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

Initial Study Checklist
(form updated January 2019)

1. **Project Title**: Butler Vineyard Conversion Agricultural Erosion Control Plan #P20-00284-ECPA

2. **Property Owner:** Jeff Butler

3. **County Contact Person, Phone Number and email:** Pamela Arifian (707) 299-5934, pamela.arifian@countyofnapa.org

4. **Project Location and Assessor's Parcel Number (APN) (Figures 1 and 2):**
No situs record; Wild Horse Valley Road, Napa; APN 033-190-006
Section 35, Township 5 North, Range 3 West Mount Diablo Principal Meridian,
Longitude 122° 10' 31.116" W / Latitude: 38° 19' 0.336" N

5. **Project sponsor's name and address:** Omar Reveles, RPE No. C74723
Acme Engineering, Inc.
1700 Soscol Ave, Suite 9
Napa Ca, 94559

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

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

8. **Background/Project History:** The project parcel (APN 033-190-006) was impacted by the 2017 Atlas Fire, and is is vacant except for Wild Horse Valley Road, drainage ditches, and a fence that encloses the entire property. Historically, the region was open rangeland of larger ranches and vineyards; however there is no history of intensive agriculture, quarrying, mining, or timbering on the parcel.

   The owner of the parcel also owns the neighboring parcel to the south, an approximate 74.17-acre parcel that occurs in Solano County (no situs record on file; APN: 0149-010-010). Development on the Solano County parcel includes 25.7 total acres (19.9 net acres) of vineyard (Solano County Department of Resource Management Public Works - Engineering Grading Permit #G2018-0038, issued April 12, 2019 – **Exhibit G**), a well (project well), reservoir and Twin Sisters Road.

9. **Description of Project:** The proposed project involves i) the clearing of oak woodland (consisting predominantly of coast live oak with scattered California bay, big leaf maple and buckeye) and non-native grassland; and ii) earthmoving and the installation and maintenance of erosion control measures on slopes between 13-26% in connection with the development of 5.1 gross acres (3.3 net acres) of new vineyard with an additional temporary staging area of approximately 0.4-acre on the approximate 10.1-acre parcel (**Figure 3**). The project would remove approximately 3.9 acres of non-native grassland, and approximately 1.2 acres of oak woodland (consisting predominantly of coast live oak with scattered California bay, big leaf maple and buckeye), existing on the parcel prior to 2018. Rock generated as a result of site preparation would be used to construct erosion control features, including on the proposed vineyard avenues (~25%) while the remaining portion (~75%) will be utilized as decorative landscaping or buried. Temporary staging and stockpile areas totaling 0.4-acres will be established in the non-native grassland area immediately adjacent to Block A and Wild Horse Valley Road; no long-term stockpiles of rock or spoils are anticipated. No grading activities, ground disturbance or rock storage would occur outside of the proposed clearing limits.

   There are no existing wells on the subject parcel; irrigation for the proposed project would be supplied by an existing well on the adjacent parcel under same ownership. An existing 6-foot wildlife exclusion fence runs around the entire Napa County parcel, which was installed to protect the vineyard planting that occurred on the adjacent Solano County parcel (immediately south of the subject parcel) in 2020.

   Erosion Control Measures: Temporary erosion control measures include cover crop maintained with a 75% minimum ground cover,

straw wattles and application of straw mulch at a rate of 3,000 lbs. per acre prior to October 15 of the year of construction and as necessary thereafter. Permanent erosion control measures include: no touch buffers of natural vegetation existing downslope of all blocks and sediment control measures such as water bars and/or straw wattles, as well as fiber rolls and silt fences when necessary. A permanent no-till cover crop would be maintained at a minimum vegetation cover density of 75%. Details of the proposed erosion control measures are provided in the Butler Vineyard ECP #P20-00284 ECPA (December 8, 2020, revised January 8, 2021); prepared by Omar Reveles (RPE No. 74723) of Acme Engineering Inc., 1700 Soscol Avenue, Ste. 9, Napa, California (**Exhibit A**).

Earthmoving: Earthmoving and grading activities associated with the installation of erosion control measures and subsequent vineyard operation including, but are not limited to vegetation and tree removal, soil ripping (maximum depth of 36 inches), rock removal, discing, and the development or erosion control measures.

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

a. Trenching for irrigation pipelines, installation of new subsurface drainage mainline
b. Temporary equipment staging and material storage on approximately 0.4-acre outside of the proposed development area of 5.1 gross acres. This equipment staging and material storage area would be located north of proposed Block A.
c. Installation of end posts, vineyard trellis, and deer fence
d. Planting of rootstock on an 8 foot by 4 foot spacing pattern.
e. Application of soil amendments prior to planting, seeding of cover crop, mulching, installation of straw wattles
f. Ongoing inspection and maintenance of temporary and permanent erosion and runoff control measures.
g. Ongoing operation and maintenance of the vineyard, which includes: vine management (pruning, fertilization, pest, and disease control, and frost protection), weed control, cover crop mowing, irrigation and trellis system maintenance, and fruit harvesting. Herbicide used to control weeds within the vineyard would be limited to contact or systemic herbicides. Spot spraying would be allowed in the spring (no earlier than February 15th to ensure adequate vegetative cover for the remainder of the rainy season). No pre-emergent herbicides would be used for weed management, and no strip spraying would be performed.

Table 1 – Implementation Schedule

April 16:	Commence clearing and tillage operations.
October 1:	All tillage and erosion control completed.
October 15[1]:	All winterization complete, including seeding, straw mulching, and straw wattle installation.

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

Table 2 – Annual Operations Schedule

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

Implementation of the proposed project would be in accordance with the Butler Vineyard ECPA prepared by Acme Engineering, Napa – (**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) and at: www.countyofnapa.org/2876/Current-Projects-Explorer

10. **Describe the environmental setting and surrounding land uses.** The project parcel is located within the Lower Reach Suisun Creek watershed in the eastern mountains of Napa Valley. General topography of the area consists of north-trending ridgelines separated by moderately-incised drainages, with eastern facing hillsides. The proposed project would occur on one parcel located in southeast Napa County on Wild Horse Valley Road as it exits Napa County on APN 033-190-006 and becomes Twin Sisters Road in Solano County, California (**Figures 1-2**), approximately 5.6 miles east of downtown Napa from the point where Coombsville Road becomes Wild Horse Valley Road. The parcel totals approximately 10.1 acres, with existing development on the parcel consisting of Wild Horse Valley Road, a drainage ditch and culvert, and a 6-foot wildlife exclusion fence around the perimeter of the parcel except where it connects to the parcel immediately south under same ownership. The parcel is primarily east facing, consisting of gently to moderately steep slopes with elevations ranging from 1445 to 1800 feet above mean sea level (msl).

There is one unnamed blue-line stream on the eastern side of the parcel and one ephemeral stream located on the northeastern side of the property, both of which drain to the northeast, ultimately into Suisun Creek to the east in Suisun Valley. Proposed vineyard development would occur outside of required stream setbacks (refer to **Exhibit B**). The existing drainage swale and culvert along the southwestern edge of Wild Horse Valley road runs along the northern edge of Block A and southern edge of Block B. This drainage does not meet the County definition of a stream, and would be avoided by the project; however, the culvert that crosses under the main access road shall be replaced.

Surrounding land uses within the immediate vicinity (i.e. within approximately one mile) of the project parcel predominantly consist of rural residential, livestock grazing, vineyards and undeveloped land. There are four wineries within approximately 3.1 miles of the project to the west, northwest, and northeast, which range in an annual production limitation from 5,000 to 85,000 gallons per year. The nearest known schools are Vichy Elementary roughly 4.8 miles northwest, and Mt. George Elementary (permanently closed) roughly 4.3 miles to the southwest within the City of Napa (Napa County GIS: Schools Layer). The nearest residences are located approximately 950 feet to the west, 2170 feet to the north and 4595 feet to the south (located in Solano County). The nearest residential area is the City of Napa located approximately 6.0 miles to the west and the nearest airport is located over approximately 8.7 miles to the southwest. The Napa/Solano County line is contiguous with the parcel's southern property line.

11. **Other agencies whose approval is required**

Responsible (R) and Trustee (T) Agencies	Other Agencies Contacted
California Department of Fish and Wildlife (CDFW) (T)	The Middletown Rancheria
	The Mishewal Wappo Tribe of Alexander Valley
	The Yocha Dehe Wintun Nation

12. **Tribal Cultural Resources.** 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 Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, and Yocha Dehe Wintun Nation on December 9, 2020. On February 8, 2021, the County received an email notification from Yocha Dehe Wintun Nation stating that the project is within an area of cultural interest and authority of the Tribe, and recommended cultural sensitivity training for any pre-project personnel. Neither the Middletown Rancheria nor the Mishewal Wappo Tribe responded to the request for consultation within the 30-day notification period, and because no response to the consultation invitation was received, the consultation time period elapsed.

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.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

ENVIRONMENTAL IMPACTS AND BASIS OF CONCLUSIONS:

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

Other sources of information used in the preparation of this Initial Study include site-specific studies conducted by the applicant and filed by the applicant in conjunction with ECP #P20-00284-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 at **www.countyofnapa.org/2876/Current-Projects-Explorer**:

- Acme Engineering Inc., December 8, 2020, Erosion Control Plan, Butler Vineyard (**Exhibit A**)
- Wildlife Research Associates (WRA), February 2020, Biological Resource Reconnaissance Survey Report for Butler Vineyard (**Exhibit B-1**)
- Acme Engineering Inc., January 11, 2022, Lands of Butler Tree Canopy Retention Analysis (**Exhibit B-2**)
- Archaeological Resource Survey, February 17, 2020, Cultural Resource Evaluation of Proposed Vineyards within the Lands of Butler, Napa County, California
- Omar Reveles for Acme Engineering, November 5, 2020, USLE Soil Loss Analysis, Lands of Butler new vineyard development **(Exhibit C).**
- Omar Reveles for Acme Engineering, November 5, 2020, Hydrologic Analysis, Lands of Butler new vineyard development **(Exhibit D).**
- Omar Reveles for Acme Engineering Inc., November 5, 2020, Water Availability Analysis for Land of Butler new vineyard development **(Exhibit E).**
- Miller Pacific Engineering Group, March 12, 2020, Geotechnical Investigation for new vineyard development within the land of Butler **(Exhibit F)**
- Application submittal materials and correspondence (**Exhibit G**)
- Project Revision Statement, dated March 3, 2022 (**Exhibit H**)
- Site inspections conducted by Napa County Planning Division staff on December 18, 2020.
- Napa County Geographic Information System (GIS) sensitivity maps/layers.

On the basis of this initial evaluation:

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

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

☐ 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.

Pamela Arifian — March 8, 2022

Signature — Date

Name: Pamela Arifian
Napa County Planning, Building & Environmental Services

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

Discussion:

a-b. The project site is located approximately 6.5 miles east of the City of Napa on moderately sloping hillsides south of Wooden Valley, generally between Atlas Peak to the northwest and the Vaca Mountains to the northeast. The general area primarily consist of oak woodland and grassland, interspersed with shrubland and vineyards. The closet County Viewshed roads are Wooden Valley Road and Monticello Road located approximately 1.5 miles to the northeast and 2.7 miles to the northwest of the site, respectively, and do not lie within the scenic corridors associated with either of these roads (Napa County GIS, Scenic Corridors Layer). The site is not located on a prominent hillside, a major or minor ridgeline (Napa County GIS, Ridgelines Layer). There are no significant rock outcroppings or geologic features on the project parcel that would be impacted by the project. Although trees would be removed with the proposed project (see **Section IV Biological Resources**), the project site is not visible from a scenic highway or roadway, as previously noted. There are no scenic highways in the area (CA Department of Transportation website: http://www.dot.ca.gov/hq/LandArch/scenic/schwy.htm). Therefore, the proposed project would have a less than significant impact on scenic vistas, scenic roadway, buildings, scenic trees, or rock outcrops.

c. The project is consistent with surrounding agricultural land uses, which include other vineyards and unmanaged open rangelands, and with the Napa County AWOS General Plan land use designation. Therefore, no impacts are expected, as the proposed project would not substantially degrade the existing visual character or quality of public views of the site or its surroundings.

d. The proposed agricultural operations on the parcel will require some lighted nighttime activities consistent with the nighttime activity already occurring in the nearby area, which includes vineyard. Lighting would occur in the form of headlights or downward direction lights on equipment being used during nighttime harvest, sulfur and pesticide/herbicide applications. The proposed project would include nighttime harvest, sulfur applications, and pesticide / herbicide applications (typically from 10 p.m. to 6 a.m.). While some nighttime activities may occur for limited periods, the project would not introduce a new source of substantial light or glare, and the type of nighttime lighting would be consistent with surrounding land uses; therefore, resulting in a less than significant impact.

II.	**AGRICULTURE AND FOREST RESOURCES.**[1] Would the project:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a)	Convert Prime Farmland, Unique Farmland, or Farmland of	☐	☐	☐	☒

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

	Statewide Important (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c)	Conflict with existing zoning for, or cause rezoning of, forest land as defined in Public Resources Code Section 12220(g), timberland as defined in Public Resources Code Section 4526, or timberland zoned Timberland Production as defined in Government Code Section 51104(g)?	☐	☐	☐	☒
d)	Result in the loss of forest land or conversion of forest land to non-forest use in a manner that will significantly affect timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, or other public benefits?	☐	☐	☐	☒
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☐	☐	☐	☒

Discussion:

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

b. The project site has a General Plan land use designation of Agriculture, Watershed and Open Space (AWOS) and is zoned Agricultural Watershed (AW). Therefore, the operation of vineyard totaling approximately 5.1 gross acres (3.3 net acres), in addition to 0.4-acre of temporary staging and rock stockpiling during construction, 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. "Forest Land" is defined in California Public Resource Code Section 12220(g) as "land that can support 10% native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." The project area is composed primarily of oak woodland 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, 2021). 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 1.2-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, or other infrastructure that would result in the conversion of existing farmland or forestland in the area to non-agricultural, or non-forestland uses. As such, the proposed project would not have an impact on the agricultural or forest resources of Napa County.

