineyard installation activities 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-1** 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-1**, the proposed project would result in less than significant impacts on special-status bird species.

> **Mitigation Measure BR-1:** The Permittee shall include in #P21-00312-ECP the following measures to minimize impacts associated with the loss and disturbance of nesting birds and raptors consistent with and pursuant Fish and Game Code Sections 3503 and 3503.5 and the California Endangered Species Act found in Fish and Game Code Section 2050 et seq.:

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.

Regarding special-status bat species the trees within the parcel may contain cavities, snags, or exfoliating bark suitable for roosting for all bat species. A targeted bat assessment was not performed by the biologist, however the project does area has already been cleared of existing trees with an approved Emergency Timber Harvest Permit as such there is not currently suitable habitat in the project area for roosting or nesting bats However, vineyard installation during the bat maternity season (generally April through August) could impact bat breeding, 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 survey prior to vineyard installation, as well as measures that prioritize avoidance 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 within the vicinity of the project area and immediate vicinity (see below), no more than six (6) months and no less than 14 days in advance of the vineyard installation. If the habitat assessment determines that bats are present, then the following shall apply:

a. For earth-disturbing activities occurring 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 bat prior to formation of colonies), under supervision of a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local bat resources with potential to occur at the project site) shall conduct preconstruction surveys for bats 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 bat breeding season, surveys shall be repeated to ensure bats have not established roosts during inactivity.
c. In the event that roosting bats 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 left the roosts and the roosts are otherwise determined inactive by a qualified biologist. Additionally, a qualified biologist shall monitor all roosts 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 roost-disturbance. If the qualified biologist observes bats displaying potential roost-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 roosting bats 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 roosting bats prior to pre-construction surveys, whether physical (i.e., removing, or disturbing roosts by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or horns), or chemical (i.e., spraying nesting birds or their habitats) shall be prohibited.

With implementation of **Mitigation Measures BR-1** through **BR-2,** the proposed project would result in less than significant impacts to special-status nesting birds (including northern spotted owl), and roosting bat species.

b-c.

There are no identified riparian habitats, sensitive natural communities, or vernal pools located within the Project Area (WRA). The subject parcel contains blue line-stream with an associated un-named tributary as well as a number of ephemeral drainages, generally located on the southern and eastern portions of the property. Sulphur Creek is an identified significant stream as in the un-named tributary which merges with Sulphur Creek southeast of the project parcel, while the ephemeral drainages drain into Sulphur Creek (see **Exhibits A** and **B**).

The proposed project has been designed to include stream setbacks from the blue-line and ephemeral streams/drainages in conformance with County Code Section 18.108.025 (General Provisions – streams and ephemerals) that range from 35 to 215 feet. The proposed project site does not contain any identified wetland and is therefore in conformance with NCC Section 18.108.026 (Wetlands). Therefore, the project has been designed to provide setbacks from streams and aquatic features (i.e., blue-line and definition streams, and ephemeral drainages) consistent with code requirements. Furthermore, project approval, if granted, would be subject to the following standard conditions to prevent the potential encroachment into stream setbacks required pursuant to Section 18.108.025 and Section 18.108.026, further protecting these aquatic resources during project implementation and operation resulting in a less than significant impact.

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

- The location of creek setbacks shall be clearly demarcated in the field with temporary construction fencing, which shall be placed at the outermost edge of required setbacks shown on the project plans. Prior to any earthmoving activities, temporary fencing shall be installed: the precise locations of said fences shall be inspected and approved by the Planning Division prior to any earthmoving and/or development activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated areas for the duration of erosion control plan installation and vineyard installation. The protection fencing shall remain in place for the duration of project implementation and until wildlife exclusion fencing is installed as shown on the plans.
- All construction and related traffic will remain on the inside (vineyard block side) of the protective fencing to ensure that the streams, buffer zones, and associated habitat and/or woodland remains undisturbed.
- 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 #P19-00496-ECPA shall be replaced on-site with fifteen-gallon trees at a ratio of 2:1 at locations approved by the planning director. Replacement trees shall be installed and documented that they are in good health prior to completion and finalization of the erosion control plan. Replacement trees shall be monitored and maintained as necessary for a minimum of 5 years to ensure they achieve at least 80% survival. If oak plantings are not achieving this success criteria during any monitoring year, Permittee shall be responsible for replacement oak plantings and monitoring them for an additional five years to ensure they achieve at least 80% survival.

d. The project areas are not within a designated wildlife corridor, or within a mapped "Essential Connectivity Area" (CDFW and Caltrans, 2010). Wildlife nursery sites were not identified in the project site; therefore, no impacts would occur in this regard.

The project parcel does contain existing deer fencing around the existing vineyard Blocks A and B, and the proposed project does propose to enclose the new vineyard Block C with deer fence, not connected to the existing fence, so each Block creates its own island. There are no designated migratory corridors within the project area, nor wildlife nursery sites; therefore, no impacts would result from project implementation.

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

Fencing – Condition of Approval: The owner/permittee shall revise Erosion Control Plan #P21-00312 prior to its approval to include wildlife exclusion fencing detail that shall 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 #P21-00312 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.

Table 5 – Vegetation Canopy Cover Retention on the Project Parcel

Assessor's Parcel Number	039-380-037
Vegetation Canopy Cover (pre-project)[1]	53.1 acres
Vegetation Canopy Cover Removed	0.42 acres
% Vegetation Canopy Cover Retained	98.8%
3:1 Veg. Canopy Preservation Mitigation Required (Area C)	1.26 acres
3:1 Veg Canopy Preservation Mitigation Proposed (Area C)	1.29 acres
GHG Preservation Mitigation (<30% slope) Required (Areas A and B)	0.42 acres
GHG Preservation Mitigation (<30% slope) Proposed (Areas A and B)	0.49 acres
Brush/Grass Canopy (pre-project)	2.05 acres
Brush/Grass Canopy Removed	0 acres
% Brush/Grass Canopy Retained	100%

One vegetation community occurs within the project study area: *Pseudotsuga menziesii* Forest Alliance or Douglas fir Forest. This vegetation type is dominated by Douglas fir and includes coast live oak, black oak, madrone, big-leaf maple (*Acer macrophyllum*) and California bay. Understory shrubs include scrub oak, poison oak, holly-leaved oak (*Quercus berberidifolia*), and toyon. A number of ferns were also noted in this area including goldback fern (*Pentagramma triangularis*), maidenhair fern (*Adiantum jordanii*), and wood fern (*Dryopteris arguta*). California fescue and narrow-flowered brome were common understory grass species in this area. Native forbs included Douglas iris, sanicle, and yellow fairy lantern (*Calochortus amabilis*), California helianthella (*Helianthella californca var. californica*), bush morning glory, blue dics (*Dicholostemma capitatum),* Fremont's star lily (*Toxicoscordion fremontii*), and woodland madia (*Anisocarpus madioides*). Oak woodlands in general and the California bay-madrone-live oak super alliance specifically are identified in the Napa County Biological Data Report (BDG) as sensitive biotic communities. None of these sensitive communities will be affected by the proposed vineyard plan (**Exhibit B, B-1 and B-2**).

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

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. More specifically, this Conservation Policy strives to: preserve oak trees and other significant vegetation that occurs near the heads of drainages to maintain diversity of vegetation types and wildlife habitat (CON-24a); achieve comply with the Oak Woodlands Preservation Act (PRC Section 21083.4) regarding oak woodland preservation to conserve the integrity and diversity of oak woodlands, and retain existing oak woodland (CON-24b); and Provide replacement of lost oak woodlands or preservation of like habitat (on an acreage basis) at a 2:1 ratio, and avoid removal of oak species that are limited in distribution (CON-24c), which includes valley oaks and woodland. There are no existing valley oaks or identified valley oak trees located on the subject parcel or within the development area, as such the project is compliant with Conservation Element Policy CON 24.

