COUNTY OF NAPA
DEPARTMENT OF PLANNING, BUILDING AND ENVIRONMENTAL SERVICES
1195 THIRD STREET, SUITE 210
NAPA, CA 94559
(707) 253-4416

Initial Study Checklist
(Reference Napa County's Procedures for Implementing CEQA, Appendix C)

1. **Project Title:** Quantum Limit Vineyards II, Erosion Control Plan Application (ECPA) #P19-00453-ECPA

2. **Property Owner(s):** Glenn Rice, Quantum Limit Partners LLC.

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

4. **Project Location and APN:** 25 Quail Ridge Drive, Napa, CA 94558, APN 033-140-052 (**Figures 1** and **2**)
   Section 31, Township 6 North, Range 2 West, Mt. Diablo Base
   Longitude 38° 19' 28.94" N / Latitude 122° 07' 48.70" W

5. **Project Sponsor:** Quantum Limit Partners, LLC
   Attn. Glenn Rice
   2700 Aqua Vista Boulevard
   Fort Lauderdale, FL 33301

   Agent: Omar Reveles (Registered Professional Engineer No. 74723)
   Acme Engineering Inc.
   1700 Soscol Avenue, Suite 9
   Napa, CA 94559

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

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

8. **Description of Project:**

The proposed project involves the clearing of vegetation, earthmoving, and installation and maintenance of erosion control measures associated with the development of approximately 4.8 gross acres of vineyard (i.e. development area, proposed clearing limits) and approximately 4.1 net planted acres within five vineyard blocks located on one 69.9-acre parcel (i.e. project site) (**Figure 3**). Block V would include approximately 0.3 acre; Block W would include approximately 6,450 square feet; Blocks X1 through X3 would include approximately 4.3 gross acres (Block X1 is approximately 3.1 net acres, Block X2 is approximately 0.5 net acre, and Block X3 is approximately 1,090 net square feet); and Block Y would include approximately 2,965 square feet. Average slopes within the development area range from 13% to 48% with approximately 0.9 acre on slopes over 30%. Approximately 30 trees with a diameter breast height (dbh) greater than 6 inches are proposed for removal, which includes interior live oak (*Quercus wislizeni*), blue oak (*Quercus douglasii*), and valley oak (*Quercus lobata*). Rock removed during the clearing of the land would be crushed and used on existing onsite roads or would be used for decoration. There would be no transport of spoils off-site. Rock that is not used immediately would be stockpiled for future use inside the proposed clearing limits. The vineyard would be irrigated via a drip irrigation system with well water. Approximately 1.64 acre-feet of water per year would be used to irrigate the proposed vineyard. The project site currently contains wildlife exclusion fencing around existing vineyard. Proposed wildlife exclusion fencing would fence proposed blocks individually and in clusters where appropriate; the fencing would be at least 6 feet tall with exit gates at the corners and would be comprised of no smaller than 6-inch by 6-inch squares (**Exhibit A-1**).

Erosion Control Measures: Temporary erosion control measures include straw wattles and the application of straw mulch at a rate of 3,000 pounds per acre. Permanent erosion control measures include a permanent no-till cover crop maintained at a minimum vegetation cover density of 75%. Details of the proposed erosion control measures are provided in the Quantum Limit Vineyards II ECP #P19-00453-ECPA, dated November 2019, prepared by Omar Reveles (Registered Professional Engineer No. 74723) of Acme Engineering Inc, Napa, California (**Exhibit A-1**).

Earthmoving: Earthmoving and grading activities associated with the installation of erosion control measures and subsequent vineyard operation include, but are not limited to vegetation and tree removal, soil ripping, rock removal, disking, the development of erosion control measures, and potential temporary rock storage.

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

a. Installation of vineyard trellis and drip irrigation systems, and planting rootstock in the following formations:
   i. Block V: 4-foot by 3-foot spacing pattern, approximate vine density of ±3,630 vines per acre, these blocks will be hand farmed.
   ii. Block W Block V: 6.5-foot by 4.5-foot spacing pattern, approximate vine density of ±1,470 vines per acre, these blocks will be mechanically farmed.

iii. Blocks X1 and X2: 6-foot by 5-foot spacing pattern approximate vine density of ±1,452 vines per acre, these blocks will be mechanically farmed.
iv. Block X3: Varies by bench width by 3-foot vine spacing pattern, approximate vine density of ±1,555 vines per acre, these blocks will be hand farmed.
v. Block Y: 5-foot by 4.5-foot spacing pattern, approximate vine density of ±1,937 vines per acre, these blocks will be hand farmed.

b. Ongoing inspection and maintenance of temporary and permanent erosion and runoff control measures.
c. Ongoing operation and maintenance of the vineyard, which includes: vine management (pruning, fertilization, and pest and disease control), weed control, cover crop mowing, irrigation and trellis system maintenance, and fruit harvesting. Pre-emergent herbicides would not be strip sprayed in the vine rows for weed management. Contact or systemic herbicides may be applied in the spring (no earlier than February 15) to ensure adequate vegetative cover in the spray strips for the remainder of the rainy season. The width of the spray strips within mechanically farmed blocks would be no wider than 18 inches in order to achieve 75% vegetative cover, and in hand farmed blocks spot spraying would occur to achieve 75% vegetative cover.

Table 1 lists a general schedule for the construction of the proposed project as identified in #P19-00453-ECPA and **Table 2** outlines typical general ongoing vineyard operations. The final implementation schedule is pending action on #P19-00453-ECPA.

Table 1 – Implementation Schedule

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

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

Table 2 – Annual Operations Schedule

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

Vineyard construction would require up to 10 workers. Up to four vehicle/truck round trips per day would occur during construction. Anticipated construction equipment will include a crawler tractor (D-8 or larger), tractor/trailer, backhoe, a trencher, pickup trucks and other service vehicles.

Pruning and harvest would each require up to 12workers. Up to four vehicle/truck round trips per day would occur seasonally during operation. Up to two truck round trips per day would occur during harvest. Anticipated equipment for vineyard operations will include a tractor/trailer, a forklift, grape trucks, pickup trucks, ATVs, and other service vehicles.

Implementation of the proposed project would be in accordance with the Quantum Limit Vineyards II ECPA prepared by Acme Engineering, Inc (November 2019 - **Exhibits A-1** and **A-2**). The proposed project is further described in the application materials including the Supplemental Project Information sheets. All documents are incorporated herein by reference and available for review in the Napa County Department of Planning, Building and Environmental Services (PBES), and at Files - PBES Cloud

9. Describe the environmental setting and surrounding land uses.

The proposed project would occur on one parcel totaling approximately 69.9 acres located at 25 Quail Ridge Drive in Napa, California (**Figures 1-3**). The project parcel is developed with two residences (a main dwelling unit and a second unit or "assessor dwelling unit), a barn and other accessory structures, an approximate 11.9 acre foot reservoir[1] (covered by Water Right License 12972 [Permit 19279/Application 27982]), approximately 21 acres of vineyard (approximately 17 net/planted acres), four agricultural wells, and paved, graveled and dirt roads associated with the parcels residential and agricultural uses. The parcel also includes periodic livestock grazing in portions of the site that are not in residential or vineyard use. The parcel is fenced generally around the periphery with a mix of cattle fencing (4 to 5-foot-tall, 3-4 wire strand) and wildlife exclusion fencing (6-foot-tall wire mesh) around vineyard development areas per P14-00356-ECPA and P17-00146-ECPA. Existing wildlife exclusion fencing associated with the neighboring vineyards located immediately west of the parcel is present along Suisun Creek and Wooden Valley Road, and to the south associated with residences and vineyard.

Surrounding land uses include rural residences, agriculture (e.g., vineyards and cattle grazing), and undeveloped areas (naturally vegetated and/or wooded hillsides). The nearest winery, Vezer Family Winery, is located approximately 2 miles south of the project site. The next closest wineries are located over 8 miles to the west in the City of Napa. The nearest residences are located between 0.1 and 0.25 mile south of the

[1] See *Pond Capacity Analysis*, Acme Engineering Inc., September 3, 2021 – **Exhibit I**

project site and approximately 0.5 mile east of the project site. The nearest schools are Suisun Valley School, located 2.5 miles south of the project site, and Vichy Elementary and Mt. George International over 6 miles west of the project site.

The project site is located approximately 8.4 miles east of the City of Napa and within the Suisun Creek watershed. One ephemeral stream runs through the project site and the nearest blue line stream is Suisun Creek, approximately 180 feet west of the project site. Runoff leaving the site drains toward the western edge of the site, toward Suisun Creek.

General topography of the area consists of hills on the eastern side of Napa Valley. The project site is generally located in the western facing foot slopes of Okell Hill south of Gordon Valley and east of Suisun Valley. Peaks, ridgelines, and valleys associated with the higher elevations of Okell Hill (elevation over 1,100 feet above mean sea level [msl]) are located to the east, and lower elevations of Gordon and Suisun Valleys (elevations approximately 240 feet to 200 feet above msl) are located to the north and west respectively. Elevations in the area range from approximately 200 to 240 feet above msl at Suisun and Gordon Valleys to approximately 1,100 above msl at Okell Hill. Elevations within the project site generally range between 200 and 750 feet above msl. Slopes within the development area are typically gently to steeply sloping western-facing slopes, with elevations that range from approximately 270 to 620 feet above msl.

No potentially active faults have been mapped on the project site, the nearest known faults are: the Cordelia Fault located approximately 0.3 mile to the west; the Green Valley Fault located 2.3 miles to the west; the Soda Creek Fault (inactive) located approximately 11.1 miles to the west; and the West Napa Fault located approximately 9.5 miles to the west (PJC & Associates Inc., March 2020 [**Exhibit G**] and Napa County GIS: Faults, West Napa Fault, and Alquist-Priolo fault layers). The project site is located within a mapped landslide deposit. Soils on the project site have been classified according to the Soil Survey of Napa County (USDA, 1978) as Bressa-Dibble Complex (Soil Series #114), which exhibits rapid runoff potential, moderate to severe erosion potential, and a low to moderate shrink-swell potential (**Exhibits A-1** and **A-2**).

The vegetation types in the area generally consist of agriculture (including grazing land and vineyard), oak woodland, grassland, shrub-land/chaparral, and rudera and /developed land. Vegetation types occurring within the project parcel consist of approximately: 24.8 acres oak woodland, 3.6 acres shrub-land, 15.1 acres grassland, 1.6 acres reservoir/open-water, 3.6 acres developed land, 20.9 acres of vineyard, and 0.4 acres ruderal land (which does not include oak woodland affect by toe 2017 Atlas Wildfires)). While approximately 3 acres of the proposed project/development area has been identified as ruderal by the project biologist (WRA December 2019), these areas were previously mapped as oak woodland (Northwest Biosurvey, August 2014; Napa County GIS Sensitivity Mapping) before being affected by the 2017 Atlas Fire.. Because the property was affect by the 2017 Atlas Wildfires, for the purposes of this initial study and analysis, ruderal areas are considered as oak woodland, unless otherwise previously mapped as another vegetation type. Vegetation removal for fire safety and debris removal after the 2017 Atlas Fire, do not necessarily modify or otherwise convert these oak woodlands (and associated vegetation mapping units) to something other than oak woodland. Therefore, vegetation in the project/development area consists of approximately 4.4 acres of oak woodland, and 0.4 acres of ruderal land.

10. Background

Existing vineyard (Blocks K, L, M and Z comprising 2.53 net acres) was planted on the project site in 2012 prior to Quantum Limit's purchase of the property. Quantum Limit performed additional vegetation clearing, earthmoving activities, and limited vineyard plantings (2.68 acres consisting of Blocks I and N which total 0.79 net acre) in 2014. Quantum Limit filed #P14-00356-ECPA with the County on November 5, 2014, and revised it on May 11, 2015 (date stamped May 27, 2015,) to include the previously developed areas and additional vineyard acreage. The County sent a notice of violation letter dated July 8, 2015, identifying Quantum Limit's options for legalizing the previous vineyard into the pending #P14-00356-ECPA, or removing the vineyard and restoring the area to pre-violation conditions. The County and Quantum Limit entered into a General Release and Settlement Agreement (the "Settlement Agreement") on October 1, 2015, addressing the legalization of the unpermitted vineyard development. The County prepared and adopted a Mitigated Negative Declaration on November 15, 2015, and approved #P14-00356-ECPA for earthmoving activities associated with the development of approximately 21.64 gross acres of vineyard (±15.9 net vine acres) on the project site.

During implementation of #P14-00356-ECPA, the County discovered that Quantum Limit performed vegetation clearing and earthmoving activities outside the boundaries of the approved ECPA. The County sent a notice of violation letter to Quantum dated February 2, 2017, requesting modifications to the ECPA and providing measures to mitigate for unauthorized tree removal. The County informed Quantum Limit that the modifications to the ECPA must be approved prior to recommencement of development activities associated with #P14-00356-ECPA. Quantum Limit submitted a subsequent ECPA application (#P17-00146-ECPA, date stamped June 1, 2017) for approval to correct and amend the deviations from #P14-00356-ECPA. The County filed a Notice of Exemption with the County Recorder's Office and approved #P17-00146-ECPA (to modify #P14-00356-ECPA) on June 12, 2017, for the development of approximately 20.96 gross acres of vineyard (±14.18 net vine acres). The gross development area was reduced by approximately 0.7 acre from the 21.64 acres approved in #P14-00356-ECPA.

Despite the recognition of previous violations, Quantum Limit submitted a July 14, 2017, inspection report provided by the plan preparer for #P17-00146-ECPA (William D. Lincoln, CPESC #2296, of Lincoln AE LLC), which documented that clearing of vegetation and installation of grape vines and vineyard infrastructure, including but not limited to vineyard avenues and vineyard staking and trellising, occurred outside of the approved boundaries of #P17-00146-ECPA.

The County sent a Notice of Violation and Amended General Release and Settlement Agreement between the County and Quantum Limit in a letter dated July 31, 2017. The letter directed the applicant to immediately remove any and all vineyard infrastructure, including vineyard avenues, and any and all vines planted outside the approved boundaries of #P17-00146-ECPA and immediately revegetate, pursuant to Condition of Approval #1.c, all areas cleared outside the approved boundaries of #P17-00146-ECPA consistent with the erosion control seed mix identified in the ECPA. An Amended General Release and Settlement Agreement was entered into on November 4, 2017.

