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

Initial Study Checklist
(form updated January 2019)

1. **Project Title**: Lyons Vineyard Conversion, Agricultural Erosion Control Plan (ECPA) File #P19-00496-ECPA

2. **Property Owner:** Richard and Sylvia Lyons

3. **County Contact Person, Phone Number and email:** Donald Barrella, (707) 253-4417, donald.barrella@countyofnapa.org

4. **Project Location and Assessor's Parcel Number (APN):** 8280 Wild Horse Valley Road, Napa, CA 94558; APN 033-190-004
   Section 34, Township 06 North, Range 03 West, Mt. Diablo Base
   Longitude 38° 19' 17.05" N / Latitude 122° 10' 32.63" W

5. **Project sponsor's name and address:** 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. **Background/Project History:** The parcel includes existing vineyards blocks and a single-family residence with guest cottage (Building Permit #B98-00606). The parcel also had an entitlement to convert an approved temporary trailer to a farm labor dwelling unit for one agricultural employee to manage existing vineyard (Use Permit #P93093-FLD, October 8, 1993).

   There are three previous erosion control plans associated with this parcel for a total of 11.6 acres of existing vineyard, including:
   - #91530-ECPA was approved on September 8, 1992, which allowed conversion of approximately 10 acres to vineyard in three phases that have all be developed.
   - #97061-ECPA was approved on September 23, 1997, and allowed conversion of approximately 6.1 acres to vineyard in four phases.
     - Phases 1 and 2 of this project has been completed, while Phases 3 and 4 have yet to be developed.
     - The proposed project (#P19-00496-ECPA) intends to develop the previously approved Phases 3 and 4 vineyard blocks concurrently with the proposed Development Areas A through E. #97061-ECPA Phases 3 and 4 measure approximately 3.8 acres, and currently consists of approximately 0.5 acres of oak woodland, 3.2 acres of grassland and 0.1 acres of developed land (e.g., existing access roads). Development of these Phases (which are referred to in #P19-00496-ECPA as Development Areas F and G) would remove approximately 27 trees.
   - #P16-00122-ECPA was approved on May 11, 2016, and allowed a replant of approximately 11.63 gross acres (10.18 net acres) of existing vineyard developed under 91530-ECPA.

   The western portion of the project parcel burned in 2008 and the entire parcel burned in the 2017 Atlas Peak Fire. Pursuant to Napa County Code 8.80.130 (Conservation regulations for fire-damaged properties), the 2018 conditions were used as the baseline for Vegetation Retention Requirements pursuant to Napa County Code (NCC) Section 18.108.020(B).

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

9. **Description of Project:** The project includes clearing of vegetation (oak woodland, toyon chaparral and non-native grassland), earthmoving, and installation and maintenance of erosion control measures associated with the development of approximately 19.0 gross acres (15.9 net acres) of new vineyard within five development areas (A-E), including the temporary disturbance of 0.5 acres of grassland for a temporary equipment staging and materials storage area for a total project area of 19.5 acres, located on an approximate 79.3 acre

parcel (**Figures 1 - 3**). Additionally, approximately 3.8 acres of vineyard within Phases 3 and 4 approved by 97061-ECPA (referred to in # P19-00496-ECPA as Development Areas F and G) that has not been converted to vineyard would be developed in conjunction with the proposed project. Combining the development areas in Phase 3 and 4 of #97061-ECPA with the proposed development areas in the proposed project yields a total development area of approximately 23.3 acres. The #P19-00496-ECPA configures the above-referenced development areas as described in Table 1, Proposed New Vineyard Development Summary.

Table 1 – Proposed New Vineyard Development Summary

Vineyard Block	Development Area	Plan/Phase	Gross Acres	Net Vine Acres
1	A	Proposed #P19-00496-ECPA	9.0	8.8
	B	Proposed #P19-00496-ECPA	1.3	
	F	*Approved #97061-ECPA*	*2.3*	*2.1*
2	C	Proposed #P19-00496-ECPA	2.4	1.9
3	D	Proposed #P19-00496-ECPA	5.0	4.1
4	E	Proposed #P19-00496-ECPA	1.3	1.1
	G	*Approved #97061-ECPA*	*1.5*	*1.2*
	Temporary Storage Area	Proposed #P19-00496-ECPA	0.5	0
Development Summary				
Total from Approved ECPA #97061			**3.8**	**3.3**
Total from Proposed ECPA #P19-00496			**19.5**	**15.9**
Total Development Acres with Project Implementation			**23.3**	**19.2**

Typical slopes within the project area range from 13-38% (with 1.0 acre on slopes over 30%). Approximately 362 trees are proposed to be removed within the proposed project area, including coast live oak, California black oak, valley oak, big leaf maple, coastal redwood and incense cedar. Combined with the trees to be removed for Development Areas F & G (Phases 3 and 4 from #97061-ECPA), the total amount of trees to be removed as a result of project implementation, if approved, in combination with #97061 ECPA would be approximately 399 trees. Rocks encountered in the development area would be used for road base and decoration, and all rock or stockpiles would be temporary; no long-term rock or soil stockpiles are anticipated.

The vineyard would be irrigated via a drip irrigation system with water from the property's two existing wells. Frost protection is not proposed. The project proposes the installation of wildlife exclusion fencing at least 6' in height, with exit gates at the corners so that deer do not become trapped, and would be comprised of no smaller than 6"x6" squares to allow small animals to move freely through the area. Existing wildlife exclusion fence would be removed within Vineyard Block 2 and new fencing is proposed around the perimeter of that Vineyard Block. Additional proposed wildlife exclusion fencing would enclose an area that includes Vineyard Block 1 (which encompasses Development Areas A, B and F [Phase 3 of #97061-ECPA]). New wildlife exclusion fencing is also proposed to enclose Vineyard Blocks 3 and 4 (including Development Areas D, E and G [Phase 4 of #97061-ECPA] and approximately 3.23 acres of undeveloped land in between Vineyard Blocks 3 and 4), and would be bound by the existing access road on the east and west of the enclosed area and the property line on the southern end of the enclosure.

Erosion Control Measures: Temporary erosion control measures include tilling and sowing of temporary cover crop in the first year, to be established and maintained with a 75% minimum ground cover, rice straw mulch at a rate of 3,000 pounds per acre, and installation of straw wattles on contours. Permanent erosion control measures include water bars, cross slope diversions, drop inlets, drainage mainlines and rock aprons (i.e. protected outfalls) to direct runoff away from proposed vineyard areas and towards stabilized discharge locations. Rock aprons would be installed at all pipe outfalls to disperse water and prevent concentrated flow from forming and creating gullies. Water bars would be installed at locations shown on the site plans along vineyard avenues. A permanent cover crop would be established and maintained with a 75% minimum ground cover, and would be mulched with rice straw at a rate of 3,000 pounds per acre until the required cover crop factor is attained. Vineyard avenues would be mowed, not disked. Details of the proposed erosion control measures are provided in the Land of Lyons New Vineyard Development ECP #P19-00496-ECPA, dated February 27, 2020, prepared by Omar Reveles (RPE #C74723) of Acme Engineering Inc. (refer to **Exhibit A**)

Earthmoving: Earthmoving and grading activities associated with the installation of erosion control measures and subsequent vineyard planting include, but are not limited to vegetation and tree removal, soil ripping 30-inch maximum), rock removal, land contouring, application of soil amendments, installation and maintenance of the proposed erosion control measures, and installation of end posts, trellis system and wildlife exclusion fencing.

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

a. Trenching and installation of approximately 835 feet of new irrigation mainline, including: a) approximately 505 feet within an existing gravel access road from the western edge of Vineyard Block 3 to one of two wells onsite, located across Wild Horse Valley Road within the southern perimeter of Vineyard Block 1, and b) approximately 330 feet through undeveloped land extending from the eastern boundary of Vineyard Block 3 through undeveloped land and Development Area G (Phase 4 of #97061-ECPA) to the western edge of Development Area E. Installation of irrigation mainline would result in approximately 0.1 acres of earth disturbance within the proposed development area of 19.0 gross acres. Installation of the irrigation mainline between Vineyard Block 3 and Development area E would result in removal of approximately 3 trees (which are included in the tree removal estimate for the proposed project).

b. Temporary equipment staging and material storage on approximately 0.5 acres outside of the proposed development area of 19.0 gross acres. This equipment staging and material storage area would be located southeast/east of Vineyard Blocks 2 and 4.

c. Additional temporary rock, soil and soil amendments would be stockpiled within the development areas, if needed. The ECP includes designated areas for temporary rock stockpile areas and equipment staging and material storage areas within development areas as follows:
    - Development Area A (0.3 acres rock stockpile area; 0.3 acres equipment staging and materials storage)
    - Development Area B (0.3 acres rock stockpile area)
    - Development Area C (0.1 acres rock stockpile area)
    - Development Area D (0.7 acre rock stockpile area)
    - Development Area E (0.1 acre rock stockpile area).

d. Installation of vineyard trellis and drip irrigation systems, and planting rootstock on a 4 foot by 8 foot spacing pattern for a vine density of approximately 1,361 vines per acre.

e. Ongoing inspection and maintenance of temporary and permanent erosion and runoff control measures.

f. Ongoing operation and maintenance of the vineyard, which includes vine management (pruning, fertilization, pest, and disease control), weed control, irrigation and trellis system maintenance, and fruit harvesting. The management regime of the no-till cover crop will be organic, consist of mowing and weeding. Contact or systemic herbicides may be applied, however no pre-emergent herbicides would be utilized.

g. Development of the previously approved Phases 3 and 4 vineyard blocks (referred to herein as Development Areas F and G; approximately 3.8 acres total) from #97061-ECPA concurrently with the proposed Development Areas A through E.

h. Environmental Commitment(s) - the owner/permittee, as part of this ECPA, has included the following element(s)[1]:
    i. Nesting Birds: Pre-construction surveys for nesting birds prior to initiation of vegetation removal and ground disturbing activities, and implementation of avoidance methods and exclusion buffers, as necessary, until nesting and fledging is complete.
    ii. Bats: Habitat assessment to identify suitable bat habitat trees within 7-14 days of planned tree removal, and phased tree trimming or removal outside of hibernation and maternity roosting seasons, and/or pre-construction survey within 14 days of project initiation to determine absence/presence of special-status bat species, including development of a plan for removal or exclusion developed by a qualified biologist and implemented upon approval of Napa County Planning Division.

Table 2 lists a general schedule for the construction of the proposed project as identified in #P19-00496-ECPA and **Table 3** outlines typical general ongoing vineyard operations. The final implementation schedule is pending action on #P19-00496-ECPA.

Table 2 – Implementation Schedule

April 1	Commence land clearing, ground preparation, and installation of vineyard infrastructure.
October 1	All tillage and erosion control completed.
October 15[1]	All winterization complete, including seeding, straw mulching, and straw wattle installation.

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

Table 3 – Annual Operations Schedule

January to April	a. Prune vines. 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.

[1] The complete language of the ECPA Environmental Commitments can be found in Section IV (Biological Resources) of this Initial Study and in **Exhibit A** under 'Special Notes".

Implementation of the proposed project would be in accordance with the Land of Lyons ECPA prepared by Acme Engineering Inc. (July 20, 2020 - **Exhibit A**). The proposed project is further described in the application materials including the Supplemental Project Information sheets. All documents are incorporated herein by reference and available for review in the Napa County Department of Planning, Building and Environmental Services (PBES).

10. Describe the environmental setting and surrounding land uses.

The proposed project would occur on one parcel totaling approximately 79.3 acres located at 8280 Wild Horse Valley Road in Napa, California, approximately 3.5 miles east from the point where Coombsville Road becomes Wild Horse Valley Road (**Figures 1-3**). Approximately 20% of the parcel is developed with vineyards (approximately 11.6-acres), a residence, associated accessory structures including a garage, pool and associated residential landscaping and roads. Existing vineyard development is predominately located in the eastern portion of the parcel surrounding the existing residence.

The project parcel is located in southeast Napa County, approximately 9 miles southeast of the City of Napa, situated in the eastern mountains. A majority of the proposed project occurs within the Wooden Valley Creek West Fork drainage, while small portions of proposed Development Area B and F (approximately 0.5-acres), and Phase 3 of #97061-ECPA and the existing developed areas (including residence and existing vineyards), occurs within the Suisun Creek Lower Reach Drainage.

There are two mapped blue-line streams (USGS 1951, NWI 2019a) and three mapped blue-line streams with several tributaries within the California Aquatic Resources Inventory (CARI) database (SFEI 2019) and several small seasonal wetlands (0.07 acres) located on the project parcel (refer to **Exhibit B**).

As discussed in Project Background and History, above, the western portion of the project parcel burned in 2008 and the entire parcel burned in the 2017 Atlas Fire.

Surrounding land uses within the immediate vicinity (i.e. within approximately one mile) of the project parcel predominantly consist of rural residential, livestock grazing, vineyards and undeveloped land. There are four wineries within approximately 2.5 miles of the project to the east, northeast, north and northwest, which range in an annual production limitation from 5,000 to 85,000 gallons per year. The nearest known schools are Vichy Elementary roughly 4.2 miles northwest, and Mt. George Elementary roughly 4 miles to the southwest within the City of Napa (Napa County GIS: Schools Layer). The nearest residences are located approximately 900 feet to the south, 3,350 feet and 3,920 feet to the east, 3,170 feet and 3,800 feet to the northeast. The nearest residential area and airport are within the City of Napa located over approximately 9 miles to the southwest. The Napa/Solano County line is approximately 0.15 miles to the south of the project parcel.

General topography of the area consists of southwestern facing hillsides associated with the southern crest of the Howell Mountains that divide the watershed between the Napa River and Green Valley Creek, and the County boundary with Solano County. The project area is generally located at elevations between approximately 1,545 and 1,805 feet above Mean sea level (MSL), throughout the property topography is typified by narrow, north-trending ridgelines separated by moderately-incised drainages, with topography of the development areas generally consisting gentle of south-facing slopes, ranging from 5% to 20% with an average slope of ±10%.

The project parcel contains of approximately 28.89 acres of oak woodland, approximately 17.11 acres of non-native annual grassland, approximately 15.92 acres of toyon chaparral, 11.6 acres of vineyards, and approximately 5.75 acres of developed area. The proposed project of 19.5 gross acres[2] consists of approximately 6.9 acres of oak woodland, 8.9 acres of toyon chaparral, and 3.7 acres of non-native annual grassland. Combining Development Areas F and G (Phase 3 and 4 of approved #97061-ECPA) with the development areas in the proposed project yields a total development area of approximately 23.3 acres, of which approximately 7.1 acres are oak woodland, approximately 9 acres toyon chaparral, 7.2 acres of annual grassland (see **Table 6**).

11. Other agencies whose approval is (or may be) required (e.g., permits, financing approval, or participation agreement).
The project would also require various ministerial approvals by the County, including but not limited to building permits, grading permits, waste disposal permits, and an encroachment permit, in addition to meeting CalFire standards.

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

[2] Nineteen gross acres plus the additional 0.5-acre equipment staging and material storage area east of Blocks 2 and 4.

12. **Tribal Cultural Resources[3].** Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resource, procedures regarding confidentiality, etc.?