Pursuant to NCC Section 18.108.020(C) (General Provisions: Vegetation Retention Requirements) within the AW zoning district, a minimum of seventy percent vegetation canopy cover as configured on the parcel existing on June 16, 2016, shall be maintained as part of any use involving earth-disturbing activity. Specific to vegetation removal mitigation and preservation NCC Section 18.108.020(D) (Vegetation Removal Mitigation) requires 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 pursuant to NCC Section 18.108.020(E) (Preserved Vegetation Canopy Cover). This provision requires preserved vegetation canopy cover to be protected (or otherwise enforceable restricted) thorough a perpetual protective easement or deed restriction preserving and conserving the preserved vegetation canopy cover.

Furthermore, because the property was affected by the 2020 fire, the provisions of NCC Section 8.80.130(B) (Conservation regulations for fire-damaged properties) are applicable. This code provision states: *For purposes of calculating the Vegetation Retention Requirements*

contained in subsection (C) of County Code Section 18.108.020 (Vegetation Retention Requirements.) for any earthmoving activity as defined in Section 18.108.030 (Definitions.) occurring on fire damaged property in the Agricultural Watershed zoning district and outside of a sensitive domestic water supply drainage as defined in Section 18.108.030 (Definitions.), the vegetation canopy cover shall be as configured on the parcel existing on June 19, 2018.

The proposed project would remove approximately 0.42-acres of Douglas-fir Forest vegetation canopy cover, as it existed in 2018; this is 1.03% of the existing 40.58 acres of Douglas-fir Forest. Resulting in the retention of approximately 98.97% of the Douglas-fir vegetation/tree canopy cover that existed in 2018. Furthermore, the project proposes to preserve 11.88 acres of land on the parcel under three Preservation Easement Blocks as required by subsection 18.108.020.E; therefore, the project, as proposed, is consistent with NCC Section 18.108.020(E). This retention is compliant the minimum vegetation canopy cover requirements for projects located within the AW zoning district pursuant to NCC Section 18.108.020(C) and (D). Furthermore, **a Condition of Approval requiring the recordation of the proposed conservation easements will ensure compliance with** NCC Sections 18.108.020(E).

Permanent Preservation – Condition of Approval: The Owner/Permittee shall record a permanent preservation area to achieve consistency with the Napa County Conservation Regulations 18.108.020.E:

a. GHG and Vegetation Canopy Cover Mitigation Areas A, B and C as detailed in Exhibit B-3 shall be deed restricted or placed under a permanent preservation easement or other means of permanent protection. Land placed in protection shall be restricted from development and other uses that would degrade the quality of the habitat (including, but not limited to conversion to other land uses such as agriculture or urban development and excessive off-road vehicle use that increases erosion) and should be otherwise restricted by the existing goals and policies of Napa County. The Owner/Permittee shall record the deed restriction or conservation easement prior to construction or within 90 days of project approval, whichever comes first.

b. In accordance with County Code Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) trees that are inadvertently removed that are not within the boundary of the project and/or not identified for removal as part of #P21-00312-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 Archeological sensitive areas and Archeological sites layers:

- Jacqueline Harrington and Thomas Origer, June 2016, A Cultural Resource Survey for Babu Vineyard Project, Saint Helena, California.

Tom Origer and Associates conducted an archeological evaluation of the project site which included a check of information on file with the California Historical Resources Information System Northwest Information Center to determine presence or absence of previously recorded historic or prehistoric cultural resources; a check of relevant historic references to determine the potential for historic era archaeological deposits or structures; and a surface reconnaissance survey of the all accessible parts of the approximately 67.8 acre parcel to locate any visible signs of potentially significant historic or prehistoric cultural deposits.

a-c.

The cultural resource reconnaissance report (Tom Origer and Associates, 2016) noted that no indications of the presence of a potentially significant cultural resource were observed. The report identified that there are no soil changes, rock alignments, non-native stone, historic era artifacts, or other indications of an archaeological deposit or site. The soils of the site are not alluvial and are not likely to mask or cover buried cultural resources. It was noted that the entire project area has undergone significant modification during previous building projects. The report did indicate the presence of large amounts of obsidian within a specific soil body. However, it was determined that this specific soil body is not native to the site and was brought in result as fill material in the relatively recent past. The report concludes that this is not an indication of Native American use.

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

Cultural Resources – Conditions of Approval: Discovery of cultural, historical, or archaeological resources, or human remains during construction, grading, or other earth moving activities:

- In accordance with CEQA Subsection 15064.5(f), should any previously unknown historic or prehistoric resources, including but not limited to charcoal, obsidian or chert flakes, grinding bowls, shell fragments, bone, pockets of dark, friable solids, glass, metal, ceramics, wood or similar debris, be discovered during grading, trenching or other onsite excavation(s), earth work within 100-feet of these materials shall be stopped until a professional archaeologist certified by the Registry of Professional Archaeologists (RPA) and a Tribal Cultural Monitor from the applicable tribe 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 approximately six (6) months. Construction activities and corresponding fuel energy consumption would be temporary and localized. In addition, there are no unusual project characteristics that would cause the use of construction equipment or haul vehicles that would be less energy efficient compared with other similar agricultural construction sites within Napa County.

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

b.

The transportation sector is a major end-user of energy in California, accounting for approximately 39% of total statewide energy consumption in 2019 (U.S. Energy Information Administration 2020). In addition, energy is consumed in connection with construction and maintenance of transportation infrastructure, such as streets, highways, freeways, rail lines, and airport runways. California's 30 million vehicles consume more than 16 billion gallons of gasoline and more than 3 billion gallons of diesel each year, making California the second largest consumer of gasoline in the world (CEC 2016). In Napa County, farm equipment (not including irrigation pumps) accounted for approximately 60% of agricultural emissions in 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) There are two (2) potentially active faults that are located approximately 10 miles to the west (Rogers Creek) and approximately 10 miles to the southeast (West Napa) (Napa County GIS faults and earthquakes layers and **Exhibit G**). The Napa GIS database indicates the potential presence of landslides in the vicinity of the property; however, the project Engineer reviewed the California Geologic Service web-based landslide inventory and submitted a Geological Assessment (**Exhibit G**). The report identified six (6) debris slides of varying scales located along the southern and northeast edges of the proposed vineyard Block C; with one (1) feature observed to be active (designated as "Landslide OEI 1" in the report). This landslide was determined to be low hazard with respect to the proposed project as runoff from the vineyard will not flow to the landslide area. All runoff from the proposed vineyard block boundary and diverted to an attenuation basin at the eastern edge of block as shown in the ECPA plans. As noted in the report, development of the proposed vineyard is not expected to reactivate or otherwise destabilize any landslides mapped near the proposed vineyard Block C including portion of the previously mapped large dormant rockslide (**Exhibit G).** 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) As noted earlier, the Napa GIS database indicates the potential presence of landslides in the vicinity of the property, however, the Geological Assessment concluded that the development of the proposed vineyard is not expected to reactivate or otherwise destabilize any landslides mapped near the proposed vineyard Block C including portion of the previously mapped large dormant rockslide (**Exhibit G).** Therefore, no impact would occur.

b.

Soils on the project parcel have been classified according to the Soil Survey of Napa County (USDA 2014, USDA 1978, and USDA 1972) as boomer-forward-felta complex, 5 to 30% slopes and felton gravelly loam 30 to 50% slopes (**Exhibit G**).

Installation and implementation of the ECP would involve vegetation removal and earthmoving activities within the proposed vineyard areas. Pursuant to NCC Section 18.108.070(L) (Erosion Hazard Areas), earthmoving activities cannot be performed between October 15 and April 1. These activities would take place during the dry season when rainstorms are less likely, resulting in negligible erosion and sedimentation during project installation.