The County conducted a compliance inspection on March 21, 2018, and sent a letter dated April 26, 2018, to follow up on the compliance inspection. Based on the site inspection, in conjunction with the January 5, 2018, Winterization Inspection Report, it was documented that grape vines that were planted out of compliance with #P17-00146-ECPA were removed. However, a majority of the associated infrastructure (i.e., end posts and trellising) in these areas was still in place. The County informed Quantum Limit that to bring the site fully into compliance with the Napa County Code and the approved ECPA, all infrastructure located outside the approved bounds needed to be removed by May 26, 2018. The hillside gully repairs, cross-slope diversion repair, and drainage channel repairs specified in the approved ECPA (Condition of Approval #1.b), were documented as completed and appeared to be appropriate and stable, except for the hillside gully located east of Vineyard Block K. While the specified repair of this gully was initiated, its implementation was inadequate because the area was still exhibiting uncontrolled runoff that could lead to additional incision, erosion and sedimentation. The April 26, 2018, letter directed additional repairs associated with this hillside gully consistent with the approved ECPA to be completed by October 15, 2018. A minimum of 48 oak trees were planted, so compliance with Condition #1.a of the approved ECPA was confirmed in the April 26, 2018. As indicated in Condition of Approval #1.a, replacement trees shall have a minimum 80% survival rate to be considered successful and for the ECPA to be finaled. The April 26, 2018, letter also stated that the disposition of the temporary diversion ditches, predominately located in Vineyard Block E, need to be addressed prior to the ECPA being finaled, either by removing them or formally incorporating them into the approved ECPA.

LinconIAE LLC responded in a letter to the County dated July 18, 2018, confirming that the additional infrastructure had been removed and the vineyard boundaries and restoration areas were in compliance with the approved ECPA (dated September 5, 2017).

The County conducted a winterization inspection on November 27, 2018, and mailed a letter dated February 5, 2019, to Quantum Limit confirming that the vineyard development was in compliance with the approved ECPA and the site had achieved required cover crop specifications. However, additional grading and draining improvements were discovered in connection with the gully below (west of) Vineyard Block K. These improvements were inconsistent with the approved ECPA, and therefore, were in violation of the Condition of Approval #1 (which requires strict conformance to all provisions of the approved Agricultural Erosion Control Plan), and Napa County Code (NCC) Section 18.108.080 (Agricultural erosion control plans – Requirement and authorization to prepare – Field modifications).

Quantum Limit applied to modify/revise #P17-00146-ECPA (specific to drainage improvements located below/west of the pond) through revisions to Building Permits #B18-01077 and #B18-01078, submitted on January 17, 2019, by CRC Builders, in an effort to address the grading and improvements installed without proper review and authorization. A February 5, 2019, letter from the County requested information and revised plans submitted by March 7, 2019. The County sent a follow up letter/notice on April 4, 2019, reiterating its request for the information and revised plans by May 6, 2019. On August 29, 2019, a resubmittal package was received to address this matter[2], and in September 2019 the permit revisions specific to these drainage improvements were approved, effectively separating the drainage improvements associated with the residential retaining walls from the pond drainage channel and #P14-00356-ECPA. The repair of this feature, as well as several other Runoff and Water Quality Improvements, were implemented as part of #P14-00356-ECPA's Environment Commitments to address the legacy effects of past cattle grazing operations on the property and reduce the property's overall sediment production. The repair of these features were not necessary to develop or operate #P14-00356-ECPA or to reduce of offset any increases in soil loss or sediment delivery impacts due to vineyard development, they were included to further reduce overall sediment production and delivery of the entire property. Because repair this feature is not a necessary to develop or operate the vineyard development, separating its repair from the ECPA does not materially change or effect the underlying vineyard development project.

Subsequent to this ECPA application submittal, a Notice of Apparent Code Violation was issued on December 15, 2020 (Record CE-20-00182), for dredging the pond and disposing of dredging spoils on-site (within the proposed development area associated with this application) without a grading permit. The owner/agent submitted revised plans and modeling to address this grading on December 18, 2020, incorporating this grading into this pending ECPA: also see **Exhibits C, E H**, and **I**.

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

Because the subject parcel was affected by the 2017 Atlas Peak Fire, pursuant to Napa County Code 8.80.130 (Conservation regulations for fire-damaged properties), the conditions as configured on the property on June 19, 2018 are used as the baseline for Vegetation Retention

[2] The resubmittal included calculations prepared by Acme Engineering, Inc. (July 16, 2019) for the drainage course below the pond showing that abandoning an existing 12" Corrugated Plastic Pipe (CPP) within the drainage course, and re-contouring and installing with check dams consistent with P14-00356-ECPA, would not result in increased runoff. Additionally, no drainage from the retaining walls constructed for the new residence would be connected to or drain directly to the drainage course below the pond. Also see building permit #B18-01481 and #ENG18-00046.

Requirements pursuant to Napa County Code (NCC) Section 18.108.020(B). As indicated in the Setting Section (Page 3), this Initial Study will be considering areas mapped as ruderal in the WRA December 2019 Biological Assessment as oak woodland consistent with previously mapped oak woodland for the purpose of CEQA analysis, and General Plan Goal and Policy consistency purposes.

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

Responsible (R) and Trustee (T) Agencies	**Other Agencies Contacted**
California Department of Fish and Wildlife (CDFW) (T)	Middletown Rancheria
Regional Water Quality Control Board (Regional Water Board) (R)	Mishewal Wappo Tribe of Alexander Valley
	Yocha Dehe Wintun Nation

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

Notice of the proposed project was sent to the Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, and Yocha Dehe Wintun Nation on November 21, 2019. The County received a response letter from Yocha Dehe Wintun Nation on February 3, 2020 indicating that the project area is within the aboriginal territories of the Yocha Dehe Wintun Nation, requested that the Tribe be contacted if any new information or cultural items are found, and recommended cultural sensitivity training for project personnel prior to construction. The County replied on March 25, 2021 indicating that the recommendation to provide cultural sensitivity training onsite prior to project initiation would be included in the conditions of approval should the application be approved, and that consultation was closed.

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 November 21, 2019, consultation invitation was received, on March 25, 2021, the County sent a consultation closure notice to the Tribes.

Also see **Section XVIII (Tribal Cultural Resources)** for additional disclosures.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

ENVIRONMENTAL IMPACTS AND BASIS OF CONCLUSIONS

The conclusions and recommendations contained herein are professional opinions derived in accordance with current standards of professional practice. They are based on a review of the Napa County Environmental Resource Maps, the other sources of information listed in the file, and the comments received, conversations with knowledgeable individuals, the preparer's personal knowledge of the area, and visit(s) to the project site and proposed development area.

Other sources of information used in the preparation of this Initial Study include site-specific studies conducted by the applicant and filed by the applicant in conjunction with #P19-00453-ECPA as listed below, and the environmental background information contained in the permanent file on this project. These documents and information sources are incorporated herein by reference and available for review at the Napa County Department of Planning, Building and Environmental Services located at 1195 Third Street, Suite 210, Napa, CA 94559, and at: https://www.pbes.cloud/index.php/s/seXwdJLKykfgnRe

- Acme Engineering Inc., March 24, 2021, Erosion Control Plan, Quantum Limit Vineyards New Vineyard Development and Erosion Control Plan Narrative (October 31, 2019) (**Exhibit A-1**).
- Acme Engineering Inc., October 31, 2019, Narrative Erosion Control Plan, Quantum Limit Vineyards (**Exhibit A-2**).

- WRA, Inc., September 2019, Biological Resources Assessment Report, Quantum Limit Vineyards, Napa County, California (**Exhibit B-1**).
- California Tree and Landscaping Consulting Inc., February 18, 2020, Tree Assessment, Quantum Limit (**Exhibit B-2).**
- Acme Engineering Inc., October 12, 2021, Soil Loss Analysis Calculations, Compilation of the following modeling results: Blocks W, X2, V and X3 October 25, 2019; Block Y May 15, 2020; and, Block X1 December 17, 2020 (**Exhibit C**).
- Acme Engineering Inc., October 25, 2019, Water Availability Analysis, 25 Quail Ridge Drive (**Exhibit D**).
- Acme Engineering Inc., October 12, 2021, WinTR-55 Hydrology Report, Compilation of the following modeling results: Watersheds D and E (Pre-project and Post-project) June 4, 2020; Watersheds A (Pre-project), B and C (Pre-project and Post-project) December 16, 2020; and, Watershed A (Post-project) September 3, 2021 (**Exhibit E**).
- Acme Engineering Inc., October 25, 2019, Vegetation Canopy Retention Analysis (**Exhibit F**).
- PJC & Associates Inc., March 25, 2020, Stability Report, 25 Quail Ridge Drive (**Exhibit G).**
- Acme Engineering Inc., December 18, 2020, Fill Placement Letter, 25 Quail Ridge Drive (**Exhibit H**).
- Acme Engineering Inc., September 3, 2021, Pond Capacity Analysis, 25 Quail Ridge Drive (**Exhibit I**).
- Tom Origer & Associates, August 26, 2014, A Cultural Resource Study of Portions of the Property at 25 Quail Ridge Drive, Napa, Napa County, California.
- Napa County Department of Planning, Building and Environmental Services (PBES), *Quantum Limit Vineyard Conversion, Initial Study and Final Negative Declaration,* Application Number P14-00356-ECPA, SCH# 2015-082068, certified November 13, 2015.
- Napa County Department of Planning, Building and Environmental Services (PBES), *Quantum Limit Modification of P14-00356-ECPA,* Application Number P17-00146-ECPA, certified June 12, 2017.
- Site inspections conducted by Napa County Planning Division staff: March 21, 2018; November 27, 2018; May 20, 2020, and September 24, 2020.
- Napa County Geographic Information System (GIS) sensitivity maps/layers.

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

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. Attached as **Exhibit J** is the signed Project Revision Statement.

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

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

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

Signature

December 13, 2021
Date

Donald Barrella
Printed Name

Napa County Planning, Building and Environmental Services

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

Discussion

a-b. The project site is approximately 0.25 mile east of Wooden Valley Road, the closest County viewshed road and is not located within a scenic corridor (Napa County GIS, Scenic Corridors Layer). The site is not located on a prominent hillside or a major or minor ridgeline (Napa County GIS, Ridgelines Layer) and is not visible from Wooden Valley Road. There are no significant rock outcroppings or geologic features on the project site that would be impacted by the proposed project. Although trees would be removed with the proposed project (discussed in **Section IV [Biological Resources]** below), they do not provide a significant visual resource outside of the project site. The project site is not visible from a state scenic highway, as there are no scenic highways in the area (Caltrans 2015 - https://dot.ca.gov/-/media/dot-media/programs/design/documents/od-county-scenic-hwys-2015-a11y.pdf). Therefore, the proposed project would have a less than significant impact on a scenic vista, scenic highway, historic buildings, scenic trees, or rock outcrops for the reasons described above.

c. The proposed project is consistent with the Napa County Agriculture, Watershed and Open Space (AWOS) land use designation and with adjacent land uses, which include other vineyards and agriculture, and rural residential uses. Given these factors, the proposed project would not substantially degrade the existing visual character or quality of public views of the site or its surroundings, resulting in a less than significant impact.

d. Proposed agricultural operations on the project site would require some lighted nighttime activities consistent with the nighttime activity already occurring on the project site and in the surrounding area, which includes vineyard and agricultural uses. Lighting would be in the form of headlights or downward direction lights on equipment being used during nighttime harvest. The proposed project would include harvest activities two times a year (typically occurring in September and October), that could include nighttime activity (typically from 3 a.m. to 6 a.m.). The proposed project would include sulfur applications (that could occur from 3 a.m. to 6 a.m.) approximately 8-10 times per year. Although some nighttime activity would occur for limited periods, the proposed project would not introduce a new source of substantial light or glare, and the type of nighttime lighting would be consistent with surrounding land uses. Therefore, the proposed project would result in a less than significant impact.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
II.	**AGRICULTURE AND FOREST RESOURCES.** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
	a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Important (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resource Code Section 12220(g)), timberland (as defined in Public Resource Code Section 4526), or timberland zoned Timberland Production (as defined in Government Code Section 51104(g))?	☐	☐	☐	☒
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Discussion

a. The Napa County Important Farmland 2016 map prepared by the California Department of Conservation, Division of Land Resource Protection identifies the development area as Grazing Land. There are no areas of Unique Farmland, Farmland of Statewide Importance, and Farmland of Local Importance mapped within the project site. 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 an AWOS General Plan designation and is zoned Agricultural Watershed (AW). Therefore, the establishment of vineyard totaling approximately 4.8 gross acres (4.1 net acres) is consistent with project site's land use and zoning designations. The subject property does not have a Williamson Act contract associated with it. Therefore, the proposed project would not conflict with its land use designation or a Williamson Act contract, resulting in no impact.

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

e. The proposed project does not include the construction of roadways or other infrastructure that would result in the conversion of existing farmland or forestland in the area to non-agricultural or non-forestland uses. As such, the proposed project would have no impact on agricultural or forest resources of Napa County.

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

Discussion

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

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

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

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

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

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

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

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

The thresholds of significance identified in **Table 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[3] for an approximately 560-acre vineyard development, Walt Ranch Vineyard[4] for an approximately 507-acre vineyard development, and Circle-S Ranch Vineyards[5] for an approximately 400-acre vineyard development.[6]

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

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

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

Table 3 – Emissions from Vineyard Development and Operation

Emissions and Thresholds	Criteria Pollutants – Constituents			
	ROG	NO_x	$PM_{2.5}$	PM_{10}
	Construction Emissions			
Pounds per day: 150-acre vineyard development[1]	8.43 to 11.39	34.39 to 52.16	3.93 to 4.47	13.93 to14.53
Pounds per day: 150- to 250-acre vineyard development[2]	9.43 to11.03	43.85 to 53.16	3.91 to 4.62	12.87 to 17.22
Pounds per day: 127-acre vineyard development[3, 4]	4.6	42.3	5.21[4]	24.21[4]
Construction threshold	54	54	54	82
	Operational Emissions			
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 4.8 gross acre vineyard (approximately 4.1 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:

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

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

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

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

- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. The BAAQMD's phone number shall also be visible.
- Water all exposed surfaces (e.g., parking areas, staging areas, soil piles, grading areas, and unpaved access roads) two times per day.
- Cover all haul trucks transporting soil, sand, or other loose material offsite.
- Remove all visible mud or dirt tracked onto adjacent public roads by using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- Idling times shall be minimized either by shutting off equipment when not in use or reducing the maximum idling time to five minutes (as required by state regulations). Clear signage shall be provided for construction workers at all access points.
- Water and/or dust palliatives shall be applied in sufficient quantities during grading and other ground disturbing activities onsite to minimize the amount of dust produced. Outdoor construction activities shall not occur when average wind speeds exceed 20 mph.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator. Any portable engines greater than 50 horsepower or associated equipment operated within the BAAQMD's jurisdiction shall have either a California Air Resources Board (ARB) registration Portable Equipment Registration Program (PERP) or a BAAQMD permit. For general information regarding the certified visible emissions evaluator or the registration program, visit the ARB FAQ[7] or the PERP website[8].

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

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

Land uses adjacent to the project site include vineyards, undeveloped land, and rural residential. The project site consists of approximately 69.9 acres of land with approximately 4.8 acres of ruderal and oak woodland, two residences, a reservoir, four wells, approximately 17 acres of existing vineyard and paved, gravel and dirt roads. The closest schools are located approximately 2.5 miles south of the project site in Napa (Suisun Valley School), and over 6 miles west of the project site (Vichy Elementary and Mt. George International) (Napa County GIS, Schools Layer). The closest offsite residences are located approximately 0.1 and 0.25 mile south of the project site and approximately 0.5 mile east of the project site. The closest residential area (Fairfield) is approximately 3.5 miles southeast of the project site.