Notice of the proposed project was sent to the Yocha Dehe Wintun Nation, the Mishewal Wappo Tribe of Alexander Valley and the Middletown Rancheria on January 17, 2020, and again to the Mishewal Wappo Tribe of Alexander Valley on February 4, 2020. On January 23, 2020, the County received a response via email from the Middletown Rancheria stating that the project is not within the aboriginal territories of the Middletown Rancheria and declined to comment. On February 20, 2020, the County received a response letter from the Yocha Dehe Wintun Nation, indicating that the project is within their aboriginal territories, and that they have a cultural interest and authority in the proposed project area[4]. Since the Tribe was not aware of any known cultural resources near the project, they determined that a cultural monitor was not needed; however, they recommended cultural sensitivity training for any pre-project personnel, and requested that the project incorporate Yocha Dehe Wintun Nation's Treatment Protocol into the mitigation measures for this project. The Tribe also requested that the Tribe and an archaeologist be contacted should any cultural resources be found. They requested that the County submit the updated mitigation measures to the Cultural Resources Department once completed. A subsequent letter dated March 26, 2020, was received from Yocha Dehe, further requesting that cultural sensitivity training for site workers be incorporated into the conditions of approval.

On March 18, 2020, the County sent correspondence to the Yocha Dehe Wintun Nation and the Middletown Rancheria acknowledging their response letters, and closing the consultation invitation because consultation was not requested within the 30-day notification period. The Mishewal Wappo Tribe of Alexander Valley did not request consultation within the 30-day notification period, and because no response to the February 4, 2020 consultation invitation was received, the County sent a consultation closure notice to the Tribe on March 18, 2020.

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

[4] Yocha Dehe project Identification Number YD-01272020-02.

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 Geographic Information System (GIS) Environmental Sensitivity and Resource Maps, the other sources of information contained in the file, and the comments received, conversations with knowledgeable individuals; the preparer's personal knowledge of the area; and site inspection. For further information, see the environmental background information contained in the permanent file on this project.

Other sources of information used in the preparation of this Initial Study include site-specific studies conducted by the applicant and filed by the applicant in conjunction with ECP #P19-00496-ECPA as listed below, and the environmental background information contained in the permanent file on this project. These documents and information sources are incorporated herein by reference and available for review at the Napa County Department of Planning, Building and Environmental Services located at 1195 Third Street, Suite 210, Napa, CA 94559 or P19-00496 Lyons Vineyard ECPA - Files - PBES Cloud

- Acme Engineering, Inc., Erosion Control Plan, Lands of Lyons New Vineyard Development (original submittal December 19, 2019, revised February 27, 2020, June 16, 2020, and July 20, 2020) (**Exhibit A**).
- Acme Engineering, Inc., Vegetation Retention Analysis, Lyons New Vineyard Development February 2020 (**Exhibit A-1**).
- WRA Environmental Consultants, February 2020, Biological Resources Reconnaissance Survey Report, Lyons Hillside Vineyard, LLC (APN 033-190-004) (**Exhibit B**)
- Archaeological Resource Service, April 26, 2019, A Cultural Resources Evaluation of Five Proposed Vineyard Blocks Within the Lands of Lyons (APN 033-190-004) (**Exhibit C –** Contents Confidential)
- Acme Engineering, Inc., December 13, 2019, Water Availability Analysis, Lyons Hillside Vineyards (**Exhibit D**)
- Miller Pacific Engineering Group, December 9, 2019, Geotechnical Investigation, Lyons Hillside Vineyards (**Exhibit E**)
- ACME Engineering, USLE Layout and Practice Alternatives/Calculations, Lyons Hillside Vineyards (Original submittal December 6, 2019; revised/supplemented April 28, 2020 and July 20, 2020) (**Exhibit F**)
- Acme Engineering, Inc., Hydraulics Calculations, Lands of Lyons New Vineyard Development Proposed Drainage (Original submittal December 17, 2019; revised/supplemented May 1, 2020 and July 21, 2020) (**Exhibit G**).
- Site inspections conducted by Napa County Planning and Engineering Division staff were completed on March 18, 2020.
- Napa County Geographic Information System (GIS) sensitivity maps/layers.

On the basis of this initial evaluation:

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

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

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

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

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

Signature: _____ March 16, 2021
Date

Name: Donald Barrella, Planner III
Napa County Planning, Building and Environmental Services Department

I.	**AESTHETICS.** Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a 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 located approximately 5 miles east of the City of Napa on moderately sloping hillsides south of Wooden Valley, generally between Atlas Peak to the northwest and the Vaca Mountains to the northeast. The general area primarily consist of oak woodland and grassland, interspersed with shrubland and vineyards. The closet County Viewsehd roads are Wooden Valley Road and Monticello Road located approximately 1.5 miles to the northeast and 2.7 miles to the northwest of the site, respectively, and do not lie within the scenic corridors associated with either of these roads (Napa County GIS, Scenic Corridors Layer). The site is not located on a prominent hillside, a major or minor ridgeline (Napa County GIS, Ridgelines Layer). There are no significant rock outcroppings or geologic features on the project parcel that would be impacted by the project. Although trees would be removed with the proposed project (see **Section IV Biological Resources**), the project site is not visible from a scenic highway or roadway, as previously noted. There are no scenic highways in the area (CA Department of Transportation website: http://www.dot.ca.gov/hq/LandArch/scenic/schwy.htm). Therefore, the proposed project would have a less than significant impact on scenic vistas, scenic roadway, buildings, scenic trees, or rock outcrops.

c) The proposed project would result in the removal of existing vegetation within the proposed development area and the development of vineyard. The proposed project is consistent with the Napa County AWOS land use designation and with adjacent land uses, which include other vineyards. Therefore, 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) Earthmoving activities, erosion control plan installation and maintenance, and vineyard installation do not involve the introduction of nighttime lighting. Proposed agricultural operations on the parcel would require some lighted nighttime activities consistent with the nighttime activity already occurring on the project parcel and in the surrounding area, which includes vineyard and agricultural uses. Lighting would be in the form of headlights or downward direction lights on equipment being used during nighttime activity. The proposed project could include periodic nighttime activities (including harvest, and pesticide and Sulphur application) typically occurring from 3 a.m. to 6 a.m.) occurring up to approximately 24 days per year. While some nighttime activities may occur for limited periods, the project would not introduce a new source of substantial light or glare, and the type of nighttime lighting would be consistent with surrounding land uses; therefore, resulting in a less than significant impact

II.	**AGRICULTURE AND FOREST RESOURCES[1].** Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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 Resources Code Section 12220(g), timberland as defined in Public Resources 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 in a manner that will significantly affect timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, or other public benefits?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Discussion:

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

a) The project site is not identified as Prime Farmland, or Farmland of Statewide Importance on the on the Napa County Important Farmland 2016 map prepared by the California Department of Conservation, Division of Land Resource Protection. Existing vineyard located in the northeast portion of the property is identified as "Unique Farmland" and the remainder of the property including the project area is designated as "Grazing Land" on this map. Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Important, resulting in no impact. Vineyard development on areas designated Grazing Lands would be consistent with this designation and would not result in an impact to farmland within Napa County.

b) The project site has a General Plan land use designation of Agriculture, Watershed and Open Space (AWOS) and is zoned Agricultural Watershed (AW). Therefore, the establishment and operation of vineyard totaling approximately 19-acres is consistent with property's land use and zoning designations. The subject property does not have a Williamson Act contract associated with it. Therefore, the project would not conflict with its land use designation or a Williamson Act contract resulting in no impact.

c-d) As noted above, "Forest Land" is defined by in California Public Resource Code Section 12220(g) as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." Based on the Napa County Geographic Information (GIS) vegetation layers and the Biological Resources Reconnaissance Survey Report (WRA Environmental Consultants, February 2020), the project area is composed primarily of oak woodland, chaparral, and non-native grassland. While the oak woodland potentially meets the State's definition of "forest land," this oak woodland does not qualify as timberland under Public Resource Code Section 4526 because the project site does not contain any Commercial Species, as defined by California Forest Practice Rules (California Department of Forestry and Fire Protection, 2017). Furthermore, the subject parcel and project area are not zoned forest land as defined in Public Resource Code Section 12220(g), timberland as defined in Public Resource Code Section 4526, or a Timberland Production Zone (TPZ) as defined in Government Code Section 51104(g). Therefore, the conversion of approximately 7-acres of oak woodland to vineyard would not have an impact on forestland or the conversion of forestland in Napa County. Refer to **Section IV (Biological Resources)** for additional discussion of on-site vegetation communities and tree removal.

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

III.	AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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 thresholds are designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA, and were posted on the BAAQMD website and included in the BAAQMD updated CEQA Guidelines (May 2012). The thresholds are advisory and may be followed by local agencies at their own discretion.

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

In view of the Supreme Court's opinion, local agencies may rely on thresholds designed to reflect the impact of locating development near areas of toxic air contamination where such an analysis is required by CEQA or where the agency has determined that such an analysis would assist in making a decision about the project. However, the thresholds are not mandatory and agencies should apply them only after determining that they reflect an appropriate measure of a project's impacts. The Guidelines 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 CEQA Guidelines dated May 2017, which includes revisions made to address the Supreme Court's opinion. The May 2017 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 Guidelines as part of its update to the CEQA Guidelines and thresholds of significance.

a-c) The project site is generally located in the hills bordering the eastern side of the Napa Valley just northeast of the City of Napa, within the Napa County climatological sub-region of the San Francisco Bay Area Air Basin, which is under the jurisdiction of BAAQMD. The topographical and meteorological features of the Napa Valley sub-region 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 (including grape haul trucks) and equipment necessary for ongoing vineyard maintenance. Refer to **Section XVI (Transportation/Traffic)** for the anticipated number of construction- and operation-related trips.

The impacts associated with implementation of the 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, ozone precursors oxides of nitrogen and reactive organic gases (NO_x and ROG), carbon monoxide (CO), nitrogen dioxide (NO_2), and suspended particulate matter of ten micrometers or less and two and a half micrometers or less (PM_{10} and $PM_{2.5}$). Other criteria pollutants, such as lead and sulfur dioxide (SO_2), would not be substantially emitted by the proposed development or associated traffic, and air quality standards for them are being met throughout the Bay Area.

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

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

In order to assess potential air quality and GHG emissions, a review of the emissions analysis associated with vineyard development/construction and operations performed for three certified Environmental Impact Reports (EIR) in Napa County was completed: Suscol Mountain Vineyards[5] for an approximately 560-acre vineyard development, Walt Ranch Vineyard[6] for an approximately 507-acre vineyard development, and Circle-S Ranch Vineyards[7] for an approximately 400-acre vineyard development.[8]

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 8 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 4 – Emissions from Vineyard Development and Operation

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

[5] #P09-00176-ECPA, Analytical Environmental Services (AES) March 2012, SCH #2009102079 certified February 3, 2013
[6] #P11-00205-ECPA, AES March 2016 , SCH #2008052075 certified August 1, 2016
[7] #P06-01508-ECPA, AES April 2011, SCH #2007062069 certified December 22, 2011
[8] These EIRs are incorporated herein by reference and available for review in the Napa County Department of Planning, Building and Environmental Services permanent files.

[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 this project's proposed 15.2-acre vineyard (12.8 net acre of vine) is substantially 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 considerably less that those identified in **Table 3** and therefore well below identified thresholds. Additionally, project approval, if granted, would be subject to the standard Air Quality condition described below, which includes standard air quality and construction best management practices (BMPs) consistent with BAAQMD measures identified in Table 8-1 of the CEQA Guidelines that would further reduce potential air quality impacts associated with construction and ongoing operation of the proposed project.

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

- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. The BAAQMD's phone number shall also be visible.
- Water all exposed surfaces (e.g., parking areas, staging areas, soil piles, grading areas, and unpaved access roads) two times per day.
- Cover all haul trucks transporting soil, sand, or other loose material off-site.
- Remove all visible mud or dirt tracked onto adjacent public roads by using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- Idling times shall be minimized either by shutting off equipment when not in use or reducing the maximum idling time to five (5) minutes (as required 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 on-site 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[9] or the PERP website[10].

Given that installation of the proposed project is expected to generate emissions that are well below identified thresholds, result in minimal temporary construction emissions, contains other features that minimize fugitive dust (such as vineyard cover crop), and introduce a minimal number of new vehicle trips to the project parcel (approximately 6 round trips per day or fewer) during both installation and operation, the implementation of the proposed project would result in less than significant air quality impacts, and would not violate air quality standards or result in cumulatively considerable effects. Additionally, the implementation of Air Quality BMPs identified in the condition of approval above is anticipated to further reduce any adverse air quality effects associated with construction and operation of the proposed project.

d-e) 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 in the vicinity to the project parcel include agricultural (vineyards) and rural residential. The nearest known schools are Vichy Elementary approximately 4.2 miles northwest, and Mt. George Elementary roughly 4 miles to the southwest within the City of Napa (Napa County GIS: Schools Layer). The nearest residences are located approximately 900 feet to the south, 3,350 feet and 3,920 feet to the east, 3,170 feet and 3,800 feet to the northeast. The nearest residential area is the City of Napa located over ±5 miles to the west.

During installation of the erosion control plan, 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 a minimum of 4 miles from the closest schools and residential neighborhoods, providing dilution of pollutants and odors. Therefore, 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.

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

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

Discussion:

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

- WRA Environmental Consultants, February 2020, Biological Resources Reconnaissance Survey Report (**Exhibit B**).

Additionally, the following Napa County Geographic Information System (GIS) Sensitivity Maps/layers were utilized in this biological resource 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 Imagery.

WRA conducted an assessment of biological resources on the subject parcel to determine: the presence of sensitive biological communities; the potential for biological communities on site to support special-status plant or wildlife species; and the presence of sensitive natural resources protected by local, state, or federal laws and regulations. The surveys correspond to blooming periods sufficient to observe and identify special-status plant species determined to have the potential to occur in the project area. 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 (CDFW, 2018). Plants were identified using Baldwin et al. (2012) and Jepson Flora Project (Jepson eFlora, 2019) to the taxonomic level necessary to determine whether they were rare. The wildlife surveys were conducted concurrently with the rare plant surveys.

A list of special-status plant and animal species that have the potential to occur within the vicinity of the project area was compiled based on data in the CNDDB (CDFW, 2018), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS, 2019), and the USFWS List of Federal Endangered and Threatened Species that may be affected by projects in the Yountville, Capell Valley, Mt. Vaca, Napa, Mt. George, Fairfield North, Cuttings Wharf, Cordelia and Fairfield South Quadrangles.

The parcel consists of the following biological communities (or Land Cover Types) with respective acreages shown in **Table 5:** Douglas fir forest, mixed oak woodland, blue oak woodland, vineyard and residential developed seasonal wetland, and a constructed reservoir/pond. As indicated in the Background/Project History and Environmental Setting Sections of this initial study (pages 1-2), the project parcel has been affected by the 2017 Atlas Peak Fire.