Soil loss calculations were prepared using the Universal Soil Loss Equation (USLE) in order to evaluate potential effects of erosion as a result of the proposed project. The USLE model evaluates the environmental conditions and physical forces that lead to the detachment

and potential movement of soil particles through surface erosion. The USLE model does not describe travel distances of soil particles once dislodged. Potential soil loss and sedimentation associated with the proposed agricultural development and operations would primarily be controlled through a no-till cover crop with vegetative cover densities of at least 85%. The cover crop provides the ability to trap eroded soils onsite, thereby reducing soil loss and sedimentation potential.

Based on USLE modeling calculations prepared by O'Connor Environmental Inc. (**Exhibit D**), the proposed project is anticipated to reduce soil loss, or surface erosion, within the project site as compared to existing conditions (**Table 6**). Under existing conditions, the annual soil loss is anticipated to average 2.61 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 2.01 tons per acre per year, or a reduction of approximately 23% as compared to existing conditions.

Table 6 – USLE Soil Loss Analysis

Vineyard Block C Segments	Pre-project Soil Loss (tons/year)	Post-project Soil Loss (tons/year)	Difference	Percent Change (approximate)
C1	0.63	0.55	-0.08	-12%
C2	0.97	0.70	-0.27	- 28%
C3	1.01	0.76	-0.25	-25%
Total	**2.61**	**2.01**	**-0.6**	**-23%**

Source: O'Connor Environmental Inc., Revised February 2022, **Exhibit D**

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, and other practices* as needed.

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

For these reasons the proposed project, with incorporation of specified erosion control measures, 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 liquefaction, and while there are instances of landslides on and near the project area the Geological Assessment concluded that the development of the proposed vineyard is not expected to reactivate or otherwise destabilize any landslides mapped near the proposed vineyard Block C including portions of the previously mapped large dormant rockslide (**Exhibit G).** Furthermore, 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.

The soils located near the project site are identified as boomer-forward-felta complex, 5 to 30% slopes and felton gravelly load, 30 to 50% slopes (**Exhibit G**). In addition, no structures are proposed as part of the project and expansive soils pose little risk to vineyards and related agricultural improvements. Therefore, there would be no impacts associated with expansive soils.

e.

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

f.

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

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

- 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).[11] 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

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

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

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

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

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

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

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

a-b.

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

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

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

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

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

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

"Operational Emissions" of the vineyard are quantified and include: i) any reduction in the amount of carbon sequestered by existing vegetation that is removed as part of the project (referred to as Operational Sequestration Emissions below); and ii) ongoing emissions from the energy used to maintain and farm the vineyard, including vehicles (such as haul trucks, pick-up trucks) and worker vehicle trips (referred to as Operational Equipment Emissions below).

Construction Emissions:

Equipment Emissions: As discussed in **Section III (Air Quality)**, three County Certified EIRs assessed and analyzed potential air quality and GHG emissions associated with vineyard development. Within those EIRs potential GHG emissions associated with construction equipment were calculated and disclosed. An estimation of potential construction equipment emissions per acre of vineyard development was derived using the most generous emissions results from these EIRs. The Circle-S Ranch EIR anticipated approximately 4,293 metric tons (MT) CO_{2e} of construction equipment emissions for a 459-acre vineyard development, resulting in approximately 9.4 MT CO_{2e} of construction equipment emissions per acre of vineyard development.[13] Using this emission factor it is anticipated that Construction Equipment Emissions associated with the proposed 0.42 gross acres of vineyard development would be approximately 3.95 MT CO_{2e} (0.42 acres multiplied by 9.4 MT CO_{2e}).

Project Site Emissions: Project site emissions are emissions resulting from vegetation removal and soil preparation associated with the conversion of approximately 0.42 acres of existing vegetation to vineyard. Because there is not yet a universally accepted scientific methodology or modeling method to calculate GHG emissions due to vegetation conversion and soil disturbance, the GHG Emissions Checklist and associated carbon stock factors developed as part of the 2018 Draft CAP efforts are utilized to determine potential project site carbon stocks and emissions. Utilizing the 2018 Draft CAP carbon stocks and the acreages of vegetation types within the development area, total carbon stocks for the development area are estimated to be approximately 39.94 MT C or approximately 146.58 MT CO_{2e} (**Table 7**).

Table 7 – Estimated Development Area Carbon Stocks/Storage

Vegetation Type/Carbon Storage	Development Area Acreage	Carbon Storage/Stock per Acre (MT C/acre)[1]	Total Carbon Storage (MT)	Total Carbon Storage in MT CO2e
Coniferous Forest	0.42	95.1	39.94	39.94
Total			**39.94**	**39.94**

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

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

[13] As discussed in Section III (Air Quality) variations or similarities in emissions modeling results between the three projects can be attributed to modeling platform and version utilized, variations in modeling assumptions and inputs (such as project acreage and vegetation types removed), and anticipated construction and equipment and duration of use.

There is currently no scientific agreement about the percentage of carbon that would be lost (or emitted) from soils through grading. Some analyses have suggested 20 to 25% while others have suggested 50%.[14] Using 50% as a more conservative estimate, the proposed project could result in one-time development area construction emissions from vegetation removal and soil preparation (i.e., grading and soil ripping) of approximately 138.10 MT CO_{2e} (**Table 8**).

Table 8 – Estimated Project Carbon Emissions Due to Vegetation Removal

Vegetation Type/Carbon Storage	Development Area Acreage	Carbon Loss/Emission per Acre (MT C/acre)[1]	Total Carbon Loss/Emission (MT)	Total Carbon Loss/Emission in MT CO2e
Coniferous Forest	0.42	89.6	37.63	37.63
Total			**37.63**	**37.63**

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 0.42-acre agricultural development would be approximately 0.28 MT CO_{2e} (0.42 multiplied by 0.67 MT CO_{2e}).

Operational Sequestration Emissions: Emissions associated with loss of sequestration due to land use change (i.e., the conversions of existing vegetation to vineyard) have been calculated based on the Annual Carbon Sequestration Factors within the 2012 Draft CAP, which indicates that oak woodlands sequester 0.425 CO_2 acre per year, while grasslands, shrublands and developed are essentially zero. Utilizing these factors, it is anticipated that the annual emissions associated with changes in carbon sequestration as a result of land use changes would be approximately 0.179 MT C per year or 0.655 MT CO_{2e} per year.[15]

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

Project Emissions:

Based on the above estimates, the proposed project could result in one-time construction emissions of up to 671.37 MT CO2e and annual ongoing emissions associated with vineyard operations (including loss of sequestration) estimated to be approximately 6.29 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	3.95	Vehicles and Equipment	0.28
Vegetation and Soil	37.63	Loss of Sequestration	0.655
Total	**671.37**	**Total**	**0.935**

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 671.37 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.

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

[15] 0.42 acres oak woodland times 0.425 MT C = 0.179 MT C, totaling 0.655 MT C

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

In the context of 12,500 acres of projected vineyard development, the proposed project would constitute less than approximately 0.0036% 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 85%, vegetated vineyard avenues, and the maintenance and establishment of grape vines. These measures, in conjunction with the Air Quality conditions of approval (detailed in **Section III [Air Quality]**), would further reduce potential GHG air quality impacts associated with construction and ongoing operation of the proposed project. For these reasons, the County does not consider one-time GHG emissions from the proposed vineyard development to be a significant impact on a project level basis or to be a "considerable" contribution to significant unavoidable cumulative impacts identified in the General Plan EIR.