During installation of the ECPA, vineyard planting, and subsequent vineyard operations, airborne pollutants and odors would be created through the use of grading and farm equipment (e.g., tractors, trucks, and ATV's). These sources would be temporary and/or seasonal in nature and would occur approximately 2.5 miles from the closest school and 3.5 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.

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

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

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

Discussion

The Biological Resources Reconnaissance Survey Report prepared by WRA, Inc. (**Exhibit B-1),** and the following Napa County Geographic Information System (GIS) Sensitivity Maps/layers were utilized in this biological resources assessment: Sensitive biotic vegetation groups, U.S. Fish and Wildlife (USFWS) Critical Habitat, California Natural Diversity Database (CNDDB), Owl Habitat, Wetlands and Vernal Pools, Vegetation, Soil types, U.S. Geological Survey Quadrangle (DRG), and Aerial Photos. These sources are incorporated herein by reference and available in the project file for review. Additionally, vegetation/habitat mapping and associated acreages identified herein includes the review and compilation of previous biological studies and environmental documentation (Napa County, November 2015) associated with this parcel.

WRA conducted an assessment of biological resources on the project site on May 11 and July 3, 2018, and June 7, 2019. The surveys were completed to document: biological communities; existing conditions and to determine if suitable habitat to support special-status plant or wildlife species exists; aquatic natural communities; and any special-status species that may be present onsite. The survey dates corresponded to blooming periods sufficient to observe and identify special-status plant species determined to have the potential to occur in the project site. The field surveys were conducted by botanists familiar with the flora of Napa County and surrounding counties. The surveys followed the protocol for plant surveys described by resource agency guidelines (CNPS, 2001; CDFW, 2018; USFWS, 1996). Plants were identified using Baldwin et al. (2012) and Jepson Flora Project (Jepson eFlora, 2018) to the taxonomic level necessary to determine whether they were rare.

A list of special-status plant and animal species that have the potential to occur within the vicinity of the project site was compiled based on data in the CNDDB (CDFW, 2018), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS, 2018), and the USFWS List of Federal Endangered and Threatened Species (USFWS, 2018) that may be affected by projects in the Capell Valley, Cordelia, Cuttings Wharf, Fairfield North, Fairfield South, Mount George, Mount Vaca, Napa, and Yountville quadrangles.

Table 4 identifies the pre-project and post-project acreages of the different plant communities (i.e. vegetation or habitat types) within the property. The acreages identified in **Table 4** are approximations and may differ slightly from acreages identified in the property's various biological assessments, reports and environmental determinations. The values shown and utilized were derived from these evaluations and determinations, and as part of County GIS mapping confirmation and vegetation cover identification. While the methodologies and mapping values utilized may differ among various report preparers, they are considered to be at least 95% consistent with one another (Napa County November 2015). Therefore these values are considered by the County to be accurate and adequate for CEQA disclosure, review, and analysis of the subject property and application.

Table 4 – Biological Communities and Habitat Types in the Development Area

Plant Community or Vegetation Alliance	Acreage (Pre-Project)	Acreage Removed[2]	Percent Removed	Percent Remaining	Post-Project (in acres)
Oak Woodland (Interior Live and Blue Oak)	24.8	4.4	17.7%	82.3%	20.4
Coyote Brush Scrub	3.6	0	0%	100%	3.6
Wild Oat Grassland	15.1	0	0%	100%	15.1
Open Water and Marsh	1.6	0	0%	100%	1.6
Developed/Disturbed	3.6	0	0%	100%	3.6
Ruderal	0.4	0.4	100%	0%	0
Vineyard	20.9	0	0%	100%	25.7
Totals	70	4.8	6.9%	--	70

[1] The acreages identified may slightly differ from acreages identified in the property's various biological assessments and associated CEQA Determinations due to the various mapping platforms, spatial characters, modeling data, and rounding utilized by the preparer. Because approximate biological/plant communities, special-status habitat and potential habitat, and project acreages have been corroborated through County GIS mapping, the values disclosed herein are considered by the County to be adequate for CEQA review and disclosure purposes of the subject application.

[2] For the purposes of this initial study and analysis, ruderal areas are considered as oak woodland, unless otherwise previously mapped as another vegetation type.

Sources: WRA September 2019; ACME Engineering November 2019 (Exhibits B-1 and A-1 respectively); and Napa County Department of Planning, Building and Environmental Services, November 2015 (*Quantum Limit Vineyard Conversion P14-00356-ECPA*, SCH# 2015-082068)

a. Special-Status Plants: Based upon a review of the resources databases listed in **Exhibit B-1**, 74 special-status plant species have been documented in the vicinity of the project site. Occurrence records of these species in CNDDB within a 5-mile radius of the project site are depicted in **Exhibit B-1** Figure 3. Fifteen special-status plant species have the potential to occur in the project site. However, no special-status plant species were observed within the project site during the surveys conducted by WRA, and no impacts to special-status plant species identified by the CDFW or USFWS are expected (**Exhibit B-1**).

Vegetation types occurring within the proposed development/project area are considered to consist exclusively of oak woodland. While the 2019 WRA Biological Assessment identifies approximately 2.98 acres of ruderal land within the project/development area, A majority of the areas identified as ruderal by the project biologist (WRA December 2019) in the proposed development area have been mapped as oak woodland within the previous biological report prepared for the project parcel (Northwest Biosurvey, August 2014) and on Napa County GIS Sensitivity mapping and previous CEQA determination (Napa County November 2015), before being affected by the 2017 Atlas Fire. For the purposes of this initial study and analysis, ruderal areas are considered as oak woodland, unless otherwise previously mapped as another vegetation type. Vegetation removal for fire safety and debris removal after the 2017 Atlas Fire, do not necessarily modify or otherwise convert these oak woodlands (and associated vegetation mapping units) to something other than oak woodland. Therefore, vegetation in the project/development area consists of approximately 4.4 acres of oak woodland, and 0.4 acres of ruderal land.

Napa County General Plan Conservation Element Policy CON-24 requires that oak woodland be maintained and/or improved to the extent feasible to provide oak woodland and wildlife habitat, slope stabilization, soil protection and species diversity. Policy CON 24c specifically calls for the preservation of oak woodland (on an acreage basis) at a 2:1 ratio. In order to maintain 2 acres preserved for 1 acre impacted in compliance with Policy Con 24(c)[9]. Based on this 2:1 preservation ratio, only approximately 8.3 acres of the parcels' 24.8 acres of oak woodland could be converted to vineyard. The project as proposed would remove approximately 4.4 acres of oak woodland habitat in compliance with the 2:1 preservation ratio requirement. The project would retain approximately 82% of the oak woodland on the project site.

While the proposed project has been designed to comply with the 2:1 oak woodland preservation ratio, Block V (approximately 0.3 acre) is proposed in an oak woodland area located east of proposed Vineyard Block X; Development in this oak woodland area has the potential to negatively affect adjacent oak woodland. The proposed vine installation and associated irrigation and maintenance needs including but not limited to the incorporation of soil amendments, the application of fertilizers, pesticides and herbicides, cover crop management, and improvements necessary to upgrade and maintain adequate access through Block V, that occur extensively within the canopies and critical root-zones of trees within the woodland has the potential to directly and indirectly impact the oak woodlands through tree mortality and associated oak woodland decline, as well as a potential contribution to the cumulative oak woodland loss in the area as result of vineyard

[9] Policy CON 24(c): Provide replacement of lost oak woodlands or preservation of like habitat at a 2:1 ration when retention of existing vegetation is found to be infeasible. Removal of oak species limited in distribution shall be avoided to the maximum extent feasible.

conversions. This results in potentially significant direct, indirect, and cumulative impacts to oak woodlands and to a sensitive species of limited distribution (i.e. Valley oak trees): see subsection *(e)* below for additional details regarding species of limited distribution.

The potential cumulative negative affects to oak woodlands due to agricultural conversation, and the removal of Valley oak trees in the County would not be considered consistent with the following General Plan Conservation Element Goals and Policies, and Zoning Ordinance, and would result in a potentially significant impact: General Plan Goal CON-2[10] by negatively affecting the existing or cumulative levels of biodiversity or special-status plant species and associated habitat; Policy CON-17[11] because sensitive natural plant communities would be removed or disturbed; Policy CON-24(e) by not maintaining and improving oak woodland habitat to provide for species diversity and wildlife habitat through maintaining a mixture of oak species to ensure acorn production, and to preserve oak trees and other significant vegetation occurring near aquatic resources (Suisun Creek) to maintain diversity of vegetation type and wildlife habitat; and, the purpose and intent of the Conservation Regulations (NCC Chapter 18.108) in that the Project adversely affects locally sensitive, rare, threatened or endangered plants.

Additionally, Napa County considers Valley Oak woodland and Valley Oak trees as habitats and species of limited distribution, as further discussed below and in subsection *(e)*; therefore, their removal would also be inconsistent with the Goals, Policies, and Regulations identified above.

The University of California, Division of Agricultural and Natural Resources (UC-ANR), and the County's *Voluntary Oak Woodland Management Plan* (Napa County, October 2010) have identified several factors, such as irrigation, soil compaction (resulting in decreased infiltration and oxygen availability to roots), pesticide and herbicide use, fertilizer use, and mechanical practices such as disking or seeding for cover crops, when conducted within the dripline of oak trees can contribute to their decline[12]. Additionally, these sources identify a root protection zone (RPZ) that is roughly one-third larger than the drip line (or outermost edge of the foliage based on the longest branch).

To reduce potential impacts to the oak woodland biological community, and to species of limited distribution, to a less than significant level, **Mitigation Measure BR-1** would be implemented to comply with Napa County General Plan Conservation Element Policy Con-24 (discussed further under subsection *(e)*). **Mitigation Measure BR-1** would also minimize impacts associated with the loss of oak species of limited distribution (valley oaks) by avoiding them and providing them with a RPZ that is a minimum of one-third larger than the dripline so that associated root structure is not adversely affected. Additionally, a permanent means of RPZ demarcation (such as rock barrier, rock wall or similar) would be installed to protect root structures during ongoing vineyard operation. Implementation of this measure would reduce the project by approximately 0.6-acres.

Implementation of **Mitigation Measure BR-1** would not substantially affect the feasibility of the proposed project or the continued viability of agricultural use of the project site, in that it would allow the owner/permittee to develop approximately 4.2 gross acres of new vineyard on the project site. Also see **Subsection (e)** below for additional disclosure and analysis associated with local policies or ordinances protecting biological resources, in particular Vegetation Retention Requirements per NC 18.108.020(C). Furthermore, this measure would provide permeant protection of oak woodland and vegetative cover canopy consistent with the Conservation Regulations and applicable General Plan Goals and Policies, preserving in total 2.1 acers of vegetation cover canopy (as further discussed in subsection *(e)* below) that includes 7.6-acres of oak woodland. Under this mitigation measure preserved oak woodland and vegetation cover canopy may overlap. The 7.6-acres of oak woodland is based on removal of 3.8-acres of oak woodland as a result of avoidance due to implementation of **Mitigation Measure BR-1**.

> **Mitigation Measure BR-1:** The owner/permittee shall revise Erosion Control Plan #P19-00453-ECPA prior to approval to include the following measures to reduce potentially significant direct, indirect and cumulative impacts to oak woodlands and oak species of limited distribution (i.e. valley oaks):
>
> a. Revise Erosion Control Plan #P19-00453-ECPA prior to approval to: remove Vineyard Block V (0.3 gross acre), and revise the proposed wildlife exclusion fencing layout to limit any new wildlife exclusion fencing to the periphery of proposed Vineyard Block X as modified by this mitigation measure.
> b. Revise Erosion Control Plan #P19-00453-ECPA prior to approval to avoid the two (2) valley oak trees located in proposed Vineyard Block X and provide them with a root protection zone (RPZ) buffer that is a minimum of one-third larger than their driplines. The RPZ buffer shall not contain vineyard avenues or tractor turn-around areas, and a permanent barrier or other adequate demarcation of the RPZ, as acceptable to the County, shall be indicated on the ECPA plans.
> c. Prior to the initiation of any vegetating removal or earthmoving activities temporary fencing shall be placed at the edge of the RPZ buffer: the precise locations of protective fencing shall be inspected and approved by the Planning Division prior to the commencement of any vegetation removal or earthmoving activities. Prior to vineyard planting the RPZ buffer temporary fencing shall be replaced with the permanent barrier identified in **Mitigation Measure BR-1(b)**.

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

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

[12] The University of California – Division of Agricultural and Natural Resources, Publication 21577, "Vineyards in an Oak Landscape", 1998.

d. Revise Erosion Control Plan #P19-00453-ECPA prior to approval to identify a Preservation Area, totaling a minimum of 7.6-acres of oak woodland that includes a minimum of 2.1 acres of vegetation cover canopy. The area shall be designated for preservation in a deed restriction, open space easement with an organization such as the Land Trust of Napa County as the grantee, or other means of permanent protection acceptable to Napa County. The 7.6-acre Preservation Area shall include a minimum of 2.1 acres of vegetation cover canopy as prescribed in NCC Section 18.108.020(D): oak woodland and vegetation cover canopy preservation may overlap. Land placed in protection shall be restricted from development and other uses that would degrade the quality of the oak woodland (e.g., 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 preservation areas shall be determined by a qualified botanist or biologist, and the determination shall be submitted to Napa County for review and approval. The owner/permittee shall record the deed restriction or conservation easement within 90 days of the County's approval of #P19-00453-ECPA. In no case shall the erosion control plan be initiated until said mitigatory or conservation easement is recorded.
e. To protect trees and woodland during construction, temporary fencing shall be placed at the edge of the dripline of trees to be retained that are located within 50-feet of the project area prior to any vegetating removal or earthmoving activities. The precise locations of protective fencing shall be inspected and approved by the Planning Division prior to the commencement of any vegetation removal or earthmoving activities. No disturbance, including grading, planting, 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 and maintenance.
f. The owner/Permittee shall refrain from severely trimming (typically considered more than 1/3rd of the canopy) trees and vegetation to be retained adjacent to the vineyard conversion areas.
g. 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 native 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 3 years to ensure they achieve at least 80% survival. If tree plantings are not achieving this success criteria during any monitoring year, the owner/Permittee shall be responsible for replacement tree plantings and monitoring them for an additional 3 years to ensure they achieve at least 80% survival.

Special-Status Animals: A total of 59 special-status wildlife species have been documented within the greater vicinity of the project site. Three of these species have a moderate or high potential to occur within the project site: pallid bat (*Antrozous pallidus*), fringed myotis (*Myotis thysanodes*), and white-tailed kite (*Elanus leucurus*). Additionally, a variety of native bird species with protections under the Migratory Bird Treaty Act and California Fish and Game Code may use vegetation within the development area for nesting.

Pallid bat is broadly distributed throughout much of western North America. This species occurs in a number of habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous forests. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of man-made structures, including vacant and occupied buildings. Tree roosting occurs in large conifer snags, inside basal hollows of redwoods and giant sequoias, and within bole cavities in oak trees. Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight. Prey items include arthropods such as scorpions, ground crickets, and cicadas (WBWG, 2018). There were no observations of this species during the site visits (WRA, September 2019 - **Exhibit B-1**).