Table 5 – Biological Communities/Land Cover Types on the Project Parcel

Biological Communities/Land Cover Type	Pre-Project Conditions (acres)
Oak Woodland	28.89
Non-native Annual Grassland	17.11
Toyon Chaparral	15.92
Seasonal Wetland	<0.1
Vineyard	11.6
Developed	5.75

Sources: WRA, February 2020, and Napa County December 2020

a.) Special-Status Plants: Results of a protocol-level plant survey determined that two special-status plants are present within the immediate vicinity project site: Napa biscuitroot (*Lomatium repostum*) and green monardella (*Monardella viridis).* Both of these plant species are CNPS List 4 species meaning that they are of limited distribution or infrequent throughout a broader area of California. While these species are not considered under CEQA, Napa County may consider them sensitive species due to their limited distribution, and assess and mitigate potential impacts to these species as part of the environmental review process.

While Napa biscuitroot and green monardella are not state or federally listed species at this time, this species and its associated habitat are of limited distribution locally within Napa County and warrant protection through applicable General Plan Goals and Policies. Protecting the continued presence of special-status species, including special-status plants, special-status wildlife, and their habitats is encouraged by Napa County General Plan Goal CON-3[11]. Additionally, pursuant to Napa County General Plan Policy CON-13[12], the County shall require that all discretionary agricultural projects consider and address impacts to wildlife habitat and avoid impacts to habitat supporting special-status species to the extent feasible. Where impacts to special-status species and their habitat cannot be avoided, projects shall include effective mitigation measures and management plans to provide protection for habitat supporting special-status species through buffering or other means, and enhance existing habitat values particularly for special-status species through restoration and replanting as part of the project or its mitigation.

Napa biscuitroot is a perennial forb in the carrot family (Apiaceae) that blooms from March through June. It typically occurs on serpentine substrate in chaparral and cismontane woodland habitat at elevations ranging from 290 to 2,700 above MSL. Twenty-four individuals of this species were observed in the toyon chaparral community in the northwestern portion of the Study Area (WRA, February 2020 - **Exhibit B:** Also see **Exhibit A)**.

Green monardella is a perennial forb in the mint family (*Lamiaceae*) that blooms from June through September. It typically occurs on serpentine substrates in chaparral, cismontane woodland, and broadleaf upland forest habitat at elevations ranging from 325 to 3,285 feet above MSL. Fifteen individuals of this species were observed in in the toyon chaparral community in the northwestern portion of the Study Area (WRA, February 2020 - **Exhibit B:** Also see **Exhibit A)**.

The project as proposed would avoid these plant species/populations and provide them with a minimum 25-foot buffer, resulting in an approximate 0.35-acre habitat area for these species. Therefore, there would be no significant impacts to these special-status plant species or their habitat as a result of the project. Additionally, the avoidance of these plans and associated habitat would also be consistent with Napa County General Plan Conservation Element Goal CON-3; Policy CON-13; Policy CON-17[13].

While the proposed project has been designed to avoid direct impacts to special-status plant species and associated habitat, there is the potential for potentially significant indirect impacts due to inadvertent disturbance or removal of plants and habitat as a result of project development and operational activities. To ensure these plants and habitat are avoided and provided with the proposed 25 foot buffer, and avoid the potential encroachment into the avoidance area **Mitigation Measure BR-1** will be implemented. **Mitigation Measure BR-1** will reduce this potential impact to a less than significant level by require demarcation of plant the plant avoidance area and installation of protective construction fencing prior to commencement of construction, and the installation of a permanent protection barrier to prevent inadvertent project and operational impacts.

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

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

[13] 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.

Mitigation Measure BR-1: To avoid indirect impacts to special-status plant species and associated habitat, the owner/permittee shall implement the following measures:

a. The special-status plants and associated habitat area (encompassing approximately 0.35-acres), as specified and shown on #P19-00496-ECPA, shall be flagged in the field by a qualified biologist or the project engineer, and protective construction fencing shall be installed along the boundary. Construction fencing shall be inspected and approved by the County prior to the commencement of vegetation removal and earth-disturbing activities. No equipment or work shall be allowed within the plant habitat avoidance area. The protective construction fencing shall be maintained and remain in place until all grading and erosion control measure installation are complete.
b. The protective constructive fencing shall be replaced with a permanent means of demarcation and protection around the habitat area (such as permanent fence or rock barrier) so that the plant avoidance area is not encroached upon or disturbed as part of ongoing vineyard operations.
c. In accordance with County Code Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) vegetation 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 at a ratio of 2:1 within the plant avoidance area. Replacement plants shall be installed and documented that they are in good health prior to completion and finalization of the erosion control plan. Replacement plants shall be monitored and maintained as necessary for a minimum of 5 years to ensure they achieve at least 80% survival. If plantings are not achieving this success criteria during any monitoring year, Permittee shall be responsible for replacement oak plantings and monitoring them for an additional five years to ensure they achieve at least 80% survival.

Special-Status Animals: A total of 62 special-status wildlife species have been documented in Napa County. Three of these species have the potential to occur within the project parcel: *Antrozous pallidus (*pallid bat); *Myotis thysanodes (*fringed myotis bat); *and Elanus Leucurus (White-tailed kite)*.

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 has been documented 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 (WRA, February 2020.

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 (WRA, February 2020).

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.

With respect to bat species, WRA a part of their Reconnaissance Survey assessed all the trees within the Survey's Study Area and project area to determine if bat habitat trees are present. Their survey found three potential bat habitat two trees, that contain cavities or snags suitable for roosting by these bat species, within the Study Area. The proposed project has been designed to avoid one of these trees and include bat avoidance and protection measures as indicated in the project description (Environmental Commitment h.ii) as detailed below. The two bat habitat trees proposed for removal are located within the southern end of Vineyard Block 2. This Environmental Commitment would be included/incorporated into the project as a condition of approval should the project be approved.

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

i. Tree trimming and/or tree removal should only be conducted during seasonal periods of bat activity (August 31 through October 15), when young would be self-sufficiently volant and prior to hibernation, and March 1 to April 15 to avoid hibernating bats and prior to formation of maternity colonies), under supervision of a qualified biologist. Note that these windows may shift with atypical temperatures or rainfall. Trees should be trimmed and/or removed in a two-phased removal system conducted over two consecutive days. The first day (in the afternoon), limbs and branches would be

removed by a tree cutter using chainsaws only. Limbs with cavities, crevices and deep bark fissures would be avoided, and only branches or limbs without those features would be removed. On the second day, the entire tree would be removed.

ii. For removal of bat habitat trees outside the seasonal activities identified above (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 and/or removal to determine absence/presence of special-status bat species. Survey methods, timing, duration, and species shall be provided for review and approval by Napa County prior to conducting pre-construction surveys. A copy of the survey 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. 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 implemented upon approval of the plan by the County Planning Division.

While the project has been designed to avoid one of the identified bat habitat trees, and includes measures to avoid bat mortality as part of the project, the removal of the other identified bat habitat trees is considered a potentially significant indirect and cumulative impact to special-status bat species because of bat habitat loss. To reduce potential indirect a cumulatively significant impacts to special-status bat species as a result of the project to a less than significant level, **Mitigation Measures BR-2** would be implemented to avoid and protect these identified bat habitat trees, reducing this impact to a less than significant level.

Mitigation Measure BR-2: To avoid impacts to special-status bat species and their habitat, the owner/permittee shall implement the following measures:

a. Revise Erosion Control Plan #P19-00496-ECPA prior to approval to modify and adjust the boundary of Vineyard Block 2 to avoid these two bat habitat trees (i.e. Tree #54 and #55) and provide them with a buffer that extends at a minimum to the trees driplines.

b. Install prior to the commencement of vegetation removal and earth-disturbing activities associated with the project temporary construction fencing (or the like) around the area(s) avoided by implementation of **Mitigation Measure BR-1(a)**. The precise locations of these fences shall be inspected and approved by the Planning Division before the start of any vegetation removal or earth-disturbing activities.

With respect to the white-tailed kite and other special-status bird species (inducing migratory birds), the Study Area and the Project Area provides suitable habitat for these species, in particular the woodlands and associated trees that could be utilized for nesting and foraging. Potential direct impacts could occur through tree removal, and indirect impacts resulting from 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 potential impacts to special-status and migratory birds would be considered significant. To reduce potentially significant impacts to special-status bird species to a less than significant level, the owner/applicant has included avoidance and protection measures as indicated in the project description (Environmental Commitment h.i) as detailed below. Implementation of this Environmental Commitment would reduce this potentially significant impact to a less than significant level, and would be included/incorporated into the project as a condition of approval, should the project be approved.

Environmental Commitment, Bird nest avoidance and protection: The Permittee shall include in #19-00220-ECPA the following measures to minimize impacts associated with the loss and disturbance of nesting birds and raptors consistent with and pursuant to California Department of Fish and Wildlife (CDFW) 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 potential to occur at the project site) shall conduct preconstruction surveys for nesting birds, raptors, and the Northern Spotted Owl, within all suitable habitat on the project site, and where there is potential for impacts adjacent to the project areas. The preconstruction survey shall be conducted no earlier than 14 days prior to vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than 14 days from the survey date, surveys should be repeated. A copy of the survey will be provided to the Napa County Conservation Division and the CDFW prior to commencement of work.

b. After commencement of work, if there is a period of no work activity of 5 days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.

c. In the event that nesting birds are found, the 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 pre-construction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or chemical (i.e., spraying nesting birds or their habitats) 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.

The project as proposed and designed with implementation of **Mitigation Measure BR-1,** the project's Environmental Commitments, and conditions of approval, will reduce potentially significant impacts to special-status animal species to a less that significant level.

b-c) There are no identified riparian habitats, sensitive natural communities, or vernal pools located within the Study Area or Project Area (WRA February 2020). The Study Area contains one primary drainage/stream and two ephemeral drainages, generally located in the north/northwest portion of the project property. The primary drainage is an unnamed blue-line stream on the Mt. George 7.5-minute quadrangle (USGS 2015) that is a tributary to White Creek and ultimately Wooden Valley Creek, while two ephemeral drainages are tributary to the unnamed blue-line stream. Four small isolated seasonal wetlands have been identified in the south south/southeast portion of the project parcel (see **Exhibits A** and **B**).

The proposed project has been designed to include stream setbacks from the blue-line and ephemeral streams/drainages in conformance with County Code Section 18.108.025 (General provisions – Intermittent/perennial streams) that range from 55 to 85 feet. The proposed project has also been designed to include 50-foot minimum setbacks from identified wetlands in conformance with NCC Section 18.108.026 (Wetlands), including providing conforming setbacks from wetlands as part of development of approved #97061-ECPA that were not contemplated or otherwise required as part of that approval. Therefore, the project has been designed to provide setbacks from streams and aquatic features (i.e. blue-line and definition streams, and wetlands) consistent with code requirements. Furthermore, project approval, if granted, would be subject to the following standard conditions to prevent the potential encroachment into stream and wetland setbacks required pursuant to Section 18.108.025 and Section 18.108.026, further protecting these aquatic resources during project implementation and operation resulting in a less than significant impact.

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

- The location of creek setbacks shall be clearly demarcated in the field with temporary construction fencing, which shall be placed at the outermost edge of required setbacks shown on the project plans. Prior to any earthmoving activities, temporary fencing shall be installed: the precise locations of said fences shall be inspected and approved by the Planning Division prior to any earthmoving and/or development activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated areas for the duration of erosion control plan installation and vineyard installation. The protection fencing shall remain in place for the duration of project implementation and until wildlife exclusion fencing is installed as shown on the plans.
- All construction and related traffic will remain on the inside (vineyard block side) of the protective fencing to ensure that the streams, buffer zones, and associated habitat and/or woodland remains undisturbed.
- In accordance with County Code Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) trees that are inadvertently removed that are not within the boundary of the project and/or not identified for removal as part of #P19-00496-ECPA shall be replaced on-site with fifteen-gallon trees at a ratio of 2:1 at locations approved by the planning director. Replacement trees shall be installed and documented that they are in good health prior to completion and finalization of the erosion control plan. Replacement trees shall be monitored and maintained as necessary for a minimum of 5 years to ensure they achieve at least 80% survival. If oak plantings are not achieving this success criteria during any monitoring year, Permittee shall be responsible for replacement oak plantings and monitoring them for an additional five years to ensure they achieve at least 80% survival.

Wetland Protection – Condition of Approval: The potential wetlands located adjacent to Vineyard Blocks 2 and 4, and Development Area G shall be flagged in the field by a qualified biologist and protective construction fencing shall be installed along their boundaries for County inspection and approval prior to the commencement of vegetation removal and earth-disturbing activities. No equipment or work shall be allowed within the wetlands. The protective construction fencing shall be maintained and remain in place until all grading and erosion control measure installation are complete.

d) Generally the northeast quadrant of the parcel, which contains existing residential and agricultural development, is fenced in with wildlife exclusion fencing (i.e. deer fencing) consisting of smooth wire mesh. Proposed wildlife exclusion fencing would consists of 6 foot tall wire mesh

(minimum 6 inch by 6 inch squares) with exit gates at the corners, that is generally installed around the periphery of identified Development Areas and proposed vineyard blocks either individually or in groups as follows: i) Development Area A, B and F, that containing proposed Vineyard Block 1 and a portion of area approved under #97061-ECPA as one unit; ii) Development Area C, that contains Vineyard Block 2 as one unit; and iii) Development Areas D, G and E, that contains Vineyards Blocks 3, 4 and portions of area approved under #97061-ECPA as one unit (also see **Exhibit A**).

While the Project will result in portions of the parcel having reduced potential for on-site wildlife movement in the western half of the property, the Project biologist has concluded that the retention of areas outside identified Development Areas in their natural condition will allow for continued wildlife movement within and across the property. In particular, through the onsite stream and ephemeral drainages that presumably provide at least some corridor function for localized movement, which will be avoided by the Project as proposed. However, the proposed fencing of Development Areas D, G and E (containing Vineyards Blocks 3, 4 and portion of #97061-ECPA) as one unit would unnecessarily enclose approximately 3.2 acres of woodland and grassland located between Vineyard Blocks 3 and 4. Impeding or otherwise removing this available habitat area from wildlife use and movement is considered a potentially significant impact to wildlife movement. Additionally, removing this area from wildlife use and movement would not be consistent with General Plan Conservation Policy CON-18, which among other things encourages the retention of movement corridoes of adequate size and habitat to allow for continued wildlife use, and requires new vineyard development to be designed to minimize the reduction of wildlife movement to the maximum extent feasible.

To minimize potential impacts to wildlife use and movement to a less than significant level, and achieve consistency with General Plan Conservation Policy CON-18, **Mitigation Measure BR-3** will be implemented. This measure will require Development Area D to be fenced as an individual unit and Development Areas E and G to be fenced as an individual unit. Additionally, this measure will require new fencing be limited to the periphery of each Development Area, and include standard fencing conditions in order to ensure that wildlife exclusion fencing is maintained in a manner that does not negatively affect wildlife movement.

The project as proposed with implementation of **Mitigation Measure BR-3** would not substantially interfere with wildlife movement, resulting in less than significant impacts to wildlife use and movement and consistency with Genera Plan Policy CON-18. Furthermore, because wildlife nursery sites were not identified in the project area or parcel, there would be no impacts to wildlife nursery sites.