As described above, total annual GHG emissions from ongoing operations are anticipated to be approximately 0.935 MT CO_{2e} per year. As stated above, the updated BAAQMD thresholds of significance for land use projects are qualitative, with no "bright-line" (quantitative) level below which to mitigate. Projects should be analyzed against either an adopted local Greenhouse Gas Reduction Strategy (i.e., Climate Action Plan (CAP)) or other threshold determined on a case-by-case basis by the Lead Agency. If a project is consistent with the State's long-term climate goals of being carbon neutral by 2045, then a project would have a less-than-significant impact as endorsed by the California Supreme Court in *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) (62 Cal. 4th 204). As stated in **Section IV, Biological Resources,** the proposed project would result in the conversion of approximately 0.42 acres of tree canopy and would retain approximately 98.8% of the tree canopy on the parcel. With implementation of the **Permanent Preservation Condition of Approval,** noted in **Section IV**, the project would result in the permanent preservation of approximately 11.88 acres of tree canopy of which 0.45 acres are located on developable land (i.e., outside of stream setbacks and on land with slopes less than 30%) with the remaining 11.43 acres occurring on slopes greater than 30%. A Biological Assessment of the proposed Block C Vegetation Canopy Mitigation Area was prepared by WRA (2022) detailing the benefits of the proposed Block C conservation area (**Exhibit B-4**). Additionally, 2,000 Douglas-fir saplings have been planted on site by the owner, these plantings will help the site to recover from the impact of the 2020 fire and help further mitigate GHG and canopy cover loss, as well as provide additional future habitat space for various species and help to improve water quality in the drainage area. Recordation of a permeant preservation of the 11.88 acres is required under the **Permanent Preservation Condition of Approval** and as such the project is consistent with NCC Section 18.108.020(E). Furthermore, the loss in carbon sequestration from the proposed removal of trees is more than offset after incorporation of the permanent preservation of Areas A and B (**Exhibit B-3**) of which 0.45 acres are similar habitat located on slopes less than 30%.

Further, as stated above, per the OPR Technical Advisory, the addition of 110 or fewer daily trips could be presumed to have a less than significant VMT impact. As detailed in **Section XVII (Transportation),** vineyard operations, including pruning and harvest is anticipated to require up to a maximum of approximately eight (8) two-way worker trips per day for work crews of approximately two (2) to eight (8) workers who are anticipated to carpool. Approximately two (2) additional two-way trips per day are anticipated for a grape haul truck during harvest which is expected to be one (1) day. Equipment for vineyard operations is anticipated to include a tractor/trailer, grape trucks, pickup trucks, ATVS, passenger vehicles and other small to medium service vehicles. Therefore, daily trips (including passenger vehicle trips and truck trips) generated by the proposed project would be well below the Governor's Office of Planning and Research's recommended screening criterion threshold for small projects generating fewer than 110 trips per day; therefore, less than significant impacts related to operational GHG emissions are anticipated.

Given that the proposed project would result in the permanent preservation of 11.88 acres (in addition to the already existing permanent preserve) and that the operational vehicle miles traveled fall well below the established threshold of 110 daily trips, the project is considered to be consistent with the State's long-term climate goals of being carbon neutral by 2045; therefore, a less than significant impact is anticipated.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐

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

Discussion

a-b.

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

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

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

Chemicals for vineyard operation would be stored at an off-site location and mixed onsite at the southwestern most portion of Block C, as indicated on the ECP Plans (**Exhibit A**). The nearest water source (i.e., two (2) streams and various ephemeral drainages)) on the project site is a minimum of 35-215 feet from the proposed vineyard development area, with the 15' wide vineyard avenue providing additional buffer from the nearby ephemerals, consistent with 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 vine rows for weed management. Project storage and staging areas would be located within proposed clearing limits per the ECP Plans and Narrative (**Exhibit A** and **Exhibit A-1**).

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 known schools are Saint Helena Primary, Saint Helena Elementary, Saint Helena High, and Robert Louise Stevenson Intermediate which are located approximately 2.3-miles, 2.35-miles, 2.6-miles and, 2.2 miles (respectively) to the east of the project site. There are no schools proposed within 0.25 mile of the project site. Therefore, no impact would occur.

d.

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

e.

The closest public airport to the project site is the Angwin Airport, located approximately 7.25 miles northeast of the project site. No portion of the proposed project is within an airport compatibility zone identified in the Airport Compatibility Plan (Napa County Airport Land Use Compatibility Plan, and Napa County GIS Airport layer). Therefore, no impact would occur.

f.

The proposed project is anticipated to introduce a small number of workers visiting the project site on a temporary basis for ECP 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 parcel is located in an area identified as having a high fire hazard severity zone; the Glass Fire impacted the parcel in 2020. The parcel is located within the State Responsibility Area (CALFIRE 2007 - https://egis.fire.ca.gov/FHSZ/). The risk of fire in vineyards is very low due to limited amount of fuel, combustibles, and ignition sources that are present. Vineyards are irrigated and cover crops are typically mowed in May and August, thereby reducing the fuel loads within the vineyard. The removal of vegetation and the management of vineyard results in an overall reduction of fuel loads within the project site as compared with existing conditions. Therefore, the proposed project would not increase the exposure of people or structures to wildland fires and impacts would be less than significant.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐

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

Discussion

On April 21, 2021, Governor Gavin Newsom declared a drought emergency in the state of California and as of July 8, 2021, 50 counties are under the drought state of emergency, including Napa County. The Governor directed the Department of Water Resources to increase resilience of water supplies during drought conditions. On June 8, 2021, the Napa County Board of Supervisors adopted a resolution declaring a Proclamation of Local Emergency due to drought conditions which are occurring in Napa County. On October 19, 2021, the Governor issued a proclamation extending the drought emergency statewide. The County requires all discretionary permit applications (such as use permits and ECPAs) to complete necessary water analyses in order to document that sufficient water supplies are available for the proposed project and to implement water saving measures to prepare for periods of limited water supply and to conserve limited groundwater resources

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

On March 8, 2022, and August 9, 2022, the Napa County Board of Supervisors adopted resolutions proclaiming a continued state of Local Emergency due to the 2021-2022 drought. On June 7, 2022, the Napa County Board of Supervisors provided direction regarding interim procedures to implement Executive Order N-7-22 for issuance of new, altered or replacement well permits and discretionary projects that would increase groundwater use during the declared drought emergency. The direction limits a parcel's groundwater allocation to 0.3-acre feet per acre per year, or no net increase in groundwater use if that threshold is exceeded already for parcels located in the GSA Subbasin. For parcels not located in the GSA Subbasin (i.e., generally located in the hillsides), a parcel-specific Water Availability Analysis would suffice to assess potential impacts on groundwater supplies. Because the parcel is located outside of the GSA Subbasin, a parcel-specific Water Availability Analysis was performed. To assess the potential impacts of groundwater pumping on hydrologically connected navigable waterways, the County's WAA guidance requires applicants to perform a Tier 3 analysis for new or replacement wells, or discretionary projects that would result in an increase in groundwater demand on existing wells that are located within 1,500 feet of designated "Significant Streams." [16]

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

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

[16] Refer to Figure 1: Significant Streams for Tier 3, located at www.countyofnapa.org/3074/Groundwater-Sustainability. The "Significant_Streams" and "Significant_Streams_1500ft_buffer" GIS layers are published as publicly-available open data through the County's ArcGIS Online Account.

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[17]"; 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[18].

The project parcel has an unnamed blue-line tributary to Sulphur Creek running along the southern property line in a west to east direction, with Sulphur Creek running north to south along the eastern property line where they converge at the southeastern corner of the parcel. The project parcel also contains several county definitional ephemeral drainages that are tributaries to Sulphur Creek and generally run in an east/west direction (**Figure 1** and **Exhibit A**). Sulfur Creek drains to the Napa River approximately 3.2 miles east of the project parcel. The proposed project has been designed to provide setbacks from the blue-line and ephemeral drainages pursuant to subject to the County Conservations Regulations (NCC Chapter 18.108) as they existed prior to amendment by the WQTPO[19], the proposed project provides setbacks of 35 feet from ephemeral streams and 125'-210' setbacks from Sulphur Creek and it's blue-line tributary.

a.

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

Agricultural Erosion Control Plan #P21-00312-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. While the proposed project has been designed with site-specific temporary and permanent erosion and runoff control measures and features to control soil loss and runoff as a result of the project, as discussed in **Section IX** (**Hazards and Hazardous Materials**), **a standard condition of approval** is being implemented to ensure that polluted runoff, as a result of hazardous material use associated with ongoing vineyard operations, does not negatively affect water quality.