Fringed myotis ranges through much of western North America from southern British Columbia, Canada, south to Chiapas, Mexico and from Santa Cruz Island in California, east to the Black Hills of South Dakota. The species occurs in a number of habitats ranging from desert scrubland, grassland, sage-grass steppe, old growth forest and subalpine coniferous and mixed deciduous forest. Roosts are typically in caves, buildings, underground mines, rock crevices in cliff faces and bridges in colonies from 10 to 2,000 individuals. There were no observations of this species during the site visits (WRA, September 2019 - **Exhibit B-1**).

While impacts to special-status bat species are not anticipated to be significant due to the lack of suitable habitat within the project area (WRA, September 2019 – **Exhibit B-1**), there is the potential for bat species to occur within the project area. To minimize potential impacts to bat species, including special-status bat species, to a less than significant level, **Mitigation Measure BR-2** will be implemented.

White-tailed kite is resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities (Dunk, 1995). Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall (Dunk, 1995). This species preys upon a variety of small mammals, as well as other vertebrates and invertebrates. The project site and adjacent areas have a moderate potential for this species to occur due to the presences of trees suitable for nesting, as well as grassland and open woodland for foraging. There were no observations of this species during the site visits (WRA, September 2019 - **Exhibit B-1**). Potential direct or indirect impacts on white-tailed kite would be considered potentially significant.

Migratory birds and raptors have the potential to nest within the trees throughout and adjacent to the development area. Tree removal and temporary and intermittent increases in noise levels may cause nest abandonment and death of young or loss of reproductive potential at active nests located near project activities. These are considered potentially significant impacts. **Mitigation Measure BR-3** will be implemented to minimize potentially significant impacts on migratory birds and raptors to a less that significant level.

Ephemeral Stream: An ephemeral drainage is located near proposed vineyard Block X. It does not meet the County's definition of a stream and does not require a setback pursuant to NCC Section 18.108.025. However, a no-developed setback of 50 feet from the drainage would be implemented (**Mitigation Measure BR-4** in question b-c below) to reduce impacts on water quality within the drainage (WRA, September 2019 - **Exhibit B-1**).

Mitigation Measure BR-2: The owner/permittee shall revise Erosion Control Plan #P19-00453-ECPA prior to approval to include the following measures to minimize impacts associated with the potential loss and disturbance of special-status bat species:

a. A qualified biologist (defined as having demonstrable qualifications and experience with the particular species for which they are surveying) shall conduct a pre-construction survey and habitat assessment in order to identify if bats are present and if there are suitable bat habitat trees within the project area. The survey and assessment shall be conducted no more than three months and no less than 14 days in advance of the planned tree removal. A copy of the survey shall be provided to the County Planning Division prior to commencement of work. If special-status bat species or bat maternity roosts are detected/present, roost trees shall be avoided with a minimum 10-foot buffer until the end of maternity roosting season or hibernation season (as determined by the qualified biologist), and an avoidance and removal plan shall be developed by the qualified biologist in conjunction with the County Planning Division and CDFW. The avoidance and removal plan shall be reviewed and authorized by the County Planning Division and implemented prior to commencement of the ECPA.
b. If the habitat assessment determines that trees proposed for removal contain suitable bat habitat, the following shall apply to removal or trimming of potential bat habitat trees:
    i. Bat habitat tree removal and trimming between August 31 and October 15, or between March 1 and April 15: Under the supervision of a qualified biologist, bat habitat trees shall be removed or trimmed in a two-phased system conducted over two consecutive days. The first day (in the afternoon), limbs and branches will be removed by a tree cutter using chainsaws only. Limbs with cavities, crevices and deep bark fissures will be avoided, and only branches or limbs without those features will be removed. On the second day, the entire tree will be removed. All felled trees shall remain on the ground for at least 24 hours prior to disposal to allow any present bats within the trees to escape.
    ii. Bat habitat tree removal or trimming between October 16 and February 28/29 of the following year or between April 16 and August 30: A qualified biologist shall conduct pre-construction survey within 14 days of project initiation to determine absence or presence of special-status bat species. A copy of the survey shall be provided to the County Planning Division and CDFW prior to commencement of work. If special-status bat species are not present removal can proceed as prescribed in Measure BR-2(b)(i). If bats are found to be present a plan for removal or exclusion will be developed by a qualified biologist in conjunction with the County Planning Division and CDFW. The removal or exclusion plan shall be reviewed and authorized by the County Planning Division and implemented prior to commencement of the ECPA.

Mitigation Measure BR-3: The owner/permittee shall revise Erosion Control Plan #P19-00453-ECPA prior to approval to include the following measures to minimize impacts associated with the potential loss and disturbance of special-status and nesting birds and raptors consistent with and pursuant to California Fish and Game Code Sections 3503 and 3503.5:

a. For earth-disturbing activities occurring between February 1 and August 31 (which coincides with the grading season of April 1 through October 15 – NCC Section 18.108.070.L, and bird breeding and nesting seasons), a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local avian resources with the potential to occur at the project site) shall conduct a preconstruction survey for nesting birds within all suitable habitat on the project site, and where there is potential for impacts adjacent to the project areas (typically within 500 feet of project activities). The preconstruction survey shall be conducted no earlier than seven (7) days prior to when vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than seven (7) days from the survey date, surveys shall be repeated. A copy of the survey shall be provided to the Napa County Conservation Division and the CDFW prior to commencement of work.
b. After commencement of work if there is a period of no work activity of seven (7) days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.
c. In the event that nesting birds are found, the owner/permittee shall identify appropriate avoidance methods and exclusion buffers in consultation with the County Conservation Division and the U.S. Fish and Wildlife Service (USFWS) and/or CDFW prior to initiation of project activities. Exclusion buffers may vary in size, depending on habitat characteristics, project activities/disturbance levels, and species as determined by a qualified biologist in consultation with County Conservation Division and the USFWS and/or CDFW.

d. Exclusion buffers shall be fenced with temporary construction fencing (or the like), the installation of which shall be verified by Napa County prior to the commencement of any earthmoving and/or development activities. Exclusion buffers shall remain in effect until the young have fledged or nest(s) are otherwise determined inactive by a qualified biologist.
e. Alternative methods aimed at flushing out nesting birds prior to preconstruction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or chemical (i.e., spraying nesting birds or their habitats) would be considered an impact to nesting birds and is prohibited. Any act associated with flushing birds from project areas should undergo consultation with the USFWS/CDFW prior to any activity that could disturb nesting birds.

b-c. The project site contains interior live oak woodland and blue oak woodland, which are considered sensitive habitats. Interior live oak woodland occurs on upland slopes, valley bottoms, and terraces in the Klamath Mountains, the Coast Ranges, the Sierra Nevada, Peninsular Ranges, Transverse Ranges, and the edges of the Great Valley. They are typically situated on shallow, moderately to excessively drained soils. Blue oak woodlands occur on valley bottoms, foothills, and rocky outcrops in the Klamath Mountains, Coast Range, Sierra Nevada Foothills, and Transverse Range. They are typically situated on low fertility, shallow, moderately to excessively drained soils within the California Floristic Province (WRA, September 2019 - **Exhibit B-1**). The project site contains approximately 24.8 acres of oak woodland, with 4.4 acres occurring in the proposed development area (approximately 17.4% of the total community type on the project site). As discussed in question a above, the proposed project would preserve more than 2:1 of the oak woodland on site; therefore, the proposed project would be in compliance with Policy CON-24 and the impact would be less than significant. In addition, the condition of approval listed in question *a* above would permanently preserve a minimum of 12.4 acres of blue oak woodland on the project site.

No wetlands were observed in the project site. The project site contains one ephemeral drainage located near the northern edge of proposed vineyard Block X that eventually drains to Suisun Creek. The ephemeral drainage contains a clear ordinary high water mark and bed-and-bank; therefore, it is likely jurisdictional under Section 404 of the Clean Water Act and Section 1600 of the California Fish and Game Code. However, the drainage is not considered a "County-definitional stream" pursuant to NCC Section 18.108.030. (WRA, September 2019 - **Exhibit B-1**).

While the project site's one aquatic resource (ephemeral stream) is outside of the development area and within the interior oak woodland that would be persevered onsite, potential indirect (or inadvertent) impacts on these features during construction and operation would be potentially significant. To reduce potential indirect impacts to the ephemeral stream as a result of construction and operation of the proposed project to a less than significant level, **Mitigation Measures BR-4** would be implemented.

Mitigation Measure BR-4: The owner/Permittee shall implement the following measures to minimize potential impacts to the on-site aquatic resource (ephemeral drainage) and to prevent the inadvertent encroachment into specified creek setbacks and associated riparian habitat during construction and subsequent vineyard operations:

a. The location of creek setbacks adjacent to vineyard development areas shall be clearly demarcated in the field, as necessary, with temporary construction fencing, which shall be placed at the outermost edge of required setbacks shown on the project plans. Prior to any earthmoving activities, temporary fencing shall be installed: the precise locations of said fences shall be inspected and approved by the Planning Division prior to any earthmoving and/or development activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated areas for the duration of erosion control plan installation and vineyard installation. The protection fencing shall remain in place for the duration of project implementation. All construction and related traffic will remain outside of the creek setback protective fencing to ensure that the creek, buffer zones, and associated riparian habitat and/or woodland remains undisturbed.
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 #P19-00453-ECPA shall be replaced on-site with fifteen-gallon trees at a ratio of 2:1 at locations approved by the planning director.

d. The project site (approximately 69.9 acres) is fenced generally around the periphery with a mix of cattle fencing (4 to 5-foot-tall, 3-4 wire strand) and wildlife exclusion fencing (6-foot-tall wire mesh). Proposed wildlife exclusion fencing would enclose proposed blocks individually and in clusters where appropriate; the fencing would be at least 6 feet tall with exit gates at the corners and would be comprised of no smaller than 6-inch by 6-inch squares (**Exhibit A-1**).

The project site is located within a mapped "Connections with Implementation Flexibility" which connects with an irreplaceable and essential corridor (CDFW 2021). The project site borders the southern portion of a mapped essential connectivity area. At the scale of landscape linkages, this tract provides connectivity between baylands of San Pablo Bay and areas from northern Napa County northward. Given the relatively small size of the project site and it being located along the southern boundary of an essential connectivity area, and the lack of apparent development impacts within the more central portion of this tract, agricultural expansion within the project site is in and of itself unlikely to result in any significant impacts to wildlife movement or migration at the landscape linkage scale. At a more local scale, the project site provides connectivity between a patchwork of undeveloped lands consisting primarily of woodland and grassland, and low-

density residential and agricultural developments. While the proposed vineyard blocks would result in portions of the site having reduced potential for on-site wildlife movement, the preservation/avoidance of streams within the project site, as well as the condition of the surrounding lands, would continue to allow for movement through the vicinity. The proposed wildlife exclusion fencing would not interfere substantially with wildlife movement and impacts are expected to be less than significant.

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

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

Fencing – Condition of Approval:

The owner/permittee shall provide a Deer Fencing Plan for #P19-00453-ECPA to be reviewed and approved by the Planning Department that shall be incorporated into Erosion Control Plan #P20-00117-ECPA. The revised Deer Fencing Plan shall be submitted within 30 days of approval of #P19-00453-ECPA. New Deer fencing (i.e. Wildlife Exclusion Fencing) shall generally be limited to the periphery of each vineyard block as modified by **Mitigation Measure BR-1** and include the following components:

- New fencing shall use a design that has 6-inch square gaps at the base (instead of the typical 3-inch by 6-inch rectangular openings) to allow small mammals to move through the fence.
- Exit gates shall be installed at the corners of wildlife exclusion fencing to allow trapped wildlife to escape. Smooth wire instead of barbed wire shall be utilized to top wildlife exclusion fencing to prevent entanglement.
- Any modifications to the location of wildlife exclusion fencing as specified in Erosion Control Plan #P19-00453-ECPA pursuant to the Vineyard Fencing Plan required by this condition shall be strictly prohibited, and would require County review and approval to ensure the modified wildlife exclusion fencing location/plan would not result in potential impacts to wildlife movement.

e. Based on the Biological Resources Reconnaissance Survey, project site contains a total of 24.8 acres of oak woodland (including interior live oak and blue oak woodland (1.96 acres within the development area). The proposed project would result in the removal of 1.96 of oak woodland (90% retention). Approximately 30 trees with a dbh greater than 6 inches are proposed for removal with the 4.8 gross acre development area.

Oak woodland is the most common land cover in the county occurring on approximately 162,000-acres (32% of the County's area). Approximately 1,124 acres of oak woodland or 0.7% of the total area of oak woodland in the County has been cleared for vineyard development between 1993 and 2014 (Napa County GIS, 2018). While oak woodlands may be one of the most common land covers within the County, their past conversion to residential and agricultural uses in conjunction with foreseeable oak woodland conversion to agricultural use is considered a potentially significant impact both on a project specific level and a cumulative level for projects that remove oak woodland[13]. Furthermore, there was only 2,903 acres of valley oak woodland remaining in the County in 2002, and only 62 acres of valley oak woodland in the Southern Interior Valleys evaluation area, in which the project parcel lies (Napa County Baseline Date Report, Biological Resources Section, Table 4-4 and Map 4-1, Version 1, November 2005). Given the limited distribution of this woodland type both valley oak woodlands and valley oak trees are considered to be a sensitive biotic community and species of limited distribution.

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 as described above.

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

[13] Napa County General Plan Draft Environmental Impact Report, Volume 1, Section 5.4, Biological Resources, February 2007

wetlands; minimize impacts on existing land forms by avoiding steep slopes, and preserving existing vegetation; and, reduce the loss of vegetation by protecting vegetation canopy cover and requiring minimum mitigation requirements.

As proposed, the project would preserve more than 2:1 of the oak woodland on site; therefore, the proposed project would be in compliance with Policy CON-24 and impact would be less than significant. In addition, **Mitigation Measure BR-1** indicated in subsection *a* above would permanently preserve a minimum of 8.8 acres of oak woodland on the project site and protect oak woodland in and near proposed Block V.

NCC Section 18.108.020(C) (General Provisions: Vegetation Retention Requirements) requires that parcels within the AW zoning district retain 70% of the vegetation canopy cover[14] based on the on-site canopy present on June 16, 2016. Because the 2017 Atlas Fire burned a portion of the oak woodland within the subject parcel and proposed project area. NCC Section 8.80.130B (Conservation regulations for fire-damaged properties and fire-damaged vineyards) states that, for the purposes of calculating the Vegetation Retention Requirements contained in subsection (C) of NCC 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.