> **Mitigation Measure BR-3:** To minimize impacts to wildlife movement and use, the owner/permittee shall revise Erosion Control Plan #P19-00496-ECPA prior to approval to include the following measures:
>
> a. Fence Development Area D as an individual unit, fence Development Areas E and G as an individual unit, and limit the location of new fencing to the periphery of each Development Area. Revised fencing locations shall be subject to review and approval by the county prior to its incorporation into #P19-00496-ECPA
> b. Fencing shall consist of wire mesh with minimum 6 inch by 6 inch squares, and shall include exit gates installed at the corners of exclusion fencing to allow trapped wildlife to escape, and smooth wire (instead of barbed wire) shall be utilized to top wildlife exclusion fencing to prevent entanglement.
> c. Any other new wildlife exclusion fencing installed in association with #P19-00496-ECPA shall be prohibited, and would require County review and approval to ensure any new fencing would not result in potential impacts to wildlife movement.

e) 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 further described below.

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

Pursuant to NCC Section 18.108.020(C) (General Provisions: Vegetation Retention Requirements) within the AW zoning district, a minimum of seventy percent vegetation canopy cover as configured on the parcel existing on June 16, 2016 shall be maintained as part of any use involving earth-disturbing activity. Specific to vegetation removal mitigation and preservation NCC Section 18.108.020(D) (Vegetation Removal Mitigation) requires the removal of any vegetation canopy cover in the AW zoning district be mitigated by permanent replacement or preservation of comparable vegetation canopy cover, on an acreage basis at a minimum 3:1 ratio pursuant to NCC Section 18.108.020(E) (Preserved Vegetation Canopy Cover). This provisions requires preserved vegetation canopy cover to be protected (or otherwise

enforceable restricted) thorough a perpetual protective easement or deed restriction preserving and conserving the preserved vegetation canopy cover.

Furthermore, because the property was affected by the 2017 Atlas Peak Fire, the provisions of NCC Section 8.80.130(B) (Conservation regulations for fire-damaged properties) are applicable. This code provision states: *For purposes of calculating the Vegetation Retention Requirements contained in subsection (C) of County Code Section 18.108.020 (Vegetation Retention Requirements.) for any earthmoving activity as defined in Section 18.108.030 (Definitions.) occurring on firedamaged 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.*

Based on an analysis provided by the applicant, and review of historical aerial imagery and County GIS Vegetation mapping, the parcel contained approximately 28-acres of vegetation canopy cover canopy in 2018. The proposed project would remove approximately 6.5-acres of vegetation canopy cover, as it existed in 2018. Taking into account vegetation canopy cover that will be removed though implementation of the remainder of approved #97061-ECPA (conservatively approximately 0.3 to 0.5-acres), an estimated 7-acres of canopy cover is calculated to be removed. Resulting in the retention of approximately 75% of the vegetation/tree canopy cover it existed in 2018 (also see **Exhibit A-1**). This retention is compliant the minimum vegetation canopy cover requirements for projects located within the AW zoning district pursuant to NCC Section 18.108.020(C). **Mitigation Measure BR-3** (that is further disclosed below) will include provisions to permanently preserve remaining canopy cover consistent with NCC Sections 18.108.020 (D) and (E), in addition to minimizing potential cumulative impacts to oaks and oak woodland. Furthermore, with implementation of **Mitigation Measure BR-1** and **BR-3** vegetation canopy cover retention will slightly increase.

With respect to all vegetation types (i.e. Biological Communities or Land Cover Types) being removed as part of the project, based on the Biological Resources Reconnaissance Survey, land cover types occurring within the project parcel include: oak woodland (±28.89 acres, non-native annual grassland (±17.11 acres), toyon chaparral (±15.92 acres), seasonal wetland (<0.1 acre), vineyard (±11.6 acres), and developed land (±5.75 acres) (**Table 5**). The proposed project of 19.5 gross acres[14] consists of approximately 6.9 acres of oak woodland, approximately 8.9 acres of toyon chaparral, and approximately 3.7 acres of annual grassland. Combining the areas entitled under #97061-ECPA with this proposed development yields a total development area of approximately 23.3 acres consisting of approximately 7.1 acres are oak woodland, approximately 9 acres toyon chaparral, and approximately 7.2 acres of annual grassland (**Table 6**).

In terms of numbers of trees to be removed as part of the proposed project, approximately 362 to 399 trees with a 6-inch diameter breast height (dbh) or greater would be removed. Tree species proposed for removal include coast live oak, California black oak, valley oak, big leaf maple, coastal redwood and incense cedar. As disclosed in subsection a above, implementation of **Mitigation Measure BR-1** would result in avoidance of the two bat habitat trees located in proposed Vineyard Block 2.

Table 6 –Land Cover Types/Biological Community Removal and Retention[15]

Land Cover Type or Biological Community	Acreage within Parcel Pre-Project	Acreage Removed[1]	Percent Removed	Percent Remaining	Post-Project Acreages
Oak woodland	28.89	7.1	24.6%	75.5%	21.79
Annual Grassland	17.11	7.2	42.1%	57.9%	9.91
Toyon Chaparral	15.92	9	56.5%	43.5%	6.92
Seasonal Wetland	<0.1	0	0%	100%	<0.1
Vineyard	11.6	0	0%	100%	34.9
Developed	5.75	0	0%	100%	5.75
Totals	79.27	23.3	29.4%	70.6%	79.27

[1] Includes acreages that will be removed under approved #97061-ECPA as part of implementation of #P19-00496-ECPA.
Sources: WRA February 2020; and Napa County December 2020

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[16]. 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

[14] Nineteen gross acres plus the additional 0.5-acre equipment staging and material storage area east of Blocks 2 and 4.
[15] The acreages identified in **Table 5** may differ slightly from acreages identified in the biological assessment (**Exhibit B)** or the Vegetation Canopy Cover retention analysis (**Exhibit A-1**), due to, mapping platforms, spatial characters, rounding, and the differences between canopy cover and land cover type mapping. Because approximate biological/plant communities and project acreages have been corroborated through County GIS mapping, the values disclosed herein are considered by the County to be adequate for CEQA review and disclosure purposes of the subject application.
[16] Napa County General Plan Draft Environmental Impact Report, Volume 1, Section 5.4, Biological Resources, February 2007

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).

The project parcel contains approximately 28.9 acres of oak woodland, with approximately 6.9-acres occurring in the proposed development area of #P19-00496-ECPA, and approximately 0.2-acres occurring within approved/entitled #97061-ECPA, totaling approximately 7.1-acres of oak woodland removal. In order to maintain 2-acres of preserved/avoided woodland for each acre impacted pursuant to Policy CON-24c (i.e. 2:1 preservation ratio), approximately 9.6-acres of oak woodland could be converted to vineyard to comply with this policy. The project as proposed with incorporation of entitled oak woodland removal would result in the retention of approximately 21.9-acres of the parcel's approximate 28.9-acres of oak woodland (or 75%), in compliance with Policy CON-24c.

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 21.9-acres of the parcel's approximate 28.9-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.

In particular, the proposed removal of three (3) valley oaks would be inconsistent with Policy CON-24c, in that oak species that are limited in distribution would be removed. Additionally, the removal of several trees at the northwest end of proposed Vineyard Block 2 (encompassing approximately 0.35-acres and containing 8 trees) would not be consistent with Policy-24a and the intent of the Conservation regulations, in that this area is located at the head of a drainage and the primary purpose of this vegetation removal is for rock storage. Inconsistency with these General Plan Conservation Policies and the Conservation Regulations is consider a potentially significant impact, as well as a potential cumulative impact to oaks of limited distribution 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-4** will be implemented. This measure will require the removal of the northwestern end of Vineyard Block 2 (encompassing approximately 0.35-acres), and the avoidance of the 3 Valley oak trees within proposed Vineyard Block 1. 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-4** 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 canopy 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.

Mitigation Measure BR-4: The owner/Permittee shall implement the following measures to reduce potential direct, indirect and cumulative impacts to oak trees and oak woodland, vegetative cover canopy and associated habitat as a result of the project, and achieve consistency with General Plan Conservation Policy CON-24 and the Conservation Regulations (NCC Chapter 18.108):

a. Revise #P19-00496-ECPA prior to County approval to remove the area identified as 'Stockpile' located at the northwest end of proposed Vineyard Block 2, encompassing approximately 0.35-acres and containing eight (8) trees. Wildlife exclusion fencing shall also be revised to conform to the block boundary as modified by this measure and **Mitigation Measure BR-3**.

b. Revise #P19-00496-ECPA prior to County approval to avoid the three (3) valley oak trees located in proposed Vineyard Block 1 and provide them with a buffer that extends at a minimum to the trees driplines. The buffer shall not contain vineyard avenues or tractor turn-around areas, and wildlife exclusion fencing shall be revised to conform to the block boundary as modified by this measure and **Mitigation Measure BR-3**.

c. 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.

d. The 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.

e. 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.

f. A Preservation Area containing remaining oak woodland, vegetative canopy cover and associated habitat on the parcel (encompassing approximately 21-acres) shall be designated for preservation in a mitigatory or conservation easement with an organization such as the Land Trust of Napa County as the grantee, or other means of permanent protection acceptable to the County. Land placed in protection shall be restricted from development and other uses that would degrade the quality of the woodland (including, but not limed to conversion to other land uses such as agriculture or urban development, and excessive off-road vehicle use that increases erosion) and should be otherwise restricted by the existing goals and policies of Napa County. The owner/permittee shall record the mitigatory or conservation easement within 60 days of approval of #P19-00496-ECPA by the County: in no case shall the ECPA be initiated until said mitigatory or conservation easement is recorded.

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.

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

Discussion:

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

The Cultural Resources Evaluation prepared by Archaeological Resource Service (April 26, 2019: incorporated herein by reference), in addition to the Napa County GIS Archaeological sensitive areas and Archaeological sites layers were utilized in this analysis.

a-b) The Cultural Resource Evaluation conducted for the project did not identify any historical or archaeological resources within the project area. There are two 19th Century stacked rock wall segments located west of Vineyard Block 1 and south of Vineyard Block 3. The ECPA has been designed to avoid these rock walls and been provided with a minimum ten (10) foot buffer from the development area (i.e. the outside edge of the vineyard avenues and/or tractor turn around areas), as recommended by the Project Archeologist. Because no archeological resources have been identified in the project area, and the proposed project has been designed to avoid historical resources, no impacts are anticipated.

Furthermore, project approval, if granted, would be subject to the standard conditions identified below and project specific condition identified in **Section XVIII (Tribal Cultural Resources)** that would further protect and avoid impacts to cultural resources, including any that may be discovered accidently.

c) The Cultural Resource Evaluation did not identify potential for any human remains in the proposed development areas, and does not anticipate the discovery of human remains due to the location of the project parcel. Therefore, impacts on human remains are anticipated to be less than significant. Furthermore, the following conditions of approval would be incorporated should the proposed project be approved, which would ensure that potential impacts on human remains would be less than significant.

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

- In accordance with CEQA Subsection 15064.5(f), should any previously unknown historic or prehistoric resources, including but not limited to charcoal, obsidian or chert flakes, grinding bowls, shell fragments, bone, pockets of dark, friable solids, glass, metal, ceramics, wood or similar debris, be discovered during grading, trenching or other onsite excavation(s), earth work within 100-feet of these materials shall be stopped until a professional archaeologist certified by the Registry of

Professional Archaeologists (RPA) 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.

VI.	**ENERGY.** Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
	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 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 compared with other similar agricultural construction sites within Napa County.

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

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

With respect to transportation energy, existing energy standards are promulgated through the regulation of fuel refineries and products such as the Low Carbon Fuel Standard (LCFS), which mandates a 10% reduction in the non-biogenic carbon content of vehicle fuels by 2020. Additionally, there are other regulatory programs with emissions and fuel efficiency standards established by USEPA and the California ARB such as Pavley II/LEV III from California's Advanced Clean Cars Program and the Heavy-Duty (Tractor-Trailer) GHG Regulation. Further, construction sites will need to comply with State requirements designed to minimize idling and associated emissions, which also minimizes use of fuel. Specifically, idling of commercial vehicles and off-road equipment would be limited to five minutes in accordance with the Commercial

Motor Vehicle Idling Regulation and the Off-Road Regulation[13]. The proposed project would comply with these State requirements; see the Air Quality conditions of approval. Napa County has not implemented an energy action plan. Therefore, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency or impede progress towards achieving goals and targets, and impacts would be less than significant.

VII.	**GEOLOGY AND SOILS.** Would the project:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a)	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
	ii) Strong seismic ground shaking?	☐	☐	☒	☐
	iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
	iv) Landslides?	☐	☐	☒	☐
b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d)	Be located on expansive soil creating substantial direct or indirect risks to life or property? Expansive soil is defined as soil having an expansive index greater than 20, as determined in accordance with ASTM (American Society of Testing and Materials) D 4829.	☐	☐	☐	☒
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 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 project would not result in a substantial increase in the number of people to the site. Therefore, the potential for the proposed project to expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving fault rupture, ground shaking, liquefaction, and landslides is anticipated to be less than significant. Additional information supporting this conclusion is identified below:

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

i) The project site is shown as lying just east of the Green Valley Fault zone, with the north-northwest trending fault just passing through the southwestern corner of the project parcel. The western portions of Blocks A and D lie within the Alquist-Priolo Earthquake Fault Zone associated with the Green Valley Fault. Interpretation of site geomorphology, indicates additional branch or secondary faults may cross the site (Miller Pacific Engineering Group, December 9, 2019), and given the historic rate and magnitude of seismic activity on the Green Valley Fault, the risk of surface rupture within the development area is moderate to high. However, no significant impact is anticipated in that no new structures are planned: the most significant possible effect of surface rupture is likely limited to offset of linear features such as vine trellises, and irrigation/utility lines, and, no special engineering measures are required to mitigate the potential for surface rupture (Miller Pacific Engineering Group, December 9, 2019).

ii) Although the project site is located in an area that may be subject to strong to very strong seismic ground shaking potential during an earthquake (Association of Bay Area Governments, 2017: and Miller Pacific Engineering Group, December 9, 2019), the proposed project does not include construction of any new residences or enclosed areas where people would congregate.

iii) The site is within an area subject to very low liquefaction potential (Napa County GIS liquefaction layer). As noted above, the project does not involve the construction of new residences or other facilities, and includes only agricultural development and associated erosion control measures. Therefore, the project would not expose people or structures to adverse effects associated with liquefaction.

iv) The east/northeastern part of the project parcel, that includes portions of Blocks B and C, has been identified to generally consist of (i.e. underlain by) a historic debris field associated large ancient landslide(s). The debris field extends from ridge to the west of the parcel down to the bottom of Wooden Valley, approximate 2-miles northeast of the parcel (Miller Pacific Engineering Group, December 9, 2019). The project geologist also indicated the debris field and associated topography could also be related to historic faulting in addition to the potential large historic landslide(s). While a portion of the project site are underlain by of historic land-sliding and/or faulting the project geologist did not identify evidence of apparent historic or incipient (developing) instability within the proposed vineyard development areas. Additionally, because a majority of the site is underlain by relatively competent bedrock at shallow depth, the risk of "global" or deep-seated instability impacting the site is generally low, and that the vineyard development should have no adverse impact on slope stability (Miller Pacific Engineering Group, December 9, 2019).

b) Soils in the project area are mapped exclusively as Sobrante Loam (Soil Series #178 and 179) The Sobrante Loam series consists of well drained soils exhibiting moderate permeability, medium to rapid runoff, moderate to high erosion potential and a low to moderate shrink-swell potential. (Soil Survey of Napa County, USDA 1978; Napa County GIS soil types layer).