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 because of the proposed project and ongoing operations.

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

[17] 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.

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

[19] This application was submitted on March 8, 2019, prior to the effective date of the recently enacted Water Quality and Tree Protection Ordinance (WQTPO - Ordinance #1438, effective on May 9, 2019), processing and review of this application will be subject to the County Conservations Regulations (NCC Chapter 18.108) as they existed prior to amendment by the WQTPO.

to avoid the potential risk of surface and groundwater contamination, whether or not such activities have occurred within these areas prior to this ECPA approval.

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

b.

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

A Water Availability Analysis (WAA) was prepared in order to determine the increase in water demand as a result of the proposed project (O'Connor Environmental Inc., Revised February 2023 - **Exhibit E**). Typically, the annual irrigation season ranges from late May to September; water use for frost protection is not proposed. The WAA estimates the onsite groundwater recharge, overall availability, and existing and proposed use, in order to assess potential impacts on groundwater. Water demands for the existing uses have historically been provided by groundwater via the existing onsite well. The nearest off-site well is located 295 feet to the north of the project well, however the WAA concluded that two (2) wells use water from different aquifer materials, have significantly different static water levels, have substantial horizontal separation (about 300 feet), and given that the pump test resulted in a drawdown of only 17 feet with a rapid recovery to 9 feet within 30 minutes, it is evident that the potential for well interference associated with the proposed use of the project well is minimal.

Additionally, a review of the applicability of a Tier III WAA was discussed in the report as the proposed project well is within 1500' of a County identified significant stream (Sulphur Creek and one of its unnamed tributaries). However, according to County of Napa WAA Guidance Document, due to the fact that the project well is more than 500 ft from the stream of concern, said Well could be utilized without further analysis regarding County Tier 3 WAA criteria provided it is operated at "Very low-capacity pumping rates, (i.e. less than 10 gallons per minute)". The Tier 3 criteria also indicate that the minimum depth of the well surface seal should be 50 ft and the depth of uppermost well perforations should be 100 ft. The surface seal for the project well is 25 deep and the uppermost perforations are at a depth of 173 ft. The deviation from the guidelines for depth of well seal (25 ft versus 50 ft) has no significance with respect to groundwater-surface water interaction and potential streamflow depletion because the well is situated on a hillside approximately 300 ft above Sulphur Creek.

The effective pumping rate for the project can be estimated based on estimated annual project groundwater use. Total annual project groundwater use is comprised of 0.87 acre-feet (AF) for irrigation and 0.50 AF for residential use. Assuming a 150-day irrigation season, average daily irrigation demand is 0.0058 AF. Assuming residential use is spread evenly through the year, average daily use is 0.00137 AF. The average daily demand during the irrigation season would be 0.00717 AF, equivalent to about 2340 gallons per day. The pumping rate required to supply this quantity of water in a 24-hour period is about 1.6 gallons per minute (gpm). This quantity of water could be pumped over a 4-hour period at a rate of 9.75 gpm. These calculations demonstrate that the project well would operate as a "very low capacity well"; consequently, the well complies with Tier 3 guidelines.

Water demands for the existing onsite development (potential future residence and associated accessory structures/landscaping, existing vineyard) have historically been and will continue to be met by pumping groundwater from the existing onsite well. The existing demand from the well, which includes water drawn for the existing on-site vineyard, is 1.37 acre-feet per year (AF/yr) for the parcel and 5.85 AF/yr for the overall aquifer recharge area; the overall recharge area for the parcel includes a house and accessory dwelling unit (ADU) on the neighboring parcel which were lost in the fire, the potential for rebuild is unknow but the residence and ADU were included in the water balance calculations both pre- and post-project. The recharge for the project parcel is 4.3 AF/yr; this is 32% of the recharge for the parcel. For the larger project recharge area the recharge is 11.3 AF/yr; this is 52% of the recharge for the recharge area. Existing water demand for the project parcel is 5.23 AF/yr, with proposed vineyard irrigation groundwater demand is anticipated to be 5.85 AF/yr, an increase of 0.62 AF/yr as a result of the additional 0.24 acres of vineyard being added to the recharge area. For clarity the water use pre- and post-project for larger recharge area were utilized in the table and discussion below.

Table 10 – Pre- and Post-Project Property Water Use Project Recharge Area

Property Water Use	Pre-Project (acre-feet/year)	Post-Project (acre-feet/year)
Residence and ADU	0.75 + 0.35 = 1.10	1.10
Future Residence	0.0	0.50
Vineyard Irrigation	4.13	4.25
Total	5.23	5.85

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 WAA utilized the 10-year PRISM Group data from Oregon State University to calculated

recharge. The percentage of rain that has the potential to infiltrate varies depending on factors such as rates of evaporation and transpiration, soil type and geology that exists at the site, and average annual rainfall. Based on available climatological data, site-specific information, and other available data and analysis relevant to potential recharge, the Tier I WAA, which uses a conservative average annual rainfall of 34.2 inches per year over the approximate 21.9 acres of recharge area estimates the average annual groundwater recharge of 11.3 AF/yr (4.3 AF/yr for the portion of the project within the recharge area) (**Exhibit E**). The estimated annual recharge volume, for the portion of the project within the recharge area, of 4.3 AF/year is greater than the total estimated average annual groundwater demand for the proposed project of 1.37 AF/yr. Similarly for the larger recharge area, the estimated annual recharge volume of 11.3 AF/yr is greater than the total estimate average groundwater demand for the post-project recharge area demand of 5.85 AF/yr.

The total proposed water demand resulting from the proposed project would be 5.85 AF/yr, representing a 0.62 AF/yr increase in total groundwater use for the recharge areas compared to existing conditions. This is below the 11.3 AF/yr of estimated annual recharge.

Considering: i) anticipated annual water use of the project parcel for existing and proposed use of approximately 5.85 AF/year is below the parcel's existing groundwater rate of recharge of 11.3 AF/yr; and ii) incorporation of the standard water use condition below to monitor water use as a result of vineyard establishment and ongoing vineyard operations and maintenance (if approved), the proposed project is anticipated to result in less than significant impacts to groundwater supplies, groundwater recharge, and local groundwater aquifer levels.

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

c.

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

Erosion control measures and plan features that are not anticipated to affect drainage patterns but would assist in minimizing the potential for increased erosion and water runoff include a no-till cover crop with vegetative cover density of at least 85% for the vineyard block 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 and D** for details related to the following discussion.

Proposed erosion control and project features that have the potential to alter natural drainage patterns include straw wattles and mulching. 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 Project Engineer (O'Connor Environmental Inc., October 2021 - **Exhibit C**). The development area is contained within two watershed basins. Watershed 1 encompasses approximately 0.05 acres and Watershed 2 encompasses 0.42 acres. Both watersheds are bounded on the downhill edge by the proposed vineyard/project boundary. The Hydrologic Analysis utilized the Natural Resource Conservation Service (NRCS) Technical Release 20 (TR-20) method to conclude that there would be a reduction in peak flow for the entire project area as shown in **Table 11**. The Hydrologic Analysis provided a comparison of the composite hydrographs for the entire project area under three scenarios (existing pre-Project conditions, proposed Project conditions without new attenuation, and proposed Project conditions with attenuation). The Hydrologic Analysis also concluded that the runoff time of concentration, which is the time it takes for runoff to flow from the upper most point in each watershed to the watershed's outlet, is anticipated to be reduced as result of the project with the inclusion of the proposed attenuation basins. As detailed in the ECPA plans two attenuation basins are included as part of the project and such runoff rates will be reduced as result of the proposed vineyard development.

