

**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:** Teachworth Vineyard Track I Agricultural Erosion Control Plan Application (ECPA) #P20-00063-ECPA
2. **Property Owner:** TFT#5 LTD
3. **County Contact Person, Phone Number and email:** Pamela Arifian, (707)259-5934, pamel.a.arifian@countyofnapa.org
4. **Project Location and Assessor's Parcel Number (APN):**

4451 N. St. Helena Highway, Calistoga, CA 94515
APN: 020-400-029 (formerly 020-400-018¹)
Section 8, Township 8 North, Range 6 West, Mt. Diablo Base
Longitude -122° 33' 25.2" W Latitude 38° 33' 28.8" N
5. **Project sponsor's name and address:** PPI Engineering, Inc
2800 Jefferson Street, Napa, CA 94558
707-253-1806
6. **General Plan description:** Agricultural, Watershed and Open Space (AWOS)
7. **Zoning:** Agricultural Watershed District (AW)

Background/Project History: The project parcel (APN 020-400-029, formerly APN 020-400-018) and the adjacent parcel (020-400-028, formerly 020-400-019) are owned by Teachworth Winery. In early December 2020, a Lot Line Adjustment (#W19-00477) was recorded of these two parcels and a third parcel (APN 020-400-017) under different ownership. The resulting acreage for the project parcel (020-400-029, formerly -018) is 40.01 acres, which contains a single-family residence, guest cottage, pool, landscaping and existing vineyard totaling 1.1 gross acres (1.0 net acres), which was established under Structural Erosion Control Plan #95537-ECPS. The resulting acreage for adjacent parcel under same ownership is 36.52 acres, and contains a single family residence, a winery and landscaping. Combined, the two parcels (APNs, 020-400-029 and 028, formerly 020-400-018 and -019; total of 76.53 acres) are referred to as the Subject Property.

The Winery is currently undergoing permit processing under a Winery Administrative Permit #P20-00161-UP to bring the winery into compliance with County Code pursuant to the County's Compliance Policy; however, this permit is not related to the subject ECPA.

A Timber Harvest Plan (THP) and Timber Conversion Permit (TCP) application is being prepared and will be submitted by Registered Professional Forester Scott Butler (RPF #1851) to California Department of Forestry and Fire Protection (CAL FIRE). CAL FIRE will utilize this IS/MND for its CEQA compliance in issuing the TCP. The THP/TCP is functionally-equivalent document to the County ECPA and will be prepared in tandem with this Initial Study Mitigated Negative Declaration.

The parcel, including the single family residence and much of the forest understory was burned in the 2020 Glass Fire. Pursuant to Napa County Code Section 08.108.130, Conservation Regulations for Fire Damaged Properties, for vegetation retention requirements, the vegetation canopy cover shall be as configured on the property on June 19, 2018. The Biological Resources Reconnaissance Survey (WRA December 2019 – **Exhibit B-1**) found no appreciable change in canopy cover since 2016; therefore, Napa County's 2016 GIS Vegetation Public Habitat Mapping layer was appropriately used for the canopy retention and preservation analyses.

¹ Lot Line Adjustment #W19-00477 was recorded in early December 2020.

8. **Description of Project:**

The proposed project involves the clearing of brush and trees within the proposed clearing limits (or project area), earthmoving, and the installation and maintenance of erosion control measures in connection with the development of 4.5 net acres of new vineyard within 5.8 gross acres on the 40.01-acre parcel (**Figure 2**). Typical slopes within the project area range from 15-29%, with approximately 0.6-acre on slopes over 30%. The project would include the removal of 4.9 acres of Douglas fir forest, 0.32 acre of mixed forest/chaparral and 0.52 acre of developed area. The project proposes to retain 76% of the tree canopy (or vegetation canopy cover) that existed on the subject parcel on areas under 50% slope and outside of stream setbacks in 2016, exceeding the 70% retention requirement and the 3:1 tree preservation ratio. Rock generated as a result of site preparation would be used to construct erosion control features such as rock level spreaders and rock aprons, and at the downslope edges of vineyard blocks for rock-filled avenues that will help retain sediment as well as disperse runoff. Rock may be crushed and used on the existing roads where needed; rock not used immediately will be stockpiled for future use inside the proposed clearing limits, in stockpiles that are expected to be less than 20 feet in height. Temporary staging areas would be located inside of proposed clearing limits. No grading activities, ground disturbance or rock storage would occur outside of the proposed clearing limits. The vineyard would be irrigated with water sourced from the two existing groundwater wells on the parcel, and new irrigation pipelines would be located in existing roadways and/or within the proposed clearing limits. A portion of the property is currently enclosed by wildlife exclusion fencing that encloses the winery, residence, cottage, existing vineyard blocks and proposed Block A, and the western half of Block B; additional fencing is proposed that would be limited to the perimeter of the eastern half of Block B, and around the perimeter of Block C.

Erosion Control Measures: Temporary erosion control measures include 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 installation of rolling dips, rock-filled avenues and diversion ditches, which would direct runoff to drop inlets. Drainage pipelines would be used to direct runoff to desired locations, and level spreaders, rock energy dissipaters, and sediment traps would be used at pipe outlets to disperse water and prevent concentrated flow from forming and developing gullies. A detention basin would be constructed in the northwest corner of Block B to attenuate small predicted increases in runoff associated with the proposed development. A permanent no-till cover crop would be maintained at a minimum vegetation cover density of 90%. Details of the proposed erosion control measures are provided in the Teachworth Winery ECP #P20-00063-ECPA, revised July 21, 2020, prepared by Matthew Bueno (Registered Professional Engineer No. 84114) of PPI Engineering, 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 4 feet), rock removal, disking, 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. Installation of vineyard trellis and drip irrigation systems, and planting rootstock on a 4 foot by 7 foot spacing pattern. In areas where the cross-slope exceeds 15%, the row spacing may be increased as needed to ensure there is adequate room for equipment turnaround.
- b. Ongoing inspection and maintenance of temporary and permanent erosion and runoff control measures.
- c. Ongoing operation and maintenance of the vineyard, which includes: vine management (pruning, fertilization, pest, and disease control, 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 lists a general schedule for the construction of the proposed project as identified in #P20-00063-ECPA and **Table 2** outlines typical general ongoing vineyard operations. The final implementation schedule is pending action on #P20-00063-ECPA.

Table 1 – Implementation Schedule

April 1:	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	<ol style="list-style-type: none"> a. Prune vines. b. Weed control.
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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 Teachworth Winery ECPA prepared by PPI Engineering (July 21, 2020 - **Exhibit A**). The proposed project is further described in the application materials including the Supplemental Project Information sheets. All documents are incorporated herein by reference and available for review in the Napa County Department of Planning, Building and Environmental Services (PBES).

9. **Describe the environmental setting and surrounding land uses.**

The proposed project would occur on a single parcel totaling approximately 40.1 acres, located at 4451 N Saint Helena Highway. The site is located at the end of a private drive on the southwest side of Highway 29 approximately 2,000 feet south of its intersection with Diamond Mountain Road, and approximately two miles southeast of the City of Calistoga. General topography of the area consists of moderate- to steep slopes of the eastern-facing Mayacama range. Elevations within the project area range from approximately 742 to 910 feet above mean sea level. Development on the project parcel includes a single family residence, accessory unit, pool, accessory infrastructure, existing well and associated residential landscaping, and approximately 1.1 acres (1 net acre) of existing vineyard developed under approved Structural Erosion Control Plan #95537-ECPS. The existing paved driveway provides access to the project area and existing vineyards from Highway 29.

The project parcel is located within the Napa River Larkmead Reach and Kellet Mine Creek watersheds. The entire project area is located within the Kellet Mine Creek watershed, with approximately 0.5-mile area of the southeastern corner of the parcel (outside of upslope from the project area) within the Napa River Larkmead Ranch watershed. Kellet Mine Creek is a blue-line stream that lies approximately 1,000 feet to the west of the proposed vineyard blocks in the neighboring parcel under same ownership; there are no mapped blue-line streams within the project parcel. There are three primary drainages within the subject property, with ephemeral portions in the upper reaches and intermittent flows in the lower reaches. One of these drainages contains two ephemeral reaches that are situated within the surrounding areas of the proposed vineyard blocks, but are avoided by the project with setbacks that exceed the minimum 35' setback pursuant to NCC 18.108.025 (**Exhibit A**). The streams drain to Kellet Mine Creek, thence the Napa River.

The surrounding area consists of rural residential, vineyards and undeveloped land. The nearest wineries are Azalea Springs Winery (approximately 2,200 feet northeast of the project site), Twomey Cellars (approximately 2,500 feet north of the project site), Joseph Cellars (approximately 2,800 feet to the northwest of the project site) and Checkerboard Vineyards (approximately 2,500 feet to the south). The nearest known schools (Calistoga Elementary, Calistoga Joint Unified School and Palisades High School) are approximately 2.1-miles, 2.3-miles and 2.5-miles, respectively, to the northwest of the project site. Bothe-Napa State Park is approximately 2.2 miles southeast of the project site.

No potentially active faults have been mapped in the project site, and the project area is not located on an active fault, and is not within an "Earthquake Fault Hazard Rupture Zone" designated by the Alquist-Priolo Earthquake Zoning Act. The nearest known faults to the project site are approximately 2.5 miles to the west and north, and 2.7 miles to the south of the project area (Napa County GIS: Faults and Earthquake Layers). Landslides, landslide deposits, and areas of instability have not been identified within the project parcel or immediately adjacent areas (Napa County GIS: Landslide Polygon and Landslide Lines layers).

Soils on the project parcel have been classified according to the *Soil Survey of Napa County* (USDA, 1978) as Forward silt loam (12 to 57 percent slopes) and Forward-Kidd complex (11 to 60 percent slopes). Vegetation types of the area generally consists of coniferous forest, oak woodlands, shrubland, agriculture and developed land (Napa County GIS Vegetation layer). The project area (i.e. clearing limits) contains the following vegetation types: developed area (0.52-acre), mixed forest/chaparral – Douglas Fir Forest (0.32-acre), and Douglas Fir Forest (4.9 acres) (WRA, 2019 – **Exhibit B-1**).

10. **Other agencies whose approval is required** (e.g., permits, financing approval, or participation agreement).

A Timber Harvest Plan (THP) and Timber Conversion Permit (TCP) will be prepared concurrently and submitted to the California Department of Forestry and Fire Protection (CAL FIRE)

Responsible (R) and Trustee (T) Agencies

California Department of Forestry and Fire Protection (CAL FIRE) (T)
California Department of Fish and Wildlife (CDFW) (T)
Regional Water Quality Control Board (Regional Water Board) (R)

Other Agencies Contacted

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 the Yocha Dehe Wintun Nation, the Middletown Rancheria of Pomo Indians, and the Mishewal Wappo Tribe of Alexander Valley on August 31, 2020. On September 16, 2020, the County received a response letter from the Yocha Dehe Wintun Nation indicating that the project area is not within their aboriginal territory, and therefore declined to make any comments on the project. On November 24, 2020, the County sent correspondence to the Yocha Dehe Wintun Nation acknowledging their response letter and closing the consultation invitation because consultation was not requested within the 30-day notification period. The Mishewal Wappo Tribe of Alexander Valley did not request consultation within the 30-day notification period, and because no response to the August 31, 2020, consultation invitation was received, the County sent a consultation closure notice to the Tribe on November 23, 2020.

On October 22, 2020, the Planning Division received a response letter from the Middletown Rancheria indicating that the proposed project is within their aboriginal territories, and requesting a tribal consultation on this project. On November 6, 2020, the Planning Division met with representatives from the Middletown Rancheria Tribal Historic Preservation Office and the Applicant's Engineer on site. The Tribe determined that there was a moderate potential for cultural resources to be discovered, but that due to the limited scope of the proposed earth-disturbing activities, incorporation of the County's standard Cultural Resources Condition of Approval would provide adequate protection for and avoidance of potential impacts on Tribal cultural resources. The County sent a closure notice to the Tribe on January 26, 2021.