Installation and implementation of the erosion control plan 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 15th and April 1st. 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 have been prepared using the Universal Soil Loss Equation (USLE) in order to evaluate potential effects of erosion as a result of the proposed project. The USLE model evaluates the environmental conditions and physical forces that lead to the detachment and potential movement of soil particles through surface erosion. The USLE model does not describe travel distances of soil particles once dislodged. Potential soil loss and sedimentation associated with the proposed agricultural development and operations would primarily be controlled through a permanent no-till cover crop with a vegetative cover density of 75%. Vineyard avenues would also maintain an 75% vegetative cover. The cover crop provides the ability to trap eroded soils on-site, thereby reducing soil loss and sedimentation potential.

Based on USLE modeling calculations prepared by Acme Engineering (**Exhibit F**), the proposed conversion of approximately 19 acres of woodland and grassland to vineyard is anticipated to reduce soil loss, or surface erosion, within the project area as compared to existing conditions (**Table 5**). Under existing conditions, the annual soil loss within the project area is anticipated to range from approximately 2.27 to 46.71 tons per year depending on slope length and gradient. Under proposed project conditions, annual soil loss is anticipated to range from approximately 2.18 to 33.21 tons per year depending on slope length and gradient. Overall, soil loss is calculated to be reduced within the project area by approximately 16.68 tons per year, or approximately an annual 23.5% reduction as compared to existing conditions.

Table 7 – USLE Soil Loss Analysis

	Soil Loss			
Block	**Pre-project (tons/year)**	**Post-project (tons/year)**	**Difference (tons/year)**	**Percent Change**
1	46.71	33.21	-13.5	-28.9%
2	5.76	5.01	-0.75	-13.0%
3	16.11	13.77	-2.34	-14.5%
4	2.27	2.18	--0.09	-4.0%
Vineyard Total	**70.85**	**54.17**	**-16.68**	**-23.5%**

Source: Acme Engineering, USLE Layout and Practice Alternatives/Calculations: Blocks 1, 2, 4 July 20, 2020; Block 3 April 28, 2020

Other proposed erosion control features that are anticipated to further reduce potential soil loss as a result of the project, including soil loss

experienced during vineyard and cover crop establishment, consist of straw wattles, surface roughening, and straw mulch applied at 1.5 tons per acre.

Should the project be approved, the following standard condition of approval shall be implemented 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 #P19-00496-ECPA pursuant to NCC Chapter 18.108 (Conservation Regulations):
>
> - Permanent Erosion and Runoff Control Measures: Pursuant to NCC Section 18.108.0) installation of runoff and sediment attenuation devices and hydromodification facilities including, but not limited to straw wattles, rock-filled avenues, rocked crossings, and permanent no-till cover, shall be installed no later than September 15 during the same year that initial vineyard development occurs. This requirement shall be clearly stated on the final Erosion Control Plan. Additionally, pursuant to NCC Section 18.108.135 "Oversight and Operation" the qualified professional that has prepared this erosion control plan (#P19-00496-ECPA) shall oversee its implementation throughout the duration of the 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 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 within a maximum 24" wide strip (i.e. 12" on either side of the vine row), with post-emergent herbicides: no pre-emergent sprays shall be used. 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.
> - Temporary and permanent erosion control measures and devices shall be free of plastic monofilament netting and should generally be composed of biodegradable or compostable materials and/or utilize biodegradable or compostable materials in their construction so that animals do not become entangled within them.

For these reasons, the proposed project with incorporation of specified erosion control measures and conditions of approval will not increase soil erosion and the loss of topsoil as compared to existing conditions, as well as maximize the potential for containment of detached soil particles to the project area, resulting in no impact with regard to soil erosion, soil loss, and sedimentation [also see **Section VIII (Hazards and Hazardous Materials)** and **(IX Hydrology and Water)**]. 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) to be less than or equal to predevelopment conditions.

Furthermore, it is not expected that land preparation activities associated with 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 large 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.

c) Geology of the project site consists of consists of sedimentary, igneous, and metamorphic rock of the Jurassic-Cretaceous age and Franciscan Complex and marine sedimentary strata of the Great Valley Sequence (Miller Pacific, December 2019). As discussed above, the project area is not located in an area prone to ground failure or liquefaction. As described above, the proposed project identifies the soil types in the project area and addresses any potential soil instability. While the project site is within a large ancient landslide deposit, the project will not affect stability. Therefore, this project will not result in any significant impacts of on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse.

d) Soils of the project site consist of Sobrante Loam, which exhibits low to moderate shrink-swell potential (USDA Soil Survey of Napa County, 1978). No structures are proposed as part of this project and expansive soils pose little risk to vineyards and related agricultural improvements.

Therefore, there would be no impacts associated with expansive soils.

e) The proposed project involves the development of vineyard. No septic tanks or alternative wastewater disposal systems are needed or proposed at the project site. Therefore, there would be no impact 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 parcel and the nature of the project (which would involve relatively shallow vineyard), the probability of encountering paleontological resources within the project area 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 breas, true, and/or trace fossils are discovered during ground disturbing activities, all work within 100 feet of the find shall be temporarily halted or 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.

VIII.	**GREENHOUSE GAS EMISSIONS**. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
a)	Generate a net increase in greenhouse gas emissions in excess of applicable thresholds adopted by the Bay Area Air Quality Management District or the California Air Resources Board which may have a significant impact on the environment?	☐	☐	☒	☐
b)	Conflict with a county-adopted climate action plan or another 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. 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/592/Climate-Action-Plan.

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

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

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

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

GHGs are the atmospheric gases whose absorption of solar radiation is responsible for the greenhouse effect, including carbon dioxide (CO_2), methane, ozone, and the fluorocarbons, which contribute to climate change. CO_2 is the principal GHG emitted by human activities, and its concentration in the atmosphere is most affected by human activity. It also serves as the reference gas to which to compare other GHGs. Agricultural sources of carbon emissions include forest clearing, land-use changes, biomass burning, and farm equipment and management activity emissions. Equivalent Carbon Dioxide (CO_{2e}) is the most commonly reported type of GHG emission and a way to get one number that approximates total emissions from all the different gasses that contribute to GHG, as described in BAAQMD's CEQA Guidelines. In this case CO_2 is used as the reference atom/compound to obtain atmospheric carbon CO_2 effects of GHG. Carbon stocks are converted to CO_{2e} by multiplying the carbon total by 44/12 (or 3.67), which is the ratio of the atomic mass of a carbon dioxide molecule to the atomic mass of a carbon atom (http://ncasi2.org/COLE/faq.html).[17]

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

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

Construction Emissions:

Equipment Emissions: As discussed in **Section III (Air Quality)**, three County Certified EIRs assessed and analyzed potential air quality and GHG emissions associated with vineyard development. Within those EIRs, potential GHG emissions associated with construction equipment were calculated and disclosed. An estimation of potential construction equipment emissions per acre of vineyard development was derived

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

using the most generous emissions results from these EIRs. The Circle-S Ranch EIR anticipated approximately 4,293 metric tons (MT) CO_{2e} of construction equipment emissions for a 459-acre vineyard development, resulting in approximately 9.4 MT CO_{2e} of construction equipment emissions per acre of vineyard development.[18] Using this emission factor it is anticipated that Construction Equipment Emissions associated with the proposed ±19.5 gross acres of vineyard development, in addition to the ±4-acres of development that would occur as a result of implementation of the remainder of the previously approved ECPA (#97061), would be approximately 225.6 MT CO_{2e} (24 acres[19] 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 23.5-acres of existing vegetation to vineyard. Because there is not yet a universally accepted scientific methodology or modeling method to calculate GHG emissions due to vegetation conversion and soil disturbance, the Greenhouse Gas Emissions Checklist and associated carbon stock factors developed as part of the 2012 CAP efforts are utilized to determine potential project site carbon stocks and emissions. Utilizing the 2012 Draft CAP carbon stocks and the acreages of vegetation types within the project area, total carbon stocks for the project site are estimated to be approximately 131.9 MT C or approximately 484 MT CO_{2e} (**Table 8**).

Table 8 – Estimated Development Area Carbon Stocks/Storage

Vegetation Type/Carbon Storage[1]	Project Acreage[1]	Carbon Storage/Stock per Acre (MT C/acre)	Total Carbon Storage (MT)	Total Carbon Storage in MT CO2e
Oak Woodland	8	95.1	760.8	2,792.1
Grasslands	7	1.4	9.8	36.0
Shrubland	9	16.2	145.8	535.1
Total			916.4	3,363.2

[1] For estimated GHG emissions associated with this project, acreages of various vegetation types being removed has conservatively been rounded up to the nearest acre, and include stocks and emissions associated with development of previously approved vineyard on the project site. Lands identified as Developed have been included in the Grassland vegetation type for this calculation.
Sources: Napa County Draft Climate Action Plan, March 2012; Napa County Conservation Division, December 2020.

There is currently no scientific agreement about the percentage of carbon that would be lost (or emitted) from soils through grading. Some analyses have suggested 20-25% while others have suggested 50%.[20] 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 453.8 MT CO_{2e} (**Table 9**).

Table 9 – Estimated Project Carbon Emissions Due to Vegetation Removal

Vegetation Type/ Carbon pool[1]	Project Acreage[1]	Carbon Loss/Emission Per Acre (MT C acre)	Total Carbon Loss in Metric Tons	Total Carbon Loss/ Emission MT CO2e
Oak Woodland	8	89.6	716.8	2,630.7
Grasslands	7	0.8	5.6	20.6
Shrubland	9	12.1	108.9	399.7
Total			831.3	3,051.0

[1] For estimated GHG emissions associated with this project, acreages of various vegetation types being removed has conservatively been rounded up to the nearest acre, and include stocks and emissions associated with development of previously approved vineyard on the project site. Lands identified as Developed have been included in the Grassland vegetation type for this calculation.
Sources: Napa County Draft Climate Action Plan, March 2012; Napa County Conservation Division, December 2020.

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 ±19.5 acre agricultural development in addition to the ±4-acres of development that would occur as a result of implementation of the remainder of the previously approved ECPA (#97061), would be approximately 16.8 MT CO_{2e} (24 multiplied by 0.67 MT CO_{2e}).

[18] As discussed in Section III (Air Quality) variations or similarities in emissions modeling results between the three projects can be attributed to modeling platform and version utilized, variations in modeling assumptions and inputs (such as project acreage and vegetation types removed), and anticipated construction and equipment and duration of use.
[19] Consistent with the acreage identified in **Tables 8 and 9**.
[20] 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. Oak woodland sequester approximately 0.43 MT C per acre per year; utilizing this factor, the proposed project would result in a loss of approximately 4.7 MT C of sequestration (8 acres times 0.58). The 2012 Draft CAP indicates that grasslands, shrubland/chaparral, and developed lands sequester a negligible quantity of CO_2 per acre per year (essentially zero), and does not identify sequestration factors for these land cover (vegetation) types. Therefore, the sequestration factor for Croplands of 0.057 MT C per acre per year (as identified in the 2012 Draft CAP) has been attributed to these land cover types that are proposed for development to provide the most conservative GHG emission estimate. Utilizing this factor, the project would convert approximately 16 acres of grassland, shrubland, and other developed lands to vineyard, resulting in a reduction of approximately 0.91 MT C of sequestration. Utilizing these results, it is anticipated that the annual emissions associated with changes in carbon sequestration as a result of land use changes would be approximately 5.61 MT C per year or 20.6 MT CO_2e per year.

Furthermore, 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 CO_2 loss from vineyard soils. Carbon sequestration loss would be further offset by the proposed vineyard, which would likely act as a sink for atmospheric CO_2, depending on the longevity of grapevine roots and the quantity of carbon stored in deep roots. In addition to vines, the sequestration of atmospheric carbon is also achieved by the soil between vine rows through cover-cropping.

Project Emissions:

Based on the above estimates, the proposed project could result in one-time construction emissions of up to 3,276.6 MT CO_{2e} and annual ongoing emissions associated with vineyard operations (including loss of sequestration) estimated to be approximately 37.4 MT CO_{2e} per year (**Table 10**).

Table 10 – Estimated Overall Project-Related GHG Emissions

Construction Emissions in Metric Tons of $C0_{2e}$		Annual Ongoing Emissions in Metric Tons of $C0_{2e}$	
Source	**Quantity**	**Source**	**Quantity**
Vehicles and Equipment	225.6	Vehicles and Equipment	16.8
Vegetation and Soil	3,051.0	Loss of Sequestration	20.6
Total	**3,276.6**	**Total**	**37.4**

Source: Napa County Conservation Division, December 2020

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 3,276.6 MT CO_{2e} by considering the size of the proposed vineyard in relation to projected vineyard development in the County. The program level EIR for the 2008 Napa County General Plan Update (SCH#2005102088 certified June 3, 2008) projected 12,500 acres of new vineyard development in the County between 2005 and 2030. The County concluded in the General Plan EIR that emissions from all sources over the planning period would result in significant and unavoidable GHG emissions despite measures adopted to address the impact. Because this determination was based on emissions from all sources, not just agriculture, the General Plan did not determine that emissions solely from projected agricultural development would result in significant unavoidable impacts. Pursuant to Section 15183(a) of the California Code of Regulation (CCR), projects that are consistent with the general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific effects which are peculiar to the project or its site.

In the context of 12,500 acres of projected vineyard development, the proposed project would constitute less than approximately 0.02% 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 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 4.06 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. Furthermore, with the implementation of **Mitigation Measure BR-1** and **BR-3** the project would be slightly reduced, which is anticipated to slightly would reduce one time emissions and operational emissions; thereby further reducing anticipated air quality impacts associated with vineyard development and ongoing vineyard operations.

IX.	HAZARDS AND HAZARDOUS MATERIALS. Would the project	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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 wild-land fires?	☐	☐	☐	☒

Discussion:

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

No on-site chemical storage is proposed as part of the project, or is currently occurring at the subject parcel. Chemical mixing and equipment cleaning would occur with existing and propose vineyard development areas. An area within proposed Vineyard Block 1 adjacent to the existing access drive would be utilized for project staging and storage. Also located within the northeast corner of Vineyard Block 1 is a rock storage area. The use of pesticides, fertilizers, and sulfur for the proposed vineyard would typically be limited to approximately 30 combined applications per year, generally occurring between January and June of each year. A detailed listing of fertilizers and other chemicals, application methods, application amounts, number of annual applications, and annual amounts of chemicals that are anticipated to be utilized for ongoing vineyard maintenance and operation of the existing and proposed vineyard is provided within Supplemental Project Information forms on file at the Planning Department.