Table 11 – Hydrologic Modeling Calculations (TR-20) Results: Runoff Rates

	Peak Discharge Flow (cfs) by 24-hour Storm Event Frequency Return Interval (cubic feet/second)			
	2-year	**10-year**	**50-year**	**100-year**
Project Area				
Pre-project conditions	0.8	0.6	0.4	0.2
Post-project conditions without attenuation	0.9 (18% increase)	0.8 (20% increase)	0.5 (27% increase)	0.2 (43% increase)
Post-project conditions with attenuation	0.6	0.5	0.1	0.05
Change (cfs)	0.2	0.1	0.3	1.95
Change (%)	-22%	-24%	-61%	-70%

Source: O'Connor Environmental Inc., October 2021, Hydrologic Analysis, Babu Vineyard Track I ECP (**Exhibit C)**

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

The project site is not located in an area of a planned stormwater drainage system, nor is it directly served by a stormwater drainage system. As discussed above, no increase in runoff volume or decrease in time of concentration is anticipated under post-project conditions. 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 (3) years to ensure that the implemented erosion control plan is functioning properly[20].

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 effect 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

[20] Compliance with Section 18.108.135 is achieved by including their provisions as conditions of approval for a project, if granted.

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 ECP includes Best Management Practices (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 ECP 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, St. Helena, is approximately 1.6 miles east of the project site. Therefore, the proposed vineyard and subsequent vineyard operations would not physically divide an established community and no impact would occur.

b.

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

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

- The proposed project is consistent with Policies CON-13 and CON-16, which require discretionary projects consider and avoid impacts to fisheries, wildlife habitat, and special-status species through evaluation of biological resources. Biological Resources Reconnaissance Survey was prepared for the proposed project. The proposed project as proposed would avoid potential direct, indirect, and cumulative impacts to special-status plant species and associated habitat occurring on the project site. With

implementation of **Mitigation Measures BR-1 and BR-2**, potential impacts to special-status birds and bats would be avoided. Furthermore, implementation of this measure would not affect the feasibility of the proposed project in that, impacts to special-status species and their habitat can be avoided while allowing for agriculture to be developed and operated on the project site.

- The project site does not contain existing wetlands and would retain mature trees located upslope from the blue-line streams located south and east of the project site. The project also proposes to permanently preserve 11.88 acres of land. As a result, the proposed project is consistent with Goals CON-2 and CON-3, which require the continued enhancement of existing levels of biodiversity and protection of special-status species and habitat, and the County Conservation Regulations through preservation of natural habitats and existing vegetation.
- As proposed, the project is consistent with CON-16, which requires discretionary projects prepare an evaluation of biological resources. Biological resource assessments were prepared for the proposed project (**Exhibit B, B-1, B-2 and B-3**).
- The project as proposed is consistent with Policy CON-18, which encourages the reduction of impacts to habitat conservation and connectivity. The project as proposed does include the installation of additional deer fencing to enclose the new proposed vineyard blocks. However, the proposed fencing is approximately 125+ feet away from Sulphur Creek and its tributary and is a minimum of 35 feet from existing ephemeral drainages, thereby allowing for wildlife movement through the riparian corridors.
- 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 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 one to the southwest 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	Less Than Significant Impact	No Impact

			Mitigation Incorporated		
XIII. NOISE. Would the project:					
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b)	Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c)	For project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion

a-b.

The project site is located in a rural setting where surrounding parcels are generally undeveloped, planted with vineyards and contain wineries. The closest offsite residences are located approximately 560 feet and approximately 1,425 feet to the west of the project site; the closest of which was lost in the 2020 Glass Fire. Additionally, adjacent proprieties and properties in the immediate area contain vineyard.

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

Table 12 – Construction Equipment Noise Emission Levels

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

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

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

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

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

[1] Based on a source noise level of 90 dBA

Source: Napa County Baseline Date Report, Noise Section Table 6-13, Version 1, November 2005

Based on distances to existing residences, noise associated with project construction would be approximately 60-55 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 14** characterizes the typical reduction of farming activity noise levels as the distance increases from the source using a noise source level of 84 dBA.

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

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

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

Based on distances to existing residences, it is anticipated that noise due to operation and maintenance agricultural activities would be 55 to 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 two (2) miles of a public, public-use, or private airport (Napa County GIS: Napa Airport Compatibility Zones and USGS Quad layers). Therefore, no impact would occur.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. POPULATION AND HOUSING. Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion

a.

The proposed project involves earthmoving activities and the installation and maintenance of erosion control measures in connection with the development and cultivation of vineyard. It does not involve the construction of new homes, businesses, roads, or infrastructure (e.g., water, sewer or utility lines) that would directly or indirectly induce substantial unplanned population growth. Construction and installation activities of the proposed project would generate a minimal number of employees to the project site on a temporary basis, and ongoing

vineyard operation and maintenance would generate a minimal number of employees to the project site on an ongoing basis. It is anticipated that these employees would come from the existing labor pool in the region. Therefore, the proposed project would not induce unplanned population growth in the proposed project vicinity or greater region, either directly or indirectly. No impact would occur.

b.

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
i. Fire protection?	☐	☐	☐	☒
ii. Police protection?	☐	☐	☐	☒
iii. Schools?	☐	☐	☐	☒
iv. Parks?	☐	☐	☐	☒
v. Other public facilities?	☐	☐	☐	☒

Discussion

a.

The proposed project does not include the construction of residential or commercial structures, as discussed in **Section XIV (Population and Housing)**, resulting in no substantial population growth in the area. It is anticipated that these temporary employees would come from the existing labor pool in the local region and would not result in an increase in population over existing conditions. As a result, there would be no need to construct any new government facilities. Therefore, there would be no change in the demand for the listed services and amenities. No impact would occur.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. RECREATION. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion

a-b.

The proposed project does not include any recreational facilities. As discussed in **Sections XIV (Population and Housing)** and **XV (Public Services)**, the proposed project would not result in substantial population growth, resulting in no increase in the use of recreational facilities and requiring no construction or expansion of recreational facilities. Therefore, no impact would occur.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. TRANSPORTATION. Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Would the project conflict or be inconsistent with CEQA guidelines § 15064.3 subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☐	☒

Discussion

a-b.

Currently, the project site is developed with a driveway, well, catchment pond, and 2.05 acres of existing vineyard approved under a Timber Harvest Permit in 2017 (ECP #P17-00196); there is also an existing 20-acre permanent preservation area on the subject parcel.

Project construction activities are anticipated to require up to approximately eight (8) two-way worker trips per day for work crews of two (2) to eight (8) people split between two (2) - four (4) vehicles, which includes trips anticipated for project mobilization and demobilization for equipment and materials delivery and pick up. Construction equipment is anticipated to include a D-7 size bulldozer, an excavator, tractor/trailers, backhoes, trencher, and pickup trucks, passenger vehicles, and other small to medium service vehicles. Vineyard operations, including pruning and harvest is anticipated to require up to a maximum of approximately eight (8) two-way worker trips per day for work crews of approximately two (2) to eight (8) workers who are anticipated to carpool. Approximately two (2) additional two-way trips per day are anticipated for a grape haul truck during harvest which is expected to be one (1) day. Equipment for vineyard operations is anticipated to include a tractor/trailer, grape trucks, pickup trucks, ATVS, passenger vehicles and other small to medium service vehicles. Vineyard operations would result in a maximum of 20 trips per day, which is less than the 110 trips noted by the BAAQMD CEQA transportation greenhouse gas (GHG) threshold; whereby projects with fewer than 110 trips per days are considered to have a less than significant impact. 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 an existing gated private road/driveway which is accessed off of White Sulphur Springs Road. Trucks and other equipment would use County roads or State highways for very short periods during construction and subsequent vineyard operation.

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

c.

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

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

d.

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

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

Discussion

Notice of the proposed project was sent to Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, and Yocha Dehe Wintun Nation on December 20, 2021. On February 4, 2022, the County received a response letter from Yocha Dehe Wintun Nation, indicating that the project site is not within the aboriginal territories of the Yocha Dehe Wintun Nation, and declined to comment. The Mishewal Wappo Tribe of Alexander Valley and Middletown Rancheria did not request consultation within the 30-day notification period, and because no response to the consultation invitation was received, the consultation time period elapsed.

a-b.