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 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 #P20-00063-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:

- PPI Engineering, July 21, 2020, Erosion Control Plan, Teachworth Winery (orig. submittal February 17, 2020) **(Exhibit A)**
- WRA Environmental Consultants, December 2019, Biological Resources Reconnaissance Survey Report, Teachworth Winery: 4451 N. Saint Helena Highway (APN: 020-400-019, 020-400-018) **(Exhibit B-1)**
- WRA Environmental Consultants, July 14, 2020, Response to Comments (Biology), Teachworth Winery Agricultural Erosion Control Plan Application #P20-00063-ECPA; 4451 N. St. Helena Highway (APN: 020-400-018) **(Exhibit B-2)**.
- Flaherty Cultural Resources Services, June 25, 2019, Cultural Resource Reconnaissance of Approximately 34 Acres near Calistoga, Napa County, California (Teachworth Winery, APN 020-400-018)
- PPI Engineering, July 1, 2020, Revised Soil Loss Analysis, Teachworth Winery Track I ECP, APN 020-400-018 **(Exhibit C)**.
- PPI Engineering, February 18, 2020, Hydrologic Analysis, Teachworth Winery Track I ECP, APN 020-400-018 **(Exhibit D)**.
- Richard C. Slade & Associates LLC, February 18, 2020, Results of Napa County Tier 1 Water Availability Analysis, New Vineyard Development, Teachworth Winery (APNs 020-400-018 & 020-400-019) **(Exhibit E)**.
- Project Revision Statement **(Exhibit F)**
- Site inspections conducted by Napa County Planning Division staff on April 15, 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 (SUBSEQUENT) MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Pamela Arifian

Signature

February 25, 2021

Date

Name: Pamela Arifian, Planner II

Napa County
Planning, Building and Environmental Services Department

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

Discussion:

- a-b. The project project is located in the uplands of the Kellet Mine Creek Drainage, and would result in approximately 5.8 acres of proposed vineyards (Blocks A, B and C) on a parcel that already contains 1.1 acres of vineyard, a single family home and guest cottage and accessory structures and surrounded by dense coniferous forest and oak woodland, as well as similar uses and vegetation cover in the neighboring parcels. The project site is located on a private drive approximately 0.5-mile south of Highway 29, designated State Scenic Highway (CA Department of Transportation website: <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>), approximately two miles southeast of the City of Calistoga; however, the project site is not visible from Highway 29. The project site is neither located on a prominent hillside nor on a major ridgeline, and there are no significant rock outcroppings or geologic features on the parcel that would be impacted by the project (site visits conducted by Napa County Staff on April 15, 2020). Therefore, the project would have a less than significant impact on a scenic vista, scenic highway, historic buildings or rock outcrops.
- c. The proposed project would result in the removal of existing vegetation within the proposed development area and the development of vineyard. The proposed project is consistent with the Napa County AWOS land use designation and with adjacent land uses, which include other hillside vineyards and forest. Therefore, the proposed project would not substantially degrade the existing visual character or quality of public views of the site or its surroundings, in that it would be consistent with the surrounding character of hillside vineyards and rural residential uses, resulting in a less than significant impact.
- d. Earthmoving activities, erosion control plan installation and maintenance, and vineyard installation would not involve the introduction of nighttime lighting. Subsequent vineyard operation and maintenance may require seasonal operation of equipment using small downward directional lights during harvest and the application of sulfur for mildew control, and pesticides/herbicides for pest and weed control. The proposed project would include nighttime harvest (typically from 12:00 am to 6:00 am) occurring approximately 3 to 5 days per year, and sulfur and pesticides/herbicides applications (typically from 12:00 am to 6:00 am) occurring approximately 5 to 10 days per year. While some nighttime activities may occur for limited periods, the project would not introduce a new source of substantial light or glare, and the type of nighttime lighting would be consistent with surrounding land uses; therefore, resulting in a less than significant impact.

II.	AGRICULTURE AND FOREST RESOURCES. ² Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
	a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Important (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	c) Conflict with existing zoning for, or cause rezoning of, forest land as defined in Public Resources Code Section 12220(g), timberland as defined in Public Resources Code Section 4526, or timberland zoned Timberland Production as defined in Government Code Section 51104(g)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	d) Result in the loss of forest land or conversion of forest land to non-forest use in a manner that will significantly affect timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, or other public benefits?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

The California Department of Forestry and Fire Protection (CalFire) enforces the laws that regulate logging on privately-owned lands in California. These laws are found in the Forest Practice Act which was enacted in 1973 to ensure that logging is done in a manner that will preserve and protect our fish, wildlife, forests and streams. Additional rules enacted by the State Board of Forestry and Fire Protection are also enforced to protect these resources. CalFire ensures that private landowners abide by these laws when harvesting trees. Although there are specific exemptions in some cases, compliance with the Forest Practice Act and Board rules apply to all commercial harvesting operations for landowners of small parcels, to ranchers owning hundreds of acres, and large timber companies with thousands of acres.

The Timber Harvesting Plan (THP) is the environmental review document submitted by landowners to CalFire outlining what timber is proposed for harvest, how it will be harvested, and the steps that will be taken to prevent damage to the environment. THPs are prepared by Registered Professional Foresters (RPFs) who are licensed to prepare these plans.

CalFire does not have the authority to deny a THP that is in compliance with state and federal rules and laws. A THP that does not comply with all forestry and environmental regulations is returned to the RPF. It is only approved after the RPF and landowner agree to make the changes necessary to ensure compliance with all laws. The design, features and components, and supporting documentation included in this ECPA application by the owner are intend to ensure compliance with applicable environmental regulations of the Forest Practice Rules.

When a timberland owner proposes to carry out a project that will result in timberland being converted to a non-timber growing use (in this case vineyard), they are also required to submit and secure a Timber Conversion Permit (TCP) in conjunction with the THP. The TCP exempts the timberland owner from the timber stocking requirements of the Forest Practice Rules.

The TCP is a project subject to the California Environmental Quality Act (CEQA) and is not covered by the functional equivalency of the Forest Practice Rules or THP process. Because the proposed project requires an Agricultural Erosion Control Plan (ECPA), Napa County will be acting as the CEQA Lead Agency and will be preparing the environmental document for this project: CalFire may act on the THP/TCP by utilizing (or tiering) the lead agency's final CEQA document or determination. It is anticipated that the proposed project (#P20-00063-ECPA) would be subject

² "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.

to a THP/TCP pursuant to the Forest Practice Rules.

- a. The Napa County Important Farmland 2016 map prepared by the California Department of Conservation, Division of Land Resource Protection identifies the project site as Other Land; there are no areas of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance mapped in the project parcel. Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance resulting in no impact. Vineyard development on areas designated Other Lands would be consistent with this designation and would not result in an impact to farmland within Napa County.
- b. The project site has a General Plan land use designation of Agriculture, Watershed and Open Space (AWOS) and is zoned Agricultural Watershed (AW). Therefore, the establishment and operation of vineyard totaling approximately 5.8-acres is consistent with property's land use and zoning designations. The subject property does not have a Williamson Act contract associated with it. Therefore, the project would not conflict with its land use designation or a Williamson Act contract resulting in no impact.
- c. 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, no impact is anticipated.
- d. The project proposes to remove approximately 4.9 acres of vegetation classified as Douglas Fir forest. "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 Resource Code Section 12220(g)). With respect to timberland, the approximate 5.5-acres of Douglas fir forest is presumed to contain commercial timber species³. As stated in the Napa County General Plan, the County has approximately 40,000-acres of land that may contain commercial timber species (Napa County, 2009).

The Napa County General Plan anticipated the conversion of Forest Land, including timberland, 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 between approximately 950 to 5,700 acres of this development would occur on "Forest Land". In the analysis specifically, and in the County's view generally, the conversion of forest land, including potential timberland, 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.

While the proposed project would result in the conversion of potential timberland to non-timber use, because the subject property and project area are not located within a TPZ or within the commercial forest land base of California, and that the conversion of approximately 4.9-acres of the property's potential timberland represents a relatively small percentage of the timberland in the County, the proposed project is expected to have a less than significant impact on forest and timberland in the County. Also see the discussion in **Section IV (Biological Resources)** for additional discussion and disclosure regarding impacts to forest land.

Furthermore, as discussed in **Sections IV (Biological Resources), VII (Geology and Soils), VIII (Hazards and Hazardous Materials), X (Hydrology and Water Quality), and XVIII (Mandatory Findings of Significance)** of this Initial Study, project impacts have been analyzed to determine their potential significance, all areas/categories of analysis were found to have a less than significant effect on the environment, and, where necessary, measures have been included to mitigate potentially significant impacts to a less than significant level (see **Section IV.e Biological Resources, Mitigation Measures BR-1 through BR-5**). Therefore, the conversion of approximately 4.9-acres of forest land to vineyard is anticipated to result in less than significant impacts to forest and timberland. Furthermore, as indicated in the **Background/Project History** and **Environmental Setting Sections** of this initial study, the project parcel was significantly damaged by the Glass Fire (October 2020), which has degraded the quality of the sites coniferous forest and timberland.

- 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 is anticipated to have a less than significant impact on agricultural or forest resources of Napa County.

³ California Forest Practice Rules, Title 14, California Code of Regulations, species Group A and those in Group B that are found on lands where the species in Group A now exist or have grown naturally.

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

Discussion:

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 located in the foothills bordering the northwestern end of the Napa Valley approximately 2 miles southeast of the City of Calistoga, which is within the Napa County climatological subregion of the San Francisco Bay Area Air Basin, which is under the jurisdiction of BAAQMD. The topographical and meteorological features of the Napa Valley subregion create the potential for air pollution. In the short term, potential air quality impacts are most likely to result from construction activities. Construction-related emissions, which are temporary in nature, mainly consist of particulate matter (PM) generated from fugitive dust during grading or other earthmoving activities and other criteria pollutants generated through the exhaust from construction equipment, and vehicular haul and worker trips. In the long term, potential air quality impacts would likely result from ongoing activities associated with the operation and maintenance of the proposed vineyard. Operational-related emissions, which are seasonal in nature, are primarily generated from vehicular trips associated with workers going to and from the site and equipment necessary for ongoing vineyard maintenance. Refer to **Section XVII (Transportation)** for the anticipated number of construction- and operation-related trips.

The impacts associated with implementation of the 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 (O₃), ozone precursors oxides of nitrogen and reactive organic gases (NO_x and ROG), carbon monoxide (CO), nitrogen dioxide (NO₂), and suspended particulate matter of ten micrometers or less and two and a half micrometers or less (PM₁₀ and PM_{2.5}). Other criteria pollutants, such as lead (Pb) and sulfur dioxide (SO₂), would not be substantially emitted by the proposed development or associated traffic, and air quality standards for them are being met throughout the Bay Area.

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

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

In order to assess potential air quality and GHG emissions, a review 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 Vineyards⁴ for an approximately 560-acre vineyard development, Walt Ranch Vineyard⁵ for an approximately 507-acre vineyard development, and Circle-S Ranch Vineyards⁶ for an approximately 400-acre vineyard development.⁷

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

Table 3 shows the approximate anticipated construction emissions associated with the development of vineyards of the sizes described above. Also shown in **Table 3** are the BAAQMD CEQA Guidelines draft thresholds of significance for emission of the following criteria pollutants: ROG, NO_x, PM₁₀, and PM_{2.5}.

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

Table 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 development¹	8.43 to 11.39	34.39 to 52.16	3.93 to 4.47	13.93 to 14.53
Pounds per day: 150- to 250-acre vineyard development²	9.43 to 11.03	43.85 to 53.16	3.91 to 4.62	12.87 to 17.22
Pounds per day: 127-acre vineyard 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 operation¹	7.78	2.85	0.80	4.22
Pounds per day: 560-acre vineyard operation²	6.58	1.84	0.75	3.91
Pounds per day: 507-acre vineyard operation³	4.3	22.3	1.4	2.3
Operational threshold (lbs/day)	54	54	54	82

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

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

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

⁷ These EIRs are incorporated herein by reference and available for review in the Napa County Department of Planning, Building and Environmental Services permanent files.

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 5.8-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 than those identified in **Table 3**, and therefore below identified thresholds. Additionally, project approval, if granted, would be subject to the standard Air Quality condition described below, which includes standard air quality and construction best management practices (BMPs) consistent with BAAQMD measures identified in Table 8-1 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 – Conditions 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 FAQ⁸ or the PERP website⁹.

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 undeveloped lands. The project site contains approximately 40.01 acres of land and is developed with one residence, one guest cottage, a pool, landscaping and associated accessory infrastructure, and approximately 1.1-acres of existing vineyard established under Structural Erosion Control Plan #95537-ECPS, and has an approved Track II Agricultural Erosion Control Plan #P19-99381-ECPA permit for the replant of that vineyard (permit issued on December 11, 2019). There are scattered rural residential and agricultural (vineyard) uses located in the vicinity of the proposed project; the nearest residences to the project site are located between approximately 725 feet west (on the adjacent parcel under same ownership), and

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

⁹ <http://www.arb.ca.gov/portable/portable.htm>

±1,200 feet and ±1,400 feet to the north and ±1,600 feet to the east. The closest residential community that may contain schools, hospitals and/or convalescent homes, is the City of Calistoga which is located approximately 2 miles to the northwest, the nearest schools (Calistoga Elementary and Calistoga High) are located approximately 2 miles to the northwest in the City of Calistoga (Napa County GIS Sensitivity Maps: Parcels and Schools layer).

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 2 miles from the closest school and 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, Coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

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

- WRA Environmental Consultants, December 2019, Biological Resources Reconnaissance Survey Report (**Exhibit B-1**).
- WRA Environmental Consultants, July 2020, Response to Comments (Biology) (**Exhibit B-2**).

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

WRA conducted an assessment of biological resources on the subject parcel to determine: the presence of sensitive biological communities; the potential for biological communities on site to support special-status plant or wildlife species; and the presence of sensitive natural resources protected by local, state, or federal laws and regulations. The surveys correspond to blooming periods sufficient to observe and identify special-

status plant species determined to have the potential to occur in the project area. The field surveys were conducted by botanists familiar with the flora of Napa County and surrounding counties. The surveys followed the protocol for plant surveys described by resource agency guidelines (CNPS, 2001; CDFW, 2018; USFWS, 1996). Plants were identified using Baldwin et al. (2012) and Jepson Flora Project (Jepson eFlora, 2018) to the taxonomic level necessary to determine whether they were rare. The wildlife surveys were conducted concurrently with the rare plant surveys.

A list of special-status plant and animal species that have the potential to occur within the vicinity of the project area was compiled based on data in the CNDDDB (CDFW, 2018), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS, 2018), and the USFWS List of Federal Endangered and Threatened Species that may be Affected by projects in the Mark West Springs and Calistoga Quadrangles.

The project area (i.e. clearing limits) consists of the following biological communities (or Land Cover Types) with respective acreages shown in **Table 4**: Douglas fir forest, mixed forest / chaparral – Douglas fir forest, and developed area. As indicated in the Background/Project History and Environmental Setting Sections of this initial study (pages 1-2), the project parcel was significantly damaged by the Glass Wildfire (October 2020).

Table 4 – Biological Communities/Land Cover Types on the Project Area

Biological Communities/Land Cover Type	Pre-Project Conditions (acres)
Douglas fir forest	4.9
Mixed Forest/Chaparral – Douglas fir forest	0.32
Developed Area (vineyard, residential and ruderal)	0.52

Source: WRA, December 2019

- a. Special-Status Plants: Two special status plant species were observed on the project site during surveys conducted by WRA: Sonoma ceanothus (*Ceanothus sonomensis*) and redwood lily (*Lilium rubescens*). Additionally, 28 special status plant species have the potential to occur in the project parcel area.

Sonoma ceanothus (*Ceanothus sonomensis*) is a CNPS Rank taxon 1B and considered to be rare and endangered in California and elsewhere. Sonoma ceanothus is a perennial evergreen shrub in the buckthorn family that blooms from February to April, and typically occurs on sandy, gravelly substrate derived from serpentine or volcanic in chaparral habitat at elevation ranging from 695 to 2,600 feet. The biologist identified seven individuals of Sonoma ceanothus situated in the vicinity of the project area, including three located in the project area (in and adjacent to the western avenue of vineyard Block B). Suitable habitat to support Sonoma ceanothus is present within the parcel, in the mixed forest/chaparral biological community (WRA 2019 – **Exhibit B-1**). Removal of these individual plant species is considered a potentially significant direct and cumulative impact due to the plants CNPS listing.

Sonoma ceanothus are frequently limited in their distribution due to competition with other, taller shrubs and being overtopped by trees. Sonoma ceanothus habitat is improved by wildfire or selective tree removal, which opens up the middle- (shrub) and understory (herbs) to sunlight and the potential for seed germination (WRA 2019 – **Exhibit B-1**) At the time of publication, the status of these individual plants following the 2020 Glass Fire is unknown. Consequently, the removal of trees by fire and for the proposed vineyard blocks would likely provide net benefit to the remaining ceanothus shrubs by providing an increase in solar radiation. It is feasible that such a provision of solar radiation would allow for seed germination and an increase in the on-site ceanothus population.

Redwood lily (*Lilium rubescens*) is a bulbiferous perennial forb in the lily family that blooms from April through September, and typically occurs in openings, roadsides, and trails, often on serpentine and volcanic substrates in broadleaf upland forest, chaparral, lower montane coniferous forest, upper montane coniferous forest and North Coast coniferous forest habitat at elevations ranging from 95 to 6,210 feet. While the biologist identified ten individuals near the project area (north of Block B), no individuals were present within the project area. At the time of publication, the status of these individual plants following the 2020 Glass Fire is unknown. Removal of these individual plant species is considered a potentially significant direct and cumulative impact due to the plants CNPS listing.

The Napa County General Plan Goal CON-2¹⁰ requires that the County 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-3¹¹ requires that the County protects the continued presence of special-status plant species or its habitat; CON-13¹² consider and address impacts to wildlife habitat and avoid impacts to fisheries and habitat supporting

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

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

¹² Policy CON-13: The County shall require that all discretionary residential, commercial, industrial, recreational, agricultural, and water development projects consider and address impacts to wildlife habitat and avoid impacts to fisheries and habitat supporting special-status species to the extent feasible. Where impacts to wildlife and special-status species cannot

special-status species to the extent feasible, and to apply mitigation measures when they cannot be avoided. Napa County General Plan Conservation Goal CON-3 and Policy CON-13 obligate the County to, among other things, protect the continued presence of special-status species and their habitats, and provide protection for habitat supporting special-status species through buffering or other means. Further, the purpose and intent of the Conservation Regulations (NCC Chapter 18.108) requires that projects preserve natural habitat or existing vegetation, and do not adversely affect sensitive, rare, threatened or endangered plants. Removal of the Sonoma ceanothus or redwood lily as a result of project implementation would result in non-conformance with the County's regulatory framework, and are considered potentially significant direct and cumulative impacts on these sensitive species. The project as proposed would result in the removal of approximately 3 Sonoma ceanothus plants and approximately 0.32 acre of its associated habitat.

Implementation of **Mitigation Measure BR-1** would require revisions to the western boundary and size of Block B, such that the Sonoma ceanothus identified by the project biologist is avoided and protected with a minimum 25-foot buffer, and would require demarcation and replacement for inadvertent removal. Revisions to the proposed block boundary would result in the preservation of approximately 0.08-acre of the Mixed-Forest/Chaparral habitat that supports Sonoma ceanothus when compared to the project as proposed, which would remove 0.32-acres, resulting in a reduction of approximately 25%. Implementation of **Mitigation Measure BR-1** would reduce potential direct and indirect impacts to special-status plant species and associated habitat to a less than significant level, and result in consistency with applicable General Plan goals and policies.

Mitigation Measure BR-1: The owner/applicant shall implement the following measures to reduce potential impacts on special status plant species and associated habitat.

- a. Revise Erosion Control Plan #P20-00063-ECPA prior to approval to avoid the Sonoma ceanothus (*Ceanothus sonomensis*) plants/populations located within the western avenue of vineyard Block B, and provide them with a minimum 25-foot buffer, consistent with the intent of the modified block configurations detailed in **Figure 4**.
- b. The avoided plants/populations and 25-foot buffer shall be demarcated with construction flagging/fencing by a qualified biologist before construction. The precise locations of the construction fencing shall be inspected and approved by the County prior to the commencement of project activities. No equipment or materials shall be laid down in or near the boundary.
- c. In accordance with Napa County Code Section 18.108.100 (Erosion Hazard Areas—Vegetation Preservation and Replacement), any special-status plants or populations inadvertently removed as part of the development authorized under #P20-00063-ECPA shall be replaced onsite at a ratio of 2:1 at locations with similar habitat, as 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 plants will be planted, location of suitable habitat on the project parcel, success criteria of at least 80% and monitoring activities for the replacement plants/populations. The replacement plan shall be implemented before vineyard planting activities. Any replaced special-status plants shall be monitored for at least three years to ensure an 80 percent survival rate.

Special-Status Animals: A total of 58 special-status wildlife species have been documented in Napa County. The project area has the potential to support 5 of these species: *Antrozous pallidus* (pallid bat); *Myotis thysanodes* (fringed myotis bat); *Contopus cooperi* (olive-sided flycatcher); *Progne subis* (purple martin); *Strix occidentalis caurina* (Northern spotted owl).

With respect to bats, both the pallid bat and the fringed myotis roost typically in rock crevices, tree hollows and exfoliating bark, mines, caves, and a variety of man-made structures. While the biologist did not perform a targeted bat assessment, the report indicates that trees within the project area (primarily oaks) may contain cavities or snags with exfoliating bark suitable for roosting by these species, and that there are CNDDDB occurrences in the vicinity (CDFW 2018a).

Removal and trimming of trees during the bat maternity season (generally April through August) could impact bat breeding and potentially result in the take of bats, resulting in a potentially significant impact. Implementation of **Mitigation Measure BR-2** would ensure that a targeted bat assessment be performed to determine the absence or presence of bats, that tree trimming and removal be conducted in a two-phased system outside of seasonal periods of bat activity, to avoid and allow potential bats to escape. Therefore, with implementation of Mitigation Measure BR-2, potential project impacts (if approved) on bats would be less than significant.

Mitigation Measure BR-2 - A Qualified Biologist (defined as having demonstrable qualifications and experience with the particular species for which they are surveying) shall conduct a habitat assessment in order to identify suitable bat

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.

habitat trees with in the project area(s), no more than 6 months and no less than 14 days in advance of the planned tree removal. If the habitat assessment determines that trees proposed for removal contain suitable bat habitat, the following shall apply to potential bat habitat trees:

- i. Tree trimming and/or tree removal should only be conducted during seasonal periods of bat activity (August 31 through October 15, when young would be self-sufficiently volant and prior to hibernation, and March 1 to April 15 to avoid hibernating bats and prior to formation of maternity colonies), under supervision of a qualified biologist. Note that these windows may shift with atypical temperatures or rainfall. Trees should be trimmed and/or removed in a two-phased removal system conducted over two consecutive days. The first day (in the afternoon), limbs and branches would be removed by a tree cutter using chainsaws only. Limbs with cavities, crevices and deep bark fissures would be avoided, and only branches or limbs without those features would be removed. On the second day, the entire tree would be removed.
- ii. For removal of bat habitat trees outside the seasonal activities identified above (between October 16 and February 28/29 of the following year or between April 16 and August 30), a qualified biologist shall conduct pre-construction survey within 14 days of project initiation and/or removal to determine absence/presence of special-status bat species. Survey methods, timing, duration, and species shall be provided for review and approval by Napa County prior to conducting pre-construction surveys. A copy of the survey shall be provided to the County Planning Division and CDFW prior to commencement of work. If bats are not present, removal can proceed. If bats are found to be present, a plan for removal or exclusion will be developed by a qualified biologist and reviewed and approved the County Planning Division in consultation with CDFW. The removal or exclusion plan shall be implemented upon approval of the plan by the County Planning Division and CDFW.

With respect to special-status bird and raptor species, including Northern Spotted Owl (*Strix occidentalis caurina*) (NSO), as previously indicated, no special-status bird or raptor species were observed during the surveys conducted by WRA. However, habitat that could support special-status bird species, in particular woodlands and associated trees that could be utilized for nesting, is found in the vicinity and occurs within or adjacent to the project area.

The project biologist performed two seasons of presence/absence surveys for the federal and state listed NSO within the project parcel per USFWS protocol.¹³ NSO were not observed during these surveys; as such, there is no indication that NSO is present or nesting in or within 0.25-mile of the project area, and construction activities related to the project would not result in a significant impact on NSO. The nearest documented NSO nesting territory is located approximately 1.3 miles west of the project area on Diamond Mountain, and the nearest activity center located approximately 0.8-miles west (WRA 2020 – **Exhibit B-2**).

While no NSO were detected during these surveys, Great horned owls (*Bubo virginianus*) and a screech owl (*megascops kennicottii*) were detected during some of these surveys. In addition to the olive-sided flycatcher and purple martin, a variety of other non-status bird species with baseline protections under the MBTA and CFGC may use vegetation within the project areas for nesting. Noise and disturbance generated through vegetation removal and land preparation have the potential to affect special-status bird species, including NSO, that may subsequently move into the area, potentially resulting in direct mortality, nest abandonment or loss and death of young, and loss of reproductive potential at active nests or roosts, which is considered a potentially significant indirect impact to special-status species. Implementation of **Mitigation Measure BR-3** would require pre-construction surveys for nesting birds, raptors and NSO prior to earth-disturbance to ensure that birds are protection through avoidance methods and exclusion buffers. Therefore, with implementation of **Mitigation Measure BR-3**, the proposed project would have less than significant impacts on special-status birds, including NSO.

Mitigation Measure BR-3: The Permittee shall include in #P20-00063-ECPA the following measures to minimize impacts associated with the loss and disturbance of nesting birds and raptors, including northern spotted owl, consistent with and pursuant to California Department of Fish and Wildlife (CDFW) Code Sections 3503 and 3503.5:

- a. For earth-disturbing activities occurring between February 1 and August 31, (which coincides with the grading season of April 1 through October 15 – NCC Section 18.108.070.L, and bird breeding and nesting seasons), a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local avian resources with potential to occur at the project site) shall conduct preconstruction surveys for nesting birds, raptors, and the Northern Spotted Owl, within all suitable habitat on the project site, and where there is potential for impacts adjacent to the project areas. The preconstruction survey shall be conducted no earlier than 14 days prior to vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than 14 days from the survey date, surveys should be repeated. A copy of the survey will be provided to the Napa County Conservation Division and the CDFW prior to commencement of work.

¹³ "Protocol for Surveying Proposed Management Activities that May Impact Northern Spotted Owls" (USFWS 2012, WRA Appendix A – **Exhibit B-1** and **B-2**).

- b. After commencement of work, if there is a period of no work activity of 5 days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.
- c. In the event that nesting birds are found, the Permittee shall identify appropriate avoidance methods and exclusion buffers in consultation with the County Conservation Division and the U.S. Fish and Wildlife Service (USFWS) and/or CDFW prior to initiation of project activities. Exclusion buffers may vary in size, depending on habitat characteristics, project activities/disturbance levels, and species as determined by a qualified biologist in consultation with County Conservation Division and the USFWS and/or CDFW.
- d. Exclusion buffers shall be fenced with temporary construction fencing (or the like), the installation of which shall be verified by Napa County prior to the commencement of any earthmoving and/or development activities. Exclusion buffers shall remain in effect until the young have fledged or nest(s) are otherwise determined inactive by a qualified biologist.
- e. Alternative methods aimed at flushing out nesting birds prior to pre-construction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or chemical (i.e., spraying nesting birds or their habitats) would be considered an impact to nesting birds and are prohibited.

Implementation of the proposed project, with incorporation of **Mitigation Measure BR-1, BR-2 and BR-3** would result in less than significant impacts on special status plant, bird and bat species.

- b-c. There are no identified riparian habitats or vernal pools located within the project site property or project area (WRA December 2019 – **Exhibit B-1**). The proposed project area contains 0.32-acre (3.5% of the total land cover type in the property) of the mixed forest/chaparral (Douglas Fir/Coast Redwood Forest Alliance biotic community and Common Manzanita West County NFD Alliance biotic community), neither of which are considered sensitive by CDFW or by Napa County.

The project site is located within the Kellet Mine Creek Watershed. Kellet Mine Creek is a blue-line stream that lies approximately 1000 feet to the west of the proposed vineyard blocks in the neighboring parcel under same ownership; there are no mapped blue-line streams within the project parcel. There are three primary drainages within the subject property, with ephemeral portions in the upper reaches and intermittent flows in the lower reaches, all draining to Kellet Mine Creek, thence the Napa River. One of these drainages contains two ephemeral reaches that are situated within the surrounding areas of the proposed vineyard blocks and drain towards the north. Another drainage contains two or more ephemeral/intermittent reaches to the south and west of proposed Blocks A and B and drain to the an in-line pond in the adjacent parcel on the property and over 500 feet to the west of the proposed project boundaries, thence Kellet Mine Creek. The third drainage is Kellet Mine Creek, which drains south to north across the western third of the property, and approximately 900 feet west of the proposed project area. All of the streams and the pond are likely jurisdictional under Section 404/401 of the CWA , the Porter Cologne Act and Section /16021602 of the CFGC, and are therefore considered sensitive aquatic resources.

The proposed project has been designed to include minimum 35-foot stream setbacks from the ephemeral/intermittent streams and avoid the blue-line stream (located approximately 815 feet southwest of Block A) and pond (located approximately 550 feet southwest of Block A) on the subject property, in conformance with County Code Section 18.108.025 (General provisions – Intermittent/perennial streams). Therefore, the project has been designed to provide setbacks from aquatic features (i.e. ephemeral streams and wetlands) creek setbacks consistent with code requirements. Furthermore, project approval, if granted, would be subject to the following standard conditions to prevent the potential encroachment into stream and wetland setbacks required pursuant to Section 18.108.025 and Section 18.108.026, further protecting these aquatic resources during project implementation and operation resulting in a less than significant impact.

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

- The location of creek setbacks shall be clearly demarcated in the field with temporary construction fencing, which shall be placed at the outermost edge of required setbacks shown on the project plans. Prior to any earthmoving activities, temporary fencing shall be installed: the precise locations of said fences shall be inspected and approved by the Planning Division prior to any earthmoving and/or development activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated areas for the duration of erosion control plan installation and vineyard installation. The protection fencing shall remain in place for the duration of project implementation and until wildlife exclusion fencing is installed as shown on the plans.
- All construction and related traffic will remain on the inside (vineyard block side) of the protective fencing to ensure that the creek, buffer zones, and associated riparian habitat and/or woodland remains undisturbed.

- In accordance with County Code Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) trees that are inadvertently removed that are not within the boundary of the project and/or not identified for removal as part of #P20-00063-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, which 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% survival rate.
- d. No wildlife nursery sites were not identified in the project area or parcel, there would be no impacts to wildlife nursery sites. A portion of the property is currently fenced with deer fencing that is generally located around the existing residence, guest cottage, and vineyard and includes the entirety of proposed Block A and approximately half of proposed Block B. The existing deer fence is generally approximately 6 feet tall and consists of smooth wire with mesh spacing approximately 4 inches by 4 inches. The project proposes to remove the portion of the existing fence that bisects the proposed Block B and install a new wildlife exclusion fence that would extend the existing fenceline to the extent of proposed Block B. Proposed Block C would be enclosed by a new wildlife exclusion fence; however, the avenue that would provide access between Blocks B and C will not be fenced, to allow wildlife movement.

The property is located within a portion of the California Bay Area Linkage Network, specifically a corridor running roughly north-south that is approximately 1.4 to 1.8 miles wide on the threshold between eastern Sonoma and northwestern Napa Counties. The parcel is not within a mapped Natural Landscape Block or Essential Connectivity Area (Caltrans 2010). At the scale of landscape linkages, this relatively broad linkage/corridor provides connectivity between the bay lands of San Pablo Bay and areas from northwestern Napa County northward.

According to the project biologist, per Caltrans (2010), the property is not within a designated wildlife corridor, and is located within a much larger tract of forest and lightly-developed land within a rural portion of Napa County. While common wildlife species presumably utilize the site to some degree for movement at a local scale, the project area does not provide corridor functions beyond connecting similar forested and heavily wood land parcels in surrounding areas (WRA, December 2019 – **Exhibit B-1**). At the local scale, the avoidance and preservation of the ephemeral drainages and of substantial portions (76%) of the property’s forest would provide for continued localized wildlife movement and shelter habitat for wildlife species.

General Plan Conservation Element Policy CON-18 requires that new vineyard development minimize impacts on habitat connectivity and the retention of wildlife corridors. CON -18 also requires that discretionary projects retain wildlife movement corridors of adequate size and habitat. The block layout and fencing plan proposed as part of this project would reduce the existing north-south corridor through the parcel from over 500 feet wide to approximately 70 feet wide. While the CDFW does not have established standards for wildlife corridors, a minimum width of 100 feet is recommended by the CDFW as a starting point for corridor establishment (D. Acomb CDFW, 2006: Gallo Vineyard – Sun Lake Ranch #P04-0446-ECPA). Therefore, by reducing the wildlife corridor to 70 feet in width, implementation of the proposed project could result in potentially significant direct, indirect and cumulative impacts on north-south wildlife movement and use through the parcel. Implementation of **Mitigation Measure BR-4** would require that the block boundaries be revised to maintain a minimum 100-foot wide corridor between Blocks B and C, thus facilitating the movement of larger mammals through the area, and would require measures such as exit gates, gaps to allow small mammal movement and smooth wire to prevent entanglement, which would reduce potential impacts on wildlife movement and access to habitat and foraging areas (or wildlife use areas) to a less than significant level.

Mitigation Measure BR-4: The owner/applicant shall revise Erosion Control Plan #P20-00063-ECPA prior to approval to include the following measures to reduce potential impacts to wildlife movement and access to wildlife habitat and foraging areas as a result of the project:

- a. A portion of vineyard Blocks B and/or C shall be removed to maintain a corridor at least 100 feet wide between the blocks, consistent with the intent of the modified block configurations detailed in **Figure 4**. New wildlife exclusion fencing shall generally be limited to the periphery of the project areas (i.e. clearing limits).
- b. Update the Deer Fence Plan of P20-00063-ECPA (Figure 3, PPI Engineering, July 21, 2020) consistent with Mitigation Measure BR-4(a) and to include the following provisions: New fencing shall use a design that has 6-inch- square gaps at the base (instead of the typical 3-inch by 6-inch rectangular openings) to allow small mammals to move through the fence. Exit gates shall be installed at the corners of deer wildlife exclusion fencing to allow trapped wildlife to escape. To prevent entanglement, smooth wire instead of barbed wire shall be utilized to top wildlife exclusion fencing.
- c. Any modifications to the location of wildlife exclusion fencing as specified in Erosion Control Plan #P20-00063-ECPA shall be strictly prohibited, and would require County review and approval to ensure that the modified wildlife exclusion fencing location would not result in potential impacts on wildlife movement or use.

- e. Based on the Biological Resources Reconnaissance Survey Report (WRA, 2019 – **Exhibit B-1**), land cover types (or biological communities) occurring within the property include approximately 35.67 acres of Douglas fir forest, 1.51 acres of mixed forest/chaparral – Douglas fir forest, and 2.91 acres of developed area. The proposed project would remove 4.9 acres of Douglas fir forest (13.7% of the total land cover on the parcel), 0.32-acre of mixed forest/chaparral – Douglas fir forest (2.1% of the total land cover on the parcel) and 0.52-acre of developed area (**Table 5**).

Table 5 –Land Cover Types/Biological Community Removal and Retention¹⁴

Land Cover Type or Biological Community	Acreage within Parcel (Pre-Project)	Acreage Removed	Percent Removed	Percent Remaining	Post-Project Acreage
Douglas fir forest	35.67	4.9	13.7%	86.3%	30.77
Mixed forest/chaparral – Douglas fir forest	1.51	0.32	2.1%	97.9%	1.19
Developed area	2.91	0.52	8.6%	91.4%	2.39
Totals	40.01	5.8	6.8%	93.2%	34.35

Sources: WRA Dec 2019 and July 2020; Napa County May and December 2020

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). While Douglas fir forest contains oak trees as sub-dominant species, the property does not contain oak woodland, and is therefore in compliance with Policy CON-24. As discussed in **Section II, Agricultural and Forest Resources**, the Douglas fir forest is considered to be timberland falling under the jurisdiction of CAL FIRE and requiring a Timber Harvest Plan (THP) and Timber Conversion Permit (TCP). A registered professional forester (RPF) is working concurrently to develop and submit a THP and TCP.

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

NCC Section 18.108.020(C) (General Provisions: Vegetation Retention Requirements) requires that parcels within the AW zoning district retain 70% of the vegetation canopy cover¹⁵ based on the on-site canopy present on June 16, 2016.

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

¹⁴ The acreages identified in **Table 5** may differ slightly from acreages identified in the biological assessment (**Exhibit B-1**) and response letter (**Exhibit B-2**), due to a lot line adjustment that resulted in differences between pre-recorded parcel boundaries and current boundaries, differences in mapping platforms, spatial characters, and rounding. Because approximate biological/plant communities and project acreages have been corroborated through County GIS mapping, the values disclosed herein are considered by the County to be adequate for CEQA review and disclosure purposes of the subject application.

¹⁵ Napa County Code Section 18.108.030 defines "vegetation canopy cover" as "the biotic communities classified as oak woodland, riparian oak woodland, or coniferous forest based on the current Manual of California Vegetation (MCV) and as described in the Napa County Baseline Data Report (2005 or as amended)."

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

The 2020 Glass Fire burned a large portion of the Douglas fir forest within the proposed project area, as well as the portion of the mixed forest/chaparral that was within the area of proposed Block B. NCC Section 8.80.130B (Conservation regulations for fire-damaged properties and fire-damaged vineyards) states that, for the purposes of calculating the Vegetation Retention Requirements contained in subsection (C) of NCC [Section 18.108.020](#) (Vegetation Retention Requirements) for any earthmoving activity as defined in [Section 18.108.030](#) (Definitions) occurring on fire-damaged property in the Agricultural Watershed zoning district and outside of a sensitive domestic water supply drainage as defined in [Section 18.108.030](#) (Definitions), the vegetation canopy cover shall be as configured on the parcel existing on June 19, 2018. According to the project biologist, there has been no appreciable change in canopy cover since 2016; therefore, the use of Napa County's 2016 GIS Vegetation Public Habitat Mapping is appropriate for the analyses.

Based on the analysis provided by the Applicant and review of historic aerial imagery and County GIS Vegetation mapping, the parcel contained approximately 35.6 acres of vegetation canopy cover in 2016 (and 2018), before being burned by the Glass Fire in 2020. The proposed project would remove a total of 4.9 acres (13.7% of the parcel total) of Douglas fir forest, and would retain 30.8 acres (86.3% of the parcel total); therefore, the proposed project has been designed to be in compliance with the 70% retention requirement. Napa County Code Section 18.108.020(D) requires that removal of tree canopy on an acreage basis be mitigated at a 3:1 ratio: the project, if approved, would remove a total of 5.43 acres of tree canopy; therefore, the mitigation for canopy cover removal would require replacement and/or preservation of a minimum of approximately 16.3 acres. The project proposes to preserve 17.42 acres of the remaining 22.83 acres of Douglas fir forest on slopes less than 50% on the parcel, which more than complies with the requirements in NCC 18.108.020(D).

The project as proposed would not be consistent with NCC 18.108.020(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-5** would require the #P20-00063-ECPA be revised, prior to approval, to include the proposed 17.42-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-5** 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. Further, as discussed in **Section VII (Geology and Soils)** and **Section X (Hydrology and Water Quality)**, the project, as proposed, would reduce the amount of soil loss due to erosion by 1.09 tons per acre, or by 18% when compared to the existing condition, and would result in the same or no net increase in runoff post-project conditions. Therefore, the findings can be made that highest biological and water quality protections have been incorporated into the project, as proposed, with incorporation of **Mitigation Measures BR-1 through BR-5** and standard conditions of approval, resulting in less than significant impacts.

Mitigation Measure BR-5: The Owner/Applicant, prior to approval, shall revise #P20-00063-ECPA to include the following provisions to reduce potential impacts to coniferous forest and oak woodland and achieve consistency with the Napa County Conservation Regulations 18.108:

- a. A Preservation Area (consistent with **Figure 4**) totaling 17.42 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 construction or within 90 days of project approval, whichever comes first. The area to be preserved shall be of like kind and quality to the coniferous forest 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, protects special-status species such as the redwood lily populations; 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 #P20-00063-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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

See **Section XVIII (Tribal Cultural Resources)** for disclosures 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: Flaherty Cultural Resource Services, June 25, 2019, Cultural Resource Reconnaissance of 34+/- Acres Near Calistoga, Napa County, California.

Flaherty Cultural Resource Services 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 34-acre parcel, including the approximate 6-acre project site to locate any visible signs of potentially significant historic or prehistoric cultural deposits.

a-b. The cultural resource reconnaissance (Flaherty Cultural Resource Services, June 25, 2019) identified no 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 accidentally. As discussed in **Section XVII, Tribal Cultural Resources**, the Middletown Rancheria determined that incorporation of the following Cultural Resources Condition of Approval would provide adequate protection for and avoidance of potential impacts on Tribal Cultural Resources. Therefore, with incorporation of the condition of approval, below, the proposed project would result in less than significant impacts to historic or archaeological resources.

c. The cultural resource reconnaissance did not locate any human remains in the proposed development area and does not anticipate the discovery of human remains due to 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

Consistent with Public Resources Code Section 21100(b)(3), this impact analysis evaluates the potential for the 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.

- d. The transportation sector is a major end-user of energy in California, accounting for approximately 39 percent of total statewide energy consumption in 2014 (U.S. Energy Information Administration 2016). In addition, energy is consumed in connection with construction and maintenance of transportation infrastructure, such as streets, highways, freeways, rail lines, and airport runways. California's 30 million

vehicles consume more than 16 billion gallons of gasoline and more than 3 billion gallons of diesel each year, making California the second largest consumer of gasoline in the world (CEC 2016). In Napa County, farm equipment (not including irrigation pumps) accounted for approximately 60% of agricultural emissions in Napa County in 2014, with the percentage anticipated to increase through 2050 (Napa County 2018 - <https://www.countyofnapa.org/DocumentCenter/View/9247/Revised-Draft-Climate-Action-Plan>).

With respect to transportation energy, existing energy standards are promulgated through the regulation of fuel refineries and products such as the Low Carbon Fuel Standard (LCFS), which mandates a 10% reduction in the non-biogenic carbon content of vehicle fuels by 2020. Additionally, there are other regulatory programs with emissions and fuel efficiency standards established by USEPA and the California ARB such as Pavley II/LEV III from California's Advanced Clean Cars Program and the Heavy-Duty (Tractor-Trailer) GHG Regulation. Further, construction sites will need to comply with State requirements designed to minimize idling and associated emissions, which also minimizes use of fuel. Specifically, idling of commercial vehicles and off-road equipment would be limited to five minutes in accordance with the Commercial Motor Vehicle Idling Regulation and the Off-Road Regulation¹³. The proposed project would comply with these State requirements; see the Air Quality conditions of approval. Napa County has not implemented an energy action plan. Therefore, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency or impede progress towards achieving goals and targets, and impacts would be less than significant.

VII.	GEOLOGY AND SOILS. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
	a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> <li data-bbox="251 913 933 1071">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. <li data-bbox="251 1081 933 1123">ii) Strong seismic ground shaking? <li data-bbox="251 1144 933 1186">iii) Seismic-related ground failure, including liquefaction? <li data-bbox="251 1228 933 1270">iv) Landslides? 				
	b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	d) Be located on expansive soil creating substantial direct or indirect risks to life or property? Expansive soil is defined as soil having an expansive index greater than 20, as determined in accordance with ASTM (American Society of Testing and Materials) D 4829.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

- 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 nearest active faults are an unnamed fault 2.4 miles west of the project site. No landslides or areas of instability have been identified within the project site. Soils on the project site have been classified according to the Soil Survey of Napa County (USDA, 1978) (Napa County GIS faults and earthquakes layers). Therefore, no impact would occur.
 - ii) Although the project site is located in an area that may be subject to strong or very strong seismic ground shaking potential during an earthquake (California Geological Society, 2016), the proposed project does not include construction of any new residences or enclosed areas where people would congregate. Therefore, this impact would be less than significant.
 - iii) The project site is not in an area subject to high liquefaction potential. The Napa County General Plan identifies the project site as having very low liquefaction potential (Napa County, 2009). Further, as noted above, the proposed project would not result in a substantial increase in the number of people or add structures onsite. Therefore, this impact would be less than significant.
 - iv) Landslides, landslide deposits, and areas of instability have not been identified within the project site (Napa County GIS landslide layer). Therefore, no impact would occur.
- b. The project site’s soils are mapped as Forward silt loam with 12 to 57% slopes (Soil Series #140), and Forward-Kidd complex (Soil Series #141) with 11 to 60% slopes (PPI Engineering, Revised July 2020).

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, drop inlets, drainage pipelines, level spreaders, rock energy dissipaters and sediment traps, as well as a no-till cover crop with vegetative cover densities of at least 90%. Vineyard avenues would also include vegetative cover densities of at least 90%. 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 PPI Engineering (**Exhibit C**), the proposed conversion of approximately 4.9 acres of Douglas fir forest and 0.32-acre of mixed-forest/chaparral to vineyard and vineyard avenues is anticipated to reduce soil loss, or surface erosion, within the project site as compared to existing conditions (**Table 6**). Under existing conditions, the annual soil loss is anticipated to average 6.07 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 4.98 tons per year, or a reduction of approximately 1.09 acres (18%) as compared to existing conditions.

Table 6 – USLE Soil Loss Analysis

Vineyard Block	Pre-project Soil Loss (tons/year)	Post-project Soil Loss (tons/year)	Difference	Percent Change (approximate)
A	0.62	0.52	-0.10	-16%
B	4.21	3.42	-0.79	-19%
C	1.24	1.04	-0.20	-16%
Total	6.07	4.98	-1.09	-18%

Source: PPI Engineering, revised July 1, 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 proposed project be approved, the following conditions of approval would be incorporated to ensure that erosion control measures are installed according to plan specifications.

Erosion and Runoff Control (i.e., Hydromodification) Installation and Operation – Conditions of Approval: The following conditions shall be incorporated by referenced into Erosion Control Plan #P20-00063-ECPA pursuant to NCC Chapter 18.108 (Conservation Regulations):

- Permanent Erosion and Runoff Control Measures: Pursuant to NCC Section 18.108.070(L) installation of runoff and sediment attenuation devices and hydromodification facilities including, but not limited to straw wattles and permanent no-till cover, shall be installed no later than October 15 during the same year that initial vineyard development occurs. This requirement shall be clearly stated on the final Erosion Control Plan. Additionally, pursuant to NCC Section 18.108.135 “Oversight and Operation” the qualified professional that has prepared this erosion control plan (#P20-00063-ECPA) shall oversee its implementation throughout the duration of the proposed project, and that installation of erosion control measures, sediment retention devices, and hydromodification facilities specified for the vineyard have been installed and are functioning correctly. Prior to the first winter rains after construction begins, and each year thereafter until the proposed project has received a final inspection from the county or its agent and been found complete, the qualified professional shall inspect the site and certify in writing to the planning director, through an inspection report or formal letter of completion verifying that all of the erosion control measures, sediment retention devices, and hydromodification facilities required at that stage of development have been installed in conformance with the plan and related specifications, and are functioning correctly.
- Cover Crop Management/Practice: The permanent vineyard cover crop shall not be tilled (i.e., shall be managed as a no till cover crop) for the life of the vineyard and the owner/permittee shall maintain a plant residue density of 90% within the vineyard and vineyard avenues. The cover crop may be strip sprayed, with a strip no wider than 1 foot (12 inches) wide at the base of vines, 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.

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

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

- c. As discussed above, the project site is not located in an area prone to landslides, ground failure or liquefaction. The proposed project identifies the soil types in the project site and addresses any potential soil instability. Therefore, impacts from offsite landslides, lateral spreading, subsidence, liquefaction or collapse would be less than significant.
- d. Soils of the project site consist of Forward silt loam and Forward-Kidd complex, which all exhibit low shrink-swell potential (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 described below that would avoid and reduce potential paleontological resource impacts. Therefore, impacts to geologic features and paleontological resources are anticipated to be less than significant.

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

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

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

Discussion:

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

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

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

can be obtained at the Napa County Department of Planning, Building and Environmental Services or online at <https://www.countyofnapa.org/592/Climate-Action-Plan>.

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

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

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

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

GHGs are the atmospheric gases whose absorption of solar radiation is responsible for the greenhouse effect, including carbon dioxide (CO₂), methane, ozone, and the fluorocarbons, which contribute to climate change. CO₂ is the principal GHG emitted by human activities, and its concentration in the atmosphere is most affected by human activity. It also serves as the reference gas to which to compare other GHGs. Agricultural sources of carbon emissions include forest clearing, land-use changes, biomass burning, and farm equipment and management activity emissions. Equivalent Carbon Dioxide (CO_{2e}) is the most commonly reported type of GHG emission and a way to get one number that approximates total emissions from all the different gasses that contribute to GHG, as described in BAAQMD’s CEQA Guidelines. In this case CO₂ is used as the reference atom/compound to obtain atmospheric carbon CO₂ effects of GHG. Carbon stocks are converted to CO_{2e} by multiplying the carbon total by 44/12 (or 3.67), which is the ratio of the atomic mass of a carbon dioxide molecule to the atomic mass of a carbon atom (<http://ncasi2.org/COLE/faq.html>).¹⁶

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

¹⁶ “Carbon stock” refers to the total amount of carbon stored in the existing plant material including trunks, stems, branches, leaves, fruits, roots, dead plant material, downed trees, understory, and soil organic material. Carbon stock is expressed in units of metric tons of carbon per acre. When land is cleared, some percentage of the carbon stored is released back to the atmosphere as CO₂. Land clearing or the loss of carbon stock is thus a type of GHG emission (County of Napa, March 2012, Napa County Draft Climate Action Plan).

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.¹⁷ Using this emission factor it is anticipated that Construction Equipment Emissions associated with the proposed 5.8 gross acres of vineyard development would be approximately 54.5 MT CO_{2e} (5.8 acres multiplied by 9.4 MT CO_{2e}).

Project Site Emissions: Project site emissions are emissions resulting from vegetation removal and soil preparation associated with the conversion of approximately 5.8 acres of existing vegetation to vineyard. Because there is not yet a universally accepted scientific methodology or modeling method to calculate GHG emissions due to vegetation conversion and soil disturbance, the 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 309.2 MT C or approximately 1,134.9 MT CO_{2e} (Table 7).

Table 7 – 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 CO _{2e}
Coniferous Forest ¹	5.31	58.1	308.5	1,132.2
Developed	0.52	1.4	0.73	2.68
Total			309.2	1,134.9

¹ For the purpose of these GHG calculations, the most conservative option was chosen; therefore, carbon stocks associated with Coniferous Forest has been applied to the Mixed forest/Chaparral vegetation type.

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%.¹⁸ 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 1,024.6 MT CO_{2e} (Table 8).

Table 8 – 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 CO _{2e}
Coniferous Forest ¹	5.31	52.5	278.8	1,023.2
Developed	0.52	0.8	0.4	1.47
Total			279.2	1,024.6

¹ For the purpose of these GHG calculations, the most conservative option was chosen; therefore, carbon stocks associated with Coniferous Forest has been applied to the Mixed forest/Chaparral vegetation type.

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 5.83-acre agricultural development would be approximately 3.9 MT CO_{2e} (5.8 multiplied by 0.67 MT CO_{2e}).

¹⁷ 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.

¹⁸ Napa County, July 12, 2010, Green House Gas Emissions Associated with Vineyard Development & Vineyard Operations, A Compilation of Quantitative Data from Three Recent Projects.

Operational Sequestration Emissions: Emissions associated with loss of sequestration due to land use change (i.e., the conversions of existing vegetation to vineyard) have been calculated based on the Annual Carbon Sequestration Factors within the 2012 Draft CAP, which indicates that coniferous forest sequester 0.67 CO₂ acre per year. 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 3.57 MT C per year or 13.08 MT CO_{2e} per year¹⁹.

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 CO₂ loss from vineyard soils. Carbon sequestration loss would be further offset by the proposed vineyard, which would likely act as a sink for atmospheric CO₂, depending on the longevity of grapevine roots and the quantity of carbon stored in deep roots. In addition to vines, the sequestration of atmospheric carbon is also achieved by the soil between vine rows through cover-cropping.

Project Emissions:

Based on the above estimates, the proposed project could result in one-time construction emissions of up to 1,393.39MT CO_{2e} and annual ongoing emissions associated with vineyard operations (including loss of sequestration) estimated to be approximately 17.45 MT CO_{2e} per year (Table 9).

Table 9 – Estimated Overall Project-Related GHG Emissions

Construction Emissions in Metric Tons of CO _{2e}		Annual Ongoing Emissions in Metric Tons of CO _{2e}	
Source	Quantity	Source	Quantity
Vehicles and Equipment	54.5	Vehicles and Equipment	3.9
Vegetation and Soil	1024.6	Loss of Sequestration	13.08
Total	1079.1	Total	16.98

Source: Napa County Conservation Division, January 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 0.05% 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 90%, 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 16.87 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.

¹⁹ 0.52 acres of grassland times 0.057 MT C = 0.03 MT C, and 5.31 acres of coniferous forest times 0.666 MT C = 3.54, totaling 3.57 MT C

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

Discussion:

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

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

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

Chemicals for vineyard operation would be mixed and stored at the existing location adjacent to the water tanks and outbuilding located north of Block B; the nearest water source (unnamed ephemeral) on the project site is approximately 200 feet east of the outbuilding. The soil and vegetation contained in the space between the mixing area and the ephemeral stream would trap pollutants, which are then naturally filtered and reduced through the soil. Fertilizers would be applied as necessary to the vineyard and to ensure the specified percent vegetative cover crop is achieved. No pre-emergent herbicides would be strip sprayed in the vinerows for weed management. Project storage and staging areas would be located within proposed clearing limits.

The reaches of ephemeral streams within the project parcel have the appropriate setback of a minimum of 35 feet as outlined in Napa County Conservation Regulations 18.108.025.

The risk of potentially hazardous materials reaching or affecting adjacent water courses or other aquatic resources is significantly reduced

because: i) the proposed project would maintain buffers greater than 50 feet from the blue-line streams; ii) project staging and storage areas would be a minimum of 50 feet from aquatic resources; and iii) only federal and/or California approved chemicals would be applied to the vineyard in strict compliance with applicable state and federal law. Project approval, if granted, would also be subject to the following standard conditions that would further avoid and/or reduce potential impacts associated with routine transport and use of hazardous materials during project implementation and ongoing vineyard operations and maintenance.

Hazardous Materials – Conditions of Approval: The owner/operator shall implement the following BMPs during construction activities and vineyard maintenance and operations:

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

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

- c. The closest schools (Calistoga Elementary, Calistoga Joint Unified School and Palisades High School) are located 2.1-miles, 2.3-miles and 2.5-miles, respectively, to the northwest of the project site. There are no schools proposed within 0.25 mile of the project site. Therefore, no impact would occur.
- d. The project site is not on any of the lists of hazardous waste sites enumerated under Government Code Section 65962.5 (Napa County GIS hazardous facility layer). Therefore, no impact would occur.
- e. The closest public airport to the project site is the Angwin-Parrett Field, located approximately 6.5 miles east 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. Current operation of the 1.1-acre vineyard includes a small number of workers visiting the site on a seasonal basis. The proposed project is anticipated to introduce a small number 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 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 very high fire 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces which would: | | | | |
| i) result in substantial erosion or siltation on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iv) impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Discussion:

On January 14, 2014, Governor Jerry Brown declared a drought emergency in the state of California. That declaration was followed up on April 1, 2015, when the Governor directed the State Water Resources Control Board to implement mandatory water reductions in cities and towns across California to reduce water usage by 25%. These water restrictions do not apply to agricultural users. However, on April 7, 2017, Governor Jerry Brown signed an executive order lifting California's drought emergency in all but four counties (Fresno, Kings, Tulare and Tuolumne). The County of Napa has not adopted or implemented any additional mandatory water use restrictions. The County requires all discretionary permit applications (such as use permits and ECPAs) to complete necessary water analyses in order to document that sufficient water supplies are available for the proposed project and to implement water saving measures to prepare for periods of limited water supply and to conserve limited groundwater resources.

The project site is located in two watersheds: the Napa River – Larkmead Reach and the Kellett Mine Creek watershed, both of which are 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 mainstem of the Napa River by reducing the delivery of coarse load sediments to the river (Stillwater Science and W. Dietrich, 2002). However, the finer sediments that are not trapped by dams negatively affect salmonid habitat by reducing gravel permeability potentially affecting special-status fish species (Stillwater Science and W. Dietrich, 2002).

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

Because vineyard properties may pose threats to water quality by discharging sediment, nutrients, and pesticides and/or by increasing storm runoff, which consequently can cause erosion and sedimentation and otherwise impact aquatic life, in July 2018 the San Francisco Bay Regional Water board adopted a water quality control permit (or General Permit) for vineyard properties in the Napa River and Sonoma Creek watersheds (Order #R2-2017-0033). The General Permit regulates parcels (including contiguous parcels under common ownership) developed with five or more acres of vineyard located in either of these watersheds. The Napa River and Sonoma Creek TMDLs adopted by the San

Francisco Bay Regional Water Board have established performance standards for sediment discharge and storm runoff to protect and restore water quality. The General Permit would require actions to control pollutant discharges including sediment and storm runoff from vineyards and unpaved roads, which are located throughout vineyard properties, and pesticides and nutrients from vineyards. The General Permit would require vineyard owners or operators of parcels that meet the enrollment criteria to do the following: develop and certify a "farm plan"²⁰; implement the farm plan to achieve discharge performance standards; submit an annual report regarding plan implementation and attainment of performance standards; and participate in group or individual water quality monitoring programs.

In the General Permit the San Francisco Bay Regional Water Board identified four significant sediment sources that are associated with vineyard properties: i) vineyard soil erosion; ii) offsite erosion caused by vineyard storm runoff increases; iii) road-related sediment delivery; and iv) channel incision. Napa County ECPA requirements and standards primarily address and control two of these sources, vineyard soil erosion and vineyard storm runoff. The General Permit will fill gaps in local regulation so that all four sediment sources are effectively controlled to reduce fine sediment deposition in stream channels that provide habitat for endangered steelhead populations, locally-rare Chinook salmon populations, and exceptionally diverse assemblages of native fish species in these watersheds. Additional details on the Vineyard Properties General Permit can be obtained from the Regional Water Board²¹.

Four ephemeral streams run through the project parcel, all of which are likely jurisdictional under Section 404/401 of the CWA and Section 1602 of the CFGC. The proposed project has been setback from these features per NCC 18.108.025 (General Provisions – Intermittent/Perennial Streams) (discussed further in **Section IV [Biological Resources]**).

- 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 #P20-00063-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).

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

In 2009, Napa County began a comprehensive study of its groundwater resources to meet identified action items in the County's 2008 General Plan update. The study, by Luhdorff and Scalmanini Consulting Engineers (LSCE), emphasized developing a sound understanding of groundwater conditions and implementing an expanded groundwater monitoring and data management program as a foundation for integrated water resources planning and dissemination of water resources information. The 2011 baseline study by LSCE, which included

²⁰ 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.

²¹ https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/agriculture/vineyard/

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 the increase in water demand as a result of the proposed project (Richard C. Slade & Associates, February 18, 2020 - **Exhibit E**). The WAA estimates the onsite groundwater recharge, overall availability, and existing and proposed use, in order to assess potential impacts on groundwater.

The project proposes to irrigate the vineyard from the two existing wells on the parcel. Water demands for the existing 1.1-acre vineyard, winery with an existing permitted production of 5,000 gallons and onsite residential uses (including 0.5-acre landscaping) are currently being met by two (Wells #2 and #3) of the existing four wells on the property (including both parcels), and would also meet the water demand for irrigation of the proposed 4.5-net acre vineyard. Two of the four wells are located on the project parcel (wells #1 and #2), and wells #3 and #4 located on the adjacent parcel under same ownership; well #1 was taken out of service due to issues with dissolved iron, and well #4 is used to meet the water demands for the residence on the adjacent parcel within the subject property. The existing water demand for the property for the residential uses, winery, and existing vineyard and landscaping is 5.36 acre-feet per year (AF/yr). There are no known offsite wells located within 500 feet of the project wells.

The proposed vineyard (approximately 4.5 net-acres) is anticipated to utilize approximately 2.25 AF/yr. Typically, the annual irrigation season ranges from late May to September. After development, the proposed project in conjunction with existing groundwater use would result in approximately 7.61 AF/year of groundwater demand (RCS February 2020 – **Exhibit E**). Irrigation pipelines would be located within existing roadways, vineyards and vineyard avenues and/or within the proposed clearing limits. The project intends to switch to dry-farming after 3 to 5 years of root establishment.

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 40 inches per year over the approximate 40.01 acres of the parcel’s land area available for recharge and a 14% deep percolate recharge estimate, estimates the average annual groundwater recharge of the parcel to be approximately 34.5 AF/year (**Exhibit D**). While 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 WAA also anticipates a potential recharge rate during drier years of ± 14.1 AF/yr, where $\pm 41\%$ of the average precipitation occurs (see **Exhibit E** for details and calculations).

The project as proposed, in conjunction with existing use, is estimated to have an annual onsite future groundwater demand of 7.61 AF/year, which is below the estimated average annual recharge volume of 34.5 AF/year, and below the anticipated recharge rate during drier years of 14.1 AF/yr.

Considering: i) anticipated annual water use of the project parcel for existing and proposed use of approximately 7.61 AF/year is below the parcel’s anticipated annual groundwater recharge rate of approximately 34.5 AF/year; ii) there is no evidence to date indicating that there are groundwater problems or declining well production in the this area of the County; and iii) incorporation of the standard water use condition below to monitor water use as a result of vineyard establishment and ongoing vineyard operations and maintenance (if approved), the proposed project is anticipated to result in less than significant impacts to groundwater supplies, groundwater recharge, and local groundwater aquifer levels.

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

- The owner/permittee shall be required (at the permittee’s expense) to record well monitoring data (specifically, static water level no less than quarterly, and the volume of water no less than monthly). Such data shall be provided to the County, if the PBES Director determines that substantial evidence indicates that water usage is affecting, or would potentially affect, groundwater supplies. If data indicates the need for additional monitoring, and if the owner/permittee is unable to secure monitoring access to neighboring wells, onsite monitoring wells may need to be established to gauge potential impacts on the groundwater resource utilized for the project. Water usage shall be minimized by use of best available control technology and best water management conservation practices.
- In order to support the County’s groundwater monitoring program, well monitoring data as discussed above shall be provided to the County if the Director of Public Works determines that such data could be useful in

supporting the County’s groundwater monitoring program. The project well shall be made available for inclusion in the groundwater monitoring network if the Director of Public Works determines that the well could be useful in supporting the program.

- In the event that changed circumstances or significant new information provide substantial evidence that the groundwater system referenced in the ECPA would significantly affect the groundwater basin, the PBES Director shall be authorized to recommend additional reasonable conditions on the owner/permittee, or revocation of this permit, as necessary to meet the requirements of the Napa County Code and to protect public health, safety, and welfare.
- c. Earthmoving activities have the potential to alter the natural pattern of surface runoff, which could lead to areas of concentrated runoff and/or increased erosion. The conversion of existing vegetation to vineyard would alter the composition of the existing land cover and infiltration rates, which could affect erosion and runoff. The project does not propose any alteration to a stream, river, or drainage course, or include the creation of impervious surfaces that would concentrate runoff.

Erosion control measures and plan features that are not anticipated to affect drainage patterns but would assist in minimizing the potential for increased erosion and water runoff include a no-till cover crop with vegetative cover density of 90% (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 D** for details related to the following discussion.

Proposed erosion control and project features that have the potential to alter natural drainage patterns include straw wattles and rolling dips. 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 rolling dips would have a negligible effect on existing drainage patterns in that they would not alter the existing topographic contours of the site.

Proposed diversion ditches and outfalls have a greater potential to alter drainage patterns, in that they are designed to capture sheet flow before reaching erosive velocities and divert it to other locations (including a detention basin and rock-filled avenue and rock apron) within the project area. While this erosion control measure would have the potential to divert water to other locations within the project area, their limited use (consisting of two ditches with a total length of approximately 800 feet), and that they do not divert water into different drainage areas or drainage courses, this feature is not anticipated to substantially alter the overall drainage patterns within the project site or the surrounding area.

A Hydrologic Analysis for the project was prepared by the Project Engineer (PPI Engineering, February 2020 - **Exhibit D**). The Analysis identifies five watershed basins (or drainage basins) within the project area, and utilizes the Natural Resource Conservation Service (NRCS) Technical Release 20 (TR-20) method. The Analysis concluded that there would be either no change in runoff for all watersheds except one, which predicted a small increase in runoff post-project; a detention basin was designed within this watershed to mitigate these potential increases and reduce post-project runoff to below pre-project levels. Pre- and post-project runoff calculations for each watershed, taking into account the detention basin, are summarized in **Table 10**²².

Table 10 – Hydrologic Modeling Calculations (TR-20) Results: Runoff Rates

	Peak Discharge Flow (cfs) by 24-hour Storm Event Frequency Return Interval (cubic feet/second)			
	2-year	10-year	50-year	100-year
Watershed 1				
Pre-project conditions	0.90	1.96	3.13	3.63
Post-project conditions	0.90	1.96	3.13	3.63
Change	0.00	0.00	0.00	0.00
Watershed 2				
Pre-project conditions	0.61	1.36	2.19	2.55
Post-project conditions	0.61	1.36	2.19	2.55
Change	0.00	0.00	0.00	0.00
Watershed 3				
Pre-project conditions	2.64	5.54	8.67	10.01

²² On August 18, 2020, the County Engineering Division determined the project’s modeling technical adequate.

Post-project conditions	2.62	5.51	8.63	9.97
Change	-0.02	-0.03	-0.04	-0.04
Watershed 4				
Pre-project conditions	1.54	3.47	5.6	6.53
Post-project conditions	1.45	2.88	4.34	4.97
Change	-0.09	-0.59	-1.26	-1.56
Watershed 5				
Pre-project conditions	4.95	10.94	17.47	20.31
Post-project conditions	4.90	10.85	17.36	20.19
Change	-0.05	-0.09	-0.11	-0.12

Source: PPI Engineering, February 2020, Hydrologic Study - **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 properly²³.

- 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 by approximately 1.09 tons/year (or an approximate 18% reduction), have no effect on runoff rates, and maintain project site drainage characteristics as compared to existing conditions. The ECPA includes BMPs that are consistent with NCC Section 18.108.080(c), as well as with Regional Water Board guidance from the Storm Water Best Management Practice Handbooks for Construction and for New Development and Redevelopment, and the Erosion and Sediment Control Field Manual.

Furthermore, project approval, if granted, would be subject to the following condition of approval, in addition to the Erosion and Runoff Control (i.e., Hydromodification) Installation and Operation conditions of approval identified in **Section VII (Geology and Soils)**, which would further reduce and avoid potential impacts to water quality as a result of the project and ongoing operations.

²³ Compliance with Section 18.108.135 is achieved by including their provisions as conditions of approval for a project, if granted.

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

Discussion:

- a. The proposed site is in a rural area of Napa County and the nearest established community, Calistoga, is approximately 2.0 miles northwest of the project site. Therefore, the proposed vineyard and subsequent vineyard operations would not physically divide an established community and no impact would occur.
- b. Surrounding land uses consist predominantly of undeveloped land and scattered rural residential, and vineyards. Surrounding parcels are zoned Agricultural Watershed (AW) and designated Agriculture, Watershed and Open Space (AWOS) in the Napa County General Plan Land Use Element. Vineyards and associated improvements are permitted uses under these designations.

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

- The project as proposed is consistent with NCC Section 18.108.010, which requires that soil loss and runoff as a result of a project be minimized to protect water quality. As discussed in **Sections VII (Geology and Soils)** and **X (Hydrology and Water Quality)**, the proposed project is anticipated to decrease soil loss and potential sedimentation by approximately 18% and maintain runoff conditions as compared to existing conditions.
- The proposed project is consistent with Policies CON 48 and CON 50c, which require pre-development sediment erosion conditions and runoff characteristics following development not be greater than predevelopment conditions. As discussed in **Section VII (Geology and Soils)** and **Section X (Hydrology and Water Quality)** the project as proposed would reduce soil loss, sedimentation, and maintain runoff characteristics as compared to existing conditions.
- The proposed project, with implementation of **Mitigation Measures BR-1 through BR-3**, is consistent with Policies CON-13 and CON-16, which require discretionary projects consider and avoid impacts to fisheries, wildlife habitat, and special-status species

through evaluation of biological resources. A Biological Resources Reconnaissance Survey was prepared for the proposed project. The project as proposed and with incorporation of **Mitigation Measure BR-1** through **BR-3** would avoid potential direct, indirect, and cumulative impacts to special-status plant species and associated habitat occurring on the project site. Furthermore, implementation of these measures would not affect the feasibility of the proposed project in that, impacts to special-status species and their habitat can be avoided while allowing the proposed increase in agricultural uses to be developed and operated on the project site.

- With implementation of **Mitigation Measures BR-4** and **BR-5** and standard stream protection conditions of approval, the proposed project is consistent with Goals CON-2 and CON-3, which requires maintaining existing levels of biodiversity and protection of special-status species and habitat, and the County Conservation Regulations through preservation of natural habitats and existing vegetation. With these measures and conditions, the proposed project would maintain levels of biodiversity and would avoid impacts to special-status plant and animal species.
- With implementation of **Mitigation Measures BR-1** through **BR-5**, and stream protection conditions of approval, the proposed project is consistent with Policy CON-13, which requires discretionary projects to consider and avoid impacts to fisheries, wildlife habitat, and special-status species.
- As proposed, the project is consistent with CON-16, which requires discretionary projects prepare an evaluation of biological resources. A Biological Resources Reconnaissance Survey was prepared for the proposed project (**Exhibit B-1**).
- The proposed project is consistent with Policy CON-30 and NCC Section 18.108.026, which encourages the avoidance of wetlands, as there are no wetlands within the project site.
- The proposed project as proposed is consistent with Policy CON-18, which encourages the reduction of impacts to habitat conservation and connectivity. With incorporation of **Mitigation Measure BR-4**, the proposed project would be revised to allow for a minimum 100-foot wildlife movement corridor between Blocks B and C, and the proposed fencing plan would be limited to block perimeters only, and allow small mammal access; therefore, wildlife movement would not be impaired.
- The proposed project is consistent with Policies CON-48 and CON-50c, which require pre-development sediment erosion conditions and runoff characteristics following development to be no greater than pre-project conditions. As discussed in **Section VII (Geology and Soils)** and **Section X (Hydrology and Water Quality)**, the proposed project would reduce soil loss and sedimentation, and result in no change to runoff.
- The project as proposed is consistent with Policy CON-65b. Due to the proposed project's scope and scale, its construction and operational GHG emissions, as disclosed in **Section VIII (Greenhouse Gas Emissions)**, are anticipated to be less than significant.
- The project as proposed is consistent with Policy AG/LU-1, which states that agricultural and related activities are the primary land uses in Napa County, as the proposed project is vineyard development and would increase agriculture uses in the County.
- The project as proposed is consistent with General Plan land use designation of Agricultural, Watershed and Open Space (AWOS), and is therefore consistent with Policy AG/LU-20.

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

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

Discussion:

- a-b. The project site is not in an area with a known mineral resource of value to the region or state or within a known mineral resource recovery area (Napa County Baseline Date Report, Figure 2-2 and Map 2-1, Version 1, November 2005; Napa County General Plan Map, December

2008; Special Report 205, Update of Mineral Land Classification, Aggregate Materials in the North San Francisco Bay Production-Consumption Region, Sonoma, Napa, Marin and Southwestern Solano Counties, California Geological Survey, 2013). The nearest known mineral resource area in Napa County is located over 20 miles to the southeast of the project site. Proposed site improvements and development of vineyard on the parcel would not physically preclude future mining activities from occurring. Therefore, no impact would occur.

XIII.	NOISE. Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
	a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-b. The project site is located in a rural setting where surrounding parcels are generally undeveloped, planted with vineyards and contain wineries. The closest nearest residences (outside of the property lines) are located between approximately 0.23 to 0.27 miles ($\pm 1,200$ feet and $\pm 1,400$ feet) to the north and ($\pm 1,600$ feet) to the east of the project area. Additionally, adjacent proprietries and properties in the immediate area contain vineyard.

Activities associated with installation of the proposed project, including earthmoving and subsequent vineyard operations, could generate noise levels above existing conditions. Several different types of equipment would be necessary for implementation and operation of the proposed project, including a bulldozer, excavator, dump truck, trencher, backhoe, and small trucks. **Table 11** characterizes typical equipment noise levels at a reference distance of 50 feet. As identified in **Table 11**, equipment used for vineyard development could produce a maximum of 89 (A-weighted decibels) dBA at a distance of 50 feet.

Table 11 – 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 Data Report Chapter 6 (Noise Resources) November 2005 (Version 1)

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

Table 12 – Estimated Distance to dBA Contours from Construction Activities ¹

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

¹ Based on a source noise level of 90 dBA

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

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

Noise related to farming activities and equipment typically ranges from 75 dBA to 95 dBA, with an average of approximately 84 dBA (Toth 1979 and Napa County Baseline Date Report, Version 1, November 2005). These noise levels should be reasonably representative of noise levels from wheeled and tracked farm equipment. Noise sources associated with ongoing vineyard operation and maintenance include a variety of vehicles and equipment, such as ATV's, tractors, grape haul trucks, passenger cars, and light trucks, which would occur on a temporary and seasonal basis. **Table 13** characterizes the typical reduction of farming activity noise levels as the distance increases from the source using a noise source level of 84 dBA.

Table 13 – Estimated Distance to dBA Contours from Farming Activities ¹

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

¹ Based on a source noise level of 84 dBA

Source: Napa County Baseline Date Report, Noise Section Table 6-14, Version 1, November 2005.

Based on distances to existing residences, it is anticipated that noise due to operation and maintenance agricultural activities would be below 50 dBA at the closest existing offsite residences.

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

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

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

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

Discussion:

- a. The proposed project involves earthmoving activities and the installation and maintenance of erosion control measures in connection with the development and cultivation of vineyard. It does not involve the construction of new homes, businesses, roads, or infrastructure (e.g., water, sewer or utility lines) that would directly or indirectly induce substantial unplanned population growth. Construction and installation activities of the proposed project would generate a minimal number of employees to the 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

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

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

Discussion:

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

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

Discussion:

- a-b. Currently, the project site is developed with approximately 1.1 acres of existing vineyard, one single-family residence, one guest cottage, landscaped areas, outbuildings, and access roads.

The proposed project is expected to generate approximately three round trips per day during construction. Four truck trips would deliver and remove heavy equipment at the start and end of project construction. Typical construction equipment anticipated for project implementation

includes a medium excavator, D8 bulldozer, haul trucks, loader, and two farm tractors with trailers. Pruning would occur approximately 15 days of the year and is anticipated to generate 4 daily employees, resulting in approximately 2 round trips per day during pruning. Weed control would occur between April and July (outside of pruning months) and is anticipated to generate up to 4 to 5 workers for 5 to 8 days annually. Harvest would occur approximately 3 to 5 days of the year and is anticipated to generate up to 10 to 15 daily employees, resulting in approximately 5 to 8 round trips per day during harvest. Flatbed pick-up trucks would be used during harvest to bring the grapes to on-site winery. 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 Dunaweal Lane, approximately 0.25 mile south of its intersection with Highway 29. 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 and it is anticipated that a number of existing employees would be utilized to develop and manage the proposed vineyard. The proposed project would result in a minimal increase in traffic levels along the local roadways compared to existing conditions, and would not result in decreased travel times on roads in the vicinity of the proposed project or a substantial increase in vehicle miles traveled given the scale of the proposed project. Further, the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, or designated bicycle and pedestrian facilities or with CEQA Section 15064.3(b). Therefore, the impact would be less than significant.

- c. The project proposes to utilize the existing site access off Dunaweal Lane for project development (**Figures 1-3**). The proposed project does not include roadway improvements and/or modifications to Dunaweal Lane, 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 and 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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

Notice of the proposed project was sent to the Yocha Dehe Wintun Nation, the Middletown Rancheria of Pomo Indians, and the Mishewal Wappo Tribe of Alexander Valley on August 31, 2020. On September 16, 2020, the County received a response letter from the Yocha Dehe Wintun Nation indicating that the project area is not within their aboriginal territory, and therefore declined to make any comments on the project. On November 24, 2020, the County sent correspondence to the Yocha Dehe Wintun Nation acknowledging their response letter and closing the consultation invitation because consultation was not requested within the 30-day notification period. The Mishewal Wappo Tribe of Alexander Valley did not

request consultation within the 30-day notification period, and because no response to the August 31, 2020, consultation invitation was received, the County sent a consultation closure notice to the Tribe on November 23, 2020.

On October 22, 2020, the Planning Division received a response letter from the Middletown Rancheria indicating that the proposed project is within their aboriginal territories, and requesting a tribal consultation on this project. On November 6, 2020, the Planning Division met with representatives from the Middletown Rancheria Tribal Historic Preservation Office and the Applicant’s Engineer on site. The Tribe determined that there was a moderate potential for cultural resources to be discovered, but that due to the limited scope of the proposed earth-disturbing activities, incorporation of the County’s standard Cultural Resources Condition of Approval would provide adequate protection for and avoidance of potential impacts on Tribal cultural resources. The County sent a closure notice to the Tribe on January 26, 2021.

a-b. As discussed in **Section V (Cultural Resources)**, the proposed project’s Cultural Resource Reconnaissance did not identify any historical or archaeological resources within the project area, although the probability of encountering cultural resources was determined to be high. As noted above, the Middletown Rancheria determined that incorporation of the County’s standard Cultural Resources Condition of Approval (identified in **Section V (Cultural Resources)**) would provide adequate protection for and avoidance of potential impacts on Tribal Cultural Resources. Therefore, the proposed project would result in less than significant impacts to Tribal Cultural Resources, including those that may be eligible for the CHRIS or local register or cultural resources as defined in Public Resources Code Section 5024.1(c).

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

Discussion:

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

Irrigation pipelines would be located within existing roadways, vineyards and vineyard avenues, and/or within proposed clearing limits. The proposed project would include the installation of 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, and a detention basin, 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 5.8 gross acres of vineyard (approximately 4.5 net acres) would be supplied by two existing onsite project wells. The WAA conducted by RCS Associates (**Exhibit E**) concluded that after full development, water use for the project parcel is estimated to be approximately 7.61 AF/year. Irrigation pipelines would be located within existing roadways, vineyards and vineyard avenues and/or within the proposed clearing limits. The project intends to switch to dry-farming after 3 to 5 years of root establishment. Based on the site-specific recharge analysis, the project parcel is estimated to have a groundwater recharge allotment of approximately 34.5 AF/yr. Furthermore, implementation of Mitigation Measure, may result in slightly reduced groundwater use. Therefore, the proposed project, in conjunction with existing uses, is anticipated to have less than significant impact on water supplies. Also see **Section X (Hydrology and Water Quality)** for additional disclosures and analysis.
- c. Given the small number of 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. 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 statutes and regulations. Therefore, no impact would occur.

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

Discussion:

The project site is located in a State Responsibility Area (SRA) that is designated as a Very High Fire Hazard Severity Zone and is within a Federal Responsibility Area (CALFIRE, 2007, Napa County GIS Fire Hazard Layer). The project site is steeply sloped on generally northwest- and northeast-facing slopes and elevations range from approximately 742 to 910 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 on the project site with the existing vineyard. The proposed project does not include any infrastructure that would exacerbate fire risk. The proposed project would not exacerbate wildfire risk and this impact would be less than significant.
- d. Although the proposed project would alter land cover, the proposed project includes temporary and permanent erosion control measures which would reduce the impact of stormwater runoff or drainage changes being discharged on or offsite and there would be a decrease in peak flow in the development area (see Section X [Hydrology and Water Quality]). The onsite residence and guest cottage closest to the proposed vineyard are located on relatively flat terrain. Therefore, there are no structures or people that would be exposed to downslope or downstream flooding or landslides and the impact would be less than significant.

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

Discussion:

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

- a. As discussed in this Initial Study, implementation of #P20-00130-ECPA, with the incorporation of identified mitigation measures and conditions of approval (should the proposed project be approved), would not have the potential to significantly degrade the quality of the environment.

Implementation of **Mitigation Measures BR-1 through BR-3** would avoid potential direct and indirect impacts to special-status bat, bird and plant species and their habitat. Existing deer fence surrounds the existing developed area, including the existing vineyard, winery, residential uses as well as proposed Block A and the western half of proposed Block B, as well as additional undeveloped area. **Mitigation Measure BR-4** would require that the vineyard Blocks B and C in the #P20-00063-ECPA be revised, prior to approval, to maintain a minimum 100-foot gap in between the two blocks to allow for north-south wildlife movement and use through the parcel. While the proposed project would result in portions of the site having reduced potential for on-site wildlife movement, the retention of blocks of vegetation with direct connectivity with similar habitats on neighboring properties would allow for continued local wildlife movement and use. As such, the proposed deer fencing, with mitigation incorporated, would not introduce significant new movement barriers to wildlife, direct and cumulative impacts to wildlife movement are expected to be less than significant. Implementation of **Mitigation Measure BR-5** would require the #P20-00063-ECPA be revised, prior to approval, to include the proposed 17.42-acre vegetation removal mitigation preservation area, consistent with the requirements of the Napa County Conservation Regulations (NCC Section 18.108.020D). The ephemeral streams on site are avoided with a

minimum 35-foot buffers. With incorporation of standard conditions to protect cultural resources that may be discovered accidentally, significant impacts to cultural resources are not expected (**Section V [Cultural Resources]**). Therefore, the proposed project as designed with the incorporation **Mitigation Measures BR-1** through **BR-5** and conditions of approval, the proposed vineyard development project would have a less than significant potential to degrade the quality of the environment.

- b. The vast majority of the project site is located within the Kellett Mine Creek Drainage. The Kellett Mine Creek Drainage contains approximately 609 acres. In 1993, vineyard acreage within this drainage was approximately 77 acres, or 12.6% of the drainage. Since 1993 approximately 33 acres of additional vineyard (or 5.4% of the drainage) have been developed to vineyard, resulting in approximately 18% of the drainage (or approximately 110 acres) containing vineyard.

It is estimated, based on evaluation of the County's GIS layer identifying Potentially Productive Soils (PPS) within the Kellett Mine Creek Drainage, that there are approximately 146 acres (24% of the drainage) having the potential to be developed to vineyard, this in conjunction with existing and approved vineyard development (approximately 110 acres) results in a total potential build out of approximately 256 acres or approximately 42% 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., Kellett Mine Creek Drainage) over the last 26 years (1993-2020) were used to project an estimation of vineyard development for the next three to five years. Over the past 26 years within the Kreuse Creek Drainage, approximately 4.1 acres of agriculture were developed per year (110 divided by 27). 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 12.3 to 20.5 acres over the next three to five years within the Kellett Mine Creek Drainage are considered reasonable estimates. NCC Chapter 18.108 includes policies that require setbacks of 35 to 150 feet from watercourses (depending on slopes), and General Plan Conservation Policy CON 24c that requires the retention of oak woodland at a 2:1 ratio, which limits the amount of potential vineyard acreage that could be converted within the watershed. It has been the County's experience with ECP projects that there are generally site-specific issues, such as oak woodland preservation, wetlands, other water features, special-status plant and animal species, or cultural resources that further reduce areas that can be developed to other land uses. Additionally, the vineyard acreage projections for the next three to five years do not consider environmental factors that influence vineyard site selection, such as sun exposure, soil type, water availability, slopes greater than 30%, or economic factors such as land availability, cost of development or investment returns.

Air Quality and GHG - Sections III and VIII:

The proposed project (#P20-00130-ECPA) includes the removal of vegetation and installation of vineyard and erosion control measures concurrent with other projects in the air basin that would generate emissions of criteria pollutants, including suspended particulate matter (PM) and equipment exhaust emissions. For construction-related dust impacts the Regional Water Board recommends that significance be based on the consideration of the control measures to be implemented (Regional Water Board, May 2017). As discussed in **Section III (Air Quality)** and shown in **Table 3** (Emissions from Vineyard Development and Operation) criteria pollutant emissions associated with development and operations are anticipated to be well below identified thresholds, and therefore are not expected to result in project or cumulatively significant impacts. Additionally, the 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 7 and 8**). As discussed in **Section VIII (Greenhouse Gas Emissions)**, the proposed project is not anticipated to result in substantial or significant GHG emissions, and includes the installation of grapevines and a permanent no-till cover crop, which may off-set (in whole or in part) potential impacts related to reductions in carbon sequestration. Potential contributions to air quality impacts associated with the proposed project, including GHG emissions and loss of sequestration, would be considered less than cumulatively significant through project design (i.e., scope and scale) and implementation of standard conditions of approval.

Biological Resources - Section IV:

A project specific Biological Resources Reconnaissance Survey (WRA, December 2019 - **Exhibit B-1**) was performed for the proposed project to evaluate potential habitat loss and disturbance to plant and wildlife species as a result of the proposed project. The reconnaissance survey included a records search to identify the presence or potential presence of special-status species within the project area. The records search included the USFWS, CNDDDB, and CNPS databases. As discussed in **Section IV (Biological Resources)**, two special-status plant species were identified onsite, including Sonoma ceanothus and redwood lily. No wetlands were identified in the project site. Five special-status animal species have the potential to occur within the project site; however, with the stream setbacks proposed in the ECPA and implementation of **Mitigation Measures BR-1, BR-2, and BR-3**, impacts on these species would be less than significant. With implementation

of **Mitigation Measure BR-4**, impacts on wildlife movement would be reduced to less than significant levels. 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 accidentally, significant impacts to cultural and tribal cultural resources are not expected (see **Section V [Cultural Resources]** and **Section XVII [Tribal Cultural Resources]**). Therefore, with the incorporation of the identified conditions of approval, the proposed vineyard development project would have a less than significant project-specific and cumulative impact on cultural and tribal cultural resources.

Geology and Soils - Section VII:

Soil loss and associated sedimentation resulting from implementation of the proposed project is anticipated to be reduced by approximately 1.09 tons/year as compared to existing conditions (**Table 6**). 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-filled avenue and rock apron, and detention basin, 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 Kellett Mine 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 calculations provided in the WAA prepared by RCS Associates (February 2020 - **Exhibit E**) indicate that the proposed development consisting of approximately 4.5 net-acres of vineyard is anticipated to utilize approximately 2.25 AF/yr. After development, the proposed project in conjunction with existing groundwater use would result in approximately 7.61 AF/year of groundwater demand (RCS February 2020 – **Exhibit E**).

The average annual rainfall utilized in the groundwater recharge analysis includes times of below-average and above-average rainfall, and therefore inherently includes drought year conditions. Based on annual average rainfall for the area (approximately 23.9 inches per year) and the size of the subject property (approximately 40-acres available for recharge), and other conditions that affect the amount of precipitation that has the potential to recharge the groundwater aquifer, such as geological conditions, runoff characteristics, and evapotranspiration, it was anticipated that approximately 14% of average rainfall or 34.5 AF/yr would be available for groundwater recharge.

Considering the anticipated water use for existing uses and proposed vineyard of 7.61 AF/yr is below the properties anticipated annual groundwater recharge rate of approximately 34.5 AF/yr, and below the anticipated recharge rate during drier years of 14.1 AF/yr , potential impacts associated with groundwater use is anticipated to result in less than significant impacts to groundwater supplies, groundwater recharge, local groundwater aquifer levels, and well interference or drawdown effects on nearby wells.

As discussed in **Section X.c (Hydrology and Water Quality)** a Hydrologic Analysis utilizing the TR-20 Runoff Model has been prepared by PPI Engineering (February 2020 - **Exhibit D**). The project does not include the creation of concentrated flows, or materially alter site drainage patterns, or materially alter site slopes no change in runoff volumes or time of concentrations are expected as compared to pre-project conditions (**Exhibit D**), 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 mitigation measures and conditions of approval identified in this Initial Study, achieves compliance with applicable NCC requirements and General Plan Goals and

Policies (also see **Section VIII [Greenhouse Gas Emissions]**).

Proposed Project Impacts found to be Less Than Significant

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

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

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

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LIST OF EXHIBITS:

- Exhibit A Agricultural Erosion Control Plan #P20-00063-ECPA
- Exhibit B-1 Biological Resources Reconnaissance Survey Report
- Exhibit B-2 Response to Napa County Comments on Biological Resources
- Exhibit C USLE (Soil Loss) Analysis
- Exhibit D Hydrologic Analysis
- Exhibit E Water Availability Analysis
- Exhibit F Project Revision Statement