Specific to vegetation canopy cover removal mitigation NCC Section 18.108.020(D) (Vegetation Removal Mitigation) requires that the removal of any vegetation canopy cover in the AW zoning district be mitigated by permanent replacement or preservation of comparable vegetation canopy cover, on an acreage basis at a minimum 3:1 ratio. NCC 18.108.020(D) prioritizes where the mitigation replacement and preservation areas should be allowed, whereby the first priority is for onsite replacement and/or preservation areas that generally occur on slopes less than 30% and outside of stream and wetland setbacks; if this cannot be reasonably accomplished, then onsite replacement and/or preservation may occur on slopes up to 50%, in areas that result in the highest biological and water quality protections, etc. NCC Section 18.108.020(E) (Preserved Vegetation Canopy Cover) requires preserved vegetation canopy cover to be protected (or otherwise enforceable restricted) thorough a perpetual protective easement or deed restriction preserving and conserving the preserved vegetation canopy cover.

Based on the analysis provided by the Applicant and review of historic aerial imagery and County GIS Vegetation mapping, the parcel contained approximately 15.1 acres of vegetation canopy cover in 2018, The proposed project would remove a total of 0.7 acres (approximately 4.6% of the parcel total) of oak woodland cover canopy based on 2018 conditions. Therefore, the proposed project has been designed to be in compliance with the 70% vegetation cover canopy retention requirement. Napa County Code Section 18.108.020(D) requires that removal of tree canopy on an acreage basis be mitigated at a 3:1 ratio: the project, if approved, would remove a total of 0.7 acres of tree canopy; therefore, the mitigation for canopy cover removal would require replacement and/or preservation of a minimum of approximately 2.1 acres. To ensure compliance with the requirements in NCC 18.108.020(D), **Mitigation Measure BR-1** includes a development restriction covering at least 2.1 acres of vegetation cover canopy (as detailed below): canopy cover preservation acreage can be combined with or otherwise included in overall oak woodland preservation acreage.

While the proposed project would achieve compliance with the 2:1 oak woodland retention provision of Policy CON-24 and NCC Section 18.108.020(C) by avoiding approximately 20.4-acres of the parcel's approximate 24.8-acres of oak woodland, and maintaining at least 70% of the parcel's vegetation cover canopy, the project may not be consistent with the purpose and intent of the Conservation Regulations and Policy CON-24a and Con-24c, without modification.

In particular, the proposed removal of two (2) valley oaks within proposed Vineyard Block X would be inconsistent with Policy CON-24c, in that oak species that are limited in distribution would be removed. Inconsistency with this General Plan Conservation Policies and the Conservation Regulations is considered a potentially significant impact, as well as a potential cumulative impact to oaks of limited distribution (i.e. Valley oak) and to oak woodlands in general, as detailed above.

To minimize these impacts to a less than significant level and achieve compliance with applicable General Plan Polices and the Conservation Regulations **Mitigation Measure BR-1** will include avoidance of the two (2) Valley oak trees within proposed Vineyard Block X, and provide them with a RPZ buffer that is a minimum of one-third larger than their driplines, consistent with the guidance in the County's Oak Woodland Management Plan and The University of California, Division of Agricultural and Natural Resources guidance. This measure will also include the permanent vegetation preservation requirements pursuant to NCC Section 18.108.020, and provisions associated with inadvertent tree removal, which is considered a potentially indirect impact. Implementation of **Mitigation Measure BR-1** would minimize these potentially significant direct, indirect and cumulative impacts to oaks and oak woodlands and associated habitat to a less than significant level, and ensure that the preservation of on-site oak woodland does not fall below the 2:1 ratio provided for in General Plan Policy CON-24, and the 3:1 vegetation canopy cover retention ratio provided for under NCC Section 18.108.020. Implementation of this specific measure is anticipated to reduce the project area by approximately 0.3 acres, and overall implementation of **Mitigation measure BR-1** is anticipated to reduce the project by approximately 0.6 acres.

[14] Napa County Code Section 18.108.030 defines "vegetation canopy cover" as "the biotic communities classified as oak woodland, riparian oak woodland, or coniferous forest based on the current Manual of California Vegetation (MCV) and as described in the Napa County Baseline Data Report (2005 or as amended)."

Implementation of **Mitigation Measure BR-1** would not substantially affect the feasibility of the proposed project or the continued viability of agricultural use of the project site, in that it would allow the owner/permittee to develop approximately 4.2 gross acres of new vineyard on the project site.

Mitigation Measure BR-1 also includes provision to ensure that oak trees and oak woodland outside the development area are not inadvertently removed as part of the proposed project, and because the proposed project would also be subject to the provisions of Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement), the following provisions would be incorporated as conditions of approval should the proposed project be approved:

Tree/Woodland Protection – Conditions of Approval:

- Prior to any earthmoving activities temporary fencing shall be placed at the edge of the dripline of trees to be retained that are located adjacent to the project site (typically within approximately 50-feet of the project site). The precise locations of said fences shall be inspected and approved by the Planning Division prior to the commencement of any earthmoving activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated protection areas for the duration of erosion control plan and vineyard installation.
- Trees removed that are not within the boundary of the project and/or not identified for removal as part of #P19-00453-ECPA shall be replaced onsite with fifteen-gallon trees at a ratio of 2:1 at locations approved by the director.
- The owner/permittee shall refrain from severely trimming the trees and vegetation to be retained adjacent to the vineyard conversion area.

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

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

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

Discussion

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

The following was utilized in this analysis and is incorporated herein by reference, in addition to Napa County GIS Archeological sensitive areas and Archeological sites layers:

- Tom Origer & Associates, August 26, 2014, Cultural Resource Study of Portions of the Property at 25 Quail Ridge Drive, Napa, Napa County, California

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

a-b. The cultural resource reconnaissance (Tom Origer & Associates, August 26, 2014) identified no cultural resources within one-mile radius of the project site.

Based on the distribution of known cultural resources and their environmental settings, it was anticipated that prehistoric archaeological sites could be found with the survey area. However, a field survey was completed by Eileen Barrow and Julianne Mercer on August 20, 2014 and no cultural resources were found within the project site.

Although no cultural resources were found within the project site, there is the possibility that buried archaeological deposits could be present and accidental discovery could occur. Therefore, the proposed project would be subject to the standard conditions of approval identified below to protect cultural resources that may be discovered accidently.

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

Cultural Resources – Conditions of Approval:

Prior to the commencement of vegetation removal and earth-moving activities of #P19-00453-ECPA, the owner/permittee shall provide documentation to the Napa County Planning Department that cultural sensitivity training for project personnel was conducted. A qualified cultural resources specialist, or designee, shall conduct training for project personnel regarding the appearance of cultural resources and the procedures for notifying cultural staff should materials be discovered. The owner/permittee shall ensure that project personnel are made available for and attend the training and retain documentation demonstrating attendance.

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

- In accordance with CEQA Subsection 15064.5(f), should any previously unknown historic or prehistoric resources, including but not limited to charcoal, obsidian or chert flakes, grinding bowls, shell fragments, bone, pockets of dark, friable solids, glass, metal, ceramics, wood or similar debris, be discovered during grading, trenching or other onsite excavation(s), earth work within 100-feet of these materials shall be stopped until a professional archaeologist certified by the Registry of Professional Archaeologists has had an opportunity to evaluate the significance of the find and suggest appropriate mitigation(s), as determined necessary.
- If human remains are encountered the Napa County Coroner shall be informed to determine if an investigation of the cause of death is required and/or if the remains are of Native American origin. Pursuant to Public Resources Code Section 5097.98, if such remains are of Native American origin the nearest tribal relatives as determined by the State Native American Heritage Commission shall be contacted to obtain recommendations for treating or removal of such remains, including grave goods, with appropriate dignity.
- All persons working onsite shall be bound by contract and instructed in the field to adhere to these provisions and restrictions.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. ENERGY. Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Discussion

Consistent with Public Resources Code Section 21100(b)(3), this impact analysis evaluates the potential for the proposed project to result in a substantial increase in energy demand and wasteful use of energy during project construction, operation and maintenance. The impact analysis is informed by Appendix G of the CEQA Guidelines. The potential impacts are analyzed based on an evaluation of whether construction and operation energy use estimates for the proposed project would be considered excessive, wasteful, or inefficient.

a. During construction of the proposed project, the use of construction equipment, truck trips for hauling materials, and construction workers' commutes to and from the project site would consume fuel. Project construction is anticipated to occur over six months. Construction activities and corresponding fuel energy consumption would be temporary and localized. In addition, there are no unusual project characteristics that would cause the use of construction equipment or haul vehicles that would be less energy efficient when compared with other similar agricultural construction sites within Napa County.

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

b. The transportation sector is a major end-user of energy in California, accounting for approximately 28% of total statewide energy consumption in 2019 (U.S. Energy Information Administration 2020). In addition, energy is consumed in connection with construction and maintenance of transportation infrastructure, such as streets, highways, freeways, rail lines, and airport runways. California's 30 million vehicles consume more than 16 billion gallons of gasoline and more than 3 billion gallons of diesel each year, making California the second largest consumer of gasoline in the world (CEC 2016). In Napa County, farm equipment (not including irrigation pumps) accounted for approximately 60% of agricultural emissions in 2014, with the percentage anticipated to increase through 2050 (Napa County 2018 - https://www.countyofnapa.org/DocumentCenter/View/9247/Revised-Draft-Climate-Action-Plan).

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☐	☒
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, 2005. Title 13, Chapter 10, 2485, updated through 2014.

d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Discussion

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

   i) No faults have been mapped on the project site, and the project site is not located on an active fault or within an "Earthquake Fault Hazard Rupture Zone" designated by the Alquist-Priolo Earthquake Zoning Act. The closest active fault to the project site is Green Valley fault, approximately 2.5 miles to the west of the project site (Napa County GIS faults and earthquakes layers). 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) Active landslides have not been identified within the project area (PJC & Associates Inc., March 2020, and Napa County PBES November 2015); however, the site has been identified to be within a large landslide deposit PJC & Associates Inc., March 2020; Napa County PBES November 2015; and Napa County GIS, Landslide Layers). Because of the shallow soils of the site (approximately 2 to 5 feet deep) the risk of seismically-induced landslides is considered to be nearly absent (PJC & Associates Inc., March 2020, and Napa County PBES November 2015), and therefore considered to be a less-than-significant impact (also see Subsection c below for additional discussion regarding slope stability and landslides).

b. The project site's soils are mapped as Bressa-Dibble Complex (Soil Series #114).

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

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

   Based on USLE modeling calculations prepared by Acme Engineering (**Exhibit C**), the proposed conversion of approximately 1.96 acres of oak woodland to vineyard and vineyard avenues is anticipated to reduce soil loss, or surface erosion, within the project site as compared to existing conditions (**Table 5**). Under existing conditions, the annual soil loss is anticipated to average 16.58 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 11.17 tons per acre per year, or a reduction of approximately 33% as compared to existing conditions.

Table 5 – USLE Soil Loss Analysis

Vineyard Block	Pre-project Soil Loss (tons/year)	Post-project Soil Loss (tons/year)	Difference	Percent Change (approximate)
V	2.02	0.77	1.25	-62%
W	3.18	2.61	0.57	-18%
X1	4.80	3.38	1.42	-30%
X2	3.31	2.74	0.57	-17%
X3	0.63	0.24	0.39	-62%
Y	2.64	1.43	1.21	-46%
Total	**16.58**	**11.17**	**5.41**	**-33%**

Source: Acme Engineering Inc, October 2021 – **Exhibit C**

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

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

Erosion and Runoff Control (i.e., Hydromodification) Installation and Operation – Conditions of Approval:
The following conditions shall be incorporated by referenced into Erosion Control Plan #P19-00453-ECPA pursuant to NCC Chapter 18.108 (Conservation Regulations):

- Permanent Erosion and Runoff Control Measures: Pursuant to NCC Section 18.108.070(L) installation of runoff and sediment attenuation devices and hydromodification facilities including, but not limited to straw wattles and permanent no-till cover, shall be installed no later than October 15 during the same year that initial vineyard development occurs. This requirement shall be clearly stated on the final Erosion Control Plan. Additionally, pursuant to NCC Section 18.108.135 "Oversight and Operation" the qualified professional that has prepared this erosion control plan (#P19-00453-ECPA) shall oversee its implementation throughout the duration of the proposed project, and that installation of erosion control measures, sediment retention devices, and hydromodification facilities specified for the vineyard have be installed and are functioning correctly. Prior to the first winter rains after construction begins, and each year thereafter until the proposed project has received a final inspection from the county or its agent and been found complete, the qualified professional shall inspect the site and certify in writing to the planning director, through an inspection report or formal letter of completion verifying that all of the erosion control measures, sediment retention devices, and hydromodification facilities required at that stage of development have been installed in conformance with the plan and related specifications, and are functioning correctly.
- Cover Crop Management/Practice: The permanent vineyard cover crop shall not be tilled (i.e., shall be managed as a no till cover crop) for the life of the vineyard and the owner/permittee shall maintain a plant residue density of 75% within the vineyard and vineyard avenues. The cover crop may be strip sprayed, with a strip no wider than 18 inches wide at the base of vines, with post-emergent herbicides: no pre-emergent sprays shall be used. In hand farmed blocks (Blocks V, X3, and Y) the cover crop will be spot sprayed to achieve 75% vegetative cover. Should the permanent no till cover crop need to be replanted/renewed during the life of the vineyard, cover crop renewal efforts shall follow the County "Protocol for Replanting/Renewal of Approved Non-Tilled Vineyard Cover Crops" July 19, 2004, or as amended.

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

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

c. Bedrock of the subject parcel and project site consists of a well-bedded sandstone, shale, claystone and Melange rocks of the Jurassic-Cretaceous Great Valley Sequence (PJC & Associates Inc., March 2020,). As discussed above, the project site is not in an area prone to landslides, ground failure or liquefaction. The proposed project identifies the soil types in the project area and addresses any potential soil instability. Therefore, the proposed project would not result in any significant impacts of on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse.

d. Soils on the project site have been classified according to the Soil Survey of Napa County (USDA, 1978) as Bressa-Dibble Complex (Soil Series #114), which exhibits rapid runoff potential, moderate to severe erosion potential, and a low to moderate shrink-swell potential (Acme Engineering, October 2019 - **Exhibits A-1** and **A-2**). In addition, no structures are proposed as part of the project and expansive soils pose little risk to vineyards and related agricultural improvements. Therefore, there would be no impacts associated with expansive soils.

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

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

Paleontological Resources – Conditions of Approval:

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

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

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

Discussion

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

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

In July 2015, the County recommenced preparation of the CAP to: i) account for present day conditions and modeling assumptions (such as methods, emission factors, and data sources); ii) address the concerns with the previous CAP effort as outlined above, iii) meet applicable state requirements, and iv) result in a functional and legally defensible CAP. As the part of the first phase of development and preparation of the CAP, the County released Final Technical Memorandum #1: 2014 Greenhouse Gas Emissions Inventory and Forecast, April 13, 2016. This initial phase included: i) updating and incorporating the County's community-wide GHG emissions inventory to 2014, and ii) preparing new GHG emissions forecasts for the 2020, 2030, and 2050 horizons. On July 24, 2018, the County prepared a Notice of Preparation of a Draft Focused EIR for the Climate Action Plan. The review period was from July 24, 2018 through August 22, 2018. The Draft Focused EIR for the CAP was published May 9, 2019. Additional information on the County CAP can be obtained at the Napa County Department of Planning, Building and Environmental Services or online at https://www.countyofnapa.org/589/Planning-Building-Environmental-Services.