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

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

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

Discussion

a.

The proposed project would generate a minimal number of employees to the property on a temporary basis, and ongoing vineyard operation and maintenance would generate a minimal number of employees to the property on an ongoing basis. It is anticipated that these employees would come from the existing labor pool in the region and would not generate an increase in the population relative to the existing conditions. Therefore, the proposed project would not create a need to construct new or modified utilities and service systems. Further, implementation of the proposed project would not result in the construction or expansion of a water or wastewater treatment facility; the proposed project would not generate wastewater and 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 straw wattles and a permanent no-till vineyard cover crop, which have been designed to meet project-related storm water drainage needs. The effect of the proposed storm water drainage system is described in **Sections IV (Biological Resources), VII (Geology and Soils),** and **X (Hydrology and Water Quality)**. As discussed in the referenced sections, the environmental impacts of construction of these features, with incorporation of standard conditions identified in **Sections III (Air Quality), IV (Biological Resources), V (Cultural Resources)** and **IX (Hazards and Hazardous Materials)**, would result in a less than significant impact.

b.

The approximately 0.42 gross acres of vineyard (approximately 0.24 net acres) would be irrigated by groundwater supplied by the existing onsite well. The WAA conducted by O'Connor Environmental, Inc. (**Exhibit E**) concluded that after full development, water use for the project recharge area is estimated to be approximately 5.85 AF/yr, an increase of 0.62 AF/yr from the existing water demand of 5.23 AF/yr. The total water demand for the recharge area of 5.85 AF/yr is below the 11.3 AF/yr of estimate annual recharge. Therefore, the proposed project, in conjunction with the existing uses, is anticipated to have a less than significant impact on water supplies. Also see **Section X (Hydrology and Water Quality)** for additional disclosures and analysis.

c.

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

d-e.

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

		Potentially Significant Impact	Less Than Significant Impact With 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 High and Very High Hazard Severity Zone (CALFIRE, 2007, Napa County GIS Fire Hazard Layer). General topography of the parcel is gently to moderately sloped with all aspects represented, and elevations ranging from elevations ranging from 470 to 847 feet above mean sea level (msl) within the western hills of Napa Valley.

a.

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

b-c.

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

d.

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

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

c)	Does the project have environmental effects which will cause substantial effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion

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

a.

As discussed in this Initial Study, implementation of #P21-00312, 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.

Existing deer fence surrounds the two existing vineyard blocks (Block A and Block B); new fencing is proposed to surround the new proposed vineyard block. The new deer fencing is located more than 125 feet from Iron Mine and Sulphur Creek, as such will not impact wildlife movement along the existing riparian corridor. The potential impacts associated with the installation of the new vineyard has the potential for indirect impacts to nesting bird and roosting bats species, which would be reduced through implantation of **Mitigation Measures BR-1 and BR-2.** With implementation of the cultural resources conditions of approval to protect cultural resources that may be discovered accidently, significant impacts to cultural resources are not expected (**Section V [Cultural Resources]**). Therefore, the proposed project as designed with the incorporation of mitigation measures, the proposed vineyard development project would have a less than significant potential to degrade the quality of the environment.

b.

The project site is located within the Sulphur Creek – Main Fork drainage.

The Sulphur Creek – Main Fork drainage contains approximately 3,434.7 acres. In 1993, vineyard acreage within this drainage was approximately 216 acres, or 6.3% of the drainage. Since 1993, approximately 15.7 acres of additional vineyard (or 0.46% of the drainage) have been developed (or approved) to vineyard, resulting in approximately 6.7% of the drainage (approximately 231.7 acres) containing vineyard. It is estimated, based on evaluation of the County's GIS layer identifying Potentially Productive Soils (PPS) within the Sulphur Creek – Main Fork Drainage, that there are approximately 428.4 acres (12.5% of the drainage) having the potential to be developed to vineyard. This, in conjunction with existing and approved vineyard development (approximately 231.7-acres), this results in a total potential build out of approximately 660.1 acres or approximately 19.2% of the drainage. The PPS layer includes lands with characteristics that have been found to be suitable for potential future vineyard development; however this total does not take into consideration other site-specific limitations such as water courses requiring setbacks, wetlands, other water features, rare or special-status plants and animal species, or cultural resources, nor does the layer take into account other factors influencing vineyard development, such as sun exposure, soil type, water availability, or economic factors.

While it is not possible to quantify precisely the acreage and location of additional vineyard development that may be proposed by property owners in this drainage in the future, it is possible to make a conservative estimate based on previous trends. To estimate the amount of reasonably foreseeable vineyard that may be developed over time, the acreage of vineyard development including approved vineyard projects in the cumulative environment (i.e., Sulphur Creek – Main Fork Drainage) over the last 29 years (1993-2022) were used to project an estimation of vineyard development for the next three (3) to five (5) years. Over the past 29 years within the Sulphur Creek – Main Fork drainage, approximately 8.0-acres of agriculture were developed per year (231.7 divided by 29).

Combined with Napa County policies and other site selection factors that limit the amount of land that can be converted to vineyard, the development of approximately 24 to 40-acres over the next three (3) to five (5) years within the Sulphur Creek – Main Fork drainages is considered a reasonable estimate. NCC Chapter 18.108 includes policies that require setbacks of 35 to 150 feet from watercourses (depending on slopes), setbacks of 50 feet from wetlands, and retention of 70% of a property's cover canopy, and General Plan Conservation Policy CON 24c that requires the retention of oak woodland at a 2:1 ratio, all of which limit the amount of potential vineyard acreage that could be converted within the watershed. It has been the County's experience with ECP projects that there are generally site-specific issues, such as oak woodland preservation, wetlands, other water features, special-status plant and animal species, or cultural resources that further reduce areas that can be developed to other land uses. Additionally, the vineyard acreage projections for the next three to five years do not consider environmental factors that influence vineyard site selection, such as sun exposure, soil type, water availability, slopes greater than 30%, or economic factors such as land availability, cost of development or investment returns.

Air Quality and GHG - Sections III and VIII:

The proposed project (#P21-00312) includes the removal of vegetation (consisting only of Douglas-fir forest) and installation of vineyard and erosion control measures concurrent with other projects in the air basin that would generate emissions of criteria pollutants, including

suspended particulate matter (PM) and equipment exhaust emissions. For construction-related dust impacts the Regional Water Board recommends that significance be based on the consideration of the control measures to be implemented (Regional Water Board, May 2017). As discussed in **Section III** (**Air Quality**) and shown in **Table 3** (Emissions from Vineyard Development and Operation) criteria pollutant emissions associated with development and operations are anticipated to be well below identified thresholds, and therefore are not expected to result in project or cumulatively significant impacts. Additionally, the proposed project would be subject to standard air quality conditions of approval (should the proposed project be approved) that requires implementation of Air Quality BMPs to further reduce potential less than significant air quality effects of the proposed project and ongoing operation. Conversion of existing vegetation and disturbance of soil would result in releases of carbon dioxide, one of the gases that contribute to climate change (**Tables 5** and **6**). As discussed in **Section VIII (Greenhouse Gas Emissions)**, the proposed project is not anticipated to result in substantial or significant GHG emissions and includes the installation of grapevines and a permanent no-till cover crop, which may off-set (in whole or in part) potential impacts related to reductions in carbon sequestration. Potential contributions to air quality impacts associated with the proposed project, including GHG emissions and loss of sequestration, would be considered less than cumulatively significant through project design (i.e., scope and scale) and implementation of standard conditions of approval.