III.	**AIR QUALITY.** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐

b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d)	Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?	☐	☐	☒	☐

Discussion:

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

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

In view of the Supreme Court's opinion, local agencies may rely on Thresholds designed to reflect the impact of locating development near areas of toxic air contamination where such an analysis is required by CEQA or where the agency has determined that such an analysis would assist in making a decision about the project. However, the Thresholds are not mandatory and agencies should apply them only after determining that they reflect an appropriate measure of a project's impacts. These 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 Guidelines dated May 2017, which includes revisions made to address the Supreme Court's opinion. The May 2017 Guidelines update does not address outdated references, links, analytical methodologies or other technical information that may be in the Guidelines or Thresholds Justification Report. The Air District is currently working to revise any outdated information in the Guidelines as part of its update to the CEQA Guidelines and thresholds of significance.

a-b. The project site is generally located in the hills bordering the eastern side of the Napa Valley just northeast of the City of Napa, within the Napa County climatological subregion of the San Francisco Bay Area Air Basin, which is under the jurisdiction of BAAQMD. The mountains bordering Napa Valley block much of the prevailing northwesterly winds throughout the year. Sunshine is plentiful in Napa County, and summertime can be very warm in the valley, particularly in the northern end. Winters are usually mild, with cool temperatures overnight and mild-to-moderate temperatures during the day. Wintertime temperatures tend to be slightly cooler in the northern end of the valley. Winds are generally calm throughout the county. Annual precipitation averages range from about 24 inches in low elevations to more than 40 inches in the mountains.

The topographical and meteorological features of the Napa Valley subregion create the potential for air pollution. In the short term, potential air quality impact 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, vehicular haul and worker trips. In the long term, potential air quality impact would likely result from ongoing activities associated with the operation and maintenance of the proposed vineyard. Operational-related emissions, which are seasonal in nature, are primarily generated from vehicular trips associated with workers going to and from the site and equipment necessary for ongoing vineyard maintenance. Refer to **Section XVII (Transportation)** for the anticipated number of construction and operation-related trips.

Ozone and fine particle pollution, or PM2.5, are the major regional air pollutants of concern in the San Francisco Bay Area. Ozone is primarily a problem in the summer, and fine particle pollution in the winter. In Napa County, ozone rarely exceeds health standards, but PM2.5 occasionally does reach unhealthy concentrations. There are multiple reasons for PM2.5 exceedances in Napa County. First, much of the county is wind-sheltered, which tends to trap PM2.5 within the Napa Valley. Second, much of the area is well north of the moderating temperatures of San Pablo Bay and, as a result, Napa County experiences some of the coldest nights in the Bay Area. This leads to greater

fireplace use and, in turn, higher PM2.5 levels. Finally, in the winter easterly winds often move fine-particle-laden air from the Central Valley to the Carquinez Strait and then into western Solano and southern Napa County (BAAQMD, In Your Community: Napa County, April 2016)

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 (NOx and ROG), carbon monoxide (CO), nitrogen dioxide (NO2), and suspended particulate matter (PM10 and PM2.5). Other criteria pollutants, such as lead and sulfur dioxide (SO2), would not be substantially emitted by the proposed development or 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 allows 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 California Environmental Quality Act Air Quality Guidelines developed by its staff in 2010 and as updated through May 2017. 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 was completed of the emissions analysis associated with vineyard development/construction and operations performed for three certified Environmental Impact Reports (EIR) in Napa County: Suscol Mountain Vineyards for an approximately 560-acre vineyard development, Walt Ranch Vineyard for an approximately 507-acre vineyard development, and Circle-S Ranch Vineyards for an approximately 400-acre vineyard development.

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

Table 3 shows the approximate anticipated construction emissions associated with the development of vineyards of the sizes described above. Also shown in Table 3 are the BAAQMD CEQA Guidelines draft thresholds of significance for emission of the following criteria pollutants: ROG, NOx, PM10, and PM2.5.

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

Table 3 – Emissions from Vineyard Development and Operation

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

Operational threshold (tons per year)	10	10	10	15

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

Because this project's proposed approximate 5.1 gross acre vineyard is smaller than any of the projects presented above, construction and operational emissions from the proposed project that could negatively affect air quality are expected to be less that those identified in **Table 3,** and therefore below identified thresholds. Additionally, project approval, if granted, would be subject to the standard Air Quality condition described below, which includes standard air quality and construction best management practices (BMPs) consistent with BAAQMD measures identified in Table 8-1 of the CEQA Guidelines that would further reduce potential air quality impacts associated with construction and ongoing operation of the proposed project. These BMPs would be incorporated into the proposed project, should the proposed project be approved.

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

- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. The BAAQMD's phone number shall also be visible.
- Water all exposed surfaces (e.g., parking areas, staging areas, soil piles, grading areas, and unpaved access roads) two times per day.
- Cover all haul trucks transporting soil, sand, or other loose material offsite.
- Remove all visible mud or dirt tracked onto adjacent public roads by using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- Idling times shall be minimized either by shutting off equipment when not in use or reducing the maximum idling time to five (5) minutes (as required by state regulations). Clear signage shall be provided for construction workers at all access points.
- Water and/or dust palliatives shall be applied in sufficient quantities during grading and other ground disturbing activities onsite to minimize the amount of dust produced. Outdoor construction activities shall not occur when average wind speeds exceed 20 mph.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator. Any portable engines greater than 50 horsepower or associated equipment operated within the BAAQMD's jurisdiction shall have either a California Air Resources Board (ARB) registration Portable Equipment Registration Program (PERP) or a BAAQMD permit. For general information regarding the certified visible emissions evaluator or the registration program, visit the ARB FAQ[2] or the PERP website[3].

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

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

Land uses in the vicinity of project parcel include rural residential, agriculture (primarily vineyard), and open space. The project site contains approximately 10.1 acres of land and is developed with a paved road. The nearest known schools are Vichy Elementary roughly 4.8 miles northwest, and Mt. George Elementary (permanently closed) roughly 4.3 miles to the southwest within the City of Napa (Napa County GIS: Schools Layer). The nearest residences are located approximately 950 feet to the west, 2170 feet to the north and 4595 feet to the south (located in Solano County). The nearest residential area is the City of Napa located approximately 6.0 miles to the west.

During installation of the ECPA, vineyard planting, and subsequent vineyard operations, airborne pollutants and odors would be created through the use of grading and farm equipment (e.g., tractors, trucks, and ATV's). These sources would be temporary and/or seasonal in nature and would occur at least 4.8 miles from the closest school and 6.0 miles from the nearest residential neighborhood, providing dilution of pollutants and odors. For the reasons identified above, the proposed project would not expose sensitive receptors or a substantial number of people to pollutants or objectionable odors, resulting in a less than significant impact.

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

Discussion:

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

- Wildlife Research Associates (WRA), February 2020, Biological Resource Reconnaissance Survey Report for Butler Vineyard (**Exhibit B-1**).
- Acme Engineering Inc., January 11, 2022, Lands of Butler Tree Canopy Retention Analysis (**Exhibit B-2**)

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

WRA conducted an assessment of biological resources on the subject parcel on April 11, May 29, June 20 and July 31, 2019. The surveys were completed to determine: the presence of sensitive biological communities; the potential for biological communities on site to support special-status plant or wildlife species; and the presence of sensitive natural resources protected by local, state, or federal laws and regulations. The field surveys were conducted by botanists familiar with the flora of Napa County and surrounding counties. The 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 surveys followed the protocol for plant surveys described by resource agency guidelines (CDFW, 2018). Plants were identified using Baldwin et al. (2012) and Jepson Flora Project (Jepson eFlora, 2019) to the taxonomic level necessary to determine whether they were rare. The wildlife surveys were conducted concurrently with the rare plant surveys.

A list of special-status plant and animal species that have the potential to occur within the vicinity of the project area was compiled based on data

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

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

in the CNDDB (CDFW, 2019), California Native Plant Society (CNPS), Inventory of Rare and Endangered Plants (CNPS, 2019), and the USFWS List of Federal Endangered and Threatened Species that may be Affected by projects in the Yountville, Capell Valley, Mt. Vaca, Napa, Mt. George, Fairfield North, Cuttings Wharf, Cordelia and Fairfield South USGS 7.5-minute quadrangles for special-status plants. The special-status wildlife evaluation was based on database searches for the entirety of Napa County.

The parcel consists of the following biological communities (or Land Cover Types) with respective acreages: coast live oak woodland (6.29 acres); non-native annual grassland (4.9 acres); developed area, consisting of the existing dirt road (0.38-acre) and roadside ditch; and two streams that drain to the east, which ultimately drains into Suisun Creek in Suisun Valley (WRA 2020 – **Exhibit B-1)**.[4]

a. Special Status Plants: According to Biological Reconnaissance Survey conducted by WRA, a total of 74 special-status plant species have been documented in the vicinity of the study area; 14 of these plants were assessed as having the potential to occur in the study area. The remaining species documented from the greater vicinity are unlikely or have no potential to occur.

WRA biologists conducted three site visits during a period sufficient to identify all 14 special-status plant species with the potential to occur. A protocol-level rare plant survey did not detect any special-status plant species within the project development area and overall project site. Project activities will not impact special-status plants as none are present within the project area.

The proposed project does not include the removal of special-status plant species or their habitat and would be consistent with the following Napa County General Plan Conservation Element Goals and Policies and Zoning Ordinance: General Plan Goal CON-2 [5] because it would assist in maintaining the existing level of biodiversity in the County, as well as contribute to minimization of potential cumulative impacts associated with the loss of special-status plant species and associated habitat due to agricultural conversion projects; Goal CON-3 [6] as it protects the continued presence of special-status plant species or its habitat; Policy CON-13 [6] in that impacts to special-status habitat can be avoided while allowing for up to approximately 3.3 acres of agriculture on the project site; Policy CON-17 [7] because the removal and disturbance of a sensitive natural plant community that contains special-status plant species is prevented; and, the purpose and intent of the Conservation Regulations (NCC Chapter 18.108) in that it preserves natural habitat or existing vegetation, and does not adversely affects sensitive, rare, threatened or endangered plants. Additionally, the drainage ditch and the two identified, unnamed, blue-line streams would have appropriate setbacks pursuant to NCC Section 18.108.025.

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

Pallid bat is broadly distributed throughout much of western North America. This species occurs in a number of habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous forests. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of man-made structures, including vacant and occupied buildings. Tree roosting has been documented in large conifer snags, inside basal hollows of redwoods and giant sequoias, and within bole cavities in oak trees.

Fringed myotis ranges through much of western North America from southern British Columbia, Canada, south to Chiapas, Mexico and from Santa Cruz Island in California, east to the Black Hills of South Dakota. The species occurs in a number of habitats ranging from desert scrubland, grassland, sage-grass steppe, old growth forest and subalpine coniferous and mixed deciduous forest. Roosts are typically in caves, buildings, underground mines, rock crevices in cliff faces and bridges in colonies from 10 to 2,000 individuals (WRA, February 2020).

White-tailed kite is resident in open to semi-open habitats throughout the lower elevations of California, including grasslands, savannahs, woodlands, agricultural areas and wetlands. Vegetative structure and prey availability seem to be more important habitat elements than associations with specific plants or vegetative communities. Nests are constructed mostly of twigs and placed in trees, often at habitat edges. Nest trees are highly variable in size, structure, and immediate surroundings, ranging from shrubs to trees greater than 150 feet tall.

[4] The Biological Resources Reconnaissance Report (WRA, 2020) identified the parcel as having approximately 11.57 acres.

[4] Goal CON-2: Maintain and enhance the existing level of biodiversity.
[6] Goal CON-3: Protect the continued presence of special-status species, including special-status plants, special-status wildlife, and their habitats, and comply with all applicable state, federal, or local laws or regulations.
[6] Goal CON-13: The County shall require that all discretionary residential, commercial, industrial, recreational, agricultural, and water development projects consider and address impacts to wildlife habitat and avoid impacts to fisheries and habitat supporting special-status species to the extent feasible. Where impacts to wildlife and special-status species cannot be avoided, projects shall include effective mitigation measures and management plans including provisions to: Provide protection for habitat supporting special-status species through buffering or other means.
[7] 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.

Regarding pallid bat and fringed myotis: the trees (primarily oak trees) within the parcel may contain cavities, snags or exfoliating bark suitable for roosting for the both bat species. Removal and trimming of trees during the bat maternity season (generally April through August) could impact bat breeding and potentially result in a take of bats, which would be considered potentially significant direct, indirect and cumulative impacts on bats. However, an assessment of potential bat roosting habitat/substrates was performed on January 8, 2021 focused on trees scheduled for removal. None of the trees scheduled for removal feature cavities/hollows of the size/shape and orientation associated with bat maternity roosting or hibernation. The cavities present appear small (e.g., woodpecker holes) and lack appropriate thermal characteristics; as such, it was determined that the trees could be removed at any time of year with no restrictions, and no further measures are warranted (**Exhibit B-1**).

Regarding special-status bird species, the parcel provides suitable year-round habitat for white-tailed kites, including stands of oaks for nesting and open areas in close proximity for foraging. White-tailed kites were not observed during the biological assessment; however, a targeted bird survey was not performed. In addition to these special-status bird species, a variety of non-status bird species with baseline protections under the Migratory Bird Treaty Act and California Fish and Game Code may use vegetation within the project areas for nesting. Removal of trees and grassland vegetation could result in potentially significant direct, indirect and cumulative impacts on special-status and migratory birds through removal of shelter and foraging habitat, and indirect construction-related disturbance (e.g., noise) to nesting birds. Implementation of **Mitigation Measure BR-1** would reduce potential impacts on special-status and migratory birds by requiring that a qualified biologist conduct a preconstruction survey, followed by preparation of avoidance measures and exclusion buffers prior to project initiation. With implementation of **Mitigation Measure BR-1**, the proposed project would result in less than significant impacts on special-status bird species.

