

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:** Hardten Family Vineyard Conversion, Agricultural Erosion Control Plan (ECPA) File #P20-00105-ECPA
2. **Property Owner:** Hardten Family Vineyard LLC., c/o Dave Hardten, 2515 Kelly Avenue, Excelsior MN 55331
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):** 3393 Atlas Peak Road, Napa, CA 94558; APN 033-010-056
Section 6, Township 06 North, Range 03 West, Mt. Diablo Base
Longitude 38° 24' 08.17" N / Latitude 122° 14' 32.32" W
5. **Project sponsor's name and address:** Napa Valley Vineyard Engineering Inc.
176 Main Street, Suite B
St. Helena, CA 94574
6. **General Plan description:** Agriculture, Watershed and Open Space (AWOS)
7. **Zoning:** Agricultural Watershed (AW)
8. **Background/Project History:** The parcel is developed with approximately 8 gross acres (± 7 net planted acres) of existing vineyard, and a single-family residence that is currently being rebuilt (Building Permit #BR19-02247-RPL) due to the Atlas Fire in 2017 that affected this parcel and its existing residential development.

The existing vineyard was originally developed in 1985, and on March 2, 2020, a Track II ECPA application was approved (#P20-00011-ECPA) allowing for the redevelopment and replanting of the existing vineyard. In 2020 approximately half of the existing vineyard (± 4 gross acres, ± 3.5 net acres) located in the southeast portion of the parcel was replanted in reliance of #P20-00011-ECPA, and the remaining ± 4 -acres (± 3.5 net acres) of existing vineyard has yet to be redeveloped.

While the parcel burned in the 2017 Atlas Peak Fire, because it is located in the Milliken Reservoir sensitive domestic water supply drainage, pursuant to Napa County Code Section 18.108.027, the 1993 conditions were used as the baseline for Vegetation Retention Calculations and Requirements.

Notice of the application was sent to the Milliken Reservoir Municipal Water Purveyor (the City of Napa) pursuant to NCC Section 18.108.077(E) on April 17, 2020, and response was received on June 15, 2020. The City's response did not include evidence that the proposed project will cause the overall delivery of sediment or other pollutants into the Milliken Reservoir to increase by more than one percent on an individual project basis, or by more than ten percent on a cumulative basis. Therefore this ECPA will not require a use permit pursuant to this provision.

This application was submitted after the effective date of the Water Quality and Tree Protection Ordinance (WQTPO - Ordinance #1438, effective May 9, 2019); therefore, this application will be subject to the County Conservations Regulations (NCC Chapter 18.108) as amended by the WQTPO. It should be noted that this application could qualify for a one time exemption to the WQTPO Ordinance pursuant to Section 17 of the Ordinance; however, as noted this application will be subject to present regulations.

9. **Description of Project:** The project includes clearing of vegetation (oak woodland, chamise chaparral, wild oat grassland and ruderal/developed land), earthmoving, and installation and maintenance of erosion control measures associated with the development of approximately 1.97-acres (± 1.49 net planted acres) of new vineyard within three vineyard blocks (A through C), on an approximate 13-acre parcel (**Figures 1 - 3**). Typical slopes within the project area range from 6% to 19%, with an average slope of approximately 10%.

The project would remove approximately: 0.34-acre of oak woodland, 0.29-acre chamise chaparral, 1.14-acres grassland, and 0.18-acre of ruderal (previously disturbed) land. Up to 14 oak trees are proposed to be removed within the proposed project area. Rock generated as a result of vineyard development would be used for road base and surfacing, landscaping, and rock mulch within the vineyard blocks.

Any remaining rock would be temporarily stockpiled within proposed development areas or hauled off-site: 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 existing well. Frost protection would be provided by wind machines. No new wildlife exclusion fencing is proposed: existing fencing generally consisting of 5-foot tall wire mesh generally located along the parcel's property lines would be maintained.

Erosion Control Measures: Temporary erosion control measures include a temporary cover crop in the first three years, to be established and maintained with a 70% minimum ground cover, straw mulch at a rate of 2 tons per acre, and installation of straw wattles. Permanent erosion control measures are limited to a permanent no-till cover crop maintained with a 70% minimum ground cover, including on vineyard avenues.

Earthmoving: Earthmoving and grading activities associated with the installation of erosion control measures and subsequent vineyard include, but are not limited to vegetation and tree removal, soil ripping 36-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 irrigation system.

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

- a. Installation of vineyard trellis and drip irrigation systems, and planting rootstock on a 4 foot by 7 foot spacing pattern for a vine density of approximately 1,556 vines per acre.
- b. Ongoing inspection and maintenance of temporary and permanent erosion and runoff control measures.
- c. Ongoing operation and maintenance of the vineyard, which includes vine management (pruning, fertilization, pest, and disease control), weed control, irrigation and trellis system maintenance, and fruit harvesting. The management regime of the no-till cover crop will consist of strip spraying within 12" of vines using either springtime post-emergent contact spray or properly timed application of pre-emergent contact spray.
- d. Environmental Commitment(s) - the owner/permittee, as part of this ECPA, has included the following element(s) in the project description¹:
 - i. Raptor and Passerine Bird Protection: Implementation of the following protection measures i) pre-construction surveys for work conducted between February 1 and August 31; ii) implementation of no disturbance buffer from active nests if identified; and, iii) maintaining the no-disturbance buffer until nestlings have fledged.
 - ii. Bat Protection: Implementation of the following protection measures i) pre-construction bat habitat and presence surveys prior to the commencement of development activities; ii) timed and phased habitat tree removal and, iii) development and implementation of avoidance plan if bats are present.

If the project is approved, these Environmental Commitments would be included as conditions of approval to ensure that they are implemented.

Table 2 lists a general schedule for the construction of the proposed project as identified in #P20-00105-ECPA and **Table 3** outlines typical general ongoing vineyard operations. The final implementation schedule is pending action on #P20-00105-ECPA.

Table 2 – Implementation Schedule

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

¹ During the winter months (September 15 to April 1 of the succeeding year), no earthmoving work is allowed by the Napa County Code (NCC) Sections 18.108.027(C) and 18.108.070(L).

Table 3 – Annual Operations Schedule

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

Implementation of the proposed project would be in accordance with the Hardten Family Vineyard ECPA prepared by Napa Valley Vineyard Engineering Inc. (dated May 12, 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).

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'.

10. Describe the environmental setting and surrounding land uses.

The proposed project would occur on an approximate 13-acre parcel located at 3393 Atlas Peak Road (i.e. the project parcel), approximately four miles north of its intersection with old Soda Spring Road (**Figures 1-3**). The project parcel is developed with approximately 8-acres of vineyards (developed in 1985), and as disclosed in Project Background and History the pre-existing residence and accessory structure are currently being rebuilt as a result of the 2017 Atlas Fire that destroyed the residence. The project parcel contains of approximately 2-acres of oak woodland, approximately 2-acres wild oat grassland, approximately 0.5-acres chamise chaparral, 8-acres of vineyard, and approximately 0.5-acre of developed/ruderal area.

The project parcel is located in southeast Napa County, approximately 5 miles northeast of the City of Napa, situated in the eastern mountains. The project parcel is also located in the Milliken Reservoir Drainage, which is within the larger Milliken Reservoir sensitive domestic water supply drainage. There is the beginning/head of an unnamed blue-line and associated pond generally located along a portion of the southern half of the project parcel's eastern property line and Atlas Peak Road. This unnamed blue-line stream is a tributary to Milliken Creek, which is located approximately 0.75 miles southeast of the project parcel (see **Exhibit B**).