Biological Resources - Section IV:

A total of 46 fire impacted trees, designated as Douglas-Fir Forest have already been removed from the parcel under an Emergency Timber Harvest Permit. The identified mixed chaparral, coast live oak woodland and coast live oak forest on the parcel will not be impacted by the proposed 0.42 acre vineyard block development. Douglas-Fir Forest, and coast live oak woodlands/forest are not considered sensitive by CDFW or included as sensitive in the NCBDR; however, the 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, soil protection, and species diversity. Policy CON-24c specifically calls for the preservation of oak woodland (on an acreage basis) at a 2:1 ratio. Code Section 18.108.020(C) requires that 70 percent of canopy cover be retained based on the on-site canopy present on June 16, 2016. Code Section 18.108.020(D) requires that the removal of tree canopy on an acreage basis be mitigated at a 3:1 ratio (which is equivalent to 75 percent retention) where the areas to be preserved must generally occur on slopes less than 50 percent and outside of stream and wetland setbacks. Since the parcel burned in the 2020 Fire, it is subject to Code Section 8.80.130(A) which requires that the vegetation canopy cover be based on that existing on the parcel on June 19, 2018. Living canopy cover mapped based on living trees and a 2018 aerial photograph results in 12.52 acres of oak canopy cover throughout the parcel, none of which (0.0 acres) is situated within the proposed vineyard block, resulting in 100% retention of oak canopy cover. Additionally the project proposes to maintain 98.8% of the existing vegetation canopy cover on the parcel. A Condition of Approval has been included to require the recordation of a permanent preservation easement of 11.88 acres (GHG Mitigation Areas A and B, and Vegetation Canopy Cover Mitigation Area C; Exhibit B-3) to achieve consistency with NCC Section 18.108.020.E. Therefore, the proposed vineyard ECP, if approved, will comply with the County Code vegetation canopy cover retention requirements.

A project specific Biological Resources Reconnaissance Survey was performed for the proposed project to evaluate potential habitat loss and disturbance to plant and wildlife species as a result of the proposed project. The reconnaissance survey included a records search to identify the presence or potential presence of special-status species within the project area. The records search included the USFWS, CNDDB, and CNPS databases. As discussed in **Section IV** (**Biological Resources**), no special-status plants were identified on the project site. Three special-status bird species were identified as having the potential to occur on the project site. Potential impacts associated with the removal of potential nesting habitat for birds and roosting bats would be reduced through implementation of **Mitigation Measures BR-1** and **Mitigation Measure BR-2.** Therefore, the proposed project would not contribute to a cumulatively significant impact to special-status plants and animals or habitats.

Cultural and Tribal Resources – Sections V and XVIII:

No potential cultural resources were identified in the project site (i.e., a structural debris and depression). With the incorporation of the cultural resources condition of approval to ensure protection of cultural and tribal cultural resources that may be discovered accidently, significant impacts to cultural and tribal cultural resources are not expected (see **Section V [Cultural Resources]** and **Section XVII [Tribal Cultural Resources]**). Therefore, with the incorporation of the identified conditions of approval, the proposed vineyard development project would have a less than significant project-specific and cumulative impact on cultural and tribal cultural resources.

Geology and Soils - Section VII:

Soil loss and associated sedimentation resulting from implementation of the proposed project is anticipated to be reduced by approximately 0.6 tons/year (a 23% decrease) as compared to existing conditions (**Table 5**); existing 2.61 tons/year, proposed conditions 2.01 tons/year. The reason for this reduction is due to the increased vegetative cover conditions within the proposed vineyard development areas and the installation of straw wattles that reduce overland flow velocities and erosive power, and trap eroded soil on-site, thereby reducing soil loss potential. Because the proposed project would reduce soil loss as compared to existing conditions the proposed project is not anticipated to contribute cumulatively to sediment production within the Sulphur Creek – Main Fork drainage; therefore, impacts associated with soil loss and associated sedimentation are not considered cumulatively significant.

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

Hydrology and Water Quality - Section X:

As discussed in **Section X (Hydrology and Water Quality)**, the total proposed water demand resulting from the proposed project recharge area would be 5.85 AF/yr, representing a 0.62 AF/yr increase in total groundwater use for the parcel from existing conditions which were 5.23 AF/yr. This is below the 11.3 AF/yr of estimate annual recharge of the project recharge area.

As discussed in **Section X (Hydrology and Water Quality)** a Hydrologic Analysis utilizing the TR-55 Runoff Model has been prepared by O'Connor Environmental Inc. (October 2021 - **Exhibit C**). Because the proposed project does not include diversions, create concentrated flows, or otherwise alter site drainage patterns, and does not materially alter site slopes no net increase in runoff volumes or time of concentrations are expected as compared to pre-project conditions (**Exhibit C**), therefore no significant impacts due to changes in hydrology are expected.

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

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

Land Use and Planning - Section XI:

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

Proposed Project Impacts found to be Less Than Significant

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

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

c.

Implementation of the proposed project would not have any potentially significant negative effects on human beings (see discussions under **Sections III [Air Quality], IX [Hazards and Hazardous Materials], X [Hydrology and Water Quality], XIII [Noise], XIV**

([Population and Housing], XVII [Transportation], and XX [Wildfire]). The proposed project, the use of the property, and reasonably foreseeable projects would be activities at a level of intensity considered normal and reasonable for a property within Agricultural Watershed zoning district. Therefore, less than significant impacts on human beings are anticipated.

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LIST OF EXHIBITS:

- O'Connor Environmental, Inc., Dated November 2021 (Resubmittal June 2022), Erosion Control Plan, Babu Vineyard Block C, 3300 White Sulphur Springs Road (**Exhibit A**).
- O'Connor Environmental, Inc., Dated November 2021 (Resubmittal June 2022), Erosion Control Plan Design Details, Babu Vineyard Block C, 3300 White Sulphur Springs Road (**Exhibit A-1**).
- O'Connor Environmental, Inc., November 2021, Erosion Control Plan Narrative, Babu Vineyard Block C, APN: 027-010-033 (**Exhibit A-2**).
- Wildlife Research Associates (WRA), Inc. and Jane Valerius Environmental Consulting, May 2017, Habitat Assessment, Babu Vineyard: 3600 White Sulphur Springs Road, Saint Helena, California (**Exhibit B**).
- Wildlife Research Associates (WRA), Inc., June 2017, Addendum to Habitat Assessment – Babu Vineyard, Napa, California (**Exhibit B-1**)
- Jane Valerius Environmental Consulting, October 2021, Special Status Plant Survey Report, Babu Vineyard Block C, 3600 White Sulphur Springs Road (**Exhibit B-2**)
- O'Connor Environmental, Inc., March 2023, Mitigation Areas for GHG and Vegetation Canopy Cover (**Exhibit B-3**).
- Wildlife Research Associates (WRA), Inc. and Jane Valerius Environmental Consulting, June 2022, 3300, Block C Vegetation Canopy Cover Mitigation Conservation Area Analysis, White Sulphur Springs Road (**Exhibit B-4**)
- O'Connor Environmental, Inc., October 2021, Hydrologic Analysis – Babu Vineyard Block C, APN: 018-050-072 (**Exhibit C**).
- O'Connor Environmental, Inc., August 2021 (Resubmittal June 2022), Erosion Analysis, Babu Vineyard, 3300 White Sulphur Springs Road, APN: 027-010-033 (**Exhibit D**).
- O'Connor Environmental, Inc., May 2017 (Revised November 2021), Water Availability Analysis, Babu Vineyard, 3300 and 3600 White Sulphur Springs Road (APN: 027-010-033), Saint Helena, California (**Exhibit E**).
- Jacqueline Harrington and Thomas Origer, June 2016, A Cultural Resource Survey for Babu Vineyard Project, Saint Helena, California.
- Notice of Emergency Timber Operations (**Exhibit F**)
- O'Connor Environmental, Inc., October 2021, Geologic Assessment of Slope Stability, Proposed Babu Vineyard Block C, 3300 White Sulfur Springs Road (**Exhibit G**)
- Project Revision Statement (**Exhibit H**)
- Application Submittal Materials and Correspondence (**Exhibit I**)