> **Mitigation Measure BR-1:** The Permittee shall include in #P20-00284-ECPA the following measures to minimize impacts associated with the loss and disturbance of nesting birds and raptors consistent with and pursuant Fish and Game Code Sections 3503 and 3503.5 and the California Endangered Species Act found in Fish and Game Code Section 2050 et seq.:
>
> a. For earth-disturbing activities occurring between February 1 and August 31, (which coincides with the grading season of April 1 through October 15 – NCC Section 18.108.070.L, and bird breeding and nesting seasons), a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local avian resources with potential to occur at the project site) shall conduct preconstruction surveys for nesting birds and raptors within all suitable habitat in the project area, and within a minimum of 500 feet of all project areas. The preconstruction survey shall be conducted no earlier than 7 days prior to vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than 7 days from the survey date, surveys shall be repeated. A copy of the survey results shall be provided to the Napa County Conservation Division and the CDFW prior to commencement of work.
>
> b. After commencement of work, if there is a period of no work activity of 5 days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.
>
> c. In the event that nesting birds are found, a qualified biologist shall identify appropriate avoidance methods and exclusion buffers in consultation with the County Conservation Division and the U.S. Fish and Wildlife Service (USFWS) and/or CDFW prior to initiation of project activities. Exclusion buffers may vary in size, depending on habitat characteristics, project activities/disturbance levels, and species as determined by a qualified biologist in consultation with County Conservation Division and the USFWS and/or CDFW.
>
> d. Exclusion buffers shall be fenced with temporary construction fencing (or the like), the installation of which shall be verified by Napa County prior to the commencement of any earthmoving and/or development activities. Exclusion buffers shall remain in effect until the young have fledged or nest(s) are otherwise determined inactive by a qualified biologist. Additionally, a qualified biologist shall monitor all active nests each day during construction for the first week, and weekly thereafter, to ensure that the exclusion buffers are adequate and that construction activities are not causing nest-disturbance. If the qualified biologist observes birds displaying potential nest-disturbance behavior, the qualified biologist shall cease all work in the vicinity of the nest and CDFW shall be consulted about appropriate avoidance and minimization measures for nesting birds prior to construction activities resuming. In this event, construction activities shall not resume without CDFW's written approval.
>
> e. Alternative methods aimed at flushing out nesting birds prior to pre-construction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or chemical (i.e., spraying nesting birds or their habitats) shall be prohibited.

Implementation of the proposed project with **Mitigation Measure BR-1** incorporated would result in less than significant impacts related to special status species.

b-c. There is one unnamed blue-line stream and one ephemeral stream located on the eastern side of the property, draining to the east, ultimately into Suisun Creek in Suisun Valley. Flows in the eastern stream are intermittent, running for the entire wet season and receiving groundwater discharge to the channel extending their surface hydrology later in the season, but drying out by late spring/early summer. The northern stream is ephemeral, running during and following rain events, but drawing down quickly after storms have subsided. These streams are likely jurisdictional under Section 404/401 of the CWA and Section 1602 of the CFGC; therefore, they are considered sensitive natural resources. Both streams meet the Napa County stream definition pursuant to Napa County Code 18.108.025. The riparian vegetation along the streams is within the jurisdiction of CDFW under Section 1602 of the CFGC. (WRA, February 2020). Additionally, a roadside ditch is present along the western edge of the existing road. This ditch was installed entirely within uplands for the purpose of draining uplands, and does not meet the Napa County definition of a stream, and is unlikely to be jurisdictional under Section 404/401 of the CWA and Section 1602 of the CFGC. No wetlands or vernal pools were observed in the project site. (WRA, February 2020 – **Exhibit B-1**).

The proposed project has been designed to include stream setbacks from the blue-line stream that range from 50 to 105 feet and setbacks of 35 feet from the ephemeral stream in conformance with County Code Section 18.108.025 (General provisions – Intermittent/perennial streams). Therefore, the project has been designed to provide setbacks from streams and aquatic features (i.e. blue-line streams and drainages) consistent with code requirements. Furthermore, project approval, if granted, would be subject to the following standard conditions to prevent the potential encroachment into stream and wetland setbacks required pursuant to Section 18.108.025 and Section 18.108.026, further protecting these aquatic resources during project implementation and operation resulting in a less than significant impact.

> **Stream Protection – Standard Conditions:** The applicant/owner shall implement the following measures to prevent the inadvertent encroachment into specified stream setbacks during construction and subsequent vineyard operations:
>
> - The location of creek setbacks shall be clearly demarcated in the field with temporary construction fencing, which shall be placed at the outermost edge of required setbacks shown on the project plans. Prior to any earthmoving activities, temporary fencing shall be installed: the precise locations of said fences shall be inspected and approved by the Planning Division prior to any earthmoving and/or development activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated areas for the duration of erosion control plan installation, outside of the proposed project activities areas. The protection fencing shall remain in place for the duration of project implementation.
>
> - All construction and related traffic will remain outside of the protective fencing on the existing road to the maximum extent practicable to ensure that the stream, buffer zones, and associated woodland habitat remains undisturbed.

d. The project area is not located within a mapped Natural Landscape Block or "Essential Connectivity Area." At a more local scale (within approximately 1 mile, including in adjacent Solano County), the project area is situated within a matrix of undeveloped lands (primarily chaparral, grassland, and woodlands) where agricultural and rural developments are scarce. Additionally, the on-site ephemeral and intermittent stream courses provide some corridor function for highly localized movement by terrestrial species. As detailed in the Biological Resources Reconnaissance Report, the project parcel's streams and terrestrial land cover types support localized wildlife movement. Wildlife nursery sites were not identified in the project area or parcel, there would be no impacts to wildlife nursery sites.

At the time of application submittal, the parcel did not include fencing. Since application submittal, temporary fencing was installed on the project parcel (6 feet tall with graduated openings near the ground) to enclose most of the project parcel as well as the development area on the Solano County parcel (at least 25.7 acres)(Application Submittal Materials - **Exhibit G**). The fence was installed to accommodate the vineyard development in 2020 on the Solano County parcel under same ownership and immediately adjacent to the project parcel. Following correspondence with the project applicant, a fencing figure was included (**Exhibit G)** that detailed the fencing installed on both parcels, and indicated that the fencing is temporary and would be adjusted to accommodate the proposed vineyard.

Maintenance of the fencing as temporarily installed would result in potentially significant impacts on wildlife movement, as it would effectively eliminate portions of the stream and ephemeral drainage and associated land covers from access and would eliminate east-west connectivity and would eliminate a majority of the north-south connectivity through the parcel.

Implementation of **Mitigation Measure BR-2** would require that the fencing be redesigned and installed to enclose the vineyard blocks exclusively, thus allowing the preservation of open, native/naturalized vegetation interstitial to the vineyard blocks to allow for continued localized wildlife movement. These open areas would be connected to property boundaries to provide broader movement in the general vicinity. Therefore, with implementation of **Mitigation Measure BR-2,** the project would result in less than significant impacts.

> **Mitigation Measure BR-2:** The owner/applicant shall provide a revised Wildlife Exclusion Fencing Plan for Erosion Control Plan #P20-00284-ECPA to be reviewed and approved by the Planning Department, that shall be incorporated into Erosion

Control Plan #P20-00284-ECPA. The revised Wildlife Exclusion Fencing Plan shall be submitted within 30 days of approval of #P20-00284-ECPA. New wildlife exclusion fencing shall generally be limited to the periphery of the vineyard development area, and shall include the following components:

- Fencing plan shall exclude the temporary staging and stockpile area (0.4-acre) to allow east-west movement through the parcel.
- Existing fencing that encroaches into the setbacks and crosses the stream and ephemeral drainage shall be removed to allow access and localized movement for wildlife.
- New fencing shall use a design that has 6-inch square gaps at the base (instead of the existing/typical 3-inch by 6-inch rectangular openings) to allow small mammals to move through the fence. Exit gates shall be installed at the corners of wildlife exclusion fencing to allow trapped wildlife to escape. Smooth wire instead of barbed wire shall be utilized to top wildlife exclusion fencing to prevent entanglement.
- Any modifications to the location of wildlife exclusion fencing as specified in Erosion Control Plan #P20-00284-ECPA pursuant to the Vineyard Wildlife Exclusion Fencing Plan required by this condition shall be strictly prohibited, and would require County review and approval to ensure the modified wildlife exclusion fencing location/plan would not result in potential impacts to wildlife movement.

e. Oak woodland is the most common land cover in the County, occurring on approximately 162,000-acres (32% of the County's area). Approximately 1,124 acres of oak woodland or 0.7% of the total area of oak woodland in the County has been cleared for vineyard development between 1993 and 2014 (Napa County GIS, 2018). While oak woodlands may be one of the most common land covers within the County, their past conversion to residential and agricultural uses in conjunction with foreseeable oak woodland conversion to agricultural use is considered a potentially significant impact both on a project specific level and a cumulative level for projects that remove oak woodland16. Furthermore, there was only 2,903 acres of valley oak woodland remaining in the County in 2002, and only 62 acres of valley oak woodland in the Southern Interior Valleys evaluation area, in which the project parcel lies (Napa County Baseline Date Report, Biological Resources Section, Table 4-4 and Map 4-1, Version 1, November 2005).

Napa County General Plan Conservation Element Policy CON-24 requires that oak woodland be maintained and/or improved to the extent feasible to provide for oak woodland and wildlife habitat, slope stabilization and soil protection, and species diversity. More specifically, this Conservation Policy strives to: preserve oak trees and other significant vegetation that occurs near the heads of drainages to maintain diversity of vegetation types and wildlife habitat (CON-24a); achieve comply with the Oak Woodlands Preservation Act (PRC Section 21083.4) regarding oak woodland preservation to conserve the integrity and diversity of oak woodlands, and retain existing oak woodland (CON-24b); and Provide replacement of lost oak woodlands or preservation of like habitat (on an acreage basis) at a 2:1 ratio, and avoid removal of oak species that are limited in distribution (CON-24c).

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

Pursuant to NCC Section 18.108.020(C) (General Provisions: Vegetation Retention Requirements) within the AW zoning district, a minimum of 70 percent (%) of the vegetation canopy cover as configured on the parcel existing on June 16, 2016 shall be maintained as part of any use involving earth-disturbing activity. Specific to vegetation removal mitigation and preservation NCC Section 18.108.020(D) (Vegetation Removal Mitigation) requires the removal of any vegetation canopy cover in the AW zoning district be mitigate by permanent replacement or preservation of comparable vegetation canopy cover, on an acreage basis at a minimum 3:1 ratio pursuant to NCC Section 18.108.020(E) (Preserved Vegetation Canopy Cover). This provision requires preserved vegetation canopy cover to be protect through a perpetual protective easement or deed restriction preserving and conserving the preserved vegetation cover.

However, because the property was affected by the 2017 Atlas Peak Fire, the provisions of NCC Section 8.80.130(B) (Conservation regulations for fire-damaged properties) are applicable. This code provision states that, for purposes of calculating the Vegetation Retention Requirements contained in subsection (C) of County Code Section 18.108.020 (Vegetation Retention Requirements.) for any earthmoving activity as defined in Section 18.108.030 (Definitions.) occurring on fire damaged property in the Agricultural Watershed zoning district and outside of a sensitive domestic water supply drainage as defined in Section 18.108.030 (Definitions.), the vegetation canopy cover shall be as configured on the parcel existing in 2018.

Based on an analysis provided by the Applicant, and review of historical aerial imagery and County GIS Vegetation mapping, the parcel contained approximately 4.8-acres of vegetation canopy cover canopy in 2018. The proposed project would remove 11 trees, including coast live oak and California bay, resulting in removal of approximately 1.2 acres (25%) of oak woodland canopy cover, as it existed in 2018,

resulting in retention of 75% of the vegetation canopy cover on the site (**Exhibit B-2)**. Therefore, the project as proposed is in compliance with the vegetation canopy cover retention requirements found in NCC Section 18.108.020(c) and NCC 8.80.130(B).

Napa County Code Section 18.108.020(D) requires that removal of vegetation canopy cover (i.e., oak woodland canopy cover) on an acreage basis be mitigated at a 3:1 ratio: the project, if approved, would remove a total of 1.2 acres of vegetation canopy cover; therefore, the mitigation for canopy cover removal would require replacement and/or preservation of a minimum of approximately 3.6 acres of vegetation canopy cover. The project proposes to preserve the remaining 3.6 acres of oak woodland canopy on land with slopes less than 50% on the parcel, which more than complies with the requirements in NCC Section18.108.020(D).

The project as proposed would not be consistent with NCC Section18.108.020(E), which requires that the mitigated preservation area be enforceably restricted with a perpetual protective easement or perpetual deed restriction. This would be considered a potentially significant impact. Implementation of **Mitigation Measure BR-3** would require the #P20-00284-ECPA be revised, prior to approval, to include the proposed 3.6-acre vegetation removal mitigation preservation area. The preservation area would prioritize areas of like habitat, areas upslope from the heads of the ephemeral drainages within the parcel, and on slopes of less than 30%. With implementation of **Mitigation Measures BR-1 through BR-3** and standard conditions of approval, the proposed project would have less than significant impacts on special-status plants and wildlife, wildlife movement and result in conformance with policies protecting biological resources in the Napa County General Plan and Conservation Regulations.

> **Mitigation Measure BR-3:** The Owner/Applicant, prior to approval, shall revise #P20-00284-ECPA to include the following provisions to reduce potential impacts to oak woodland and achieve consistency with the Napa County Conservation Regulations Chapter 18.108:
>
> a. An Oak Woodland Preservation Area totaling 3.6 acres located outside of the boundaries of the existing and proposed developed area shall be designated as such in a deed restriction or conservation easement or other means of permanent protection. Land placed in protection shall be restricted from development and other uses that would degrade the quality of the habitat (including, but not limited to conversion to other land uses such as agriculture or urban development and excessive off-road vehicle use that increases erosion) and should be otherwise restricted by the existing goals and policies of Napa County. The applicant shall record the deed restriction or conservation easement prior to earthmoving or within 90 days of project approval, whichever comes first. The area to be preserved shall be of like kind and quality to the oak woodland being impacted as a result of the proposed project, as follows: areas to be preserved shall take into account the type of vegetation being removed, and species diversity and species that are limited within the project property and Napa County; the acreage included in the preservation area should be selected in a manner that minimizes fragmentation of forest within the project property; and the preservation area should not include portions of the property already subject to development restrictions (i.e., within creek setbacks or on slopes over 50%). The area to be preserved shall be determined by a qualified biologist with knowledge of the habitat and species and shall obtain final approval from Napa County.
>
> b. Prior to any earthmoving activities temporary fencing shall be placed at the edge of the dripline of trees to be retained that are located adjacent to the project site (typically within approximately 50-feet of the project site). The precise locations of said fences shall be inspected and approved by the Planning Division prior to the commencement of any earthmoving activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated protection areas for the duration of erosion control plan and vineyard installation.
>
> c. The Owner/Permittee shall refrain from severely trimming the trees (typically no more than 1/3rd of the canopy) and vegetation to be retained adjacent to the vineyard conversion area.
>
> d. In accordance with County Code Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) trees that are inadvertently removed that are not within the boundary of the project and/or not identified for removal as part of #P20-00284-ECPA shall be replaced on-site with fifteen-gallon trees at a ratio of 2:1 at locations approved by the planning director. A replacement plan shall be prepared for county review and approval, that includes at a minimum, the locations where replacement trees will be planted, success criteria of at least 80%, and monitoring activities for the replacement trees. The replacement plan shall be implemented before vineyard planting activities. Any replaced trees shall be monitored for at least three years to ensure an 80 percent survival rate. Replacement trees shall be installed and documented that they are in good health prior to completion and finalization of the erosion control plan.

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

Therefore, no impact would occur.

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

Discussion:

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

The following was utilized in this analysis and is incorporated herein by reference, in addition to Napa County GIS Archeological sensitive areas and Archeological sites layers: Archaeological Resource Service (ARS), February 17, 2020, Cultural Resource Evaluation of Vineyards with the Lands of Butler, Napa County, California.

ARS conducted an archeological evaluation of the project site which included a review of information on file with the California Historical Resources Information System Northwest Information Center to determine presence or absence of previously recorded historic or prehistoric cultural resources; a review of relevant historic references to determine the potential for historic era archaeological deposits or structure; and a surface reconnaissance survey of the all accessible parts of approximately 10.1-acre parcel, including the approximate 5.5-acre project site to locate any visible signs of potentially significant historic or prehistoric cultural deposits.

a-b. The cultural resource reconnaissance (ARS, February 17, 2020) did not identify any cultural resources within the project site. Furthermore, project approval, if granted, would be subject to the standard conditions identified below to protect cultural resources that may be discovered accidently. the cultural resource reconnaissance did not locate any human remains in the proposed development area and does not anticipate the discovery of human remains due to the proposed project. Therefore, impacts on human remains are anticipated to be less than significant. Furthermore, the following conditions of approval would be incorporated should the proposed project be approved, which would ensure that potential impacts on human remains would be less than significant.

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

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

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

Discussion:

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

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

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

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

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

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

VII.	GEOLOGY AND SOILS. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
a)	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
	ii) Strong seismic ground shaking?	☐	☐	☒	☐
	iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
	iv) Landslides?	☐	☐	☒	☐
b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d)	Be located on expansive soil creating substantial direct or indirect risks to life or property? Expansive soil is defined as soil having an expansive index greater than 20, as determined in accordance with ASTM (American Society of Testing and Materials) D 4829.	☐	☐	☐	☒
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Discussion:

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

i. No faults have been mapped on the project site, and the project site is not located on an active fault or within an "Earthquake Fault Hazard Rupture Zone" designated by the Alquist-Priolo Earthquake Zoning Act. The Green Valley and Cordelia faults are the closest and most likely sources of significant future earthquakes. The project site is shown as lying just east (approximately 2,022 feet) of the Green Valley Fault zone and southeast of the potentially active Cordelia Fault (approximately 1.5 miles) (Napa County GIS faults and earthquakes layers).. Given the historic rate and magnitude of seismic activity on the Green Valley Fault, the risk of surface rupture within the development area is moderate to high. However, no significant impact is anticipated in that no new structures are planned. Therefore, impact would be less than significant.

ii. Although the project site is located in an area that may be subject to strong to very strong seismic ground shaking potential during an earthquake (California Geological Society, 2016), the proposed project does not include construction of any new residences or enclosed

areas where people would congregate. Therefore, impact would be less than significant.

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. Therefore, impact would be less than significant.

iv. The project parcel has been identified to generally consist of (i.e. underlain by) a historic debris field associated large ancient landslide(s). The debris field extends from ridge to the west of the parcel down to the bottom of Wooden Valley, approximate 2-miles northeast of the parcel (Miller Pacific Engineering Group, 2020 – **Exhibit C).** The project geologist also indicated the debris field and associated topography could also be related to historic faulting in addition to the potential large historic landslide(s). While the project site are underlain by historic land-sliding and/or faulting the project geologist did not identify evidence of apparent historic or incipient (developing) instability within the proposed vineyard development areas. The project site is underlain by variable soil and rock materials, and some risk of deep-seated or "global" landsliding may exist; however, we judge that the proposed grading and vineyard development will have a negligible effect on and will not increase the risk of such "global" instability. The risk of more localized instability at the site is high given the locally thick soils and variable bedrock/groundwater conditions. Steeper slopes in the eastern and northwestern parts of the site, which are underlain by thicker and/or loose and permeable soils, are judged to present a "moderate" risk of instability. The project, as designed, incorporates the recommendations of the project geologist; therefore, less than significant impacts would result.

b. The project site's soils have been classified according to the Soil Survey of Napa County (USDA, 1978) as Hambright Loam 15 to 40% slopes (WRA).

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

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

Based on USLE modeling calculations prepared by Acme Engineering (**Exhibit C**), the proposed conversion of approximately 5.5 acres of non-native grassland and coast live oak woodland to vineyard and vineyard avenues (including 0.4-acre temporary stockpile area) is anticipated to reduce soil loss, or surface erosion, within the project site as compared to existing conditions (**Table 4**). Under existing conditions, the annual soil loss is anticipated to average 18.84 tons per year across the development area depending on soil type, slope length, and gradient. Under proposed project conditions, annual soil loss is anticipated to average of 12.63 (permanent) /11.03 (temporary) tons per year, or a reduction of approximately 6.21 acres (32.9%) as compared to existing conditions.

Table 4 – USLE Soil Loss Analysis

Vineyard Block	Pre-project Soil Loss (tons/year)	Post-project Soil Loss (tons/year)	Difference	Percent Change (approximate)
Block 1	7.30	6.54	- 0.76	-10.5%
Block 2	11.54	6.09	- 5.54	- 52.7%
Property Total	18.84	11.03	- 6.21	- 32.9%

Source: Acme Engineering, November 5, 2020

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

Should the 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 #P20-00284 -ECPA pursuant to NCC Chapter 18.108 (Conservation Regulations):

- Permanent Erosion and Runoff Control Measures: Pursuant to NCC Section 18.108.0) installation of runoff and sediment attenuation devices and hydromodification facilities including, but not limited to straw wattles, rock-filled avenues, rocked

crossings, and permanent no-till cover, shall be installed no later than September 15 during the same year that initial vineyard development occurs. This requirement shall be clearly stated on the final Erosion Control Plan. Additionally, pursuant to NCC Section 18.108.135 "Oversight and Operation" the qualified professional that has prepared this erosion control plan (#P20-00284-ECPA) shall oversee its implementation throughout the duration of the project, and that installation of erosion control measures, sediment retention devices, and hydromodification facilities specified for the vineyard have be installed and are functioning correctly. Prior to the first winter rains after construction begins, and each year thereafter until the project has received a final inspection from the county or its agent and been found complete, the qualified professional shall inspect the site and certify in writing to the planning director, through an inspection report or formal letter of completion verifying that all of the erosion control measures, sediment retention devices, and hydromodification facilities required at that stage of development have been installed in conformance with the plan and related specifications, and are functioning correctly.

- Cover Crop Management/Practice: The permanent vineyard cover crop shall not be tilled (i.e., shall be managed as a no till cover crop) for the life of the vineyard and the owner/permittee shall maintain a plant residue density of 75% within the vineyard and vineyard avenues. The cover crop may be strip sprayed within a maximum 24" wide strip (i.e. 12" on either side of the vine row), with post-emergent herbicides: no pre-emergent sprays shall be used. Should the permanent no till cover crop need to be replanted/renewed during the life of the vineyard, cover crop renewal efforts shall follow the County "Protocol for Replanting/Renewal of Approved Non-Tilled Vineyard Cover Crops" July 19, 2004, or as amended.
- Temporary and permanent erosion control measures and devices shall be free of plastic monofilament netting and should generally be composed of biodegradable or compostable materials and/or utilize biodegradable or compostable materials in their construction so that animals do not become entangled within them.

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

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. As such, less than significant impacts would result from project implementation, if approved

c. As discussed above, the project area is not located in an area prone to ground failure or liquefaction. As described above, the proposed project identifies the soil types in the project area and addresses any potential soil instability. While the project site is within a large ancient landslide deposit, the project will not affect stability. Therefore, this project will not result in any significant impacts of on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse.

d. Soils of the project site consist of Hambright Loam 15 to 40% slopes (USDA Soil Survey of Napa County, 1978). In addition, no structures are proposed as part of the project and expansive soils pose little risk to vineyards and related agricultural improvements. Therefore, there would be no impacts associated with expansive soils.

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

f. There are no unique geologic features on the project site. Due to the nature of the soils in the project site and the nature of the proposed project (which would involve relatively shallow vineyard), the probability of encountering paleontological resources within the project site is minimal. Furthermore, project approval, if granted, would be subject to the standard conditions, as noted in **Section V (Cultural Resources)**, repeated 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.

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

Discussion:

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

In July 2015, the County re-commenced preparation of the CAP to: i) account for present day conditions and modeling assumptions (such as but not limited to methods, emission factors, and data sources), ii) address the concerns with the previous CAP effort as outlined above, iii) meet applicable State requirements, and iv) result in a functional and legally defensible CAP. On April 13, 2016 the County, as the part of the first phase of development and preparation of the CAP, released Final Technical Memorandum #1: 2014 Greenhouse Gas Emissions Inventory and Forecast, April 13, 2016. This initial phase included: i) updating the unincorporated County's community-wide GHG emissions inventory to 2014, and ii) preparing new GHG emissions forecasts for the 2020, 2030, and 2050 horizons. Additional information on the County CAP can be obtained at the Napa County Department of Planning, Building and Environmental Services or https://www.countyofnapa.org/2876/Current-Projects-Explorer.

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

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

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

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

an adopted General Plan for which an EIR was prepared.

GHGs are the atmospheric gases whose absorption of solar radiation is responsible for the greenhouse effect, including carbon dioxide (CO_2), methane, ozone, and the fluorocarbons, which contribute to climate change. CO_2 is the principal GHG emitted by human activities, and its concentration in the atmosphere is most affected by human activity. It also serves as the reference gas to which to compare other GHGs. Agricultural sources of carbon emissions include forest clearing, land-use changes, biomass burning, and farm equipment and management activity emissions. Equivalent Carbon Dioxide (CO_{2e}) is the most commonly reported type of GHG emission and a way to get one number that approximates total emissions from all the different gasses that contribute to GHG, as described in BAAQMD's CEQA Guidelines. In this case CO_2 is used as the reference atom/compound to obtain atmospheric carbon CO_2 effects of GHG. Carbon stocks are converted to CO_{2e} by multiplying the carbon total by 44/12 (or 3.67), which is the ratio of the atomic mass of a carbon dioxide molecule to the atomic mass of a carbon atom (http://ncasi2.org/COLE/faq.html).[7]

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

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

Construction Emissions:

Equipment Emissions: As discussed in **Section III (Air Quality)**, three County Certified EIRs assessed and analyzed potential air quality and GHG emissions associated with vineyard development. Within those EIRs potential GHG emissions associated with construction equipment were calculated and disclosed. An estimation of potential construction equipment emissions per acre of vineyard development was derived using the most generous emissions results from these EIRs. The Circle-S Ranch EIR anticipated approximately 4,293 metric tons (MT) CO_{2e} of construction equipment emissions for a 459-acre vineyard development, resulting in approximately 9.4 MT CO_{2e} of construction equipment emissions per acre of vineyard development.[8] Using this emission factor it is anticipated that Construction Equipment Emissions associated with the proposed 5.5 gross acres of vineyard development would be approximately 51.7 MT CO_{2e} (5.5 acres multiplied by 9.4 MT CO_{2e}).

Project Site Emissions: Project site emissions are emissions resulting from vegetation removal and soil preparation associated with the conversion of approximately 5.5 acres of existing vegetation to vineyard. Because there is not yet a universally accepted scientific methodology or modeling method to calculate GHG emissions due to vegetation conversion and soil disturbance, the Greenhouse Gas Emissions Checklist and associated carbon stock factors developed as part of the 2012 CAP efforts are utilized to determine potential project site carbon stocks and emissions. Utilizing the 2012 Draft CAP carbon stocks and the acreages of vegetation types within the project site, total carbon stocks for the project site are estimated to be approximately 119.58 MT C or approximately 438.86 MT CO_{2e} (**Table 5**).

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

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

Table 5 – Estimated Development Area Carbon Stocks/Storage

Vegetation Type/Carbon Storage	Project Acreage	Carbon Storage/Stock per Acre (MT C/acre)[1]	Total Carbon Storage (MT)	Total Carbon Storage in MT CO2e
Oak Woodland	1.2	95.1	114.1	418.8
Grassland	3.9	1.4	5.5	20
Total			**119.6**	**438.8**

Sources: Napa County Draft Climate Action Plan, March 2012; Napa County Conservation Division, January 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%.[9] 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 406 MT CO_{2e} (**Table 6**).

Table 6 – Estimated Project Carbon Emissions Due to Vegetation Removal

Vegetation Type/Carbon Storage	Project Acreage	Carbon Loss/Emission per Acre (MT C/acre)[1]	Total Carbon Loss/Emission (MT)	Total Carbon Loss/Emission in MT CO2e
Oak Woodland	1.2	89.6	107.5	394.6
Grassland	3.9	0.8	3.1	11.4
Total			**110.6**	**406**

Sources: Napa County Draft Climate Action Plan, March 2012; Napa County Conservation Division, January 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 5.5-acre agricultural development would be approximately 3.685 MT CO_{2e} (5.5 multiplied by 0.67 MT CO_{2e}).

Operational Sequestration Emissions: Emissions associated with loss of sequestration due to land use change (i.e., the conversions of existing vegetation to vineyard) have been calculated based on the Annual Carbon Sequestration Factors within the 2012 Draft CAP, which indicates that oak woodlands sequester 0.45 CO_2 acre per year, while grasslands, shrublands and developed areas are essentially zero. The developed land use is not identified by the 2012 Draft CAP and is considered similar to grasslands (essentially zero). Utilizing these factors, it is anticipated that the annual emissions associated with changes in carbon sequestration as a result of land use changes would be approximately 0.51 MT C per year or 0.76 MT CO_2e per year[10].

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

Project Emissions:

Based on the above estimates, the proposed project could result in one-time construction emissions of up to 453.94 MT CO2e and annual ongoing emissions associated with vineyard operations (including loss of sequestration) estimated to be approximately 4.5 MT CO_{2e} per year (**Table 7**).

Table 7 – Estimated Overall Project-Related GHG Emissions

Construction Emissions in Metric Tons of $C0_{2e}$		Annual Ongoing Emissions in Metric Tons of $C0_{2e}$	
Source	**Quantity**	**Source**	**Quantity**
Vehicles and Equipment	51.7	Vehicles and Equipment	3.7

Vegetation and Soil	406	Loss of Sequestration	0.8
Total	**453.94**	**Total**	**4.5**

Source: Napa County Conservation Division, April 2021

There is no adopted CEQA significance threshold at the state, regional, or local level for construction-related GHG emissions, and the County has therefore evaluated the significance of one-time project-generated emissions of up to approximately 1,393.39 MT CO_{2e} by considering the size of the proposed vineyard in relation to projected vineyard development in the County. The program level EIR for the 2008 Napa County General Plan Update (SCH#2005102088 certified June 3, 2008) projected 12,500 acres of new vineyard development in the County between 2005 and 2030. The County concluded in the General Plan EIR that emissions from all sources over the planning period would result in significant and unavoidable GHG emissions despite measures adopted to address the impact. Because this determination was based on emissions from all sources, not just agriculture, the General Plan did not determine that emissions solely from projected agricultural development would result in significant unavoidable impacts. Pursuant to Section 15183(a) of the California Code of Regulation (CCR), projects that are consistent with the general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific effects which are peculiar to the proposed project or its site.

In the context of 12,500 acres of projected vineyard development, the proposed project would constitute less than approximately 0.0004% of the vineyard development anticipated in the General Plan EIR. The proposed project also contains measures to reduce and/or offset emissions from vineyard development and vineyard operations such as maintaining a permanent no-till cover crop density of a minimum 75%, vegetated vineyard avenues, and the maintenance and establishment of grape vines. These measures in conjunction with the Air Quality conditions of approval (detailed in **Section III [Air Quality]**) would further reduce potential GHG air quality impacts associated with construction and ongoing operation of the proposed project.

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

As described above, total annual GHG emissions from ongoing operations are anticipated to be approximately 4.5 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**
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b)	Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

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

[10] 3.9 acres of grassland times 0.057 MT C = 0.22 MT CO2e; 1.2 acres of oak woodland times 0.45 MT C = 0.54 MT CO2e

e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wild-land fires?	☐	☐	☒	☐

Discussion:

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

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

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

No on-site chemical storage is proposed as part of the project, or is currently occurring at the subject parcel. Chemical mixing and equipment cleaning would occur within proposed designated locations on vineyard Block A and B; these areas are located more than 50' away from any identified creek, drainage, or wetland area. A temporary equipment staging and material storage, in addition to temporary rock stockpile, are proposed at the northern property line (adjacent to Wild Horse Valley Road) consisting of approximately 0.4 acres. The use of pesticides, fertilizers, and sulfur for the proposed vineyard would typically be limited to approximately 9+ combined applications per year, generally occurring between January and June of each year (with fertilizers noted as being applied as needed). 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. Chemical storage shall be in a designated locked tool shed which is housed on an adjacent parcel, which is owned by the same property owner. No pre-emergent herbicides would be strip sprayed in the vine rows for weed management.

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).

One unnamed blue-line stream and one ephemeral stream have been identified on the project site, and the project has the appropriate setbacks as outlined in Napa County Conservation Regulation Section 18.108.025.

The risk of potentially hazardous materials reaching or affecting adjacent water courses or other aquatic resources is significantly reduced because: i) the proposed project would maintain buffers greater than 35 feet from the extrapolated stream; ii) project staging and storage areas would be a minimum of 50 feet from aquatic resources; and iii) only federal and/or California approved chemicals would be applied to the vineyard in strict compliance with applicable state and federal law. Project approval, if granted, would also be subject to the following standard conditions that would further avoid and/or reduce potential impacts associated with routine transport and use of hazardous materials during project implementation and ongoing vineyard operations and maintenance.

> **Hazardous Materials – Conditions of Approval**: The owner/operator shall implement the following BMPs during construction activities and vineyard maintenance and operations:
>
> - Workers shall follow manufacturer's recommendations on use, storage and disposal of chemical products.
> - Workers shall avoid overtopping fuel gas tanks and use automatic shutoff nozzles where available.

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

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

c. The nearest known schools are Vichy Elementary roughly 4.8 miles northwest, and Mt. George Elementary (permanently closed) roughly 4.3 miles to the southwest (Napa County GIS: Schools Layer). There are no schools proposed within one-quarter mile of the project site. Therefore, there would be no impact to existing or proposed schools.

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

e. The closest public airport to the project site is the Napa County Airport, located approximately 9 miles south of the project site. No portion of the proposed project is within an airport compatibility zone identified in the Airport Compatibility Plan (Napa County Airport Land Use Compatibility Plan, and Napa County GIS Airport layer). Therefore, no impact would occur.

f. There would be negligible numbers of workers visiting the project site on a temporary basis for ECPA and vineyard installation and on a seasonal basis for subsequent vineyard operations, resulting in no permanent substantial increase in the number of people working or residing at the project site. Therefore, the proposed project would not impair implementation of or physically interfere with any adopted emergency response plan or emergency evacuation plan, and no impact would occur.

g. No structures are proposed as part of the project. The project site is located in an area identified as having high fire hazard severity (CALFIRE 2007 - https://egis.fire.ca.gov/FHSZ/). The risk of fire in vineyards is low due to limited amount of fuel, combustibles, and ignition sources that are present. Vineyards are irrigated and cover crops are typically mowed in May and August, thereby reducing the fuel loads within the vineyard. The removal of vegetation and the management of vineyard results in an overall reduction of fuel loads within the project site as compared with existing conditions. Therefore, the proposed project would not increase the exposure of people or structures to wildland fires and impacts would be less than significant.

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

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

Discussion:

On April 21, 2021, Governor Gavin Newsom declared a drought emergency in the state of California and as of July 8, 2021, 50 counties are under the drought state of emergency, including Napa County. The Governor directed the Department of Water Resources to increase resilience of water supplies during drought conditions. On June 8, 2021, the Napa County Board of Supervisors adopted a resolution declaring a Proclamation of Local Emergency due to drought conditions which are occurring in Napa County. On October 19, 2021, the Governor issued a proclamation extending the drought emergency statewide. The County of Napa has not adopted or implemented any mandatory water use restrictions. The County requires all discretionary permit applications (such as use permits and ECPAs) to complete necessary water analyses in order to document that sufficient water supplies are available for the proposed project and to implement water saving measures to prepare for periods of limited water supply and to conserve limited groundwater resources.

The project site is located in the Suisun Creek watershed and within the Napa River sub-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 main stem of the Napa River by reducing the delivery of coarse load sediments to the river (Stillwater Science and W. Dietrich, 2002). However, the finer sediments that are not trapped by dams negatively affect salmonid habitat by reducing gravel permeability potentially affecting special-status fish species (Stillwater Science and W. Dietrich, 2002).

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

Because vineyard properties may pose threats to water quality by discharging sediment, nutrients, and pesticides and/or by increasing storm runoff, which consequently can cause erosion and sedimentation and otherwise impact aquatic life, in July 2018 the San Francisco Bay Regional Water board adopted a water quality control permit (or General Permit) for vineyard properties in the Napa River and Sonoma Creek watersheds (Order #R2-2017-0033). The General Permit regulates parcels (including contiguous parcels under common ownership) developed with five or more acres of vineyard located in either of these watersheds. The Napa River and Sonoma Creek TMDLs adopted by the San Francisco Bay Regional Water Board have established performance standards for sediment discharge and storm runoff to protect and restore water quality. The General Permit would require actions to control pollutant discharges including sediment and storm runoff from vineyards and unpaved roads, which are located throughout vineyard properties, and pesticides and nutrients from vineyards. The General Permit would require vineyard owners or operators of parcels that meet the enrollment criteria to do the following: develop and certify a "farm plan[11]"; implement the farm plan to achieve discharge performance standards; submit an annual report regarding plan implementation and attainment of performance standards; and participate in group or individual water quality monitoring programs.

[11] A farm plan documents a vineyard property's natural features, developed areas, and BMPs. Under the General Permit, a "certified" farm plan would mean that upon its full implementation of the plan, that the vineyard property is expected to achieve the performance standards for discharge. The Water Board's Executive Officer would approve third-party programs or certify a farm plan.

In the General Permit the San Francisco Bay Regional Water Board identified four significant sediment sources that are associated with vineyard properties: i) vineyard soil erosion; ii) offsite erosion caused by vineyard storm runoff increases; iii) road-related sediment delivery; and iv) channel incision. Napa County ECPA requirements and standards primarily address and control two of these sources, vineyard soil erosion and vineyard storm runoff. The General Permit will fill gaps in local regulation so that all four sediment sources are effectively controlled to reduce fine sediment deposition in stream channels that provide habitat for endangered steelhead populations, locally-rare Chinook salmon populations, and exceptionally diverse assemblages of native fish species in these watersheds. Additional details on the Vineyard Properties General Permit can be obtained from the Regional Water Board[12].

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

   The proposed project has been designed with site-specific temporary and permanent erosion control measures and features to prevent sediment, runoff, and pollutants from leaving the project site. Agricultural Erosion Control Plan #P20-00284-ECPA includes BMPs that are consistent with NCC Section 18.108.080(c), as well as with Regional Water Board guidance from the Stormwater Best Management Practice Handbooks for Construction and for New Development and Redevelopment, and the Erosion and Sediment Control Field Manual. Therefore, the proposed project is not anticipated to violate any water quality standards or otherwise substantially degrade surface or groundwater quality, and this impact would be less than significant.

b. The County requires all ECPA applicants to complete necessary water analyses in order to document that sufficient water supplies are available for a proposed project. On June 28, 2011, the Board of Supervisors approved creation of a Groundwater Resources Advisory Committee (GRAC). The GRAC's purpose was to assist County staff and technical consultants with recommendations regarding groundwater, including data collection, monitoring, and well pump test protocols, management objectives, and community support. The County completed a countywide assessment of groundwater resources (Napa County Groundwater Conditions and Groundwater Monitoring Recommendations Report, 2011) and developed a groundwater monitoring program (Napa County Groundwater Monitoring Plan, 2013). The County also completed a 2013 Updated Hydrogeologic Conceptualization and Characterization of Groundwater Conditions (2013).

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

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

   A Water Availability Analysis (WAA) was prepared in order to determine if the proposed increase in groundwater water demand as a result of the proposed project would result in a significant impact to groundwater supplies (Acme Engineering, Inc., November 5, 2020 - **Exhibit F).** The WAA estimates the onsite groundwater recharge, overall availability, and both existing and proposed use, in order to assess potential impact on groundwater in accordance with the WAA Guidance Documented adopted by the County May 12, 2015. A WAA that includes a Tier 2 analysis (Well and Spring Interference Criterion) is not necessary for this project because there are no known non-project wells located within 500 feet of the project wells.

   An existing well, located on the Solano County parcel under same ownership, would serve as the water source for the proposed project. The project would be subject to the following condition of approval to ensure the transfer of water from the Solano County parcel to the proposed project in Napa County.

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

Groundwater Easement – Condition of Approval: The planned transfer of groundwater from Parcel 1 in Solano County [no situs record; Twin Sisters Road, Solano County, APN: 0149-010-010] to the proposed vineyard acreage on Parcel 2 [no situs record; Wild Horse Valley Road, Napa County; APN 033-190-006] in Napa shall be documented and memorialized through the recordation of an "Agreement for Grant of Easement and Water Right" as described in Appendix E of the Water Availability Analysis Guidance Document (Napa County, 2015). The Agreement shall be on a form approved by the County and shall be recorded by the owner/permittee prior to commencement of any activities authorized by #P20-00284-ECPA.

The well also serves the existing and future vineyard on the Solano County parcel; therefore the WAA accounts for the use and recharge on both parcels. The Solano parcel measures approximately 74.2 acres, and consists of 13.9 acres of existing vineyard and 6.0 acres of future vineyard. At time of preparation of the Water Availability Analysis, the vineyard on the Solano County parcel was not yet installed, and there are no other uses on that parcel resulting in water demand. The project parcel (in Napa County) is 10.1 acres, and the project proposes 5.1 gross acres (3.3 net planted vine acres). Based on the Napa County WAA Guidance Document, the range for estimating vineyard water usage is 0.2 to 0.5 acre-feet per acre per year; this result in a total estimated annual usage range from 4.64 to 11.6 acre feet per acre per year for both parcels. The WAA used the Napa County lower limit (4.64 af/ac/y) and added an additional 10 percent to allow for any additional miscellaneous uses; the total estimated annual water demand for the proposed project on the Napa County parcel is 5.1 acre feet per year. There are no other anticipated water uses on the subject parcel; therefore, the anticipated vineyard water usage (5.1 acre-feet per year) is also the total annual water usage requirement for the subject parcel, which is considered by the County to be a plausible and adequate amount of irrigation water necessary and available (or otherwise allocated) for the proposed vineyard.

Groundwater Recharge: Long-term average groundwater recharge can be estimated as the percentage of rainfall that falls on the parcel that percolates into the underlying aquifer. The percentage of rain that has the potential to infiltrate varies depending on factors such as rates of evaporation and transpiration, soil type and geology that exists at the site, and average annual rainfall. Based on available climatological data, site-specific information, and other available data and analysis relevant to potential recharge, the Tier I WAA, which uses an average annual rainfall of 27.65 inches per year over the approximate 84.3 acres of the land area within the two parcels under same ownership available for recharge and a 10% deep percolate recharge estimate, estimates the average annual groundwater recharge of the parcels to be approximately 19.42 AF/year (**Exhibit F**). The average annual rainfall utilized in the recharge analysis includes times of below-average and above-average rainfall, and therefore inherently includes drought year conditions.

The project as proposed, in conjunction with existing vineyard uses on adjacent parcels, is estimated to have an annual onsite future groundwater demand of approximately 5.1 AF/year, which is below the estimated average annual recharge volume of 19.42 AF/year for the two parcels under same ownership.

Considering: i) anticipated annual water use of the project parcel for the proposed uses of approximately 5.1 AF/year is below the parcel's anticipated annual groundwater recharge rate of approximately 19.42 AF/year; ii) there is no evidence to date indicating that there are groundwater problems or declining well production in the this area of the County; and iii) incorporation of the standard water use condition below to monitor water use as a result of vineyard establishment and ongoing vineyard operations and maintenance (if approved), the proposed project is anticipated to result in less than significant impacts to groundwater supplies, groundwater recharge, and local groundwater aquifer levels.

Groundwater Management, Wells – Conditions of Approval: This condition is implemented jointly by the Public Works and PBES Departments:

a. 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.

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

c. 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.

The project proposes to maintain the existing sheet flow and shallow concentrated flow characteristics to the maximum extent practicable; however, there is an existing culvert that discharges runoff directly onto the upslope end of a proposed vineyard development area (Block B). To prevent this, a new drainage mainline is proposed, which would carry the run-off away from the existing culvert outfall and discharge it at a more stabilized outfall location.

Erosion control measures and plan features that are not anticipated to affect drainage patterns but would assist in minimizing the potential for increased erosion and water runoff include a no-till cover crop with vegetative cover density of 75% (including vineyard avenues and turnarounds/turn-spaces), and the annual application of straw mulch cover on all disturbed areas at a rate of 3,000 pounds per acre. These features would slow and filter surface runoff water, thereby minimizing sediment, nutrients, and chemicals from leaving the project site and entering nearby aquatic resources. Refer to **Exhibits A, C** and **E** for details related to the following discussion.

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

A Hydrologic Analysis for the project was prepared for the proposed project, which utilized the Natural Resource Conservation Service (NRCS) United States Deparatment of Agriculture (USDA) Technical Release 55 (TR-55) method (Acme Engineering, November 5, 2020 - **Exhibit D**). The Analysis identified that the project site is part of an overall watershed that consists of eight sub-watersheds (watersheds A-H), and showed that implementation of the proposed project would result in no net increase in peak flow rates. Pre- and post-project runoff calculations for each watershed are summarized in **Table 8**[13].

Table 8 – Hydrologic Modeling Calculations (TR-55) Results: Runoff Rates

	Peak Discharge Flow (cfs) by 24-hour Storm Event Frequency Return Interval (cubic feet/second)					
	2-year	**5-year**	**10-year**	**25-year**	**50-year**	**100-year**
Subarea A						
Pre-project conditions	1.10	1.74	2.27	3.00	3.56	4.12
Post-project conditions	1.10	1.74	2.27	3.00	3.56	4.12
Change	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Subarea B						
Pre-project conditions	0.65	1.03	1.35	1.78	2.11	2.45
Post-project conditions	0.65	1.03	1.35	1.78	2.11	2.45
Change	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Subarea C						
Pre-project conditions	0.20	0.31	0.40	0.53	0.62	0.72
Post-project conditions	0.19	0.30	0.39	0.51	0.61	0.70
Change	**-0.01**	**-0.01**	**-0.01**	**-0.02**	**-0.01**	**-0.02**
Subarea D						
Pre-project conditions	0.21	0.33	0.43	0.57	0.68	0.79
Post-project conditions	0.21	0.33	0.43	0.57	0.68	0.79
Change	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Subarea E						
Pre-project conditions	1.43	2.15	2.74	3.53	4.14	4.74
Post-project conditions	1.24	1.94	2.51	3.30	3.90	4.50

[13] In January 2021, the County Engineering Division determined the project's modeling technical adequate.

Change	**-0.19**	**-0.21**	**-0.23**	**-0.23**	**-0.24**	**-0.24**
Subarea F						
Pre-project conditions	0.36	0.55	0.70	0.91	1.06	1.22
Post-project conditions	0.36	0.55	0.70	0.91	1.06	1.22
Change	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Subarea G						
Pre-project conditions	0.34	0.53	0.69	0.89	1.05	1.21
Post-project conditions	0.31	0.49	0.65	0.85	1.01	1.17
Change	**-0.03**	**-0.04**	**-0.04**	**-0.04**	**-0.04**	**-0.04**
Subarea H						
Pre-project conditions	0.36	0.55	0.70	0.90	1.05	1.20
Post-project conditions	0.30	0.47	0.62	0.82	0.97	1.12
Change	**-0.06**	**-0.08**	**-0.08**	**-0.08**	**-0.08**	**-0.08**

Source: Acme Engineering, November 5, 2020, Hydrology - **Exhibit D**

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

In addition, pursuant to NCC Section 18.108.135 (Oversight and Operation), projects requiring an erosion control plan would be inspected by the County after the first major storm event of each winter until the project has been completed and stable for three years to ensure that the implemented erosion control plan is functioning properly[14].

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 drainage courses and watercourses would facilitate increased water infiltration so that chemicals and potentially hazardous materials associated with project implementation and operation can be trapped and degraded in buffer vegetation and soils to protect water quality. The limited application of agricultural chemicals, generally occurring during the non-rainy season, would also minimize the amounts of chemicals that could 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, 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

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

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**
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Discussion:

a-b. The proposed project and subsequent vineyard operations would not physically divide an established community. The nearest established community is the Vichy Springs located approximately 3.0 miles west, on which development of the proposed vineyard on the project parcel would have no impact.

Surrounding land uses consist predominately of rural residential, agricultural and open space/rangeland. The subject parcel and surrounding properties within Napa County are zoned Agricultural Watershed (AW) and are within the Agriculture, Watershed and Open Space (AWOS) General Plan land use designation. Vineyards and associated improvements are permitted uses under these designations. Surrounding land uses in Solano County include primarily vacant land and rural residential within the Agricultural Watershed General Plan land use designation and Watershed and Conservation zoning district.

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

- The project as proposed is consistent with NCC Section 18.108.010, which requires that soil loss and runoff as a result of a project be minimized to protect water quality. As discussed in **Section VI (Geology and Soils)** and **Section IX (Hydrology and Water Quality)**, the project would not increase soil loss, sedimentation, or runoff as compared to existing conditions, thereby minimizing negative effects to water quality, and is therefore consistent with General Plan Conservation Element Policy CON-48 and CON-50c.
- With implementation of **Mitigation Measures BR-1** and **BR-2** and the standard stream protection conditions of approval, the project is consistent with Goals CON-2 and CON-3, which require the continued enhancement of existing levels of biodiversity and protection of special-status species and habitat, and the County Conservation Regulations through preservation of natural habitats and existing

vegetation. With these condition of approval, the project would maintain levels of biodiversity and would avoid impacts to special-status plant and animal species.

- The project is consistent with Policy CON-24 as it maintains a mixture of oak species, and, as proposed, is consistent with NCC Section 18.108.020(C), as it retains approximate 75% of the vegetation canopy cover, and, with implementation of **Mitigation Measure BR-3**, would result in the permanent preservation of approximately 3.6 acres of vegetation canopy cover, pursuant to the 3:1 ratio by acreage mitigation requirement found in NCC Section 18.108.020(D) and the preservation requirements of NCC Section 18.108.020(E).
- As proposed, the project is consistent with Policy CON-16, which requires discretionary projects prepare an evaluation of biological resources. A Biological Resources Reconnaissance Survey was prepared for the project (WRA 2020 - **Exhibit B**).
- The project as proposed with implementation of standard stream protection conditions of approval is consisted with Policy CON-6, which limits development is environmentally sensitive areas such as those adjacent to rivers or streamside areas. The project includes setbacks from all watercourses.
- With implementation of **Mitigation Measure BR-2**, which would require revisions to the existing wildlife exclusion fence that surrounds the property to enclose only the vineyard development area and to exclude the stream and ephemeral drainage, the project would be consistent with Policy CON-18, which encourages the reduction of impacts to habitat conservation and connectivity.
- The project as proposed is consistent with Policy CON-30 and NCC Section 18.108.026, which requires projects avoid impacts to wetlands; no wetland were identified on the project site.
- 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 designation of Agricultural, Watershed and Open Space, and is therefore consistent with Policy AG/LU-20. Because of these reasons, the project with the conditions of approval incorporated would not be in conflict with applicable County regulations, policies, or goals and is anticipated to have a less than significant impact with respect to applicable County regulations, policies, or goals.

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

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

Discussion:

a-b. Historically, the two most valuable mineral commodities in Napa County in economic terms have been mercury and mineral water. More recently, building stone and aggregate have become economically valuable. Mines and Mineral Deposits mapping included in the Napa County Baseline Data Report (Mines and Mineral Deposits, BDR Figure 2-2) indicates that there are no known mineral resources nor any locally important mineral resource recovery sites located on the project site. Proposed site improvements and development of vineyard on the parcel would not physically preclude future mining activities from occurring. No impacts would occur.

XIII.	**NOISE.** Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact

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

Discussion:

a-b. The project site is located in a rural setting where surrounding parcels are generally agricultural, planted with vineyards, or developed with rural residences. The nearest residences are located approximately 950 feet to the west, 2170 feet to the north and 4595 feet to the south (located in Solano County).

Activities associated with installation of the proposed project, including earthmoving and subsequent vineyard operations, could generate noise levels above existing conditions. Several different types of equipment would be necessary for implementation and operation of the proposed project, including a bulldozer, excavator, dump truck, trencher, backhoe, and small trucks. **Table 9** characterizes typical equipment noise levels at a reference distance of 50 feet. As identified in **Table 9**, equipment used for vineyard development could produce a maximum of 89 (A-weighted decibels) dBA at a distance of 50 feet.

Table 9 – Construction Equipment Noise Emission Levels

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

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

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

Table 10 – Estimated Distance to dBA Contours from Construction Activities [1]

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

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

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

Based on distances to existing residences, noise associated with project construction would be approximately 55-60 dBA at the nearest existing offsite residences.

Noise related to farming activities and equipment typically ranges from 75 dBA to 95 dBA, with an average of approximately 84 dBA (Toth 1979 and Napa County Baseline Data Report, Version 1, November 2005). These noise levels should be reasonably representative of noise levels from wheeled and tracked farm equipment. Noise sources associated with ongoing vineyard operation and maintenance include a variety of vehicles and equipment, such as ATV's, tractors, grape haul trucks, passenger cars, and light trucks, which would occur on a temporary and seasonal basis. **Table 11** 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 11 – 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 (nearest residence is approximately 950 feet from the nearest proposed vineyard Block), it is anticipated that noise due to operation and maintenance agricultural activities would be between 50-55 dBA at the closest existing offsite residences.

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

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

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

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

Discussion:

a. The proposed project involves earthmoving activities and the installation and maintenance of erosion control measures in connection with the development and cultivation of vineyard. It does not involve the construction of new homes, businesses, roads, or infrastructure (e.g., water, sewer or utility lines) that would directly or indirectly induce substantial unplanned population growth. Construction and installation activities of the proposed project would generate a minimal number of employees to the project site on a temporary basis, and ongoing vineyard operation and maintenance would generate a minimal number of employees to the project site on an ongoing basis. It is anticipated that these employees would come from the existing labor pool in the region. Therefore, the proposed project would not induce unplanned population growth in the proposed project vicinity or greater region, either directly or indirectly. No impact would occur.

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

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

Discussion:

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

XVI.	**RECREATION.** Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
	a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical	☐	☐	☐	☒

deterioration of the facility would occur or be accelerated?

b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion:

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

XVII.	**TRANSPORTATION.** Would the project:	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a)	Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	☒
b)	Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	☒
c)	Substantially increase hazards due to a geometric design feature, (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d)	Result in inadequate emergency access?	☐	☐	☐	☒
e)	Conflict with General Plan Policy CIR-14, which requires new uses to meet their anticipated parking demand, but to avoid providing excess parking which could stimulate unnecessary vehicle trips or activity exceeding the site's capacity?	☐	☐	☐	☒

Discussion:

a-b. Currently, the project site is developed with one existing road, a drainage ditch, and wildlife exclusion fencing that encloses the parcel to connect it with the parcel to the south in Solano County. The proposed project is expected to generate approximately one round trip per day during construction. Four truck trips would deliver and remove heavy equipment at the start and end of project construction. Typical construction equipment anticipated for project implementation includes a medium excavator, D8 bulldozer, haul trucks, loader, and two farm tractors with trailers. Pruning would occur approximately 5 days of the year and is anticipated to generate 5 daily employees, resulting in approximately 5 round trips per day during pruning. Weed control would occur between May and July (outside of pruning months) and is anticipated to generate up to one worker; there will be 2 application per year and it will take 1 day to complete. Mowing (between rows) would occur once per month between April and June resulting in 2-3 mows. Each moving event will take 1 day to complete. Harvest would occur approximately two-four days of the year and is anticipated to generate up to six daily employees, resulting in approximately six round trips per day during harvest. It is anticipate that one grape haul truck would be used during harvest. Vehicular equipment for ongoing vineyard maintenance is anticipated to include ATVs, tractors, truck and equipment trailers, and passenger cars and/or light trucks. Some of this traffic already exists onsite due to the operation and maintenance of the existing vineyard. Construction traffic would be intermittent during non-peak hours, generally arriving between 6 a.m. and 7 a.m. and departing between 2 p.m. and 3 p.m. Traffic associated with routine vineyard operation and maintenance, including harvest, would also be intermittent during the non-peak hours, generally arriving around 6 a.m. and departing around 3 p.m.

The project site is accessed from Wild Horse Valley Road from Napa County and from Twin Sisters Road in Solano County. Trucks and other

equipment would use County roads or State highways for very short periods during construction and subsequent vineyard operation.

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

c. The project proposes to utilize the existing road, Wild Horse Valley Road for project development. This road is located at the northwestern portion of the parcel, and runs through the center continuing into Solano County (**Figures 1-3**). The proposed project does not include roadway improvements and/or modifications to said existing roadway, or include any other design feature that would result in hazardous conditions due to a geometric design feature or incompatible uses. The installation of the vineyard is consistent with the allowed use of the property and other Agricultural Watershed zoned properties as well as agricultural uses in the area. Therefore, the potential for the creation, substantial increase in hazards or hazards due to a geometric design feature and incompatible uses would be a less than significant impact.

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

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

Discussion:

a-c. Notice of the proposed project was sent to Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, and Yocha Dehe Wintun Nation on December 9, 2020. On February 8, 2021, the County received an email notification from Yocha Dehe Wintun Nation stating that the project is within an area of cultural interest and authority of the Tribe, and recommended cultural sensitivity training for any pre-project personnel. Neither the Middletown Rancheria nor the Mishewal Wappo Tribe responded to the request for consultation within the 30-day notification period, and because no response to the consultation invitation was received, the consultation time period elapsed. As discussed in **Section V (Cultural Resources**), the proposed project's Cultural Resource Reconnaissance did not identify any historical or archaeological resources within the project area, and that there is a low likelihood of encountering cultural resources in the project area. Furthermore, the Cultural Resources condition of approval in **Section V (Cultural Resources)** would be incorporated should the proposed project be approved, which would ensure that potential impacts on human remains would be less than significant.

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

Discussion:

a. The proposed project would generate a minimal number of employees to the property on a temporary basis, and ongoing vineyard operation and maintenance would generate a minimal number of employees to the property on an ongoing basis. It is anticipated that these employees would come from the existing labor pool in the region and would not generate an increase in the population relative to the existing conditions. Therefore, the proposed project would not create a need to construct new or modified utilities and service systems. Further, implementation of the proposed project would not result in the construction or expansion of a water or wastewater treatment facility; the proposed project would not generate wastewater and one existing groundwater well would provide irrigation water to the vineyard.

   Irrigation pipelines would be located the proposed vineyards and vineyard avenues, and/or within proposed clearing limits. The proposed project would include the installation of onsite storm water drainage features such as straw wattles, a permanent no-till vineyard cover crop, drainage ditches, rolling dips, rock-filled avenue and rock apron at outfalls, which have been designed to meet project-related storm water drainage needs. The effect of the proposed storm water drainage system is described in **Sections IV (Biological Resources), VII (Geology and Soils),** and **X (Hydrology and Water Quality)**. As discussed in the referenced sections, the environmental impacts of construction of these features, with incorporation of standard conditions identified in **Sections III (Air Quality), IV (Biological Resources), V (Cultural Resources)** and **IX (Hazards and Hazardous Materials)**, would result in a less than significant impact.

b. The approximately 5.1 gross acres of vineyard (approximately 3.3 net acres) would be supplied by existing water sourced from the neighboring parcels well (located immediately south and owned by the same property owner). It is anticipated that after full development, water use for the 3.3 net acres of proposed vineyard is estimated to be approximately 5.1 acre-feet of water per year. Therefore, the proposed project, in conjunction with existing uses, is anticipated to have less than significant impact on water supplies. Also see **Section X (Hydrology and Water Quality)** for additional disclosures and analysis.

a. Given the small number of 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.

d-e. Rock generated during vineyard preparation would be utilized onsite primarily in surfacing vineyard avenues or be buried. Rock not used immediately would be stockpiled for future use inside the proposed clearing limits. Solid waste generated during construction activities (e.g., broken pipe, fittings, trellis, end posts, etc.) would be negligible. Implementation of the proposed project would include pruning and harvesting activities which would generate waste material (cane). This material would generally be disposed of onsite by spreading it back into the vineyard, burning it, or a combination of the two. Therefore, the proposed project would not generate a volume of waste that would

need to be disposed of at a landfill that would exceed the permitted capacity of applicable landfills serving the project area. Furthermore, all waste would be disposed of in accordance with federal, State, and local statues and regulations. Therefore, no impact would occur.

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

Discussion:

The project site is located in a State Responsibility Area (SRA) that is designated as a High Fire Hazard Severity Zone and is within a Federal Responsibility Area (CALFIRE, 2007, Napa County GIS Fire Hazard Layer). The project site is gently to moderately sloped on generally eastern-facing slopes and elevations range from approximately 1445 to 1800 feet above msl.

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

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

d. Although the proposed project would alter land cover, the proposed project includes temporary and permanent erosion control measures which would reduce the impact of stormwater runoff or drainage changes being discharged on or offsite and there would be a decrease in peak flow in the development area (see **Section X [Hydrology and Water Quality**]). There is not existing onsite residence or accessory structures on site. Therefore, there are no structures or people that would be exposed to downslope or downstream flooding or landslides and the impact would be less than significant.

XXI.	**MANDATORY FINDINGS OF SIGNIFICANCE**	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below	☐	☐	☒	☐

	self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c)	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion:

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

a. As discussed in this Initial Study, with incorporation of **Mitigation Measure BR-1** through **BR-3** and identified conditions of approval (should the proposed project be approved), implementation of #P20-00284-ECPA would not have the potential to significantly degrade the quality of the environment.

   Implementation of **Mitigation Measure BR-1** would reduce potential direct and indirect impacts to special-status and migratory birds and their respective habitats. The unnamed blue-line stream and the ephemeral drainage located on the eastern portion of the parcel are avoided with required setbacks consistent with County code. Implementation of **Mitigation Measure BR-2** would require that the existing wildlife exclusion fencing be removed and replaced with new fencing that would enclose only the proposed 5.1-acre vineyard development area (the additional 0.4 acres temporary staging and stockpile area would not be enclosed with fencing) and connecting with the existing wildlife exclusion fence surrounding the vineyard development located on the parcel immediately south (in Solano County). The retention of blocks of vegetation along the streams within the project area would allow wildlife use and movement within the streams and movement corridors of similar habitats on neighboring properties. Therefore, with implementation of **Mitigation Measure BR-2**, impacts to wildlife movement would be reduced to a less than significant level. With incorporation of standard conditions to protect cultural resources that may be discovered accidently, significant impacts to cultural resources are not expected (**Section V [Cultural Resources**]). Therefore, the proposed project as designed with the incorporation of conditions of approval, the proposed vineyard development project would have a less than significant potential to degrade the quality of the environment.

b. The subject property is located within the Suisun Creek Lower Reach Drainages. It is estimated, based on evaluation of the County's GIS layer identifying Potentially Productive Soils (PPS) within the Suisun Creek Lower Reach Drainage, that there are approximately 114.46 acres (100% of the drainage) having the potential to be developed to vineyard, this in conjunction with existing and approved vineyard development (approximately 5.5 acres) results in a total potential build out of approximately 114.46 acres or approximately 0.05% of the drainage. The PPS layer includes lands with characteristics that have been found to be suitable for potential future vineyard development; however this total does not take into consideration other site-specific limitations such as water courses requiring setbacks, wetlands, other water features, rare or special-status plants and animal species, or cultural resources, nor does the layer take into account other factors influencing vineyard development, such as sun exposure, soil type, water availability, or economic factors.

   While it is not possible to quantify precisely the acreage and location of additional vineyard development that may be proposed by property owners in these drainages in the future, it is possible to make a conservative estimate based on previous trends. To estimate the amount reasonably foreseeable vineyard that may be developed over time, the acreage of vineyard development including approved vineyard projects in the cumulative environment (i.e., Suisun Creek Lower Reach Drainage) over the last 28 years (1993-2021) were used to project an estimation of vineyard development for the next three to five years. Over the past 28 years within the Suisun Creek Lower Reach Drainage, approximately 57 acres of agriculture were developed, which results in an approximate development rate of 2 acres per year (57 divided by 28) within the watershed. Combined with Napa County policies and other site selection factors that limit the amount of land that can be converted to vineyard, the development of approximately 6 to 10 acres over the next three to five years within the Suisun Creek Lower Reach Drainage are considered reasonable estimates.

   NCC Chapter 18.108 includes policies that require setbacks of 35 to 150 feet from watercourses (depending on slopes), and General Plan Conservation Policy CON 24c that requires the retention of oak woodland at a 2:1 ratio, which limits the amount of potential vineyard acreage that could be converted within the watershed. It has been the County's experience with ECP projects that there are generally site-specific issues, such as oak woodland preservation, wetlands, other water features, special-status plant and animal species, or cultural resources that further reduce areas that can be developed to other land uses. Additionally, the vineyard acreage projections for the next

three to five years do not consider environmental factors that influence vineyard site selection, such as sun exposure, soil type, water availability, slopes greater than 30%, or economic factors such as land availability, cost of development or investment returns.

There is one additional pending Agricultural Erosion Control Plan within the same watershed: Quantum Limit II Vineyard Conversion #P19-00453-ECPA with a proposed development of 4.8 gross acres (4.1 net vine acres). Implementation of the proposed project (3.3 net acres) would result in a total of 7.4 net acres of new vineyard pending approval within the Suisun Creek Lower Reach Drainage, which is within the reasonable estimation of vineyard development over the next three to five years (approximately 6 to 10 acres). Therefore, implementation of the proposed project, in conjunction with the pending approval of #P19-00453-ECPA, would result in a less than significant impact related to cumulative vineyard development in the watershed.

Air Quality and GHG - Sections III and VIII:

The proposed project (#P20-00284-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 7** (Emissions from Vineyard Development and Operation) criteria pollutant emissions associated with development and operations are anticipated to be well below identified thresholds, and therefore are not expected to result in project or cumulatively significant impacts. Additionally, the proposed project would be subject to standard air quality conditions of approval (should the proposed project be approved) that requires implementation of Air Quality BMPs to further reduce potential less than significant air quality effects of the proposed project and ongoing operation. Conversion of existing vegetation and disturbance of soil would result in releases of carbon dioxide, one of the gases that contribute to climate change (**Tables 5 and 6**). As discussed in S**ection 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 Assessment with Botanical Survey was performed for the proposed project to evaluate potential habitat loss and disturbance to plant and wildlife species as a result of the proposed project. The reconnaissance survey included a records search to identify the presence or potential presence of special-status species within the project area. The records search included the USFWS, CNDDB, and CNPS databases. As discussed in **Section IV (Biological Resources)**, no special-status plant species or wetlands were identified in the project site. Impacts on special status species would be reduced to a less than significant level after implementation of **Mitigation Measure BR-1**. By project design, no impacts to waters of the U.S. would occur. Implementation of **Mitigation Measure BR-2** would reduce potential impacts on wildlife movement to a less than significant level within the Napa County parcel. Therefore, the proposed project would not contribute to a cumulatively significant impact to special-status plants and animals or habitats.

Cultural and Tribal Resources – Sections V and XVIII: No cultural resources were identified in the project site. With the incorporation of standard conditions to protect cultural and tribal cultural resources that may be discovered accidently, significant impacts to cultural and tribal cultural resources are not expected (see **Section V [Cultural Resources]** and **Section XVII [Tribal Cultural Resources]**). Therefore, with the incorporation of the identified conditions of approval, the proposed vineyard development project would have a less than significant project-specific and cumulative impact on cultural and tribal cultural resources.

Geology and Soils - Section VII: Soil loss and associated sedimentation resulting from implementation of the proposed project is anticipated to be reduced as compared to existing conditions (**Table 4**). The reasons for this reduction is due to the increased vegetative cover conditions within the proposed vineyard development areas and the installation of straw wattles that reduce overland flow velocities and erosive power, and trap eroded soil on-site, and by drainage ditches, rock apron, and grassy swale, which would capture sediment and slow runoff, thereby reducing soil loss potential. Because the proposed project would reduce soil loss as compared to existing conditions the proposed project is not anticipated to contribute cumulatively to sediment production within the Suisun Creek Drainage; therefore, impacts associated with soil loss and associated sedimentation are not considered cumulatively significant.

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

Hydrology and Water Quality - Section X: Water use is anticipated to be approximately 5.1 AF/yr would be needed to irrigate the 5.5 gross (3.3 net) acres of proposed planted vineyard. Existing groundwater use is approximately 0.0 Af/yr. Total annual groundwater use only includes the proposed project, and as there are no other existing or proposed residential or agricultural uses on site, is anticipated to be approximately 5.1 AF/yr.

Based on available climatological data, site-specific information, and other available data and analysis relevant to potential recharge, the Tier I WAA, which uses an average annual rainfall of 27.65 inches per year over the approximate 84.3 acres of the parcel's land area available for recharge and a 10% deep percolate recharge estimate, estimates the average annual groundwater recharge of the parcel to be approximately 19.42 AF/year (**Exhibit E**).

Considering: i) anticipated annual water use of the project parcel for existing and proposed uses of approximately 5.1 AF/year is below the parcel's anticipated annual groundwater recharge rate of approximately 19.42 AF/year; ii) there is no evidence to date indicating that there are groundwater problems or declining well production in the this area of the County; and iii) incorporation of the standard water use condition below to monitor water use as a result of vineyard establishment and ongoing vineyard operations and maintenance (if approved), the proposed project is anticipated to result in less than significant impacts to groundwater supplies, groundwater recharge, and local groundwater aquifer levels.

As discussed in Section X.c (Hydrology and Water Quality) a Hydrologic Analysis utilized the Natural Resource Conservation Service (NRCS) United States Deparatment of Agriculture (USDA) Technical Release 55 (TR-55) method (**Exhibit D**). The Analysis concluded that there would be either no change, or a slight reduction, in peak flows and no changes in times of concentration as compared to pre-project conditions for all watersheds modeled as result of the project (**Table 11**). Therefore, no significant impacts due to changes in hydrology are expected.

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

Furthermore, because hydrologic impacts associated with future agricultural projects would receive the same scrutiny under CEQA and County General Plan Policy CON-50(c), which requires development projects be designed so that peak runoff following development is not greater than predevelopment conditions, it is 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 identified conditions of approval identified in this Initial Study, achieves compliance with applicable NCC requirements and General Plan Goals and Policies (also see **Section VIII [Greenhouse Gas Emissions]**).

Proposed Project Impacts found to be Less Than Significant

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

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

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

LIST OF FIGURES:

LIST OF TABLES:

LIST OF EXHIBITS:

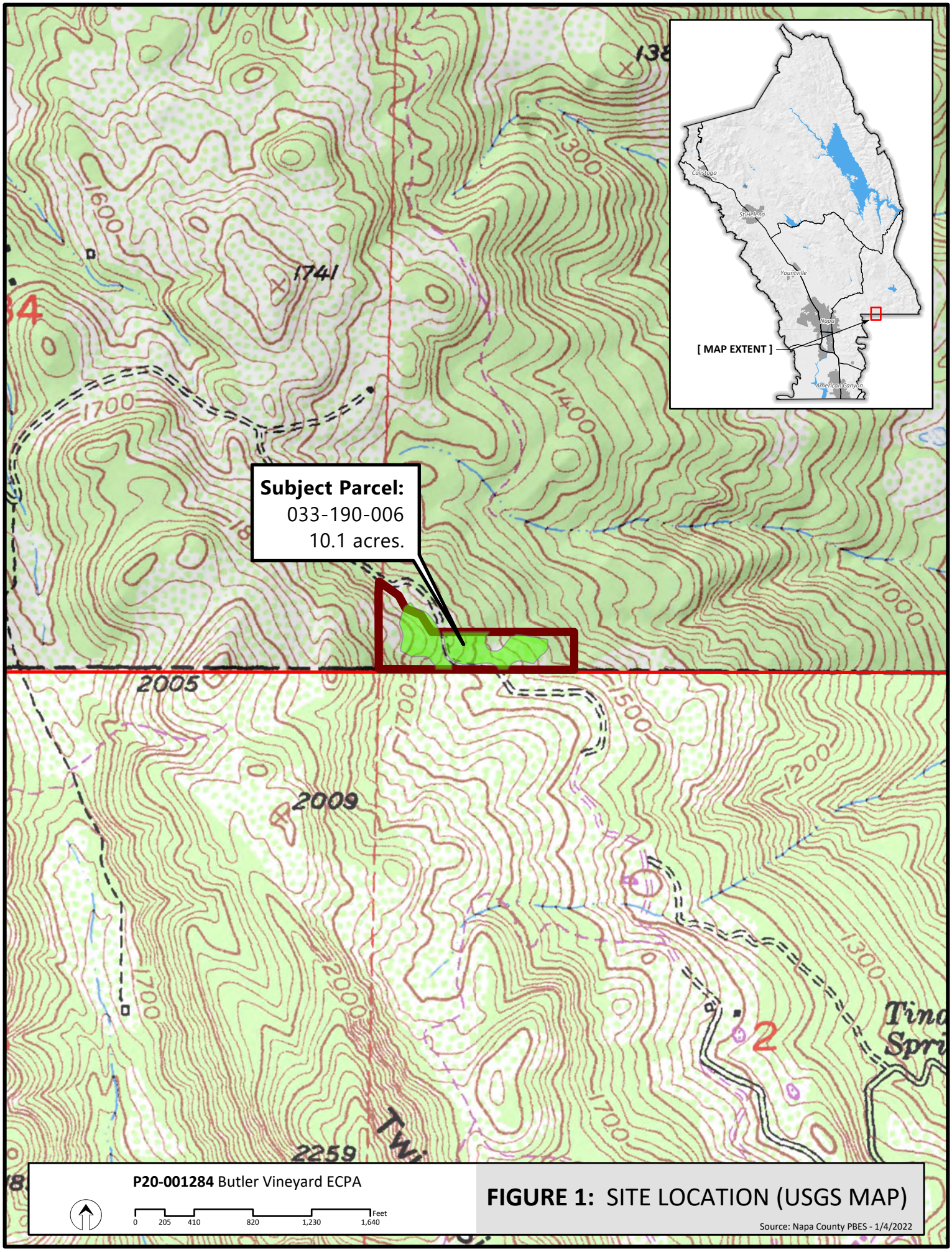
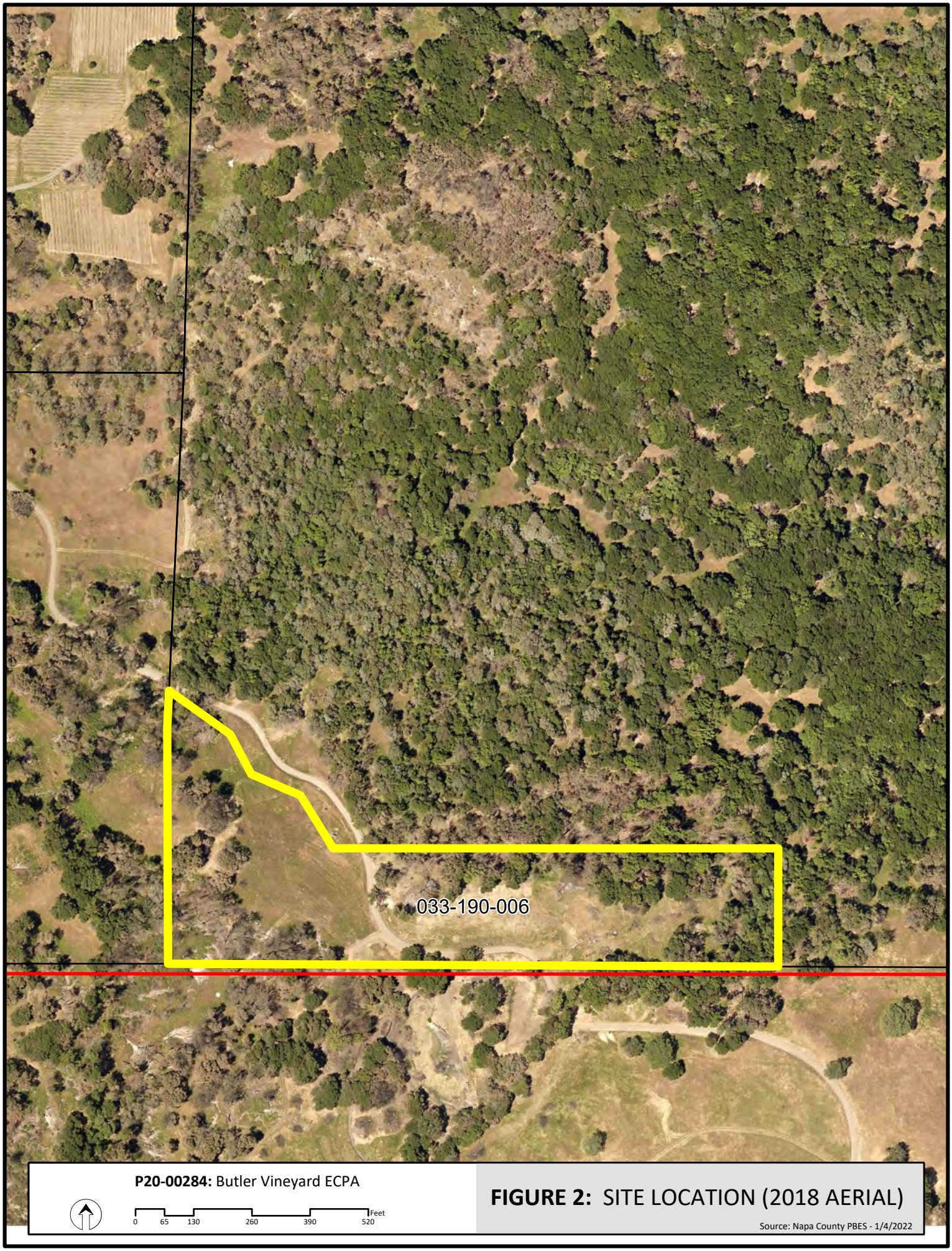


FIGURE 1: SITE LOCATION (USGS MAP)

Source: Napa County PBES - 1/4/2022

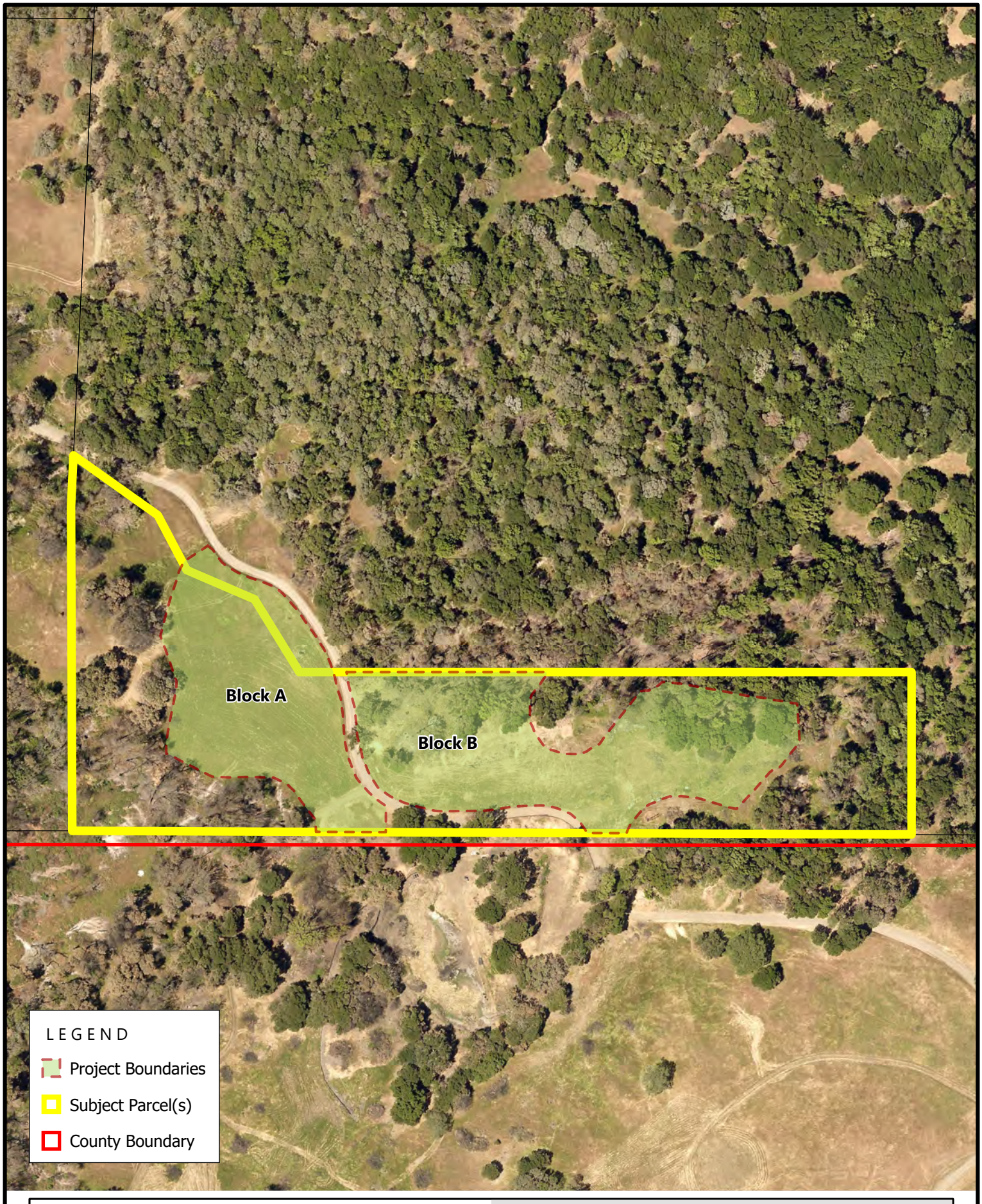


P20-00284: Butler Vineyard ECPA

0 65 130 260 390 520 Feet

FIGURE 2: SITE LOCATION (2018 AERIAL)

Source: Napa County PBES - 1/4/2022



P20-00284: Butler Vineyard ECPA

0 50 100 200 300 400 Feet

FIGURE 3: PROJECT AREA (2018 AERIAL)

Source: Napa County PBES - 1/4/2022