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

Within the western portion of the project parcel and in the immediate vicinity of the development areas, there is an unnamed blue-line stream, and two ephemeral drainages that contain characteristics to be considered county definitional streams. There are also four isolated potential seasonal wetlands. The blue-line stream and definitional streams have been provided setbacks consistent with NCC Section 18.108.025 (General provision – Intermittent/perennial streams) that range from 55 feet to 85 feet. The wetlands have been provided a minimum 50-foot setback consistent with NCC Section 18.108.026 (General provisions – wetlands).

The risk of potentially hazardous materials reaching or affecting adjacent streams, wetlands or other aquatic resources is significantly reduced because: i) the project would provide minimum setbacks of 50 from the site's aquatic resources; ii) project staging and storage areas, including agricultural chemical mixing and cleaning would be located at least 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 laws. Project approval, if granted, would also be subject to the following standard conditions that would further avoid and/or reduce potential impacts associated with routine transport and use of hazardous materials during project implementation and ongoing vineyard operations and maintenance.

Hazardous Materials – Conditions of Approval:
The owner/operator shall implement the following Best Management Practices (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 water courses, 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 condition of approval described above, impacts associated with the use and transport of hazardous materials is considered to be less than significant.

c) The nearest known schools are Vichy Elementary roughly 4.2 miles northwest, and Mt. George Elementary roughly 4 miles to the southwest (Napa County GIS: Schools Layer). There are no schools proposed within one-quarter mile of the project site. Therefore, there would be no impact to existing or proposed schools.

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, there is no impact.

e) The closest airport is the Napa County Airport, located approximately 11 miles southwest of the project site. The project is not located within any airport influence area or airport compatibility zones identified in the Airport Compatibility Plan (Napa County Airport Land Use Compatibility Plan, and Napa County GIS zoning layer). Therefore, no impact is anticipated.

f) There would be negligible numbers of workers visiting the parcel on a temporary basis for erosion control plan 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 is anticipated.

g) No structures are proposed as part of the project. The project site is located in an area identified as having high fire severity (Napa County GIS fire hazard severity zones layer). 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 area as compared with existing conditions. Therefore, the project would not increase the exposure of people or structures to wild-land fires, resulting in no impact.

X.	**HYDROLOGY AND WATER QUALITY.** Would the project:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
	a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater 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 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?	☐	☐	☒	☐
	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 January 14, 2014, Governor Jerry Brown declared a drought emergency in the state of California. That declaration was followed up on April 1, 2015, when the Governor directed the State Water Resources Control Board to implement mandatory water reductions in cities and towns across California to reduce water usage by 25%. These water restrictions do not apply to agricultural users. However, on April 7, 2017, Governor Jerry Brown signed an executive order lifting California's drought emergency in all but four counties (Fresno, Kings, Tulare and Tuolumne). The County of Napa has not adopted or implemented any additional 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 parcel is located in the Suisun Creek Watershed[21], with a majority of the proposed project occurring within the Wooden Valley Creek West Fork Drainage, with small portions of proposed Development Area B and F (approximately 0.5-acres), and Phase 3 of #97061-ECPA and the existing developed areas (including residence and existing vineyards), occurring within the Suisun Creek Lower Reach Drainage. The Suisun Creek watershed encompasses 53 square miles in Napa and Solano counties, and includes three major creeks (i.e. blue-line tributaries), White Creek, Wooden Valley Creek, and Suisun Creek. These tributaries drain this watershed, characterized by steep mountainous terrain and several large valleys, into the Suisun Marsh and Suisun Bay. Suisun Creek is currently listed as an impaired waterbody for dissolved oxygen and water temperature under Section 303(d) of the Clean Water Act (CWA). Steelhead trout (*Oncorhynchus mykiss*), a federally listed threatened species, have been found in the three main creeks of the watershed, although none is listed as critical habitat. Land use in the watershed is almost entirely rural: cattle grazing and irrigated agriculture consisting of wine grapes, fruit and nut orchards and row crops. The watershed has no urban areas.

In 2001 the California Sportfishing Protection Alliance (CSPA) working with Laurel Marcus & Associates (LMA) prepared a watershed enhancement plan for the Suisun Creek watershed. Water temperature, water quality, and geomorphic monitoring were carried out between 2001 and 2003. Mapping of riparian forest and field studies of aquatic habitats was also completed. Extensive landowner outreach was also completed. The Enhancement Plan identified a number of priority actions and projects including restoring riparian forest to reduce water temperatures, eradication of invasive species in the riparian corridor to improve water temperature and wildlife habitat, and community education to improve land use practices to reduce fine sediment reaching the creeks. Many projects have been carried out or are underway to achieve the recommendations of the watershed enhancement plan, including removal of other invasive plants on all three creeks and installation of native plants, reduction of sedimentation through the implementation of BMPs on agricultural lands enrolled in the Fish Friendly

[21] The project parcel is not located within the Napa River Watershed and therefore; is not subject San Francisco Bay Regional Water Board Order #R2-2009-0064 or Order #R2-2017-0033 (General Permit) for vineyard properties in the Napa River and Sonoma Creek watersheds).

Farming Environmental Certification Program, and continued monitoring and quantification of habitat, water quality, and geomorphology. The Californian Land Stewardship Institute continues to implement the watershed plan and move forward with additional projects and programs.

There are two mapped blue-line streams (USGS 1951, NWI 2019a) and three mapped blue-line streams with several tributaries within the California Aquatic Resources Inventory (CARI) database (SFEI 2019) and several small seasonal wetlands (0.07 acres) located on the project parcel (refer to **Exhibit B**). The proposed project has been designed to include setbacks from these features pursuant to and consistent with NCC Section 18.108.025 (General Provisions – Intermittent/Perennial Streams) and .Section 18.108.026 (General provisions – Wetlands).

a) Waste discharge is not included as part of the project, or anticipated for 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 area. Agricultural Erosion Control Plan #P19-00496-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.

A Water Demand and Water Availability Analysis (WAA) was prepared in order to determine if the proposed increase in groundwater water demand as a result of the proposed project would result in a significant impact to groundwater supplies (Acme Engineering, Inc., December 13, 2019 - **Exhibit D**). The WAA estimates the onsite groundwater recharge, overall availability, and both existing and proposed use, in order to assess potential impact on groundwater in accordance with the WAA Guidance Documented adopted by the County May 12, 2015.

Water demands for the existing vineyard and onsite residential uses are currently being met by two existing groundwater wells located on the project parcel: identified as Well 1 and Well 2 in **Exhibit D.** The proposed vineyard, in addition to the vineyard approved under #97061-ECPA but not yet developed, would be irrigated via a drip irrigation system with water from the property's two existing wells. No frost protection or heat protection is proposed as part of the project. A WAA that includes a Tier 2 analysis (Well and Spring Interference Criterion) is not necessary for this project because there are no known non-project wells located within 500 feet of the project wells.

The approximate 10.3 net-planted acres of existing vineyard utilizes approximately 3.96 acre-feet of water per year (AF/yr.)[22] in addition, the existing residential uses utilize approximately 0.95 AF/yr., for a total existing water use of approximately 4.91 AF/yr. The proposed vineyard that includes approximately 15.9 net planted acres is anticipated to utilize approximately 6.11 AF/yr. of groundwater annually, and the approximate 3.3 net planted acres of vineyard approved under #97061-ECPA is anticipated to utilized approximately 1.27 AF/yr., for a total of approximately 7.38 AF/yr.: After development, the proposed project in conjunction with existing groundwater uses (i.e. existing vineyard and residential uses), and previously entitled uses that have yet to be developed, would result in approximately 12.29 AF/yr. of groundwater use/demand**.**

Groundwater Recharge: Long-term average groundwater recharge can be estimated as the percentage of rainfall that falls on the parcel that percolates into the underlying aquifer. The percentage of rain that has the potential to infiltrate varies depending on factors such as rates of evaporation and transpiration, soil type and geology that exists at the site, and average annual rainfall. Based on available climatological data, site-specific information, and other available data and analysis relevant to potential recharge, the Tier I WAA, which uses an average annual rainfall of 22.5 inches per year over the approximate 79.3 acres of the parcel's land area available for recharge and a 10% deep percolate recharge estimate, estimates the average annual groundwater recharge of the parcel to be approximately 14.87 AF/year (**Exhibit D).** The average annual rainfall utilized in the recharge analysis includes times of below-average and above-average rainfall, and therefore inherently includes drought year conditions.

The project as proposed, in conjunction with existing use, is estimated to have an annual onsite future groundwater demand of approximately 12.29 AF/year, which is below the estimated average annual recharge volume of 14.87 AF/year. Furthermore, with implementation of **Mitigation Measures BR-1 and BR-3**, which would nominally reduce the project acreage, anticipated long term, overall water use will be slightly reduced.

Considering: i) anticipated annual water use of the project parcel for existing and proposed uses of approximately 12.29 AF/year is below the parcel's anticipated annual groundwater recharge rate of approximately 14.87 AF/year; ii) there is no evidence to date indicating that there are groundwater problems or declining well production in the this area of the County; and iii) incorporation of the standard water use condition below to monitor water use as a result of vineyard establishment and ongoing vineyard operations and maintenance (if approved), the proposed project is anticipated to result in less than significant impacts to groundwater supplies, groundwater recharge, and local groundwater aquifer levels.

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

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

Erosion control measures and plan features that are not anticipated to affect drainage patterns but would assist in minimizing the potential for increased erosion and water runoff include a no-till cover crop with vegetative cover density of 75% (including vineyard avenues and turnarounds/turn-spaces), and the annual application of straw mulch cover on all disturbed areas at a rate of 3,000 pounds per acre. These

[22] Typically, the annual irrigation season for vineyard ranges from late May through September/October depending on the varietal.

features would slow and filter surface runoff water, thereby minimizing sediment, nutrients, and chemicals from leaving the project site and entering nearby aquatic resources.

Refer to **Exhibits A, F** and **G** for details related to the following discussion. Proposed erosion control and project features that have the potential to alter natural drainage patterns include straw wattles, water bars, cross slope diversion ditches, drop inlets, drainage mainlines and rock aprons (i.e. stabilized outfalls). Straw wattles would be placed on contour at various locations around the perimeter of the vineyard blocks and within vineyard avenues to slow and maintain surface/sheet flow. Straw wattles and water bars are spaced according to the USLE to maintain soil losses below the tolerable levels for the soil types found on the site and to ensure (in conjunction with the cover crop and other runoff control features) that no net increase in erosion sediment conditions occurs beyond pre-development conditions as a result of the project. The design and location of straw wattles and water bars would have a negligible effect on existing drainage patterns in that they would not alter the existing topographic contours of the site.

Proposed cross slope diversion ditches and associated subsurface drain lines and outfalls have a greater potential to alter drainage patterns, in that they are designed to capture sheet flow before reaching erosive velocities and divert it to other locations within the project area. While these erosion control measure would have the potential to divert water to other locations within the project area, their designed use and that they do not divert water into different drainage areas or drainage courses, are not anticipated to substantially alter the overall drainage patterns within the project site or the surrounding area.

A Hydrologic Analysis for the project was prepared by the Project Engineer (ACME Engineering, **Exhibit G**). The Analysis identifies seven sub-watershed basins within the project area, and utilizes the Natural Resource Conservation Service (NRCS) Technical Release 20 (TR-20) method. The Analysis concluded that there would be a slight reduction in peak flows and no changes in times of concentration (the time it takes for runoff to flow from the upper most point in each watershed to the watershed's outlet) for all watersheds in the project area as result of the project (**Table 11**)[23].

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

	Peak Discharge Flow (cfs) by 24-hour Storm Event Frequency Return Interval (cubic feet/second)					
	2-year	**5-year**	**10-year**	**25-year**	**50-year**	**100-year**
Sub-watershed A						
Pre-project conditions	82.44	135.57	180.30	241.26	287.62	333.37
Post-project conditions	77.91	130.15	174.28	234.79	280.87	326.49
Sub-watershed B						
Pre-project conditions	2.19	3.52	4.64	6.16	7.31	8.45
Post-project conditions	1.97	3.26	4.35	5.85	6.99	8.12
Sub-watershed C						
Pre-project conditions	2.44	4.05	5.41	7.27	8.69	10.10
Post-project conditions	2.35	3.95	5.31	7.19	8.62	10.04
Sub-watershed D						
Pre-project conditions	7.02	11.49	15.23	20.33	24.19	28.01
Post-project conditions	6.62	10.96	14.65	19.69	23.53	27.33
Sub-watershed E						
Pre-project conditions	5.24	8.56	11.35	15.16	18.05	20.91
Post-project conditions	5.23	8.55	11.34	15.14	18.04	20.89
Sub-watershed F						
Pre-project conditions	10.14	16.65	22.12	29.56	35.22	40.81
Post-project conditions	9.55	15.92	21.29	28.66	34.27	39.82
Sub-watershed X						
Pre-project conditions	3.18	5.20	6.90	9.20	10.95	12.68
Post-project conditions	2.81	4.80	6.50	8.86	10.66	12.44

Source: Acme Engineering, Hydrologic Analysis: Watersheds A, B, C, and F December 1, 2019; Watershed X May 1, 2020; Watersheds D and E July 21, 2020.

General Plan Conservation Element Policy CON-50c states that peak runoff following development cannot be greater than predevelopment conditions. As demonstrated above, the proposed project would not increase runoff flow rates, and, therefore, is consistent with Policy CON-50c. Additionally, as discussed in **Section VII (Geology and Soils)**, the proposed project is anticipated to decrease soil loss as compared to existing conditions. Therefore, the proposed project would have a less than significant impact with respect to alterations of existing drainage patterns of the site or area that would result in increased runoff, or considerable on or offsite erosion, siltation, or flooding. Additionally, implementation of **Mitigation Measure BR-1** and **BR-3**, which would slightly reduce the project, is anticipated to result in similar hydrologic effects/rates.

[23] On August 7, 2020, the County Engineering Division determined the project's modeling technical adequate.

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, a slight decrease in runoff volume and no change in time of concentration is anticipated under post-project conditions as compared to pre-project conditions. Furthermore, as discussed in **Section VII (Geology and Soils)**, a reduction in soil loss and sedimentation is anticipated under post-project conditions. Therefore, the proposed project would not contribute a substantial amount of additional runoff to an existing stormwater drainage system or provide substantial additional sources of polluted or sediment laden runoff, resulting in a less than significant impact.

In addition, pursuant to NCC Section 18.108.135 (Oversight and Operation), projects requiring an erosion control plan would be inspected by the County after the first major storm event of each winter until the project has been completed and stable for three years to ensure that the implemented erosion control plan is functioning properly[24].

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

As discussed above and in **Section VII (Geology and Soils)**, the proposed project has been designed with site-specific temporary and permanent erosion and runoff control measures and features to prevent sediment, runoff, and pollutants from leaving the project area. As such, the proposed project is anticipated to reduce soil loss and sedimentation by approximately 16.68 tons/year (or an approximate 23.5% reduction), 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, in addition to the **Erosion and Runoff Control (i.e., Hydromodification) Installation and Operation** conditions of approval identified in **Section VII (Geology and Soils**), which would further reduce and avoid potential impacts to water quality as a result of the project and ongoing operations.