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

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

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

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

GHGs are the atmospheric gases whose absorption of solar radiation is responsible for the greenhouse effect, including carbon dioxide (CO_2), methane, ozone, and the fluorocarbons, which contribute to climate change. CO_2 is the principal GHG emitted by human activities, and its concentration in the atmosphere is most affected by human activity. It also serves as the reference gas to which to compare other GHGs. Agricultural sources of carbon emissions include forest clearing, land-use changes, biomass burning, and farm equipment and management activity emissions. Equivalent Carbon Dioxide (CO_{2e}) is the most commonly reported type of GHG emission and a way to get one number that approximates total emissions from all the different gasses that contribute to GHG, as described in BAAQMD's CEQA Guidelines. In this case CO_2 is used as the reference atom/compound to obtain atmospheric carbon CO_2 effects of GHG. Carbon stocks are converted to CO_{2e} by multiplying the carbon total by 44/12 (or 3.67), which is the ratio of the atomic mass of a carbon dioxide molecule to the atomic mass of a carbon atom (http://ncasi2.org/COLE/faq.html).[15]

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

In addition to the one-time Construction Emissions, "Operational Emissions" of the vineyard are also quantified and include: i) any reduction in the amount of carbon sequestered by existing vegetation that is removed as part of the project (referred to as Operational Sequestration Emissions below); and ii) ongoing emissions from the energy used to maintain and farm the vineyard, including farm equipment and vehicles (such as tractors, haul trucks, backhoes, pick-up trucks, and ATVs) and worker vehicle trips (referred to as Operational Equipment Emissions below). See **Section XVII (Transportation)** for anticipated number of operational trips. Operational Emissions from the proposed vineyard would be modest when compared to one-time construction emissions (as discussed below), and a

[15] "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).

quantitative estimate would require many assumptions about what would happen during the next 100 years onsite under "project" and "no project" conditions (e.g., the life expectancy of the proposed vineyard and existing site vegetation, incidences of disease and fire, etc.).

Construction Emissions:

Equipment Emissions: As discussed in **Section III (Air Quality)**, three County Certified EIRs assessed and analyzed potential air quality and GHG emissions associated with vineyard development. Within those EIRs potential GHG emissions associated with construction equipment were calculated and disclosed. An estimation of potential construction equipment emissions per acre of vineyard development was derived using the most generous emissions results from these EIRs. The Circle-S Ranch EIR anticipated approximately 4,293 metric tons (MT) CO_{2e} of construction equipment emissions for a 459-acre vineyard development, resulting in approximately 9.4 MT CO_{2e} of construction equipment emissions per acre of vineyard development.[16] Using this emission factor it is anticipated that Construction Equipment Emissions associated with the proposed 4.8 gross acres of vineyard development would be approximately 45.1 MT CO_{2e} (4.8 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 4.8 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 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 project site, total carbon stocks for the project site are estimated to be approximately 190.6 MT C or approximately 699.5 MT CO_{2e} (**Table 6**).

Table 6 – Estimated Development Area Carbon Stocks/Storage

Vegetation Type/Carbon Storage	Development Area Acreage[1]	Carbon Storage/Stock per Acre (MT C/acre)	Total Carbon Storage (MT)	Total Carbon Storage in MT CO2e
Oak Woodland	1.96	95.1	186.4	684.1
Ruderal	2.98	1.4	4.2	15.4

[1] Based on WRA, Inc., September 2019, Biological Resources Assessment Report, Figure 2 'Biological Communities'
Sources: WRA, Inc., September 2019; Napa County Draft Climate Action Plan, March 2012; Napa County Conservation Division, October 2021

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%.[17] Using 50% as a more conservative estimate, the proposed project could result in one-time project site construction emissions from vegetation removal and soil preparation (i.e., grading and soil ripping) of approximately 653.3 MT CO_{2e} (**Table 7**).

Table 7 – Estimated Project Carbon Emissions Due to Vegetation Removal

Vegetation Type/Carbon Storage	Project Acreage[1]	Carbon Loss/Emission per Acre (MT C/acre)	Total Carbon Loss/Emission (MT)	Total Carbon Loss/Emission in MT CO2e
Oak Woodland	1.96	89.6	175.6	644.5
Ruderal	2.98	0.8	2.4	8.8
Total			**178.0**	**653.3**

[1] Based on WRA, Inc., September 2019, Biological Resources Assessment Report, Figure 2 'Biological Communities'
Sources: WRA, Inc., September 2019; Napa County Draft Climate Action Plan, March 2012; Napa County Conservation Division, October 2021

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 4.8-acre agricultural development would be approximately 3.2 MT CO_{2e} (4.8 multiplied by 0.67 MT CO_{2e}).

[16] 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.

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

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. The ruderal/developed land use is not identified by the 2012 Draft CAP and is considered similar to grasslands (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 1.0 MT C per year or 3.7 MT CO_2e per year.[18]

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

Project Emissions:

Based on the above estimates, the proposed project could result in one-time construction emissions of up to 698.4 MT CO2e and annual ongoing emissions associated with vineyard operations (including loss of sequestration) estimated to be approximately 6.9 MT CO_{2e} per year (**Table 8**).

Table 8 – 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	45.1	Vehicles and Equipment	3.2
Vegetation and Soil	653.3	Loss of Sequestration	3.7
Total	**698.4**	**Total**	**6.9**

Source: Napa County Conservation Division, October 2021

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 698.4 MT CO_{2e} by considering the size of the proposed vineyard in relation to projected vineyard development in the County. The program level EIR for the 2008 Napa County General Plan Update (SCH#2005102088 certified June 3, 2008) projected 12,500 acres of new vineyard development in the County between 2005 and 2030. The County concluded in the General Plan EIR that emissions from all sources over the planning period would result in significant and unavoidable GHG emissions despite measures adopted to address the impact. Because this determination was based on emissions from all sources, not just agriculture, the General Plan did not determine that emissions solely from projected agricultural development would result in significant unavoidable impacts. Pursuant to Section 15183(a) of the California Code of Regulation, projects that are consistent with the general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific effects which are peculiar to the proposed project or its site.

In the context of 12,500 acres of projected vineyard development, the proposed project would constitute less than approximately 0.04% of the vineyard development anticipated in the General Plan EIR. The proposed project also contains measures to reduce and/or offset emissions from vineyard development and vineyard operations such as maintaining a permanent no-till cover crop density of a minimum 75%, vegetated vineyard avenues, and the maintenance and establishment of grape vines. These measures in conjunction with the Air Quality conditions of approval (detailed in **Section III [Air Quality]**) would further reduce potential GHG air quality impacts associated with construction and ongoing operation of the proposed project.

For these reasons, the County does not consider one-time GHG emissions from the proposed vineyard development to be a significant impact on a project level basis or to be a "considerable" contribution to significant unavoidable cumulative impacts identified in the General Plan EIR.

As described above, total annual GHG emissions from ongoing operations are anticipated to be approximately 6.9 MT CO_{2e} per year, which is well below the threshold of 1,100 MT CO_{2e} per year that BAAQMD has defined as significant for CEQA purposes when considering land development projects. Therefore, ongoing project emissions, including loss of sequestration, due to the proposed project are considered less than significant.

[18] 1.96 acres of oak woodland times 0.425 MT C = 0.83 MT C, and 2.98 acres of ruderal times 0.057 MT C = 0.17, totaling 1.0 MT C

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

Discussion

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

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

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

No chemical storage facility currently exists on the project site and none are proposed as part of the project. Mixing of agricultural chemicals and cleaning would occur within the vineyard, at least 50 feet from any creek, drainage, or wetland area. Fertilizers would be applied as necessary to the vineyard and to ensure the specified percent vegetative cover crop is achieved. No pre-emergent herbicides would be strip sprayed in the vinerows for weed management. Project storage and staging areas would be located within proposed clearing limits.

Suisun Creek, a mapped blue line stream, is located directly west of the project site, and the proposed project as designed provides minimum setbacks of between 105 feet and 125 feet from Suisun Creek and 50 foot minimum from an ephemeral stream located north of Vineyard Block X, both consistent with the minimum setback requirements pursuant to NCC Section 18.108.025.

The risk of potentially hazardous materials reaching or affecting adjacent water courses or other aquatic resources is significantly reduced because: i) the proposed project would maintain buffers greater than 50 feet from the blue-line stream and at least 50 feet from ephemeral streams; ii) project staging 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 of approval that would further avoid and/or reduce potential impacts associated with routine transport and use of hazardous materials during project implementation and ongoing vineyard operations and maintenance. Also see the Water Quality Condition of Approval in Section X(e) (Hydrology and Water Quality) of this Initial Study.

Hazardous Materials – Conditions of Approval:

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

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

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

c. The closest school (Suisun Valley K-8 School) is located approximately 2.5 miles to the south of the project site. There are no schools proposed within 0.25 mile of the project site. Therefore, no impact would occur.

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

e. The closest public airport to the project site are the Napa County Airport and the Nut Tree Airport, both located approximately 10 miles to the southwest and northeast (respectively) 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. There would be negligible numbers 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 no permanent substantial increase in the number of people working or residing at the project site. Therefore, the proposed project would not impair implementation of or physically interfere with any adopted emergency response plan or emergency evacuation plan, and no impact would occur.

g. No structures are proposed as part of the project. The project site is located in an area identified as having moderate fire severity (CALFIRE 2007 - https://egis.fire.ca.gov/FHSZ/). The risk of fire in vineyards is very low due to limited amount of fuel, combustibles, and ignition sources that are present. Vineyards are irrigated and cover crops are typically mowed in May and August, thereby reducing the fuel loads within the vineyard. The removal of 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 May 10, 2021, 41 counties are under the drought state of emergency, including Napa County. The Governor directed the Department of Water Resources to increase resilience of water supplies during drought conditions. The County of Napa has not adopted or implemented any mandatory water use restrictions. The County requires all discretionary permit applications (such as use permits and ECPAs) to complete necessary water analyses in order to document that sufficient water supplies are available for the proposed project and to implement water saving measures to prepare for periods of limited water supply and to conserve limited groundwater resources.

The project site is located in the Suisun Creek watershed. The Suisun Creek watershed is located within Solano and Napa Counties and empties into Suisun Marsh and Suisun Bay.

One ephemeral drainage is located within the oak woodland is present in project area. There is also one reservoir located on the project site.

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

   The proposed project has been designed with site-specific temporary and permanent erosion control measures and features to prevent sediment, runoff, and pollutants from leaving the project site. Agricultural Erosion Control Plan #P19-00453-ECPA includes BMPs that are consistent with NCC Section 18.108.080(c), as well as with Regional Water Board guidance from the Stormwater Best Management Practice Handbooks for Construction and for New Development and Redevelopment, and the Erosion and Sediment Control Field Manual. Therefore, the proposed project is not anticipated to violate any water quality standards or otherwise substantially degrade surface or groundwater quality, and this impact would be less than significant.

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

   On June 28, 2011, the Board of Supervisors approved creation of a Groundwater Resources Advisory Committee (GRAC). The GRAC's purpose was to assist County staff and technical consultants with recommendations regarding groundwater, including data collection, monitoring, and well pump test protocols, management objectives, and community support. The County completed a countywide assessment of groundwater resources (Napa County Groundwater Conditions and Groundwater Monitoring Recommendations Report, 2011) and developed a groundwater monitoring program (Napa County Groundwater Monitoring Plan, 2013). The County also completed a 2013 Updated Hydrogeologic Conceptualization and Characterization of Groundwater Conditions (2013).

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

Groundwater Sustainability Objectives were developed and recommended by GRAC and adopted by the Board. The recommendations included the goal of developing sustainability objectives, provided a definition of sustainability, and explained the shared responsibility for Groundwater Sustainability and the important role of monitoring as a means to achieving groundwater sustainability.

In 2009, Napa County began a comprehensive study of its groundwater resources to meet identified action items in the County's 2008 General Plan update. The study, by Luhdorff and Scalmanini Consulting Engineers (LSCE), emphasized developing a sound understanding of groundwater conditions and implementing an expanded groundwater monitoring and data management program as a foundation for integrated water resources planning and dissemination of water resources information. The 2011 baseline study by LSCE, which included over 600 wells and data going back over 50 years, concluded that "the groundwater levels in Napa County are stable, except for portions of the MST district". Most wells elsewhere within the Napa Valley floor with a sufficient record indicate that groundwater levels are more affected by climatic conditions, are within historical levels, and seem to recover from dry periods during subsequent wet or normal periods.

The proposed vineyard would be irrigated using the four existing wells located on the project site as identified in the Project's WAA (ACME Engineering October 2019), that currently support the parcel's ±17 planted acers of vineyard. There are no wells within 500 feet of the project wells and there are no known natural springs that are being used for domestic or agricultural purposes within 1,500 feet of the project wells. A Water Availability Analysis (WAA) was prepared in order to determine the effects of the increase in water demand on groundwater as a result of the proposed project (Acme Engineering, October 2019 - **Exhibit D**).

It is anticipated that the proposed vineyard (4.1-net planted acres) would require up to approximately 2.47 acre-feet of water per year (AF/yr) over the short term (or vineyard establishment period which is typically considered the first three years after vine planting) and 1.64 AF/yr over the long term, or approximately 0.6 acre-feet of water per planted acre per year while the vineyard is being established, and 0.4 AF/yr once the vineyard is established. Combining the annual domestic, livestock and vineyard (existing and proposed) water usage results in an annual total water usage of 13.2 AF/yr over the long term, and 14.0 AF/yr over the short term for the subject parcel.

There are currently four wells on the project site that can provide water for agricultural uses as identified in the Project's WAA (ACME Engineering October 2019). Based on disclosures, technical studies, and analysis in the P14-00356-ECPA *Quantum Limit Vineyard Conversion Negative Declaration* (Napa County PBES, November 2015, during normal years 78.0 acre-feet (or 36% of the average annual precipitation) is estimated to infiltrate into the local aquifer as annual average bedrock groundwater recharge. During dry years, the groundwater recharge was anticipated to amount to 29.0 AF/yr (or 19% of the total average annual precipitation).

The four existing wells are capable of sustaining the following annual yields: Well No. 1, 15.91 AF/yr; Well No. 2, 23.87 AF/yr; Well No. 3, 47.73 AF/yr; and, Well No. 4, 62.05 AF/yr.

After the proposed vineyard development, the estimated long term water usage on the project site (approximately 13.2 acre-feet per year) corresponds to 17% of the project site's estimated annual groundwater recharge under normal year conditions, and 46% under dry year conditions. Similarly, the estimated short term water usage on the project site (approximately 14.0 acre-feet per year) corresponds to 18% of the project site's estimated annual groundwater recharge under normal year conditions, and 48% under dry year conditions.

Based on this information, water from Well 1 alone, which happens to be the least productive well, would meet the water demand needs on the project site and the proposed project would not adversely affect the annual recharge capabilities of the existing wells. Therefore, there will be no significant adverse effects of the proposed project on the groundwater supply.