Surrounding land uses within the immediate vicinity (i.e. within approximately one mile) of the project parcel predominantly consist of rural residential, with interspersed vineyards and wineries, and undeveloped land. There are three wineries within approximately 1 mile of the project parcel to the south, which range in an annual production limitation from 10,000 to 40,000 gallons per year. The nearest known schools are Vichy Elementary and Sunrise Montessori of Napa Valley located over 4.5 miles to the southwest of the project parcel (Napa County GIS: Schools Layer). The nearest residences (approximately 5) are scattered between approximately 800 feet and 1,500 feet to the south and east. The nearest residential community (City of Napa) and airport (Napa County Airport) are located approximately 5.25 miles and 11 miles to the southwest (respectively) from the project parcel.

General topography of the surrounding area and the project site consists of east facing hillsides, peaks, ridgelines, and valleys typical of the Atlas Peak and Foss Valley area: Foss Valley and Atlas Peak are located approximately 1.25 miles and 3.5 miles to the northwest (respectively) of the project parcel. General topography of the project site consists of gently to moderately sloping southeast facing hill slopes (slopes typically 6% to 19%: average slope $\pm 10\%$) with elevations within the project site generally ranging between $\pm 1,470$ feet to $\pm 1,529$ feet above Mean sea level (MSL). Soils of the project site consist of Aiken Loam (Soil Series #100 and 102) and Hambright rock outcrop (Soil Series #152).

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

California Department of Fish and Wildlife (CDFW) (T)
Regional Water Quality Control Board (Regional Water Board) (R)

Other Agencies Contacted

The Mishewal Wappo Tribe of Alexander Valley
The Yocha Dehe Wintun Nation
The Middletown Rancheria
City of Napa Water/Utilities Department

12. Tribal Cultural Resources². 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 April 17, 2020. On April 30, 2020, the County received a response letter from the Yocha Dehe Wintun Nation, indicating that the project is not within their aboriginal territories, and declined to comment on the application³. On June 15, 2020, the County sent correspondence to the Yocha Dehe Wintun Nation acknowledging their response letter, and closing the consultation invitation because consultation was not requested, and on June 15, 2020, correspondence was sent to the Mishewal Wappo Tribe of Alexander Valley and the Middletown Rancheria closing their consultation invitations because consultation was not requested by either of these Tribes within the 30-day notification period.

² **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.

³ Yocha Dehe project Identification Number YD-08022019-02.

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 #P20-00105-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 [Files - PBES Cloud](#)

- Napa Valley Vineyard Engineering, Inc., Erosion Control Plan, Hardten Family Vineyard, May 12, 2020 (**Exhibit A**).
- Napa Valley Vineyard Engineering, Inc., Vegetation Retention Analysis, Hardten Vineyard Development January 10, 2020 (**Exhibit A-1**)
- Northwest Biosurvey, Biological Resources Assessment, Hardten Vineyard Project, May 29, 2020 (**Exhibit B**)
- Tom Origer & Associates, Cultural Resources Study, 3393 Atlas Peak Road, August 13, 2019 (**Exhibit C – Contents Confidential**)
- Napa Valley Vineyard Engineering, Inc., Water Availability Analysis, Hardten Family Vineyard April 2, 2021 (**Exhibit D**)
- Gilpin Geosciences Inc., Engineering Geological & Geotechnical Investigation, Hardten Vineyards, March 12, 2020 (**Exhibit E**)
- Napa Valley Vineyard Engineering, Soil Loss Analysis, Hardten Vineyard, July 13, 2020 (**Exhibit F**)
- Napa Valley Vineyard Engineering, Inc., Hydrology Analysis, Hardten Vineyard, January 13, 2020 (**Exhibit G**)
- Napa County Resource Conservation District, SWRCB General Permit Memo, May 11, 2020 (**Exhibit H**)
- Napa Valley Vineyard Engineering, Inc., Vineyard Development and Operation Traffic and Practice, Hardten Vineyard Hydrology Analysis, Hardten Vineyard, April 29, 2020 (**Exhibit I**)
- Site inspections conducted by Napa County Planning and Engineering Division staff were completed on May 5, 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.
- 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:  _____

July 20, 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

a-b) The project site is located approximately 5 miles northeast of the City of Napa on gentle to moderately sloping hillsides typical of the Atlas Peak and Foss Valley area: Foss Valley and Atlas Peak are located approximately 1.25 miles and 3.5 miles to the northwest (respectively) of the project parcel. The general area primarily consist of oak woodland and grassland, interspersed with shrubland and vineyards. The closet County Viewsehd roads are Monticello Road and Silverado Trail that are both located over 3.5 miles to the south and west (respectively) of the project parcel. The project site neither lies within the scenic corridors, nor is visible from, 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 a small number of 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 minimal removal of existing vegetation within the proposed project 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, Sulphur applications) that could typically occur from about 8 p.m. to 12 a.m. and from 4 a.m. to 8 a.m. up to approximately 10 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 RESOURCES¹. 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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

California Resources Agency, to non-agricultural use?

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion:

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

a) The existing vineyard on the project parcel is either classified as Farmland of Statewide Importance or Unique Farmland, and the project site is identified as Grazing Land or Farmland of Local Importance on the on the Napa County Important Farmland 2016 map prepared by the California Department of Conservation, Division of Land Resource Protection. Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Important to non-agricultural use, 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 2-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 Assessment (**Exhibit B**) the project site 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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 approximately 5 miles 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 (NO₂), and suspended particulate matter of ten micrometers or less and two and a half micrometers or less (PM₁₀ and PM_{2.5}). Other criteria pollutants, such as lead and sulfur dioxide (SO₂), 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 Vineyards⁴ for an approximately 560-acre vineyard development, Walt Ranch Vineyard⁵ for an approximately 507-acre vineyard development, and Circle-S Ranch Vineyards⁶ for an approximately 400-acre vineyard development.⁷

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, PM₁₀, 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 development¹	8.43 to 11.39	34.39 to 52.16	3.93 to 4.47	13.93 to 14.53
Pounds per day: 150- to 250-acre vineyard development²	9.43 to 11.03	43.85 to 53.16	3.91 to 4.62	12.87 to 17.22
Pounds per day: 127-acre vineyard development³	4.6	42.3	5.21 ⁴	24.21 ⁴
Construction threshold	54	54	54	82
Operational Emissions				
Pounds per day: 400-acre vineyard operation¹	7.78	2.85	0.80	4.22
Pounds per day: 560-acre vineyard operation²	6.58	1.84	0.75	3.91
Pounds per day: 507-acre vineyard operation³	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

⁴ #P09-00176-ECPA, Analytical Environmental Services (AES) March 2012, SCH #2009102079 certified February 3, 2013

⁵ #P11-00205-ECPA, AES March 2016, SCH #2008052075 certified August 1, 2016

⁶ #P06-01508-ECPA, AES April 2011, SCH #2007062069 certified December 22, 2011

⁷ 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 1.97-acre vineyard (1.49 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 than 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 FAQ⁸ or the PERP website⁹.

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 10 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 and Sunrise Montessori of Napa Valley located over 4.5 miles to the southwest of the project parcel (Napa County GIS: Schools Layer). The nearest residences (approximately 5) are scattered between approximately 800 feet and 1,500 feet to the south and east. The nearest residential community, the City of Napa, is located over 5 miles to the southwest from the project parcel.

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 4.5 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.

⁸ http://www.arb.ca.gov/portable/perp/perpfaq_04-16-15.pdf

⁹ <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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

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

- Northwest Biosurvey, Biological Resources Assessment, Hardten Vineyard Project, May 29, 2020 (**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.

Northwest Biosurvey 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 biologists/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, 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, 2020), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS, 2020), and the USFWS List of Federal Endangered and Threatened Species that may be affected by projects in the Capell Valley, Cordelia, Cuttings Wharf, Mt. George, Napa, Rutherford, Sears Point, Sonoma and Yountville Quadrangles.

The parcel generally 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	2
Wild Oat Grassland	2
Chamise Chaparral	0.5
Vineyard	8
Developed/Ruderal	0.5

Sources: Northwest Biosurvey, May 2020, and Napa County March 2021

a.) Special-Status Plants: No special-status plant species were observed within the proposed project area during the surveys conducted by Northwest Biosurvey. Additionally, preferred habitats for many of the special status plant species known to occur within the vicinity of the subject property are not identified to be present within the project area according to the project biologist (Northwest Biosurvey, 2020).

Because the project site and parcel do not contain special-status plants or potential habitat for special-status plants, the project is not anticipated to have any direct or indirect impacts on special-status plant species or their habitat. Additionally, the avoidance of impacts to special-status plants and associated habitat would be consistent with Napa County General Plan Conservation Element Goal CON-3; Policy CON-13; Policy CON-17¹⁰.

Special-Status Animals: No special-status animal species were observed within the proposed project area during the surveys conducted by Northwest Biosurvey. Potential habitat for the following species are present on the project parcel: Pallid bat (*Antrozous pallidus*), Lawrence's gold finch (*Carduelis lawrencei*), Lewis' woodpecker (*Melanerpes lewis*), Loggerhead shrike (*Lanius ludovicianus*), and White-tailed kite (*Elanus leucurus*).

Pallid bat habitat consists of open forest and woodlands with sources of water over which to feed. These bats prefer the cool summer temperatures of caves, crevices, and mines as roosting sites where they are known to wedge themselves into small spaces, but they will also roost in buildings, bridges, and hollow trees. Foraging occurs over open country. Pallid bats take a variety of prey, including insects, reptiles, and rodents. Maternity colonies tend to be in the more protected, isolated locations and may consist of more than 100 individuals. These bats have a home range of 1 to 3 miles and are known to roost with other bat species. This species is extremely sensitive to human disturbance of roosting sites (Northwest Biosurvey, 2020).

Lawrence's gold finch are passerine (perching) birds that prefer to nest in the dense foliage of oaks in dry open woodland near brushy and grassy areas or chaparral. Proximity to water is important. Their diet consists primarily of seeds but includes some insects. They frequently nest near other pairs during a breeding season that extends from late March through July, with birds migrating south in August. There is nesting habitat for this bird in oak woodlands within the survey area.

Lewis' woodpeckers excavate nest cavities in dead trees and dead limbs of live trees in open woodlands. They hunt insects and eat fruits and berries throughout the spring and summer and shift their diet to cached acorns and emerging insects in the fall and winter. Breeding occurs between early May and July. The open oak woodland habitat within the grassland community provides potential habitat.

Loggerhead shrike is considered a sensitive species by the County of Napa. These passerines prefer open-canopied woodlands with grass ground cover and grazed open pastures. Preferred habitats include valley-foothill woodlands and riparian. They build well-concealed nests in the dense foliage of oaks and shrubs. They eat large insects but are fairly unique for passerines in that they also eat small amphibians, reptiles, birds, and mammals which they may impale on thorns or barbed wire fences. Shrikes use fence posts or shrubs as observation posts. Nesting occurs between March and early July when the young are fully fledged. Potential habitat for this species may be found in the mix of grassland and oak woodlands.

White-tailed kites are usually found near agricultural areas, the kite prefers open terrain near woodlands and water. These raptors hunt over open country and prefer large, deciduous trees surrounded by expanses of grassland, meadows, farmland, and/or wetlands for nesting and roosting sites. They feed mostly on small diurnal mammals, but will sometimes eat birds, insects, amphibians, and reptiles. The California Fully Protected status of these raptors pertains to nesting pairs with an emphasis on protecting nesting habitat. This species is also protected under the Migratory Bird Treaty Act.

With respect to bat species, Northwest Biosurvey a part of their Biological Resource Assessment assessed all the trees within the Assessment's

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

Survey Area and project area to determine if bat habitat trees are present. Their survey found two potential bat habitat trees, which contain cavities or snags suitable for bat roosting. Both of these trees are located over 50 feet from the project area, and there was no indication of current or past use by bats was observed at these trees. In addition to the proposed project being designed to avoid these trees, the project includes bat avoidance and protection measures as indicated in the project description (Environmental Commitment d.ii) and as detailed below. 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 shall conduct a passive habitat assessment of all trees proposed for removal in order to identify suitable bat habitat within 6 months of planned tree removal. If the habitat assessment determines that trees proposed for removal contain suitable bat habitat, the following shall apply to potential bat habitat trees:

- a. Tree trimming and/or tree removal 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.
- b. 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 (defined as having demonstrable qualifications and experience with the particular species for which they are surveying, and with bat surveys in specific roost types for project specific conditions) 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 Conservation 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 Conservation Division and CDFW. The removal or exclusion plan shall be implemented upon approval of the plan by the Conservation Division.

Because the project has been designed to avoid potential bat habitat trees and includes bat avoidance measures to protect bats impacts to these species and their habitat would be less than significant.

With respect to the white-tailed kite and other special-status bird species (including migratory birds), 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, consistent with and pursuant to California Department of Fish and Wildlife (CDFW) Code Sections 3503 and 3503.5 to minimize impacts associated with the loss and disturbance of nesting birds and raptors, the owner/applicant has included avoidance and protection measures as indicated in the project description (Environmental Commitment d.i) and 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 following nesting birds preconstruction survey(s) shall be conducted prior to the commencement of vineyard development and implementation activities:

- 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 construction surveys for nesting birds within all suitable habitat on the project site, and within 500 feet of all earthmoving activities. 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 Planning Division and 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 applicant/owner shall identify appropriate avoidance methods and exclusion buffers in consultation with the County Conservation Division and the 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 the 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 the project's Environmental Commitments, would result in less than significant impacts to special-status bird species.

b-c) There are no identified riparian habitats, sensitive natural communities, or vernal pools located within the project area (Northwest Biosurvey, May 2020). There is the beginning/head of an unnamed blue-line stream and associated pond generally located along a portion of the southern half of the project parcel's eastern property line and Atlas Peak Road. These features are located over 200 feet east of the project area. This unnamed blue-line stream is a tributary to Milliken Creek, which is located approximately 0.75 miles southeast of the project parcel (see **Exhibit B**)

Therefore, the project has been designed to avoid streams and aquatic features (i.e. blue-line stream and associated pond) and provide them with setbacks in excess of code requirements, no impacts to streams or other aquatic resources is anticipated as a result of the project.

d) The project parcel is currently fenced along its property lines with wildlife exclusion fencing generally consisting of ±5- foot tall wire mesh fencing. No new wildlife exclusion fencing is proposed: existing fencing would be maintained as necessary. Because the property is fenced and dominated by existing vineyard, and no wildlife movement corridors within the project parcel have been identified by the project biologist, no impacts to wildlife movement or use are anticipated.

e) Because the project parcel and project site is located in the Milliken Reservoir Sensitive Domestic Water Supply Drainage, pursuant to NCC Section 18.108.027(B) (Sensitive domestic water supply drainages – Vegetation Clearing) a minimum of 70% of the tree canopy and a minimum of 40% of the brush/shrub cover existing on the parcel within the Milliken Reservoir Sensitive Domestic Water Supply Drainage existing in 1993 is required to be retained as part of the project. Based on information provided by the applicant and review of historical aerial imagery, the project parcel contained approximately 1.88-acres of tree canopy cover, approximately 1.89-acres of brush/shrub cover, and approximately 9.23-acers of developed area in 1993. The project would remove approximately 0.37-acres of tree canopy cover, approximately 1.13 acres of the grass/shrub cover, and approximately 0.54-acres of developed area as it existed on this parcel in 1993. The proposed project would result in the retention of approximately 80.3% of the tree canopy cover and approximately 40.7% of the grass/shrub cover as it existed in 1993 within this Drainage, which would be in conformance with NCC Section 18.108.027(B). Also see the Vegetation Retention Analysis for the Hardten Vineyard Development prepared by Napa Valley Vineyard Engineering, Inc., (**Exhibit A-1**).

The cover canopy retention calculations above are also consistent with NCC Section 18.108.020(C) (General Provisions: Vegetation Retention Requirements) for parcels within the AW zoning district, which requires a minimum of seventy percent vegetation canopy cover as configured on the parcel existing on June 16, 2016, 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) through a perpetual protective easement or deed restriction preserving and conserving the preserved vegetation canopy cover.

To ensure that cover canopy and oak woodland is protected in accordance with NCC Section 18.108.020(E), the following provisions will be included as conditions of approval should the proposed project be approved:

Cover Canopy Protection/Preservation – Conditions of Approval:

- a. A Preservation Area containing oak woodland, vegetative canopy cover and associated habitat on the parcel (encompassing no less than 1-acre) shall be designated for preservation in an enforceable restriction, such as a conservation easement with an entity or organization consistent with California Civil Code Section 815, a deed restriction or other means of permanent protection acceptable to the County. Land placed in protection shall be restricted from development and other uses that could degrade the quality of the Preservation Area (including, but not

limited to conversion to other land uses such as agriculture or urban development, and excessive off-road vehicle use that increases erosion) and should be otherwise restricted by the existing goals and policies of Napa County. The owner/permittee shall record the enforceable restriction within 60 days of approval of #P20-00105-ECPA by the County: in no case shall earthmoving activities commence until said enforceable restriction is recorded.

- b. The area to be preserved shall be of like kind and quality to the land cover type(s) impacted as a result of the proposed project and shall be selected in accordance with Section 18.108.020(D) of the Napa County Code as determined by a qualified biologist, as follows: areas to be preserved shall take into account the type of vegetation being removed, and species diversity and species that are limited within the project property and Napa County; the acreage included in the preservation area shall be selected in a manner that minimizes fragmentation of woodland within the project property. The Preservation Area shall be subject to review and approval by the Director prior to recordation.

With respect to all vegetation types (i.e. Biological Communities or Land Cover Types), including oak woodland, being removed as part of the project, based on the Biological Resource Assessment and Napa County GIS vegetation layers, land cover types occurring within the project parcel include: approximately 2-acres oak woodland, approximately 2-acres wild oat grassland, approximately 0.5-acres chamise chaparral, approximately 8-acres vineyard, and approximately 0.5-acres of developed/ruderal land (**Table 5**). The proposed project of 1.97-acres consists of approximately 0.34-acres of oak woodland, approximately 0.29-acres of chamise chaparral, approximately 1.14 acres of wild oat grassland, and approximately 0.2-acres of ruderal land (**Table 6**).

In terms of numbers of trees to be removed as part of the proposed project, up to 14 trees with a 6-inch diameter breast height (dbh) or greater would be removed. Tree species proposed for removal include coast live oak and California black oak.

Table 6 –Land Cover Types/Biological Community Removal and Retention¹¹

Land Cover Type or Biological Community	Acreage within Parcel Pre-Project	Acreage Removed	Percent Removed	Percent Remaining	Post-Project Acreages
Oak woodland	2	0.34	17%	83%	1.66
Wild oat grassland	2	1.14	57%	43%	0.86
Chamise Chaparral	0.5	0.29	58%	42%	0.21
Vineyard	8	0	0%	100%	10
Developed/ruderal	0.5	0.2	40%	60%	0.3
Totals	13	1.97	15%	70.6%	13.0

Sources: Northwest Biosurvey May 2020; and Napa County March 2021

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 compliance 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), in particular valley oak trees.

In order to maintain 2-acres of preserved/avoided oak woodland for each acre impacted pursuant to Policy CON-24c (i.e. 2:1 preservation ratio), approximately 0.7-acres of oak woodland could be converted to vineyard to comply with this policy. The project as proposed would result in the retention of approximately 1.66-acres of the parcel's approximate 2-acres of oak woodland (or 83%), in compliance with Policy CON-24c.

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

Tree/Woodland Protection – Conditions of Approval:

- Prior to any earthmoving activities temporary fencing shall be placed at the edge of the dripline of trees to be retained that are located adjacent to the project area (typically within approximately 50-feet of the project area). The precise locations of said fences shall be inspected and approved by the Planning Division prior to the commencement of any earthmoving

¹¹ The acreages identified in **Tables 5 and 6** 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.

activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated protection areas for the duration of erosion control plan and vineyard installation.

- Trees removed that are not within the boundary of the project and/or not identified for removal as part of # P19-00037-ECPA shall be replaced onsite with fifteen-gallon trees at a ratio of 2:1 at locations approved by the director.
- The owner/permittee shall refrain from severely trimming the trees and vegetation to be retained adjacent to the vineyard conversion area.

Therefore, the project as proposed with incorporation of the Cover Canopy Protection/Preservation and Tree/Woodland Protection conditions of approval, that includes the permanent vegetation preservation requirements pursuant to NCC Section 18.108.020, and provisions associated with inadvertent tree removal, would result in less than significant direct, indirect and cumulative impacts to oaks and oak woodlands and associated habitat, 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 canopy cover retention ratio provided for under NCC Section 18.108.020.

f) There are no Habitat Conservation Plans, Natural Community Conservation Plans, or other similar plans applicable to the project site or project parcel. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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 Study prepared by Tom Origer & Associates, August 13, 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 Study conducted for the project did not identify any historical or archaeological resources within the project area. Because no archeological resources have been identified in the project area, 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 archeological and cultural resources, including any that may be discovered accidentally.

c) The Cultural Resource Study 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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 Regulation¹³. 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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) No potentially active faults have been mapped in the project site and the project area is not located on an active fault and is not within an “Earthquake Fault Hazard Rupture Zone” designated by the Alquist-Priolo Earthquake Zoning Act. The nearest active fault to the site is the Concord-Green Valley Fault, located approximately 3.7 miles east of the project parcel (Gilpin Geosciences, Inc., March 2020).
- ii) While the project site is located in an area that may be subject to strong to severe seismic ground shaking potential during an earthquake (Association of Bay Area Governments, 2017), 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) Landslides, landslide deposits, and areas of instability have not been identified within the project parcel or project site (Gilpin Geosciences, Inc., March 2020, and Napa County GIS Landslide layers). Therefore, no impact would occur.

b) Soils of the project site consist of Aiken Loam (Soil Series #100 and 102) and Hambright rock outcrop (Soil Series #152) (Gilpin Geosciences, Inc., March 2020, and Napa County GIS, Soil types layer). The Aiken Loam series soils consists of well drained soils with Soil Series #100 exhibiting medium runoff, a slight erosion hazard potential, and a low shrink-swell potential, and Sols Sires #102 exhibiting rapid runoff, a moderate erosion hazard potential, and a moderate shrink-swell potential. The Hambright rock outcrop (Soil Series #152) consists of well drained soils exhibiting rapid to very rapid runoff, a high erosion hazard potential, and a low 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 September 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 70%. Vineyard avenues would also maintain a 70% vegetative cover density. 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 Napa Valley Vineyard Engineering (**Exhibit F**), the proposed conversion of approximately 2 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 1.16 to 2.95 tons per acre per year depending on slope length and gradient. Under proposed project conditions, annual soil loss is anticipated to range from approximately 1.03 to 2.86 tons per acre per year depending on slope length and gradient. Overall, soil loss is calculated to be reduced within the project area by approximately 0.46 tons per acre, or approximately an annual 7.2% reduction as compared to existing conditions.

Table 7 – USLE Soil Loss Analysis

Block	Soil Loss			
	Pre-project ¹	Post-project ¹	Difference ¹	Percent Change
1	1.16	1.03	-0.13	-11.2%
2	1.78	1.72	-0.06	-3.4%
3 ²	1.35	1.23	-0.12	-8.9%
Vineyard Total	4.29	3.98	-0.31	-7.2%

¹ Tons per acre year. ² Average of soil loss transects.
Source: Napa Valley Vineyard Engineering, July 13, 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 2 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 #P20-00105-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 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 (#P20-00105-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 been 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 PBES 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 70% 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 herbicide contact sprays, or properly timed application of pre-emergent sprays. 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 basaltic andesite and andesite lavas of the Sonoma Volcanics (Gilpin Geosciences, Inc., March 2020). 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. 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 Aiken Loam soils Series #100 and #102, which exhibit a low to moderate shrink-swell potential, and the Hambright rock outcrop Soil Series (#152) that exhibits a low shrink-swell potential (Soil Survey of Napa County, USDA 1978; Napa County GIS soil types layer). 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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 (CO₂), methane, ozone, and the fluorocarbons, which contribute to climate change. CO₂ 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 CO₂ is used as the reference atom/compound to obtain atmospheric carbon CO₂ effects of GHG. Carbon stocks are converted to CO_{2e} by multiplying the carbon total by 44/12 (or 3.67), which is the ratio of the atomic mass of a carbon dioxide molecule to the atomic mass of a carbon atom (<http://ncasi2.org/COLE/faq.html>).¹²

One-time "Construction Emissions" associated with vineyard development projects include: i) the carbon stocks that are lost or released when site vegetation is removed, including any woody debris and downed wood; ii) underground carbon stocks, or soil carbon, released when soil is ripped in preparation for vineyard development and planting (referred to as Project Site Emissions below); and iii) emissions associated with the energy used to develop and prepare the 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 using the most generous emissions results from these EIRs. The Circle-S Ranch EIR anticipated approximately 4,293 metric tons (MT) CO_{2e} of construction equipment emissions for a 459-acre vineyard development, resulting in approximately 9.4 MT CO_{2e} of construction equipment emissions per acre of vineyard development.¹³ Using this emission factor it is anticipated that Construction Equipment Emissions associated with the proposed ±2 gross acres of vineyard development, would be approximately 18.8 MT CO_{2e} (2 acres multiplied by 9.4 MT CO_{2e}).

¹² "Carbon stock" refers to the total amount of carbon stored in the existing plant material including trunks, stems, branches, leaves, fruits, roots, dead plant material, downed trees, understory, and soil organic material. Carbon stock is expressed in units of metric tons of carbon per acre. When land is cleared, some percentage of the carbon stored is released back to the atmosphere as CO₂. Land clearing or the loss of carbon stock is thus a type of GHG emission (County of Napa, March 2012, Napa County Draft Climate Action Plan).

¹³ As discussed in Section III (Air Quality) variations or similarities in emissions modeling results between the three projects can be attributed to modeling platform and version utilized,

Project Site Emissions: Project site emissions are emissions resulting from vegetation removal and soil preparation associated with the conversion of approximately 2-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 57.1 MT C or approximately 209.5 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 CO _{2e}
Oak Woodland	0.5	95.1	47.6	174.7
Grasslands	1	1.4	1.4	5.1
Shrubland/Chaparral ²	0.5	16.2	8.1	29.7
Total			57.1	209.5

¹ For estimated GHG emissions associated with this project, acreages of various vegetation types being removed has conservatively been rounded up to the nearest half acre. Lands identified as Developed or Ruderal have been included in the Oak woodland vegetation type for this calculation.

² Includes Chamise Chaparral.

Sources: Napa County Draft Climate Action Plan, March 2012; Napa County Conservation Division, March 2021.

There is currently no scientific agreement about the percentage of carbon that would be lost (or emitted) from soils through grading. Some analyses have suggested 20-25% while others have suggested 50%.¹⁴ 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 189.7 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 CO _{2e}
Oak Woodland	0.5	89.6	44.8	164.4
Grasslands	1	0.8	0.8	2.9
Shrubland/Chaparral ²	0.5	12.1	6.1	22.4
Total			51.7	189.7

¹ For estimated GHG emissions associated with this project, acreages of various vegetation types being removed has conservatively been rounded up to the nearest half acre. Lands identified as Developed or Ruderal have been included in the Oak woodland vegetation type for this calculation.

² Includes Chamise Chaparral.

Sources: Napa County Draft Climate Action Plan, March 2012; Napa County Conservation Division, March 2021.

Operational Emissions:

Operational Equipment Emissions: The referenced vineyard development EIRs also assessed ongoing vineyard operation emissions associated with vehicles and equipment. Estimated potential construction equipment emissions per acre of vineyard development were derived using the most generous emissions results from these EIRs. The Suscol Mountain Vineyard EIR anticipated approximately 373 MT CO_{2e} of operational emissions for a 560-acre vineyard, resulting in approximately 0.67 MT CO_{2e} of operational emissions per acre of vineyard per year. Using this emission factor, it is anticipated that Operational Equipment Emissions associated with the proposed ±2 acre agricultural development, would be approximately 1.3 MT CO_{2e} (2 multiplied by 0.67 MT CO_{2e}).

Operational Sequestration Emissions: Emissions associated with loss of sequestration due to land use change (i.e., the conversions of existing vegetation to vineyard) have been calculated based on the Annual Carbon Sequestration Factors within the 2012 Draft CAP. 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 0.29 MT C of sequestration (0.5 acre times 0.58). The 2012 Draft CAP indicates that grasslands, shrubland/chaparral, and developed lands sequester a negligible quantity of CO₂ 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 1.5 acres of grassland, shrubland, and other developed lands to vineyard, resulting in a reduction of approximately 0.09 MT C of sequestration. Utilizing these results, it is anticipated that the annual

variations in modeling assumptions and inputs (such as project acreage and vegetation types removed), and anticipated construction and equipment and duration of use.

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

emissions associated with changes in carbon sequestration as a result of land use changes would be approximately 0.38 MT C per year or approximately 1.4 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 CO₂ loss from vineyard soils. Carbon sequestration loss would be further offset by the proposed vineyard, which would likely act as a sink for atmospheric CO₂, 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 CO _{2e}		Annual Ongoing Emissions in Metric Tons of CO _{2e}	
Source	Quantity	Source	Quantity
Vehicles and Equipment	18.8	Vehicles and Equipment	1.3
Vegetation and Soil	189.7	Loss of Sequestration	1.4
Total	208.5	Total	2.7

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 208.5 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 0.002% 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 2.7 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.

IX.	HAZARDS AND HAZARDOUS MATERIALS. Would the project	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wild-land fires? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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 project parcel. Chemical mixing and equipment cleaning would occur with existing and proposed vineyard development areas. An area that has been previously disturbed by past residential development, located adjacent to the northern end of proposed Vineyard Block C and the existing access drive would be utilized for project staging and storage. The use of pesticides, fertilizers, and sulfur for the proposed vineyard would typically be limited to approximately 20 combined applications per year, generally occurring between April and July 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).

There is the beginning/head of an unnamed blue-line stream and associated pond generally located along a portion of the southern half of the project parcel's eastern property line and Atlas Peak Road. This unnamed blue-line stream is a tributary to Milliken Creek, which is located approximately 0.75 miles southeast of the project parcel (see **Exhibit B**). This pond and unnamed tributary are located at least 250 feet east of the project site, including the projects and staging and storage area. The setback provided far exceeds the stream setbacks required by setbacks NCC Section 18.108.025 (General provision – Intermittent/perennial streams) the maximum of which is 150 feet.

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 approximately 250 feet from the project parcel's aquatic resources; ii) project staging and storage areas, would be located at least 250 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 and Sunrise Montessori of Napa Valley located over 4.5 miles to the southwest of the project parcel (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 nearest airport (Napa County Airport) is located approximately 11 miles to the southwest of the project parcel. The project site 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 parcel and site are predominately located in an area identified as having a very high fire severity, with a small section of the southwest corner of the parcel and project area identified as a moderate 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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:				

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|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| i) result in substantial erosion or siltation on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iv) impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion:

On April 21, 2021, Governor Gavin Newsom declared a drought emergency in the state of California and as of May 10, 2021, 41 counties are under the drought state of emergency, including Napa County. The Governor directed the Department of Water Resources to increase resilience of water supplies during drought conditions. The County of Napa has not adopted or implemented any mandatory water use restrictions.

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

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

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

Because vineyard properties may pose threats to water quality by discharging sediment, nutrients, and pesticides and/or by increasing storm runoff, which consequently can cause erosion and sedimentation and otherwise impact aquatic life, in July 2018 the San Francisco Bay Regional Water board adopted a water quality control permit (or General Permit) for vineyard properties in the Napa River and Sonoma Creek watersheds (Order #R2-2017-0033). The General Permit regulates parcels (including contiguous parcels under common ownership) developed with five or more acres of vineyard located in either of these watersheds. The Napa River and Sonoma Creek TMDLs adopted by the San Francisco Bay Regional Water Board have established performance standards for sediment discharge and storm runoff to protect and restore water quality. The General Permit would require actions to control pollutant discharges including sediment and storm runoff from vineyards and unpaved roads, which are located throughout vineyard properties, and pesticides and nutrients from vineyards. The General Permit would require vineyard owners or operators of parcels that meet the enrollment criteria to do the following: develop and certify a "farm plan¹⁵"; implement the farm plan to achieve discharge performance standards; submit an annual report regarding plan implementation and

¹⁵ A farm plan documents a vineyard property's natural features, developed areas, and BMPs. Under the General Permit, a "certified" farm plan would mean that upon its full

attainment of performance standards; and participate in group or individual water quality monitoring programs.

In the General Permit the San Francisco Bay Regional Water Board identified four significant sediment sources that are associated with vineyard properties: i) vineyard soil erosion; ii) offsite erosion caused by vineyard storm runoff increases; iii) road-related sediment delivery; and iv) channel incision. Napa County ECPA requirements and standards primarily address and control two of these sources, vineyard soil erosion and vineyard storm runoff. The General Permit will fill gaps in local regulation so that all four sediment sources are effectively controlled to reduce fine sediment deposition in stream channels that provide habitat for endangered steelhead populations, locally-rare Chinook salmon populations, and exceptionally diverse assemblages of native fish species in these watersheds. Additional details on the Vineyard Properties General Permit can be obtained from the Regional Water Board¹⁶.

There is a blue-line stream located along the subject parcel's eastern property line that is tributary to Milliken Reservoir. The proposed project has been setback from this feature consistent with NCC 18.108.025 (General Provisions – Intermittent/Perennial Streams) (see **Section IV Biological Resources** for additional discussion).

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 #P20-00105-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 Hydrogeological 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-Tuluca (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 (Napa Valley Vineyard Engineering, Inc., April 2, 2021 - **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 Document adopted by the County May 12, 2015.

implementation of the plan, that the vineyard property is expected to achieve the performance standards for discharge. The Water Board's Executive Officer would approve third-party programs or certify a farm plan.

¹⁶ https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/agriculture/vineyard/

Water demands for the existing vineyard and onsite residential uses are currently being met by an existing groundwater well located in the southwest portion of the project parcel (**Exhibit D**). The proposed vineyard would be irrigated via a drip irrigation system with water from the property's existing well. No frost protection or heat protection achieved through the application of water is proposed as part of the project: wind machines may be utilized for frost protection. 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 well (**Exhibit D**).

The approximate 7 net-planted acres of existing vineyard utilizes approximately 2.01 acre-feet of water per year (AF/yr.)¹⁷, and the existing residential use utilizes approximately 0.18 AF/yr., for a total existing water use of approximately 2.19 AF/yr. The proposed vineyard that includes approximately 1.49 net planted acres is anticipated to utilize approximately 0.43 AF/yr. of groundwater annually. After development, the proposed project in conjunction with existing groundwater uses (i.e. existing vineyard and residential uses), would result in approximately 2.62 AF/yr. of groundwater use/demand. During a dry year it is anticipated that and an additional 0.20 AF would be necessary for irrigation of the proposed vineyard, resulting in 2.82 AF of anticipated use.

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 WAA, which uses an average annual rainfall of 36 inches per year over the approximate 13 acres of the parcel's land area available for recharge and a 10% deep percolation recharge estimate, the average annual groundwater recharge of the parcel is estimated to be approximately 3.58 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. However, the project WAA includes a dry year recharge rate, which considers 77% of average rainfall as a dry year. Based on this rainfall rate potential recharge is anticipated to be approximately 2.94 AF.

The project as proposed, in conjunction with existing uses, is estimated to have an annual onsite future groundwater demand of approximately 2.62 AF/year, which is below the estimated average annual recharge volume of 3.58 AF/year. During a dry year anticipated overall demand of approximately 2.82 AF would be below the anticipated dry year recharge of 2.94 AF.

Considering: i) anticipated annual water use of the project parcel for existing and proposed uses of approximately 2.62 AF/year (2.82 AF in dry years) is below the parcel's anticipated annual groundwater recharge rate of approximately 3.58 AF/year and below 2.94 AF in dry years; 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 project specific 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.

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

All monitoring shall commence within six months of the issuance of the ECPA, or immediately upon commencement of the ECPA, whichever occurs first and shall be submitted annually thereafter. All monitoring required by these conditions shall verify that the water use assumptions and the actual water use are consistent with the usage and assumptions analyzed in the Water Availability Analysis prepared by Napa Valley Vineyard Engineering (April 2021) for the Hardten Family Vineyard.

Groundwater pumping shall not exceed 3.58 AF/yr in normal rainfall years and 2.94 AF/yr in dry rainfall years (77% of average rainfall or less).

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

¹⁷ Typically, the annual irrigation season for vineyard ranges from late May through September/October depending on the varietal.

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 70% (including vineyard avenues and turnarounds/turn-spaces), and the annual application of straw mulch cover on all disturbed areas at a rate of two tons per acre. These features would slow and filter surface runoff water, thereby minimizing sediment, nutrients, and chemicals from leaving the project site and entering nearby aquatic resources.

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

A Hydrologic Analysis for the project was prepared by the Project Engineer (Napa Valley Vineyard Engineering, Inc., January 2020 - **Exhibit G**). The Analysis identifies two 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 no changes or a slight reduction in peak flows, and no changes in times of concentration¹⁸ for the watersheds in the project area as result of the project (**Table 11**)¹⁹.

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 1						
Pre-project conditions	17.36	26.46	34.11	45.73	54.83	63.68
Post-project conditions	17.36	26.45	34.11	45.73	54.83	63.68
Sub-watershed 2						
Pre-project conditions	3.38	4.80	5.96	7.70	9.04	10.33
Post-project conditions	3.28	4.70	5.86	7.59	8.94	10.24

Source: Napa Valley Vineyard Engineering, Inc., January 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.

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.

¹⁸ The Time of Concentration is the time it takes for runoff to flow from the upper most point in each watershed to the watershed's outlet.

¹⁹ On July 13, 2020, the County Engineering Division determined the project's modeling technical adequate.

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 properly²⁰.

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 ECPA 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 0.31 tons per acre per year (or an approximate 7.2% annual reduction), slightly decrease or 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.

XI.	LAND USE AND PLANNING. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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²⁰ Compliance with Section 18.108.135 is achieved by including their provisions as conditions of approval for a project, if granted.

- 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 within the immediate vicinity (i.e. within approximately one mile) of the project parcel predominantly consist of rural residential, with interspersed vineyards and wineries, and undeveloped land. The project parcel and surrounding parcels are zoned Agricultural Watershed (AW), and are designated as Agriculture, Watershed and Open Space (AWOS) in the Napa County General Plan Land Use Element. Vineyards and associated improvements are permitted uses under these designations. The proposed project has been analyzed for consistency with applicable sections of the NCC and with the Napa County General Plan. The proposed project as designed with inclusion of the Project's Environmental Commitments and conditions of approval (if approved) 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.
- The project as designed and with incorporations of the Project's Environmental Commitments 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.
- The project as proposed and with implementation of conditions of approval is consistent with Policy CON-24c as it maintains a mixture of oak species, and provide for the preservation of like habitat (on an acreage basis) at a 2:1 ratio.
- 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 is consistent with Policy CON-6, which limits development in environmentally sensitive areas such as those adjacent to rivers or streamside areas, in that the project is over 200-feet from the nearest aquatic resource.
- The project as proposed with implementation of conditions of approval would result in consistency with the Vegetation Canopy Cover requirements of NCC Section 18.108.020(C) and (D), and Section 18.108.027(B).
- 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 as designed in conjunction with its Environmental Commitments and conditions of approval 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.

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 over 8 miles south 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-b) The project site is located in a rural setting where some surrounding parcels are planted with vineyards or undeveloped. The nearest residences (approximately 5) are scattered between approximately 800 feet and 1,500 feet to the south and east of the project parcel, and the nearest residential community (the City of Napa) is located over 5 miles to the southwest.

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 is anticipated to range from approximately 55 dBA to 60 dBA at the nearest existing residences.

Noise related to farming activities and equipment typically ranges from 75 dBA to 95 dBA, with an average of approximately 84 dBA (Toth 1979 and Napa County Baseline Date Report, Version 1, November 2005). These noise levels should be reasonably representative of noise levels from wheeled and tracked farm equipment. Noise sources associated with 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 associated with ongoing agricultural activities is anticipated to range from approximately 50 dBA to 55 dBA at the closest existing residences.

Napa County considers construction noise levels up to 75 dBA during daytime hours (7 a.m. to 7 p.m.) and 60 dBA during nighttime hours (7 p.m. to 7 a.m.) as compatible with residential uses (NCC Section 8.16.080), and 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 50 dBA 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	c) Substantially increase hazards due to a geometric design feature, (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-b) The subject parcel is located on the west side of Atlas Peak Road approximately 5.25 miles northeast of the City of Napa, and approximately 4 miles north of Atlas Peak Road's intersection with old Soda Spring 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. The project parcel is currently developed with a residence (that is being reconstructed as a result of the Atlas Fire), approximately 8-acres of vineyards, a well, and associated residential and vineyard access roads, including vineyard avenues.

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

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

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

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

The proposed project is expected to generate up to approximately 20 one-way trips per day during project construction and vineyard installation, for anticipated work crews of up to approximately 20 employees during the busiest construction activity (vineyard planting) (**Exhibit I**). It is anticipated that approximately eight 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 days of the year (typically February through March) with crews up to 10 workers, resulting in approximately four one-way trips; ii) Cover crop management and pest control occurring between 10 and 20 times per year (typically April 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) anticipated to occur up to 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 one week, 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. A majority of this traffic already exists to the project parcel due to the operation and maintenance of the parcel's existing 8-acre 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.

As indicated above, Technical Guidelines provide a screening criterion that could be used to determine whether a VMT analysis is warranted for small projects, which are defined as projects that would generate fewer than 110 trips per day and may generally be assumed to cause less-than-significant transportation impacts. As indicated above, construction of the proposed project would generate up to approximately 20 one-way worker trips per day, and periodically up to eight one-way truck trips per day. And vineyard operation would generate during harvest up to approximately ten one-way worker trips, and one one-way truck trip per day: other typically vineyard operations (as outlined above) are anticipated to generate up six one-way trips per day during the days these activities occur. Therefore, daily trips (including passenger vehicle trips and truck trips) generated by the proposed project would be well below the Governor's Office of Planning and Research's recommended screening criterion threshold for small projects generating fewer than 110 trips per day. Additionally, daily trips associated with the project would

be temporary and seasonal in nature, further supporting conformance and observance of this screening criterion.

. Trips already occur to the project parcel 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 20 one way trips during construction, and up to approximately 10 one way trips during operation) 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 conflict 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 Atlas Peak 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 Atlas Peak 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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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 April 17, 2020. On April 30, 2020, the County received a response letter from the Yocha Dehe Wintun Nation, indicating that the project is not within their aboriginal territories, and declined to comment on the application²¹. On June 15, 2020, the County sent correspondence to the Yocha Dehe Wintun Nation acknowledging their response letter, and closing the consultation invitation because consultation was not requested, and on June 15, 2020, correspondence was sent to the Mishewal Wappo Tribe of Alexander Valley and the Middletown Rancheria closing their consultation invitations because consultation was not requested by either of these Tribes within the 30-day notification period.

a-b) As discussed in **Section V (Cultural Resources)**, the proposed project's Cultural Resources Study (Tom Origer & Associates, August 13, 2019), did not identify any historical, archaeological, or cultural resources within the project parcel. Therefore no resources listed or eligible for the California Register of Historical Resources (CRHR) are present and impacts to archaeological resources as a result of the proposed project are considered to be less than significant. Furthermore, no resources that may be significant pursuant to Public Resources Code Section

²¹ Yocha Dehe project Identification Number YD-08022019-02.

5024.1(c) have been identified or are anticipated onsite. The Cultural Resources conditions of approval discussed in Section V (Cultural Resources) would avoid and reduce potential impacts to unknown resources.

As such, the proposed project, with the incorporation of Cultural Resources conditions of approval (should the project be approved), 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).

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b)	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 ±1.5 net-planted acres of vineyard, and the existing vineyard and residential uses would be supplied by an existing onsite well. The WAA conducted by Napa Valley Vineyard Engineering, Inc., (**Exhibit D**) concluded that after full development, water use for the project parcel is estimated to be approximately 2.62 AF/year. Based on the site-specific recharge analysis, the project parcel is estimated to have a groundwater recharge rate of approximately 3.58 AF/year. During a dry year anticipated overall demand is anticipated to be 2.82 AF and anticipated dry year recharge is anticipated to be approximately 2.94 AF. 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.

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 would be utilized on-site for vineyard avenue surfacing and/or crushed and returned back to the vineyard as rock mulch. 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 statutes 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

The project parcel is located in a State Responsibility Area (SRA) that is designated as a Moderate and Very High Fire Hazard Severity Zones (CALFIRE, 2007, Napa County GIS Fire Hazard Severity Zones 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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 Environmental Commitments and conditions of approval (should the proposed project be approved).

a) As discussed in this Initial Study, implementation of #P20-00105-ECPA, with the incorporation of its Environmental Commitments (i.e. Bird Protection and Bat Protection) 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 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 the project area for nesting, roosting, or maternal activities. Aquatic resources (i.e. blue-line stream and associated pond) identified on the subject parcel have been avoided and provided with setback buffers in excess of 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 accidentally, 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 project 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 Milliken Reservoir Drainage, which is within the larger Milliken Reservoir sensitive domestic water supply drainage. In 1993, vineyard acreage within this drainage was approximately 403 acres, or approximately 6.6% of the drainage. Since 1993 approximately 108-acres of additional vineyard (or approximately 1.8% of the drainage) have been developed to vineyard (including vineyard approved but not developed), resulting in approximately 8.3% of the drainage (or approximately 511-acres) containing vineyard and approved/entitled vineyard. There are no other pending ECPA applications in this drainage. The drainage also includes three wineries, with a total annual production capacity/limit of 68,000 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 Milliken Reservoir drainage, there is approximately 1,897 acres (30.9% of the drainage) having the potential to be developed to vineyard within the Milliken Reservoir 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 of reasonably foreseeable vineyard that may be developed over time, the acreage of vineyard development including approved vineyard projects in the cumulative environment (i.e., Milliken Reservoir drainage) over the last 27 years (1993-2020) were used to project vineyard development for the next three to five years. Across the drainage approximately 108-acres were developed or approved into vineyard over the past 27 years, or about 4 acres per year. Based on this rate, approximately 20-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 20-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 (#P20-00105-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 CNDDDB and CNPS databases. As discussed in **Section IV (Biological Resources)**, no special-status plant species were identified in the project area of subject parcel. 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. The Project as proposed and designed in conjunction with the project's Environmental Commitments, and with implementation of standard conditions of approval, potential impacts to special-status species and wildlife use and movement would be less than significant.

Potential direct, indirect and cumulative impacts to vegetative cover, oak woodlands and associated habitat would be reduced through implementation of standard conditions of approval that would require the permanent protection of a portion of the property's cover canopy and oak woodland pursuant to NCC Section 18.108.020. Therefore, the project as proposed, with implementation of its environmental commitments, conditions of approval 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. The project as designed with the incorporation of standard conditions of approval 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 0.31 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 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 Napa Valley Vineyard Engineering (April 2, 2021 -**Exhibit D**) indicate that the proposed project is anticipated to utilize approximately 0.43 acre-feet of groundwater per year (AF/yr.)²². Existing groundwater use is approximately 2.19 AF/yr. (± 7 net-planted acres of vineyard utilizing approximately 2.01 AF/yr., and residential utilizing approximately 0.18 AF/yr.). Total annual groundwater use that includes the proposed project, existing vineyard, and existing residential is anticipated to be approximately 2.62 AF/yr. During a dry year anticipated overall demand is anticipated to approximately 2.82 AF and anticipated dry year recharge is anticipated to be approximately 2.94 AF.

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 36 inches per year over the approximate 13-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 3.58 AF/yr. (**Exhibit D**). The average annual rainfall utilized in the recharge analysis includes times of below-average and above-average rainfall, and therefore fundamentally includes drought year conditions.

Considering: i) anticipated annual water use of the project parcel for existing and proposed uses of approximately 2.62 AF/year is below the parcel's anticipated annual groundwater recharge rate of approximately 3.58 AF/year, and during a dry year anticipated demand is anticipated to be approximately 2.82 AF, which is below the anticipated dry year recharge of 2.94 AF; 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 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 Napa Valley Vineyard 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 as result of the project for the watersheds modeled (**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.

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 and retention.

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

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.

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Figure 1	Site Location Map (USGS)
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LIST OF EXHIBITS:

Exhibit A	Napa Valley Vineyard Engineering, Inc., Erosion Control Plan, Hardten Family Vineyard, May 12, 2020 (original submittal January 10, 2020, revised May 12, 2020).
Exhibit A-1	Napa Valley Vineyard Engineering, Inc., Vegetation Retention Analysis, Hardten Vineyard Development January 10, 2020
Exhibit B	Northwest Biosurvey, Biological Resources Assessment, Hardten Vineyard Project, May 29, 2020.
Exhibit C	Tom Origer & Associates, Cultural Resources Study, 3393 Atlas Peak Road, August 13, 2019 (Contents Confidential).

- Exhibit D Napa Valley Vineyard Engineering, Inc., Water Availability Analysis, Hardten Family Vineyard, April 2, 2021.
- Exhibit E Gilpin Geosciences Inc., Engineering Geological & Geotechnical Investigation, Hardten Vineyards, March 12, 2020.
- Exhibit F Napa Valley Vineyard Engineering, Soil Loss Analysis, Hardten Vineyard, July 13, 2020.
- Exhibit G Napa Valley Vineyard Engineering, Inc., Hydrology Analysis, Hardten Vineyard, January 13, 2020.
- Exhibit H Napa County Resource Conservation District, SWRCB General Permit Memo, May 11, 2020.
- Exhibit I Napa Valley Vineyard Engineering, Inc., Vineyard Development and Operation Traffic and Practice, Hardten Vineyard Hydrology Analysis, Hardten Vineyard, April 29, 2020.