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

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

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

XI.	LAND USE AND PLANNING. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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 project and subsequent vineyard operations would not physically divide an established community. The nearest established community is the Vichy Springs located approximately 3 miles west, on which development of the proposed vineyard on the project parcel would have no impact.

b) Surrounding land uses consist predominately of rural residential and agricultural. The northern part of the project parcel and parcels to the north are zoned Agricultural Preserve (AP), while the southern part of the project parcel and parcels to the south are zoned Agricultural Watershed (AW). The northeastern part of the project parcel and parcels north and east are designated Agricultural Resource in the Napa County General Plan Land Use Element, while the southwestern part of the project parcels and parcels south and west are designated Agriculture, Watershed and Open Space (AWOS). 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 measure and conditions of approval, the project has been found consistent with applicable code requirements and General Plan Goals and Policies, including but not limited to the following:

- The project as proposed is consistent with NCC Section 18.108.010, which requires that soil loss and runoff as a result of a project be minimized to protect water quality. As discussed in **Section VI (Geology and Soils)** and **Section IX (Hydrology and Water Quality)**, the project would not increase soil loss, sedimentation, or runoff as compared to existing conditions, thereby minimizing negative effects to water quality, and is therefore consistent with General Plan Conservation Element Policy CON-48 and CON-50c.
- With implementation of **Mitigation Measures BR-1** through **BR-3** and the Creek Protection condition of approval, the 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 mitigation measures and condition of approval, the project would maintain levels of biodiversity and would avoid impacts to special-status plant and animal species.
- With implementation of **Mitigation Measure BR-4,** the project is consistent with Policy CON-24 as it maintains a mixture of oak species. Additionally, implementation of the **Mitigation Measure BR-4** will protect trees adjacent to the project site.
- As proposed, the project is consistent with Policy CON-16, which requires discretionary projects prepare an evaluation of biological resources. A Biological Resource Survey was prepared for the project (**Exhibit B**).
- The project as proposed with implementation of **Mitigation Measure BR-4** is consisted with Policy CON-6, which limits development is environmentally sensitive areas such as those adjacent to rivers or streamside areas. The project includes setbacks from all watercourses. Additionally, the project as proposed with implementation of **Mitigation Measure BR-4** would result in consistency with Conservation Policy CON-24 and the permanent vegetation campy cover requirements of NCC Section 18.108.020.
- The project as proposed with implementation of **Mitigation Measure BR-3** is consistent with Policy CON-18, which encourages the reduction of impacts to habitat conservation and connectivity.
- The project as proposed is consistent with Policy CON-30 and NCC Section 18.108.026 which requires projects avoid impacts to wetlands.
- The project as proposed is consistent with Policy CON-65b. Due to the project's scope and scale, its construction and operational GHG emissions, as disclosed in **Section VII (Greenhouse Gas Emissions)**, are anticipated to be less than significant.
- The project as proposed is consistent with Policy AG/LU-1, which states that agricultural and related activities are the primary land uses in Napa County, as the proposed project is vineyard development and would increase agriculture uses in the County.
- The project as proposed is consistent with General Plan land use designations of Agricultural Resource and Agricultural, Watershed and Open Space, and is therefore consistent with Policy AG/LU-20.

Because of these reasons, the project with the mitigation measure 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.

c) There are no habitat conservation plans or natural community conservation plans applicable to project site or adjacent parcels. Therefore, no impact would result.

XII.	**MINERAL RESOURCES.** Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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 does not take place in the area of a known mineral resource of value to the region or state or within the area of a known mineral resource recovery area (Napa County Baseline Date Report, Figure 2-2 and Map 2-1, Version 1, November 2005; Napa County General Plan Map, December 2008; Special Report 205, Update of Mineral Land Classification, Aggregate Materials in the North San Francisco Bay Production-Consumption Region, Sonoma, Napa, Marin and Southwestern Solano Counties, California Geological Survey, 2013). The nearest known mineral resource area in Napa County is located approximately 9 miles southwest of the project parcel. Proposed site improvements and development of vineyard on the property would not physically preclude future mining activities from occurring. Therefore, no impacts to mineral resources are anticipated

XIII.	**NOISE.** Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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 a 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 some surrounding parcels are planted with vineyards or undeveloped. The nearest off-site residences are located approximately 900 feet to the south, 3,350 feet and 3,920 feet to the east, 3,170 feet and 3,800 feet to the northeast.

Activities associated with installation of the project, including earthmoving, and subsequent vineyard operations, including fans for frost protection, could generate noise levels above existing conditions. Several different types of equipment would be necessary for implementation and operation of the proposed project, including bulldozer, excavator, dump truck, trencher, backhoe, and small trucks. **Table 11** characterizes typical equipment noise levels at a reference distance of 50 feet. Equipment used for vineyard development could produce a maximum of 85dBA at a distance of 50 feet.

Table 12 – Construction Equipment Noise Emission Levels

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

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

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

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

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

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

Based on distances to existing residences, noise associated with project construction would be less than 55 to 60 dBA at the nearest existing residence.

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 on-going vineyard operation and maintenance include a variety of vehicles and equipment, such as ATV's, tractors, grape haul trucks, passenger cars, and light trucks, which would occur on a temporary and seasonal basis. **Table 13** characterizes the typical reduction of farming activity noise levels as the distance increases from the source using a noise source level of 84 dBA.

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

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

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

Based on distances to existing residences it is anticipated that noise due to ongoing agricultural activities would be 50 dBA at the closest existing residence.

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 on-going (or established use) noise levels of approximately 55 dBA as compatible with residential uses (NCC Section 8.16.070). As the closest resident will experience noise levels between 55dBA and 60 dBA, noise and vibration impacts associated with project development and operation are anticipated to be less than significant. 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.

Furthermore, these noise sources and levels are considered typical and reasonable for agricultural development and operational activities, consistent with the County's 'Right to Farm' (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.

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 impacts.

c) The project site is neither located within an area covered by an airport land use plan, nor within two miles of a public, public-use, or private airport: the nearest airport is over 11 miles to the southwest within the City of Napa (Napa County GIS Napa Airport Compatibility Zones and US Geological Survey quad layers). Therefore, no impacts are anticipated.

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

Discussion:

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

XV.	**PUBLIC SERVICES.** Would the project result in:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a)	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.

XVI.	**RECREATION.** Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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.

XVII.	**TRANSPORTATION.** Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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 section 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?	☐	☐	☐	☒
e)	Conflict with General Plan Policy CIR-14, which requires new uses to meet their anticipated parking demand, but to avoid providing excess parking which could stimulate unnecessary vehicle trips or activity exceeding the site's capacity?	☐	☐	☐	☒

Discussion:

a-b) The project parcel is currently developed with a residence and associated accessory structures/development (garage, pool, landscaping), ±13-acres of vineyards (approximately 20% of the parcel), and associated residential and vineyard access roads, including vineyard avenue and tractor turn around areas.

The proposed project is expected to generate up to approximately 12 one-way trips per day during project construction and vineyard installation, for anticipated work crews of up to approximately 10 employees. It is anticipated that approximately six to 10 truck trips would be needed to mobilize and demobilize construction equipment (i.e. deliver and remove heavy equipment at the start and end of project construction). Vehicular equipment anticipated for project implementation typically includes a tractor/trailer, D-8 bulldozers, backhoe, excavator, dump truck, pickup trucks, water truck, flatbed trucks, and ATVs. Vineyard operations are generally anticipated to consist of the following: i) Pruning occurring approximately 4 weeks of the year (typically January through March) with crews up to 6-8 workers, resulting in approximately four one-way trips per; ii) Cover crop management and pest control occurring between 10 and 22 times per year (typically January to June) with crews of between 2 and 6 workers, resulting in approximately 2 to 6 one-way trips per day; iii) general vineyard maintenance vine management (including irrigation oversight) occurring approximately 30 times per year (typically March to October) with crews of between 1 and 6 works, resulting in up to approximately 1 to 4 trips per day; and iv) Harvest anticipated to occur approximately up to two weeks, typical during October, consisting of work crews of 6 to 10 workers resulting in approximately six to 10 one-way trips per day (including grape haul trucks). Vehicular equipment for ongoing vineyard maintenance is anticipated to include ATVs, tractors, truck and equipment trailers, and passenger cars and/or light trucks. Some of this traffic already exists to the subject parcel due to the operation and maintenance of the parcel's 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/seasonal during the non-peak hours, generally arriving around 6 a.m. and departing around 3 p.m. or arriving around 10 p.m. and departing around 5 a.m. depending on the season/activity.

The subject parcel is located over approximately 9 miles southeast of the City of Napa, approximately 3.5 miles east from the point where Coombsville Road becomes Wild Horse Valley Road (**Figures 1-3)**. Commercial and passenger vehicles (including light trucks), would predominately utilize use County roads, and to a lesser extent State highways, intermittently and seasonally for construction and subsequent vineyard operations.

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 on the subject property, and it is anticipated that a number of existing employees would be utilized to develop and manage the proposed vineyard; therefore, it is anticipated that trips to and from the site would not significantly change as a result of the project. The proposed project would result in a minimal increase in traffic levels (up to approximately 12 one way trips during construction, and up to approximately 10 one way trips during construction) along the local roadways as 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 and existing site development and operations. Further, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, or designated bicycle and pedestrian facilities or with CEQA Section 15064.3(b). Therefore, the impact would be less than significant.

c) The project proposes to utilize the existing site access off Wild Horse Valley Road that currently provides access to existing on-site vineyards, for project development and subsequent operations (**Figures 1-3**). The project does not include roadway improvements and/or modifications to Wild Horse Valley Road or any State Highways in the vicinity, or include any other roadway design feature that would result in hazardous conditions or introduce 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 proposed project is not anticipated to substantial increase hazards due to roadway or access design features, or incompatible uses, resulting in a less than significant impact.

d) The existing roads would continue to provide adequate emergency access to the project parcel and project area, resulting in no impact.

e) Vineyard development and operation is a land use that does not have prescribed parking standards under current county ordinances; therefore,

no parking impacts are anticipated. Additionally, parking within existing and proposed staging areas and/or along existing and proposed vineyard avenues would satisfy parking demands for project installation and subsequent vineyard operations.

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:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
	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	☐	☐	☒	☐
	b) 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 Yocha Dehe Wintun Nation, the Mishewal Wappo Tribe of Alexander Valley and the Middletown Rancheria on January 17, 2020, and again to the Mishewal Wappo Tribe of Alexander Valley on February 4, 2020. On January 23, 2020, the County received a response via email from the Middletown Rancheria stating that the project is not within the aboriginal territories of the Middletown Rancheria and declined to comment. On February 20, 2020, the County received a response letter from the Yocha Dehe Wintun Nation, indicating that the project is within their aboriginal territories, and that they have a cultural interest and authority in the proposed project area[25]. Since the Tribe was not aware of any known cultural resources near the project, they determined that a cultural monitor was not needed; however, they recommended cultural sensitivity training for any pre-project personnel, and requested that the project incorporate Yocha Dehe Wintun Nation's Treatment Protocol into the mitigation measures for this project. The Tribe also requested that the Tribe and an archaeologist be contacted should any cultural resources be found. They requested that the County submit the updated mitigation measures to the Cultural Resources Department once completed. A subsequent letter dated March 26, 2020, was received from Yocha Dehe, further requesting that cultural sensitivity training for site workers be incorporated into the conditions of approval (Yocha Dehe Identification Number YD-01272020-02).

On March 18, 2020, the County sent correspondence to the Yocha Dehe Wintun Nation and the Middletown Rancheria acknowledging their response letters, and closing the consultation invitation because consultation was not requested within the 30-day notification period. The Mishewal Wappo Tribe of Alexander Valley did not request consultation within the 30-day notification period, and because no response to the February 4, 2020 consultation invitation was received, the County sent a consultation closure notice to the Tribe on March 18, 2020.

a-b) As discussed in **Section V (Cultural Resources),** the proposed project's Cultural Resources Evaluation (Archaeological Resource Service, April 26, 2019), did not identify any historical or archaeological resources within the project parcel.

As indicated above, the Yocha Dehe Wintun Nation has requested a project-specific condition of approval that the owner/Permittee engage with the Tribe to provide cultural sensitivity training to site workers prior to the commencement of project construction (i.e. vegetation removal or earth-disturbing activities). To ensure that Yocha Dehe Wintun Nation cultural sensitivity training is provided to site worker prior to the commencement of the project so that cultural resources are adequately protected, the project shall be subject to the project-specific condition of approval below, should the project be approved.

As such, the proposed project, with incorporation of the standard cultural resource conditions identified in **Section V (Cultural Resources)** and the project specific Tribal Cultural Resources condition of approval below**,** would result in less than significant impacts to Tribal Cultural Resources, including those that may be eligible for the CHRIS or local register or cultural resources as defined in Public Resources Code Section 5024.1(c).

[25] Yocha Dehe project Identification Number YD-01272020-02.

Tribal Cultural Resources – Condition of Approval: Prior to the commencement of vegetation removal and earth-moving activities of #P19-00496-ECPA, the owner/Permittee shall provide documentation to Napa County demonstrating that they have engaged with Yocha Dehe Wintun Nation to provide cultural sensitivity training and that cultural sensitivity training has been provided to site workers. Should the owner/Permittee be unsuccessful in engaging with the Yocha Dehe Wintun Nation, the owner/Permittee shall provide, for review and approval by Napa County, a Cultural Monitoring Plan prepared by a professional archaeologist certified by the Registry of Professional Archeologists (RPA). The Cultural Monitoring Plan shall outline monitoring requirements including but not limited to, sensitivity training for site workers, find procedures, and monitoring documentation and reporting procedures.

XIX.	**UTILITIES AND SERVICE SYSTEMS.** Would the project:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a)	Require or result in the relocation or construction of a 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 wastewater 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 new employees to the property on a temporary basis, and ongoing vineyard operation and maintenance would generate a minimal number of new employees to the property on an ongoing basis. It is anticipated that these employees would come from the existing labor pool in the region and would not generate an increase in the population relative to the existing conditions. Therefore, the proposed project would not create a need to construct new or modified utilities and service systems. Further, implementation of the proposed project would not result in the construction or expansion of a water or wastewater treatment facility; the proposed project would not generate wastewater, and one existing groundwater well would provide irrigation water to the vineyard. Irrigation pipelines would be located within existing roadways and/or within proposed clearing limits. The proposed project would include the installation of a limited number of onsite storm water drainage features, that have been designed to meet project-related storm water drainage needs and county no net increase policy objectives. The effect of the proposed storm water drainage system is described in **Sections IV (Biological Resources), VII (Geology and Soils),** and **X (Hydrology and Water Quality)**. As discussed in the referenced sections, the environmental impacts of construction of these features, with incorporation of standard conditions identified in **Sections III (Air Quality), IV (Biological Resources), V (Cultural Resources)** and **IX (Hazards and Hazardous Materials)**, would result in a less than significant impact.

b) The proposed ±15.9 net-planted acres of vineyard in conjunction with the ±3.3 net-planted acres of vineyard approved under #97061-ECPA, and the existing vineyard and residential uses would be supplied by an existing onsite wells. The WAA conducted by ACME Engineering (**Exhibit D**) concluded that after full development, water use for the project parcel is estimated to be approximately 12.29 AF/year. Based on the site-specific recharge analysis, the project parcel is estimated to have a groundwater recharge allotment of approximately 14.87 AF/year. Therefore, the proposed project, in conjunction with existing uses, is anticipated to have less than significant impact on water supplies. Also see **Section X (Hydrology and Water Quality)** for additional disclosures and analysis. Furthermore, with implementation of **Mitigation Measure BR-2** and **BR-4**, groundwater use may be slightly reduced.

c) Given the small number of new employees that the 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 or the properties waste water system.

d-e) Rock generated during vineyard preparation that is not utilized on-site for vineyard avenue surfacing and erosion control measures (i.e. rock aprons), would be stored/stockpiled for future use within proposed development areas. Solid waste generated during construction activities (e.g., broken pipe, fittings, trellis, end posts, etc.) would be negligible. Implementation of the proposed project would include pruning and harvesting activities which would generate waste material (cane). This material would generally be disposed of onsite by spreading it back into the vineyard, burning it, or a combination of the two. Therefore, the proposed project would not generate a volume of waste that would need to be disposed of at a landfill that would exceed the permitted capacity of applicable landfills serving the project area. Furthermore, all waste would be disposed of in accordance with federal, State, and local statues and regulations. Therefore, no impact would occur.

XX.	**WILDFIRE.** If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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 slope instability, or drainage changes?	☐	☐	☒	☐

Discussion:

The project site is located in a State Responsibility Area (SRA) that is designated as a High Fire Hazard Severity Zone (CALFIRE, 2007, Napa County GIS Fire Hazard Layer).

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

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

d) Although the proposed project would alter land cover and could include burning woody debris, the project includes temporary and permanent erosion control measures which would reduce the impact of stormwater runoff or drainage changes being discharged on or offsite, and there would be no change or a decrease in peak flow for all watersheds in the project site (see **Section X - Hydrology and Water Quality**). Additionally, as discussed in **Section IX (Hazards and Hazardous Materials**) 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 area as compared with existing conditions. For these reasons, no structures or people are anticipated to be exposed to downslope or downstream flooding or landslides as a result of wildfire, and the impact would be less than significant.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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 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 that 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 measure and conditions of approval (should the proposed project be approved).

a) As discussed in this Initial Study, implementation of # P19-00496-ECPA, with the incorporation of its Environmental Commitments (i.e. Bird Protection and Bat Protection), **Mitigation Measure BR-2** and identified conditions of approval (should the project be approved), would not have the potential to significantly degrade the quality of the environment.

Incorporation and implementation of the Environmental Commitments included in this project (as modified by conditions of approval identified herein) would minimize and avoid potential impacts to special-status bird species and special-status bat species that may utilize trees/woodland within and adjacent to project area for nesting, roosting, or maternal activities. Aquatic resources (i.e. wetlands, ephemeral streams and blue-line streams) identified on the subject parcel have been avoided and provided with setback buffers consistent with code requirements. No cultural resources or examples of California history or prehistory have been identified within the project area, and with incorporation of standard and project specific conditions for the protection of cultural and tribal cultural resources that may be discovered accidently, significant impacts to cultural resources are not expected (**Sections V and XVIII, Cultural Resources and Tribal Cultural Resources)**. Therefore, the proposed project, with incorporation of **Mitigation Measure BR-2,** Environmental Commitments, and conditions of approval, is not anticipated to result in potential significant direct, indirect, and cumulative impacts to the quality of the environment, wildlife species, or historic/cultural resources.

b) The subject property is located within the Wooden Valley Creek West Fork and Suisun Creek Lower Reach Drainages. The proposed project occurs almost completely within the Wooden Valley Creek West Fork drainage: only small portions of proposed Development Area B and F encompassing approximately 0.5-acres occurs within the Suisun Creek Lower Reach Drainage. Phase 3 of #97061-ECPA and the existing developed areas (including residence and existing vineyards), also occurs within the Suisun Creek Lower Reach Drainage. Because the proposed development almost exclusively occurs within the Wooden Valley Creek West Fork Drainage cumulative disclosures and analysis herein will focus on the Wooden Valley Creek West Fork Drainage.

In 1993, vineyard acreage within this drainage was approximately 127 acres, or approximately 3% of the drainage. Since 1993 approximately 355 acres of additional vineyard (or ±8.5% of the drainage) have been developed to vineyard (including vineyard approved but not developed), resulting in approximately 11.5% of the drainage (or approximately 482-acres) containing vineyard and approved/entitled vineyard. There are no other pending ECPA applications in this drainage. The drainage also includes five approved wineries, with a total annual production capacity/limit of 291,000 gallons. There are no pending winery use permit applications or known water rights applications on file within this drainage.

Based on evaluation of the County's GIS layer identifying Potentially Productive Soils (PPS) within the Wooden Valley Creek – West Fork drainage, there is approximately 1,788 acres (42.8% of the drainage) having the potential to be developed to vineyard within the Wooden Valley

Creek – West Fork drainage. The PPS layer includes lands with characteristics that have been found to be suitable for potential future vineyard development. However, this total does not take into consideration other site-specific limitations such as watercourses requiring setbacks, wetlands, other water features, rare or special-status plants and animal species, or cultural resources, nor other factors influencing vineyard development, such as sun exposure, soil type, water availability, or economic factors.

While it is impossible to precisely quantify the acreage and location of additional vineyard development in this drainage 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., Wooden Valley Creek West Fork drainage) over the last 27 years (1993-2020) were used to project vineyard development for the next three to five years. Across the drainage, 355 acres were developed or approved into vineyard over the past 27 years, or about 13.2 acres per year. Based on this rate, approximately 66-acres of vineyard could be expected to be developed in the drainage over the next 5 years.

Combined with Napa County policies and other site selection factors that limit the amount of land that can be converted to vineyard, the potential development of up to approximately 66-acres of agriculture over the next five years within the drainage is considered a reasonable estimate. NCC Chapter 18.108 includes provisions that require the retention and preservation of 70% of a parcel's vegetation canopy cover, setbacks of 35 to 150 feet from watercourses, and 50-foot setbacks from wetlands. General Plan Conservation Element Policy CON-24 requires the retention of oak woodland at a 2:1 ratio. These regulations limit the amount of potential vineyard acreage that could be converted within the drainage. It has been the County's experience with ECPA projects that there are generally site-specific issues, such as oak woodland preservation, aquatic resource setbacks, special-status plant and animal species, or cultural resources, in addition to the intent and purpose of the Conservation Regulations that further reduce areas that could 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 project (#P19-00496-ECPA) includes the removal of vegetation and installation of vineyard and erosion control measures concurrent with other projects in the air basin that would generate emissions of criteria pollutants, including suspended particulate matter (PM) and equipment exhaust emissions. For construction-related dust impacts the Regional Water Board recommends that significance be based on the consideration of the control measures to be implemented (Regional Water Board, May 2017). As discussed in **Section III** (**Air Quality**) and shown in **Table 3** (Emissions from Vineyard Development and Operation) criteria pollutant emissions associated with development and operations are anticipated to be well below identified thresholds, and therefore are not expected to result in project or cumulatively significant impacts. Additionally, the project would be subject to standard air quality conditions of approval (should the project be approved) that require implementation of Air Quality BMPs to further reduce potential less than significant air quality effects of the project and ongoing operation. Conversion of existing vegetation and disturbance of soil would result in releases of carbon dioxide, one of the gasses that contribute to climate change (**Tables 8** and **9**). As discussed in **Section VIII (Greenhouse Gas Emissions)**, the proposed project is not anticipated to result in substantial or significant GHG emissions, and includes the installation of grapevines and a permanent no-till cover crop, which may off-set (in whole or in part) potential impacts related to reductions in carbon sequestration. Potential contributions to air quality impacts associated with the proposed project, including GHG emissions and loss of sequestration, would be considered less than cumulatively significant through project design (i.e., scope and scale) and implementation of standard conditions of approval.

Biological Resources - Section IV:

A project-specific Biological Resources Reconnaissance Survey (**Exhibit B**) was performed for the project. The survey included a records search to identify the presence or potential presence of special-status species within the project area. The records search included the CNDDB and CNPS databases. As discussed in **Section IV** (**Biological Resources**), two special-status plant species were identified in the subject parcel, which have been avoided by the proposed project. It was also identified that there is the potential for special-status bird and bat species to occur within the project area because potential habitat for these species (i.e. oak woodland) exist within the parcel. Additionally, the proposed fencing locations could result in potential impacts to wildlife use and movement. The Project as proposed and designed injunction with the project's Environmental Commitments, and with implementation of **Mitigation Measure BR-1** through **Mitigation Measure BR-3** and standard conditions of approval, potential impacts to special-status species and wildlife use and movement would be less that significant.

The proposed project involves woodland and tree removal that may not be consistent with the overall intent of Policy CON-24, which requires that oak woodland be maintained and/or improved to the extent feasible to provide for oak woodland and wildlife habitat, slope stabilization, soil protection, and species diversity. Specifically, Policy CON-24a 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, and avoid the removal of oak trees of limited distribution (i.e. valley oaks). Additionally, NCC Section 18.108.020 requires the permanent protection of a portion of the property's cover canopy and oak woodland. Potential direct, indirect and cumulative impacts to vegetative cover, oak woodlands and valley oak trees and associated habitat would be reduced through implementation of **Mitigation Measures BR-4** and incorporation of standard conditions of approval. Therefore, the project as proposed, with implementation of its environmental commitments, standard and project specific conditions of approval, and mitigation

measure would not contribute to a cumulatively significant impact to woodlands, and achieve compliance with applicable General Plan Conservation Polices and the Conservation Regulations.

Cultural and Tribal Resources – Sections V and XVIII:

The Cultural Resource Evaluation conducted for the project did not identify any historical or archaeological resources within the project area. There are two 19th Century stacked rock wall segments located west of Vineyard Block 1 and south of Vineyard Block 3, that have been avoided and provided with a 10-foot buffer from the development areas. As indicated in these impact category sections the Yocha Dehe Wintun Nation has requested a project-specific condition of approval to address their concerns. The project as designed with the incorporation of standard and project specific conditions is not expected to result in significant impacts to historic, cultural or tribal resources (see **Section V Cultural Resources** and **Section XVIII 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 16.68 tons/year as compared to existing conditions (**Table 7**). The reasons for this reduction is due to the vegetative cover conditions within the proposed vineyard development areas, in conjunction with installation of cross slope diversions and associated outfalls, water bars and straw wattles that reduce overland flow velocities and erosive power, and trap eroded soil on-site, thereby reducing soil loss potential. Because the project would reduce soil loss as compared to existing conditions the project is not anticipated to contribute cumulatively to sediment production within the Lake Hennessey drainage; therefore, impacts associated with soil loss and associated sedimentation are not considered cumulatively significant.

Because geologic impacts associated with future agricultural projects would receive the same scrutiny under CEQA, the County's General Plan Goals and Policies, in particular General Plan Conservation Element Policy CON-48 requires development projects to result in no net increase in sediment erosion conditions and soil loss as compared to existing conditions, it is reasonable to anticipate that those projects would also have a less than significant project specific and cumulative impact on erosion and associated sedimentation.

Hydrology and Water Quality - Section X:

Water use calculations provided in the WAA prepared by ACME Engineering (December 2019 -**Exhibit D**) indicate that the proposed project is anticipated to utilize approximately 6.11 acre-feet of groundwater per year (AF/yr.)[26]. Existing groundwater use is approximately 4.91 AF/yr. (10.3 net-planted acres of vineyard utilizing approximately 3.96 AF/yr., and residential utilizing approximately 0.95 AF/yr.). The 3.3 net planted acres of vineyard approved under #97061-ECPA is anticipated to utilized approximately 1.27 AF/yr. Total annual groundwater use that includes the proposed project, entitled vineyard, and existing residential is anticipated to be approximately 12.29 AF/yr.

Based on available climatological data, site-specific information, and other available data and analysis relevant to potential recharge, the Tier I WAA, which uses an average annual rainfall of 22.5 inches per year over the approximate 79.3 acres of the parcel's land area, and a 10% deep percolate recharge rate, the average annual groundwater recharge of the parcel is anticipated to be approximately 14.87 AF/yr. (**Exhibit D).**

Considering: i) anticipated annual water use of the project parcel for existing and proposed uses of approximately 12.29 AF/year is below the parcel's anticipated annual groundwater recharge rate of approximately 14.87 AF/year; ii) there is no evidence to date indicating that there are groundwater problems or declining well production in the this area of the County; and iii) incorporation of the standard water use condition below to monitor water use as a result of vineyard establishment and ongoing vineyard operations and maintenance (if approved), the proposed project is anticipated to result in less than significant impacts to groundwater supplies, groundwater recharge, and local groundwater aquifer levels

As discussed in **Section X.c (Hydrology and Water Quality)** a Hydrologic Analysis utilizing the TR-20 Runoff Model has been prepared by ACME Engineering (**Exhibit G**). The Analysis concluded that there would be a slight reduction in peak flows and no changes in times of concentration as compared to pre-project conditions for all watersheds modeled as result of the project (**Table 11).** Therefore, no significant impacts due to changes in hydrology are expected.

The project 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.

[26] Typically, the annual irrigation season for vineyard ranges from late May through September/October depending on the varietal.

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

Land Use and Planning - Section XI:

As discussed in **Section XI (Land Use and Planning)**, the proposed project, with implementation of the mitigation measure 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]**), including General Plan Policy CON-24 regarding oak woodland removal.

Proposed Project Impacts found to be Less Than Significant

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

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

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

LIST OF FIGURES:

LIST OF TABLES:

LIST OF EXHIBITS:

Exhibit A	Acme Engineering, Inc., Erosion Control Plan, Lands of Lyons New Vineyard Development (Original submittal December 19, 2019; revised February 27, 2020, June 16, 2020, and July 20, 2020).
Exhibit A-1	Acme Engineering, Inc., February 2020, Lyons Hillside New Vineyard Development Vegetation Retention Analysis
Exhibit B	WRA Environmental Consultants, February 2020, Biological Resources Reconnaissance Survey Report, Lyons Hillside Vineyard, LLC.
Exhibit C	Archaeological Resource Service, April 26, 2019, A Cultural Resources Evaluation of Five Proposed Vineyard Blocks Within the Lands of Lyons (Contents Confidential).
Exhibit D	Acme Engineering, Inc., December 13, 2019, Water Availability Analysis, Lyons Hillside Vineyards.
Exhibit E	Miller Pacific Engineering Group, December 9, 2019, Geotechnical Investigation, Lyons Hillside Vineyards.
Exhibit F	ACME Engineering, USLE Layout and Practice Alternatives/Calculations, Lyons Hillside Vineyards (Original submittal December 6, 2019; revised/supplemented April 28, 2020 and July 20, 2020).
Exhibit G	Acme Engineering, Inc., Hydraulics Calculations, Lands of Lyons New Vineyard Development Proposed Drainage (Original submittal December 17, 2019; revised/supplemented May 1, 2020 and July 21, 2020)
Exhibit H	Signed Project Revision Statement