Furthermore, as indicated in the Background Section of this Initial Study (Pages 3 and 4) the existing vineyard on the parcel was approved under #P14-00356-ECPA (as Modified by #P17-00146). The #P14-00356-ECPA approval included a project specific condition of approval limiting groundwater use[19], and the #P17-00146-ECPA modification approval included the County's standard groundwater management

[19] P14-00356-ECPA COA #:12 - The permittee shall (at the permittee's expense) provide well monitoring data monthly and the total annual groundwater pumped. Data requested shall include, but not necessarily be limited to, water extraction volumes and static well levels. Water usage shall be minimized by use of best available control technology and best water management conservation practices. **i**). No new on-site or off-site water sources, including but not limited to wells, imported water, new ponds/reservoir(s) or other surface water impoundments, or use of an existing pond shall be permitted without additional environmental review and may be subject to a modification to this ECPA. A new Water Availability Analysis shall be required prior to approval of any new water source(s) on the property. **ii).** All monitoring shall commence within six months of the issuance of the ECPA, or immediately upon commencement of the ECPA, whichever occurs first and shall be submitted annually thereafter. **iii)** The monitoring required by these conditions shall verify that the water use assumptions and the actual water use are consistent with the usage and assumptions analyzed in the Water Availability Analysis prepared by Balance Geo (March 2015) for the Quantum Limit Vineyard. If the actual water usage is greater than what was assumed in the WAA, the report shall analyze whether the increased water usage is likely to have potential impacts and whether it results in the annual water allocation of 34.75**1** acre-feet per year (af/yr) in normal years and 29 af/yr in dry years (dry years are defined as70% or less of normal rainfall) for the project being exceeded. If the annual water allocation is exceeded, the report shall recommend ways in which water usage can be reduced so as not to exceed the allocation the following year. All recommendations shall be immediately implemented to the satisfaction of the PBES Director. **iv)** If after two years of reporting the monitoring shows that the annual water allocation identified above continues to be exceeded, this ECPA shall be scheduled for review by the PBES Director and possible modification, revocation or suspension. **v)** Groundwater pumping shall not exceed 34.75 af/yr in normal years and 29 af/yr in dry years.

condition of approval[20], both of which will be carried forward in this project (should it be approved) through implementation of the following project specific condition. The groundwater use limitations in this and previous conditions are anticipated to further minimize potential impacts to groundwater.

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.

No new on-site or off-site water sources, including but not limited to wells, imported water, new ponds/reservoir(s) or other surface water impoundments, or use of an existing pond shall be permitted for vineyard irrigation without additional environmental review and may be subject to a modification to this ECPA. A new Water Availability Analysis shall be required prior to approval of any new water source(s) on the property.

All monitoring shall commence within six months of the issuance of P19-00453-ECPA, or immediately upon commencement of the ECPA, whichever occurs first and shall be submitted annually thereafter. All monitoring required by these conditions shall verify that the water use assumptions and the actual water use are consistent with the usage and assumptions analyzed in the Water Availability Analysis prepared by ACME Engineering (October 2019) for the Quantum Limit Vineyard II project and Napa County November 2015.

Groundwater pumping shall not exceed 34.75 acre-feet per year (AF/yr) in normal years and 29 AF/yr in dry years (dry years are defined as 70% or less of normal rainfall).

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. These features include a no-till cover crop with vegetative cover density of 75% (including vegetated avenues and turnaround avenues), and the annual application of straw mulch cover on all disturbed areas at a rate of 3,000 pounds per acre. Vineyard avenues and turn spaces would be maintained with the minimum vegetative cover density as specified for the individual vineyard block (75%). These features would slow and filter surface runoff water, thereby minimizing sediment, nutrients, and chemicals from leaving the project site and entering nearby aquatic resources. Refer to **Exhibit E** for details related to the following discussion.

[20] P17-00146-ECPA COA #9 - Groundwater management – Wells. This condition is implemented jointly by the Public Works and PBES Departments: The 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 will be provided to the County, if the PBES Director determines that substantial evidence1 indicates that water usage at the vineyard is affecting, or would potentially affect, groundwater supplies or nearby wells. If data indicates the need for additional monitoring, and if the applicant 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 will 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 will 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 evidence1 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 permittee, or revocation of this permit, as necessary to meet the requirements of the County Code and to protect public health, safety, and welfare.

Proposed erosion control and project features that have the potential to alter natural drainage patterns include straw wattles and mulching. 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 Acme Engineering, Inc. (Acme Engineering, October 2021 - **Exhibit E**). The development area is located within the Suisun Creek watershed. Runoff leaving the project site drains toward the western edge of the project site, towards Suisun Creek. The Hydrologic Analysis utilized the Natural Resource Conservation Service Technical Release 55 (TR-55) method to conclude that there would not be an increase in peak flow for all subareas in the development area (**Table 9**). 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 remain the same as existing conditions.

Table 9 – Hydrologic Modeling Calculations (TR-55) Results: Runoff Rates

	Peak Discharge Flow (cfs) by 24-hour Storm Event Frequency Return Interval (cubic feet/second)			
	2-year	**10-year**	**50-year**	**100-year**
Subarea A				
Pre-project conditions	3.74	7.21	10.84	12.36
Post-project conditions	3.54	6.95	10.64	12.17
Change (cfs)	-0.20	-0.26	-0.20	-0.19
Change (%)	-5.3	-3.6	-5.3	-1.5
Subarea B				
Pre-project conditions	1.14	2.21	3.31	3.78
Post-project conditions	1.04	2.09	3.19	3.66
Change (cfs)	-0.10	-0.12	-0.12	-0.12
Change (%)	-8.8	-5.4	-5.4	-5.4
Subarea C				
Pre-project conditions	1.59	3.08	4.62	5.27
Post-project conditions	1.32	2.75	4.28	4.93
Change (cfs)	-0.27	-0.33	-0.34	-0.34
Change (%)	-17.0	-10.7	-7.4	-7.4
Subarea D				
Pre-project conditions	1.11	2.30	3.58	4.13
Post-project conditions	1.11	2.30	3.58	4.13
Change (cfs)	0	0	0	0
Change (%)	0	0	0	0
Subarea E				
Pre-project conditions	0.16	0.33	0.51	0.59
Post-project conditions	0.16	0.33	0.51	0.59
Change (cfs)	0	0	0	0
Change (%)	0	0	0	0

Source: Acme Engineering, Inc., October 2021, WinTR-55 Hydrology Report, Quantum Limit (**Exhibit E**)

The proposed project's improvement of 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 anticipated to decrease soil loss as compared to existing conditions. Therefore, the proposed project would have a less than significant impact with respect to alterations of existing drainage patterns of the site or area that would result in increased runoff, or considerable on or offsite erosion, siltation, or flooding.

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

In addition, pursuant to NCC Section 18.108.135 (Oversight and Operation) projects requiring an erosion control plan would be inspected by the County after the first major storm event of each winter until the proposed project has been completed and stable for three years to ensure that the implemented erosion control plan is functioning properly[21]. Furthermore, pursuant to NCC Section 18.108.135 (Oversight and Operation) projects requiring an erosion control plan will be inspected by the County after the first major storm event of each winter

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

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

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

e. The proposed project would not have an adverse impact on water quality because the ECPA has been designed to keep polluted runoff and sediment from leaving the project site. As discussed in **Section IX (Hazards and Hazardous Materials)**, the project proposes the use of potentially hazardous materials during implementation activities (i.e., oil, gasoline, and transmission fluids associated with construction equipment) and the application of chemicals (i.e., fertilizers) for ongoing vineyard maintenance. Only federal and/or California approved chemicals would be applied to the vineyard in strict compliance with applicable state and federal law. As discussed in **Sections IV (Biological Resources)** and **IX (Hazards and Hazardous Materials)**, buffers provided in the ECP adjacent to the watercourse 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 decrease times of concentration in relation to existing conditions (as discussed in question c above), the proposed cover crop and buffers would be able to effectively trap and filter sediments, thereby minimizing their entry into nearby water resources.

As discussed above and in **Section VII (Geology and Soils)**, the proposed project has been designed with site-specific temporary and permanent erosion and runoff control measures and features to prevent sediment, runoff, and pollutants from leaving the project site. As such, the proposed project is anticipated to reduce soil loss and sedimentation by approximately 5.41 tons/year, have no effect on runoff rates, and maintain project site drainage characteristics as compared to existing conditions. The ECPA includes BMPs that are consistent with NCC Section 18.108.080(c), as well as with Regional Water Board guidance from the Storm Water Best Management Practice Handbooks for Construction and for New Development and Redevelopment, and the Erosion and Sediment Control Field Manual.

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

Water Quality – Condition of Approval:

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

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

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

Discussion

a. The proposed site is in a rural area of Napa County and the nearest established community, Fairfield, is approximately 3.5 miles southeast 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 consist predominantly of undeveloped land, scattered rural residential, and vineyards. Surrounding parcels are zoned Agricultural Watershed (AW) in the Napa County General Plan Land Use Element. Vineyards and associated improvements are permitted uses under these designations.

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

- The proposed project is consistent with NCC Section 18.108.010, which requires that soil loss and runoff as a result of a project be minimized to protect water quality. As discussed in **Sections VII (Geology and Soils)** and **X (Hydrology and Water Quality)**, the proposed project is anticipated to decrease soil loss and potential sedimentation by approximately 33% and maintain runoff conditions as compared to existing conditions.
- The proposed project is consistent with Policies CON-48 and CON-50c, which require post-development sediment erosion conditions and runoff characteristics not be greater than pre-development conditions. As discussed in **Section VII (Geology and Soils)** and **Section X (Hydrology and Water Quality)** the project as proposed would reduce soil loss, sedimentation, and maintain runoff characteristics as compared to existing conditions.
- The proposed project with implementation of **Mitigation Measures BR-1 through BR-4** is consistent with Policies CON-13 and CON-16, which require discretionary projects consider and avoid impacts to fisheries, wildlife habitat, and special-status species through evaluation of biological resources. A Biological Resources Reconnaissance Survey was prepared for the proposed project. The proposed project as proposed would avoid potential direct, indirect, and cumulative impacts to special-status plant species and associated habitat occurring on the project site. With implementation of **Mitigation Measures BR-2** and **BR-3** potential impacts to special-status bat and bird species would be avoided. Furthermore, implementation of these measures would not affect the feasibility of the proposed project in that, impacts to special-status species and their habitat can be avoided.
- With implementation of **Mitigation Measures BR-1** through **BR-4** and the fencing and tree/woodland conditions of approval, the proposed project is consistent with Goals CON-2 and CON-3, which require the continued enhancement of existing levels of biodiversity and protection of special-status species and habitat, and the County Conservation Regulations through preservation of natural habitats and existing vegetation. With these measures and conditions, the proposed project would maintain levels of biodiversity and would avoid impacts to special-status plant and animal species.
- With implementation of **Mitigation Measures BR-1** through **BR-4** and the fencing and tree/woodland conditions of approval, the proposed project is consistent with Policy CON-13, which requires discretionary projects to consider and avoid impacts to fisheries, wildlife habitat, and special-status species, and Policy CON-17, which requires the preservation and protection of native grasslands, sensitive biotic communities, and habitats of limited distribution and no net loss of sensitive biotic communities.
- The proposed project is consistent with CON-16, which requires discretionary projects prepare an evaluation of biological resources. A Biological Resources Reconnaissance Survey was prepared for the proposed project (**Exhibit B-1**).
- The proposed project is consistent with Policy CON-30, which encourages the avoidance of wetlands, as there are no wetlands within the project site.
- The proposed project is consistent with Policy CON-18, which encourages the reduction of impacts to habitat conservation and connectivity. With incorporation of the fencing conditions of approval, and the proposed project's small amount of proposed new fencing, wildlife movement would not be impaired.
- The proposed project is consistent with Policies CON-48 and CON-50c, which require pre-development sediment erosion conditions and runoff characteristics following development to be no greater than pre-project conditions. As discussed in **Section VII (Geology and Soils)** and **Section X (Hydrology and Water Quality)**, with incorporation of the Permanent Erosion and Runoff Control Measures condition of approval, the proposed project would reduce soil loss and sedimentation, and result in no change to runoff.
- The proposed project is consistent with Policy CON-65b. Due to the proposed project's scope and scale, its construction and operational GHG emissions, as disclosed in **Section VIII (Greenhouse Gas Emissions)**, are anticipated to be less than significant.
- The proposed project is consistent with Policy AG/LU-1, which states that agricultural and related activities are the primary land uses in Napa County, as the proposed project is vineyard development and would increase agriculture uses in the County.
- The proposed project is consistent with the General Plan land use designation of AWOS, and is therefore consistent with Policy AG/LU-20.

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Discussion

a-b. The project site is not in an area with a known mineral resource of value to the region or state or within a known mineral resource recovery area (Napa County Baseline Date Report, Figure 2-2 and Map 2-1, Version 1, November 2005; Napa County General Plan Map, December 2008; Special Report 205, Update of Mineral Land Classification, Aggregate Materials in the North San Francisco Bay Production-Consumption Region, Sonoma, Napa, Marin and Southwestern Solano Counties, California Geological Survey, 2013). The nearest known mineral resource area in Napa County is the Syar Napa Quarry, located approximately 7.5 miles 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 Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. NOISE. Would the project:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion

a-b. The project site is located in a rural setting where surrounding parcels are generally undeveloped, planted with vineyards and contain wineries. The nearest residences are located between 0.1 and 0.25 mile south of the project site (approximately 530 feet and 1,320 feet, respectively) and approximately 0.5 mile (±2,640 feet) east of the project site. 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 10** characterizes typical equipment noise levels at a reference distance of 50 feet. As identified in **Table 10**, equipment used for vineyard development could produce a maximum of 89 (A-weighted decibels) dBA at a distance of 50 feet.

Table 10 – 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 11 characterizes the typical reduction in construction equipment noise levels as the distance increases from the source, based on a source noise level of 90 dBA.

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

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

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

Based on distances to existing residences, noise associated with project construction would be approximately 55 dBA to 65 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 12** 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 12 – 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 below 60 dBA at the closest existing offsite residences.

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

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

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

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

Discussion

a. The proposed project involves earthmoving activities and the installation and maintenance of erosion control measures in connection with the development and cultivation of vineyard. It does not involve the construction of new homes, businesses, roads, or infrastructure (e.g., water, sewer or utility lines) that would directly or indirectly induce substantial unplanned population growth. Construction and installation activities associated with the proposed project would generate a minimal number of 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 approximately 17 acres of existing vineyard, two residences, grazing lands, developed lands and access roads.

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

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

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

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

The proposed project is expected to generate approximately four vehicle/truck round trips per day during construction. Four truck trips would deliver and remove heavy equipment at the start and end of project construction. Typical construction equipment anticipated for proposed project implementation includes a crawler tractor (D8 or larger), tracker/trailer, backhoe, and a trencher. Pruning would occur approximately two days of the year and is anticipated to generate six daily employees, resulting in approximately four round trips per day during pruning. Weed control would occur between April and June (outside of pruning months) twice a year and is anticipated to generate up to two workers. Harvest would occur approximately two days of the year and is anticipated to generate up to six daily employees, resulting in approximately four round trips per day during harvest. One grape haul truck would be used during harvest. Vehicular equipment for ongoing vineyard maintenance is anticipated to include a tractor/trailer, a forklift, and passenger cars and/or light trucks. Some of this traffic already exists onsite due to the operation and maintenance of the existing vineyard. Construction traffic would be intermittent during non-peak hours, generally arriving between 6 a.m. and 7 a.m. and departing between 2 p.m. and 3 p.m. Traffic associated with routine vineyard operation and maintenance, including harvest, would also be intermittent during the non-peak hours, generally arriving around 3 a.m. and departing around 6 a.m.

The project site is accessed from Quail Ridge Drive, approximately 0.25 mile south of its intersection with Wooden Cross Road. Trucks and other equipment would use County roads or State highways for very short periods during construction and subsequent vineyard operation.

As indicated above, Technical Guidelines provide a screening criterion that could be used to determine whether a VMT analysis is warranted for small projects, which are defined as projects that would generate fewer than 110 trips per day and may generally be assumed to cause less-than-significant transportation impacts. As indicated above, construction of the proposed project would generate approximately four round trips per day, and periodically up to two one-way truck trips per day. And vineyard operation would generate during harvest approximately six to one-way worker trips, and two one-way truck trip per day (resulting in up to eight round trips per day): Other typically vineyard operations (as outlined above) are anticipated to generate up four one-way trips per day during the days these activities occur. Therefore, daily trips (including passenger vehicle trips and truck trips) generated by the proposed project would be well below the Governor's Office of Planning and Research's recommended screening criterion threshold for small projects generating fewer than 110 trips per day. Additionally, daily trips associated with the project would be temporary and seasonal in nature, further supporting conformance and observance of this screening criterion.

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

system, including transit, roadway, or designated bicycle and pedestrian facilities or with CEQA Section 15064.3(b). Therefore, the impact would be less than significant.

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

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

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

Discussion

Notice of the proposed project was sent to the Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, and Yocha Dehe Wintun Nation on November 21, 2019. The County received a response letter from Yocha Dehe Wintun Nation on February 3, 2020 indicating that the project area is within the aboriginal territories of the Yocha Dehe Wintun Nation, requested that the Tribe be contacted if any new information or cultural items are found, and recommended cultural sensitivity training for project personnel prior to construction. The County replied on March 25, 2021 indicating that the recommendation to provide cultural sensitivity training onsite prior to project initiation would be included in the conditions of approval should the application be approved, and that consultation was closed.

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 November 21, 2019 consultation invitation was received, on March 25, 2021, the County sent a consultation closure notice to the Tribes.

a-b. As discussed in **Section V (Cultural Resources)** the proposed project's Cultural Resource Reconnaissance (Tom Origer & Associates, August 26, 2014), identified no cultural resources within a one-mile radius of the project site. Furthermore, no resources that may be significant pursuant to Public Resources Code Section 5024.1(c) have been identified or are anticipated onsite. The Cultural Resources conditions of approval discussed in **Section V (Cultural Resources)** would avoid and reduce potential impacts to unknown resources.

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

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

Discussion

a. The proposed project would generate a minimal number of 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 four existing groundwater wells would provide irrigation water to the vineyard.

An additional 0.1 acre of earth disturbance would be required for trenching and installation of approximately 710 feet of new irrigation mainline, which would be installed to provide irrigation water to the proposed vineyard development areas. The proposed project also would include the installation of a limited number of onsite storm water runoff 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 features is described in **Sections IV (Biological Resources), VII (Geology and Soils),** and **X (Hydrology and Water Quality)**. As discussed in the referenced sections, the environmental impacts of construction of these features, with incorporation of standard conditions identified in **Sections III (Air Quality), IV (Biological Resources), V (Cultural Resources)** and **IX (Hazards and Hazardous Materials)**, would result in a less than significant impact.

b. The 4.8 gross acres of vineyard (approximately 4.1 net acres) would be irrigated by the four existing wells one the parcel. Three of the four wells also provide water to the two residences, landscaping, livestock and existing vineyards. It is anticipated that long-term water use for the 4.1-net acres of proposed vineyard is estimated to be approximately 1.64 acre-feet of water per year. Irrigation would occur with groundwater.

Implementation of the proposed project would not generate wastewater and would not result in the construction or expansion of a water or wastewater treatment facility. Therefore, the proposed project would have a less than significant impact on water supplies. Water availability and water use are discussed in greater detail in **Section X (Hydrology and Water Quality)**.

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

d-e. Rock generated during vineyard preparation would be utilized onsite for decoration or on existing roads as road base. Any leftover rocks would be stockpiled within the development areas temporarily, if needed. Solid waste generated during construction activities (e.g., trash, discarded building materials, debris, etc.) would be negligible and would be cleared daily, or as necessary. Implementation of the proposed project would include pruning and harvesting activities which would generate waste material (cane). This material would be placed in designated collection areas or containers and would be cleared daily, or as necessary, and regular removal and proper disposal would be

required. Therefore, the proposed project would not generate a volume of waste that would need to be disposed of at a landfill that would exceed the permitted capacity of applicable landfills serving the project area. Furthermore, all waste would be disposed of in accordance with federal, state, and local statues and regulations. Therefore, no impact would occur.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. **WILDFIRE.** If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slop instability, or drainage changes?	☐	☐	☒	☐

Discussion

The project site is located in a State Responsibility Area (SRA) that is designated as a Moderate Fire Hazard Severity Zone and is within a Federal Responsibility Area (CALFIRE, 2007, Napa County GIS Fire Hazard Layer). The project site is generally located in the western facing foot slopes of Okell Hill south of Gordon Valley and east of Suisun Valley. Elevations within the project site range from approximately 400 to 750 above msl.

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

b-c. Project construction would require the use of vehicles and heavy equipment for grading and other activities, and these vehicles and equipment could spark and ignite flammable vegetation. During construction, the risk of igniting a fire would be low because vegetation would be cleared prior to developing the vineyard, and the risk would be temporary 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 not be an increase in peak flow in the development area (see **Section X [Hydrology and Water Quality]**). The two onsite residences and three residences closest to the proposed vineyard are located on gently to steeply sloped terrain. Therefore, there are no structures or people that would be exposed to downslope or downstream flooding or landslides and the impact would be less than significant.

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

Discussion

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

a. As discussed in this Initial Study, implementation of #P19-00453-ECPA, with the incorporation of identified mitigation measures and conditions of approval (should the proposed project be approved), would not have the potential to significantly degrade the quality of the environment.

   Implementation of **Mitigation Measures BR-1 through BR-4** would avoid potential direct and indirect impacts to special-status bat and bird species and their habitat. The proposed new vineyard blocks would be fenced individually and in clusters where appropriate. Given the relatively small size of the project site (relative to the width of the corridor tract) and the lack of apparent development impacts within the more central portion of this tract, agricultural expansion within the project site is in and of itself unlikely to result in any significant impacts to wildlife movement or migration at the landscape linkage scale. While the proposed project (vineyard blocks) would result in portions of the site having reduced potential for on-site wildlife movement, the retention of blocks of vegetation with direct connectivity with similar habitats on neighboring properties would allow for continued local wildlife movement. As such, the proposed wildlife exclusion fencing would not introduce any new movement barriers to wildlife and impacts to wildlife movement are expected to be less than significant, and the range of special-status plant species would not be restricted, cumulative impacts are anticipated to be less than significant. There are no blue-line streams onsite and the project would not require stream setbacks. With incorporation of standard conditions to protect cultural resources that may be discovered accidently, significant impacts to cultural resources are not expected (**Section V [Cultural Resources]**). Therefore, the proposed project as designed with the incorporation **Mitigation Measures BR-1 through BR-4** and conditions of approval, would have a less-than-significant potential to degrade the quality of the environment.

b. The project site is located within the Suisun Creek watershed. The Suisun Creek drainage area contains approximately 3,292.5 acres. In 1993, vineyard acreage within this drainage was approximately 101.3 acres, or 3.1% of the drainage. Since 1993 approximately 57.4 acres of additional vineyard (or 1.7% of the drainage) have been developed to vineyard, resulting in approximately 4.8% of the drainage (or approximately 158.7 acres) containing vineyard.

   It is estimated, based on evaluation of the County's GIS layer identifying Potentially Productive Soils within the Suisun Creek Drainage, that there are approximately 1,205.1 acres (37% of the drainage) having the potential to be developed to vineyard. This, in conjunction with existing and approved vineyard development (approximately 158.7 acres), results in a total potential build out of approximately 1,363.8 acres or approximately 41.4% of the drainage. The Potentially Productive Soils layer includes lands with characteristics that have been found to be suitable for potential future vineyard development; however this total does not take into consideration other site-specific limitations such as water courses requiring setbacks, wetlands, other water features, rare or special-status plants and animal species, or cultural resources, nor does the layer take into account other factors influencing vineyard development, such as sun exposure, soil type, water availability, or economic factors.

While it is not possible to quantify precisely the acreage and location of additional vineyard development that may be proposed by property owners in these drainages in the future, it is possible to make a conservative estimate based on previous trends. To estimate the amount reasonably foreseeable vineyard that may be developed over time, the acreage of vineyard development including approved vineyard projects in the cumulative environment (i.e., Suisun Creek Watershed) over the last 28 years (1993-2021) were used to project an estimation of vineyard development for the next three to five years. Over the past 28 years within the Suisun Creek Drainage, approximately 5.7 acres of agriculture were developed per year (158.7 divided by 28). Combined with Napa County policies and other site selection factors that limit the amount of land that can be converted to vineyard, the development of approximately 17.1 to 28.5 acres over the next three to five years within the Suisun Creek Drainage are considered reasonable estimates. NCC Chapter 18.108 includes policies that require setbacks of 35 to 150 feet from watercourses (depending on slopes), and General Plan Conservation Policy CON-24c that requires the retention of oak woodland at a 2:1 ratio, which limits the amount of potential vineyard acreage that could be converted within the watershed. It has been the County's experience with ECP projects that there are generally site-specific issues, such as oak woodland preservation, wetlands, other water features, special-status plant and animal species, or cultural resources that further reduce areas that can be developed to other land uses. Additionally, the vineyard acreage projections for the next three to five years do not consider environmental factors that influence vineyard site selection, such as sun exposure, soil type, water availability, slopes greater than 30%, or economic factors such as land availability, cost of development or investment returns.

Air Quality and GHG - Sections III and VIII:

The proposed project (#P19-00453-ECPA) includes the removal of vegetation and installation of vineyard and erosion control measures concurrent with other projects in the San Francisco Bay Area Air Basin that would generate emissions of criteria pollutants, including suspended PM and equipment exhaust emissions. For construction-related dust impacts, the Regional Water Board recommends that significance be based on the consideration of the control measures to be implemented (Regional Water Board, May 2017). As discussed in **Section III** (**Air Quality**) and shown in **Table 3** (Emissions from Vineyard Development and Operation) criteria pollutant emissions associated with development and operations are anticipated to be well below identified thresholds, and therefore are not expected to result in project or cumulatively significant impacts. Additionally, the proposed project would be subject to standard air quality conditions of approval (should the proposed project be approved) that requires implementation of Air Quality BMPs to further reduce potential less than significant air quality effects of the proposed project and ongoing operation. Conversion of existing vegetation and disturbance of soil would result in releases of carbon dioxide, one of the gasses that contribute to climate change (**Tables 6** and **7**). 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. Additionally, implementation of **Mitigation Measure BR-1**, which would reduce project acreage by approximately 0.6 acres would further reduce potential air quality impacts.

Biological Resources - Section IV:

A project-specific Biological Resources Reconnaissance Survey (WRA, September 2019 - **Exhibit B-1**) was performed for the proposed project to evaluate potential habitat loss and disturbance to plant and wildlife species as a result of the proposed project. The reconnaissance survey included a records search to identify the presence or potential presence of special-status species within the project area. The records search included the USFWS, CNDDB, and CNPS databases. As discussed in **Section IV** (**Biological Resources**), no special-status plant species or wetlands were identified in the project site. Three special-status animal species have the potential to occur within the project site; however, with the implementation of **Mitigation Measures BR-1** through **BR-4**, impacts on these species would be less than significant. Therefore, the proposed project would not contribute to a cumulatively significant impact to special-status plants and animals or habitats.

Cultural and Tribal Resources – Sections V and XVIII:

The cultural resource reconnaissance (Tom Origer & Associates, August 26, 2014) identified no cultural resources within a one-mile radius of the project site. With the incorporation of standard conditions to protect cultural and tribal cultural resources that may be discovered accidently and cultural sensitivity training, significant impacts to cultural and tribal cultural resources are not expected (see **Section V [Cultural Resources]** and **Section XVII [Tribal Cultural Resources]**). Therefore, with the incorporation of the identified conditions of approval, the proposed vineyard development project would have a less-than-significant project-specific and cumulative impact on cultural and tribal cultural resources.

Geology and Soils - Section VII:

Soil loss and associated sedimentation resulting from implementation of the proposed project is anticipated to be reduced by approximately 5.41 tons/year as compared to existing conditions (**Table 5**). The reasons for this reduction is due to the increased vegetative cover conditions within the proposed vineyard development areas and the installation of straw wattles that reduce overland flow

velocities and erosive power, and trap eroded soil on-site, thereby reducing soil loss potential. Because the proposed project would reduce soil loss as compared to existing conditions, the proposed project is not anticipated to contribute cumulatively to sediment production within the Suisun Creek Drainage. Therefore, impacts associated with soil loss and associated sedimentation are not considered cumulatively significant.

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

Hydrology and Water Quality - Section X:

It is anticipated that approximately 1.64 acre-feet of water per year would be needed to irrigate the 4.1 net acres of proposed planted vineyard in the long term. The proposed vineyard would be irrigated using four existing wells located on the project site. Water from the existing wells would meet the water demand needs on the project site and the proposed project would not adversely affect the annual recharge capabilities of the existing wells. No potentially significant impacts associated with groundwater use would occur and the proposed project would result in less than significant impacts to groundwater supplies, groundwater recharge, and local groundwater aquifer levels.

As discussed in **Section X.c (Hydrology and Water Quality)** a Hydrologic Analysis utilizing the TR-55 Runoff Model has been prepared by Acme Engineering (Acme Engineering, October 2021 - **Exhibit E**). 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 E**). Therefore, no significant impacts due to changes in hydrology are expected.

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

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

Additionally, implementation of **Mitigation Measure BR-1**, which would reduce project acreage by approximately 0.6 acres would slightly reduced proposed water use and potential water use impacts.

Land Use and Planning - Section XI:

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

Proposed Project Impacts found to be Less Than Significant

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

current or future public services, and would not require the need for utilities and service systems. For these reasons, impacts associated with the proposed project that may be individually limited, but cumulatively considerable, would be less than significant.

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

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

LIST OF FIGURES:

LIST OF TABLES:

LIST OF EXHIBITS: