

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

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

1. **Project Title:** Johnson Vineyard Agricultural Erosion Control Plan (ECPA) Application #P19-00220-ECPA
2. **Property Owner(s):** The Johnson Family Trust, U.A.D. September 10, 2012
3. **Lead Agency Contact:** Donald Barrella, Planner III, (707) 299-1338, [donald.barrella@countyofnapa.org](mailto:donald.barrella@countyofnapa.org)
4. **Project Location and APN:** 3363 State Highway 128, Calistoga, CA 94515, APN 017-160-036 (**Figures 1 and 2**)  
Section 34, Township 9 North, Range 7 West, Mt. Diablo Base  
Longitude 38°35' 25.84"N / Latitude 122°37' 31.11"W
5. **Project Sponsor:** Edward Johnson  
3363 State Highway 128  
Calistoga, CA 94515  
  
**Agent:** Drew Aspegren (Registered Professional Engineer No. 31418)  
Napa Valley Vineyard Engineering  
176 Main Street, Suite B  
St. Helena CA 94574

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

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

8. **Background/Project History:** The project parcel was significantly damaged by the Tubbs Wildfire (October 2017) and a portion of the burned vegetation was removed in 2018 under Notice of Emergency Timber Operation, Harvest Document 1-18EM-071-NAP (**Exhibit F**). The original project design of #P19-00220-ECPA included the development of an approximate 0.42-acre vineyard block located in the southwest corner of the project parcel (Block D); however, that block has been removed from the application, which resulted in the preservation of 20 trees (eleven of which are Valley oaks) and elimination of the need to upgrade an existing watercourse crossing due to increased intensity of use. Additionally, a portion of proposed Vineyard Block E (approximately 1 acre) has been developed outside the approved bounds of a previously approved ECPA covering the property (#95091-ECPA, Vineyard Block 1: Approved September 13, 1995 – **Exhibit G**), which is included as part of the proposed project. Approximately 1.5 acres of the 14.5 acres of vineyard approved under #95091 has yet to be developed.

Because the original submittal (April 22, 2019) contained the requisite application materials required by the County ECPA Application Checklist at that time, the application was determined to be a 'substantially conforming' and 'qualified permit application' pursuant to the recently enacted Water Quality and Tree Protection Ordinance (WQTPO) (Ordinance #1438), that became effective on May 9, 2019. Therefore, continued processing and review of this application will not be subject to the County Conservations Regulations (NCC Chapter 18.108) as amended by the WQTPO: this application is subject to the County Conservations Regulations that were in effect prior to May 2019.

9. **Description of Project:** The project includes clearing of vegetation (Douglas fir forest, mixed oak woodland, blue oak woodland, and ruderal), earthmoving, and installation and maintenance of erosion control measures associated with: i) the development of approximately 9.8-acres of vineyard (approximately 7.09 net planted acres) within six vineyard blocks located on an approximate 40 acre parcel (**Figures 1 - 3**), and ii) the ongoing maintenance of erosion control measures associated with approximately 1-acre of existing vineyard developed outside of the property's approved Agricultural Erosion Control Plan (ECPA) (#95091-ECPA, September 13, 1995); and therefore developed without the benefit of an approved ECPA (i.e. the northern half of proposed vineyard Block E). Typical slopes within the project area range from 5% to 35% with an average slope of approximately 15% (approximately 0.49 acres would be located on slopes over 30%). The project would remove: approximately 5.55-acres of Douglas fir forest, approximately 1.05-acres of mixed oak woodland, approximately 0.7-acre of blue oak woodland, and approximately 1.5-acres of ruderal vegetation. Approximately 143 trees with a 6-inch diameter at breast height (dbh) or greater are proposed to be removed. Rock generated would be used on-site for erosion control measures, surfacing of roadways and vineyard avenues, or landscaping, or stored on-site in existing rock storage areas or within proposed development areas, and any remaining rock may be transported off-site; therefore, it is anticipated that transport off-site of spoils would be limited. The vineyard would be irrigated via a drip irrigation system with water from the property's existing on-site well. Misters are proposed for frost protection as part of the project. No new wildlife exclusion fencing is proposed as part of the project.

**Erosion Control Measures:** Temporary erosion control measures include water bars, straw wattles (or fiber rolls), silt fencing, and the application of straw mulch at a rate of 2 tons per acre. Permanent erosion control measures include diversions ditches and a permanent no-till cover crop maintained at a minimum vegetation cover density of 80%; vineyard avenues would also maintain a vegetative cover density of at least 80%. Details of the proposed erosion control measures are provided in the Johnson Vineyard ECP #P19-00220-ECPA, dated January 10, 2020, prepared by Drew Aspegren (RPE No. 31418) of Napa Valley Vineyard Engineering, Napa, California (**Exhibit A**).

**Earthmoving:** Earthmoving and grading activities associated with the installation of erosion control measures and subsequent vineyard operation include, but are not limited to vegetation and tree removal, shallow soil ripping (18 inch maximum), rock removal, disking, the development and installation of erosion control measures, and rock storage.

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

- a. Installation of vineyard trellis and drip irrigation systems, and planting rootstock on a 5 foot by 7 foot spacing pattern for a vine density of approximately 1,245 vines per acre. Proposed Vineyard Block 2 (±0.15 acres) would be planted on a 5 foot by 6 foot spacing pattern to match the abutting vineyard.
- b. Ongoing inspection and maintenance of temporary and permanent erosion and runoff control measures.
- c. Ongoing operation and maintenance of the vineyard, which includes vine management (pruning, fertilization, pest, and disease control), weed control, irrigation and trellis system maintenance, and fruit harvesting. The management regime of the no-till cover crop will consist of mowing and springtime spot spraying within 12" of vines by contact or systemic herbicides: no pre-emergent spraying will be utilized as part of cover crop management.
- d. Environmental Commitment(s) - the owner/permittee, as part of this ECPA, has included the following element(s)<sup>1</sup>:
  - ii. Raptor and Passerine Bird Protection: Implementation of the following protection measures i) pre-construction surveys for work conducted between February 1 and August 31; ii) implementation of no disturbance buffer from active nests if identified; and, iii) maintaining the no-disturbance buffer until nestlings have fledged.
  - iii. Bat Protection: Implementation of the following protection measures i) pre-construction bat habitat and presence surveys prior to the commencement of development activities; and, ii) development and implementation of avoidance plan if bats are present.

**Table 1** lists a general schedule for the construction of the proposed project as identified in #P19-00220-ECPA and **Table 2** outlines typical general ongoing vineyard operations. The final implementation schedule is pending action on #P19-00220-ECPA.

**Table 1 – Implementation Schedule**

April 1	Commence land clearing, ground preparation, and installation of vineyard infrastructure.
October 1	All tillage and erosion control completed, including construction of all structural measures (e.g. diversion ditches).
October 15 <sup>1</sup>	All winterization complete, including seeding, straw mulching, and straw wattle installation.

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

**Table 2 – Annual Operations Schedule**

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

Implementation of the proposed project would be in accordance with the Johnson Vineyard ECPA prepared by Napa Valley Vineyard Engineering (April 10, 2019, revised January 10, 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).

<sup>1</sup> The complete language of the ECPA Environmental Commitments can be found in Section IV (Biological Resources) of this Initial Study and in Exhibit A under 'Special Notes'.

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

The proposed project would occur on one parcel totaling approximately 40 acres located at 3363 State Highway 128 in Calistoga, California, approximately 0.5 miles southwest of the intersection of State Highway 128 and Bennett Lane (**Figures 1-3**). Development on the project parcel includes the following the structures and infrastructure associated with the parcel's existing residential and agricultural uses: single-family residence; groundwater well and associated infrastructure, including water storage tanks and supply/delivery lines; driveway and access roads; associated accessory structures, including a shop/barn, an agricultural chemical storage shed, and pool and associated residential landscaping including other ruderal vegetation (encompassing approximately 4-acres), and approximately 13-acres of existing vineyard ( $\pm 11.21$  net planted acres) developed under approved Agricultural Erosion Control Plan #95091-ECPA (**Exhibit G**). Vineyard development is predominately located in the central portion of the parcel (identified as Blocks 2A and 2B) and along the western periphery of the parcel (identified as Block 1), including associated primary irrigation lines. An existing paved driveway provides access to the project parcel from State Highway 128, and existing dirt roads provide access from the paved driveway to existing vineyards.

The project parcel is located approximately 1-mile northwest of the City of Calistoga within the Blossom Creek Drainage: there are no mapped blue-line streams located on the project parcel. Surrounding land uses within the immediate vicinity (i.e. within approximately one mile) of the project parcel predominately consist of rural residential, agriculture (i.e. vineyards) generally to the north and south, and undeveloped land (naturally vegetated and/or wooded hillsides) to the east and west. The nearest wineries are generally located over 0.75 miles to the northeast on the east side of State Highway 29. Overall, within the Blossom Creek drainage there are seven approved wineries with a total production capacity of 383,000 gallons per year. The nearest known schools (Calistoga Elementary and Calistoga High) are located approximately 2.5 miles to the east in the City of Calistoga (Napa County GIS: Schools Layer). The nearest residences are located approximately 300 feet ( $\pm 0.05$  miles) to the north and southeast of the project parcel.

General topography of the surrounding area and the project site consists of northeastern facing hill sides, peaks, ridgelines, and valleys associated with the northern end of the Napa Valley and Western Mountains, elevations in this area range from  $\pm 400$  feet to  $\pm 1,200$  feet above mean sea level (msl). General topography of the project site consists of gently to steeply sloping northeast and southwest facing hill slopes (slopes typically 5% to 35% with an average slope of 15%) with elevations within the project site generally ranging between 470 to 580 feet above sea level above msl.

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 located  $\pm 1.75$  miles to the south and  $\pm 3$  miles to the southeast (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 gravelly loam, 5 to 39 percent slopes (Soil Series #139); Forward gravelly loam, 12 to 57 percent slopes (Soil Series #140); and Forward-Kidd complex (Soil Series #141), 50 to 75 percent slopes (Napa Valley Vineyard Engineering, January 2020 - **Exhibit A** and **Exhibit E**).

Vegetation types of the area generally consist of Coniferous Forest (Redwood and Douglas-fir), Mixed Oak woodlands, and vineyard (Napa County GIS Vegetation layer). Vegetation types occurring within the project parcel consist of approximately 7.83 acres of Douglas fir forest, 8.67 acres mixed oak woodland, approximately 4.56 acres blue oak woodland, approximately 0.05 acres seasonal wetland, a constructed reservoir/pond encompassing approximately 1.5 acres, and approximately 17.38 acres of developed lands (that includes vineyard, residential and associated landscaping, access and roadways, and other ruderal areas) within the parcel (WRA, January 2020 - **Exhibit B-1**).

As indicated in the Background/Project History section: i) only a portion of Vineyard Block A in #95091-ECPA has been developed (approximately 1.5 acres of 2.5 acres), and the northern half of proposed Vineyard Block E covers an area of existing vineyard developed outside of approved boundaries of #95091-ECPA; and ii) the project parcel was significantly damaged by the Tubbs Wildfire (October 2017) and a portion of the burned vegetation (including approximately 7.8-acres of Douglas Fir Forest) was removed in 2018 under Notice of Emergency Timber Operation, Harvest Document 1-18EM-071-NAP (**Exhibit F**).

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

**Responsible (R) and Trustee (T) Agencies**

California Department of Forest and Fire Protection (CalFire) (T)  
California Department of Fish and Wildlife (CDFW) (T)  
U.S. Army Corps of Engineers (USACE) (R)  
Regional Water Quality Control Board (Regional Water Board) (R)

**Other Agencies Contacted**

The Mishewal Wappo Tribe of Alexander Valley  
The Yocha Dehe Wintun Nation  
The Middletown Rancheria

- 12. California Native American Tribal Consultation<sup>2</sup>:** Have tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun? [Also see **Section XVIII (Tribal Cultural Resources)** for additional details regarding this subject matter].

Notice of the proposed project was sent to the Yocha Dehe Wintun Nation, the Middletown Rancheria, and the Mishewal Wappo Tribe of Alexander Valley on May 29, 2019. On June 6, 2019, the County received a response letter from the Middletown Rancheria indicating they have cultural resources or sites in the vicinity of the project area, and requested the following condition be applied to the permit (should the project be approved): *Applicant must engage with the Middletown Rancheria in a Cultural Resource Monitoring Agreement for the preservation and protection of all cultural resources during all ground disturbance activities as identified by the Middletown Rancheria.* On July 1, 2019, the County received a response letter from the Yocha Dehe Wintun Nation indicating that the project is not within the aboriginal territories and therefore decline to make any comments on the proposed project.

On July 11, 2019, the County sent correspondence to the Middletown Rancheria and to the Yocha Dehe Wintun Nation acknowledging their response letters and closing the consultation invitation because consultation was not requested within the 30-day notification period. The Mishewal Wappo Tribe of Alexander Valley did not request consultation within the 30-day notification period, and because no response to the May 29, 2019, consultation invitation was received, the County sent a consultation closure notice to the Tribe on July 11, 2019.

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<sup>2</sup> **Note:** Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

**ENVIRONMENTAL 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 #P19-00220-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:

- Napa Valley Vineyard Engineering, January 10, 2020, Erosion Control Plan, Johnson Vineyard (orig. submittal April 2019) (**Exhibit A**)
- WRA Environmental Consultants, April 2019, Biological Resources Reconnaissance Survey Report, Johnson Property, 3363 State Route 128 (APN: 017-160-036) (**Exhibit B-1**)
- WRA Environmental Consultants, January 2020, Response to Comments (Biology), Johnson Vineyard Agricultural Erosion Control Plan Application #P19-00220-ECPA; 3363 State Highway 128 (APN: 017-160-036) (**Exhibit B-2**).
- Napa Valley Vineyard Engineering, January 9, 2020, Hydrology Study, Johnson Vineyard (**Exhibit C**).
- Napa Valley Vineyard Engineering, January 10, 2020, Water Demand and Water Availability Analysis, Johnson Vineyard (**Exhibit D**).
- Napa Valley Vineyard Engineering, January 9, 2020, USLE (soil loss) Analysis, Johnson Vineyard (**Exhibit E**).
- Russell Kobayashi, May 14, 2018, Archeological Survey Report, Johnson Property Emergency Notice
- California Department of Forestry and Fire Protection, June 2018 and May 2019, Notice of Emergency Timber Operation and Notice of Inspection, Harvest Document 1-18EM-071-NAP (**Exhibit F**).
- Agricultural Erosion Control Plan #95091 (**Exhibit G**)
- Site inspection conducted by Napa County Planning Division staff on January 11, 2019.
- 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. Attached as **Exhibit H** is the signed Project Revision Statement.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature

June 11, 2020

Date

Donald Barrella  
Napa County  
Planning, Building and Environmental Services Department

**ENVIRONMENTAL CHECKLIST FORM**

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>I. AESTHETICS.</b> Except as provided in Public Resources Code Section 21099, would the project:				
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) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<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. While State Highway 128 is a viewshed road (Napa County GIS, Scenic Corridors Layer), existing woodlands to remain located between the project site and State Highway 128 (approximately 1 mile) would screen the vineyard from the highway. The site is not located on a prominent hillside, a major or minor ridgeline (Napa County GIS, Ridgelines Layer). There are no significant rock outcroppings or geologic features on the project parcel that would be impacted by the project. Although trees would be removed with the proposed project (see **Section IV Biological Resources**), the project site is not visible from a scenic highway or roadway, as previously noted. Therefore, the proposed project would have a less than significant impact on scenic vistas, scenic roadway, buildings, scenic trees, or rock outcrops.
- c. The proposed project would result in the removal of existing vegetation within the proposed development area and the development of vineyard. The proposed project is consistent with the Napa County AWOS land use designation and with adjacent land uses, which include other vineyards. Therefore, the proposed project would not substantially degrade the existing visual character or quality of public views of the site or its surroundings, resulting in a less than significant impact.
- d. Proposed agricultural operations on the parcel would require some lighted nighttime activities consistent with the nighttime activity already occurring on the project parcel and in the surrounding area, which includes vineyard and agricultural uses. Lighting would be in the form of headlights or downward direction lights on equipment being used during nighttime harvest. The proposed project could include nighttime harvest (typically from 8 p.m. to 8 a.m.) occurring approximately one to three days per year, and sulfur applications (typically from 9 p.m. to 2 a.m.) occurring approximately one to three 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.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>II. AGRICULTURE AND FOREST RESOURCES.</b> "Forest land" is defined by the State as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." (Public Resources Code Section 12220(g)) The Napa County General Plan anticipates and does not preclude conversion of some "forest land" to agricultural use, and the program-level EIR for the 2008 General Plan Update analyzed the impacts of up to 12,500 acres of vineyard development between 2005 and 2030, with the assumption that some of this development would occur on "forest land." In that analysis specifically, and in the County's view generally, the conversion of forest land to agricultural use would constitute a potentially significant impact only if there were resulting significant impacts to sensitive species, biodiversity, wildlife movement, sensitive biotic communities listed by the California Department of Fish and Wildlife, water quality, or other environmental resources addressed in this checklist.				
a) 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 Resource Code Section 12220(g)), timberland (as defined in Public Resource Code Section 4526), or timberland zoned Timberland Production (as defined in Government Code Section 51104(g))? | <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?   | <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 or conversion of forest land to non-forest 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 Environmental Commitments included in the ECPA application by the owner (i.e. erosion and runoff protection and control, preconstruction surveys, and sensitive species avoidance and protection measures) are intended 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 subject project (#P19-00220-ECPA) would be subject 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 Grazing Lands would be consistent with this designation and would not result in an impact to farmland within Napa County.
- b. The project site has a General Plan land use designation of Agriculture, Watershed and Open Space (AWOS) and is zoned Agricultural Watershed (AW). Therefore, the establishment and operation of vineyard totaling approximately 11-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 5.55-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 species<sup>3</sup>. 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, the project site is not located within the commercial forest land base of California, and that the conversion of approximately 5.55-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), VI (Geology and Soils), VIII (Hazards and Hazardous Materials), IX (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 Measure BR-1 and BR-2**). Therefore, the conversion of approximately 5.55-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 Tubbs Wildfire (October 2017) and a portion of the burned vegetation (including approximately 7.8-acres of Douglas Fir Forest) was removed in 2018 under Notice of Emergency Timber Operation, Harvest Document 1-18EM-071-NAP (**Exhibit F**), which does not include a timber restocking requirement, and 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.

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

**Discussion**

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

<sup>3</sup> 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.



On June 2, 2010, the Bay Area Air Quality Management District (BAAQMD) Board of Directors unanimously adopted thresholds of significance to assist in the review of projects under the California Environmental Quality Act (CEQA). These guidelines were updated in May 2017 to address the California Supreme Court's 2015 opinion in *Cal. Bldg. Indus. Ass'n vs. Bay Area Air Quality Mgmt. Dist.*, 62 Ca 4<sup>th</sup> 369. These thresholds are designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA, and were posted on the BAAQMD website and included in the BAAQMD updated CEQA Guidelines (May 2012). The thresholds are advisory and may be followed by local agencies at their own discretion.

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

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

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

a-b. The project site is located in the foothills bordering the northwestern end of the Napa Valley approximately 1 mile northwest 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 (O<sub>3</sub>), ozone precursors oxides of nitrogen and reactive organic gases (NO<sub>x</sub> and ROG), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), and suspended particulate matter of ten micrometers or less and two and a half micrometers or less (PM<sub>10</sub> and PM<sub>2.5</sub>). Other criteria pollutants, such as lead (Pb) and sulfur dioxide (SO<sub>2</sub>), 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 Vineyards<sup>4</sup> for an approximately 560-acre vineyard development, Walt Ranch Vineyard<sup>5</sup> for an approximately 507-acre vineyard development, and Circle-S Ranch Vineyards<sup>6</sup> for an approximately 400-acre vineyard development.<sup>7</sup>

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<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>.

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 <sub>x</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>
	Construction Emissions			
Pounds per day: 150-acre vineyard development <sup>1</sup>	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 development <sup>2</sup>	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 <sup>3, 4</sup>	4.6	42.3	5.21 <sup>4</sup>	24.21 <sup>4</sup>
Construction threshold	54	54	54	82
Operational Emissions				
Pounds per day: 400-acre vineyard operation <sup>1</sup>	7.78	2.85	0.80	4.22
Pounds per day: 560-acre vineyard operation <sup>2</sup>	6.58	1.84	0.75	3.91
Pounds per day: 507-acre vineyard operation <sup>3</sup>	4.3	22.3	1.4	2.3
Operational threshold (lbs/day)	54	54	54	82
Tons per year (Metric) <sup>1, 5</sup>	0.78	0.35	0.11	0.58
Operational threshold (tons per year)	10	10	10	15

<sup>1</sup> As identified in Circle-S EIR; <sup>2</sup> As identified in Suscol Mountain EIR; <sup>3</sup> As identified in Walt Ranch EIR; <sup>4</sup> Includes dust and exhaust emissions; <sup>5</sup> 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 10-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.

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

<sup>5</sup> #P11-00205-ECPA, AES March 2016, SCH #2008052075 certified August 1, 2016

<sup>6</sup> #P06-01508-ECPA, AES April 2011, SCH #2007062069 certified December 22, 2011

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

- Remove all visible mud or dirt tracked onto adjacent public roads by using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- Idling times shall be minimized either by shutting off equipment when not in use or reducing the maximum idling time to five (5) minutes (as required by state regulations). Clear signage shall be provided for construction workers at all access points.
- Water and/or dust palliatives shall be applied in sufficient quantities during grading and other ground disturbing activities onsite to minimize the amount of dust produced. Outdoor construction activities shall not occur when average wind speeds exceed 20 mph.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator. Any portable engines greater than 50 horsepower or associated equipment operated within the BAAQMD's jurisdiction shall have either a California Air Resources Board (ARB) registration Portable Equipment Registration Program (PERP) or a BAAQMD permit. For general information regarding the certified visible emissions evaluator or the registration program, visit the ARB FAQ<sup>8</sup> or the PERP website<sup>9</sup>.

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 acres of land and is developed with one residence, approximately 13 acres of existing vineyard, and associated accessory structures and infrastructure. There are scattered rural residential and agricultural (vineyard) uses located in the vicinity of the proposed project; the nearest residences are located approximately 0.05 miles (±300 feet) to the north and south. The closest residential community that may contain schools, hospitals and/or convalescent homes, is the City of Calistoga which is located approximately 1 miles to the southeast, the nearest schools (Calistoga Elementary and Calistoga High) are located approximately 2.5 miles to the southeast in the City of Calistoga (Napa County GIS Sensitivity Maps: Parcels and Schools layer).

During installation of the ECP, 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 more than 2 miles from the closest school and more than 1 mile from the closest residential neighborhood, providing dilution of pollutants and odors. For the reasons identified above, the proposed project would not expose sensitive receptors or a substantial number of people to pollutants or objectionable odors, resulting in a less than significant impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>IV. BIOLOGICAL RESOURCES.</b> Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<sup>8</sup> [http://www.arb.ca.gov/portable/perp/perpfaq\\_04-16-15.pdf](http://www.arb.ca.gov/portable/perp/perpfaq_04-16-15.pdf)

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

or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?

- |  |                          |                                     |                                     |                                     |
|--|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?       | <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 type="checkbox"/>            | <input checked="" 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, April 2019, Biological Resources Reconnaissance Survey Report (**Exhibit B-1**).
- WRA Environmental Consultants, January 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 CNDDB (CDFW, 2018), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS, 2018), and the USFWS List of Federal Endangered and Threatened Species that may be Affected by projects in the Mark West Springs and Calistoga Quadrangles.

The parcel consists of the following biological communities (or Land Cover Types) with respective acreages shown in **Table 4**: Douglas fir forest, mixed oak woodland, blue oak woodland, vineyard and residential developed seasonal wetland, and a constructed reservoir/pond. As indicated in the Background/Project History and Environmental Setting Sections of this initial study (pages 1-2), the project parcel was significantly damaged by the Tubbs Wildfire (October 2017) and a portion of the burned vegetation was removed in 2018 under Notice of Emergency Timber Operation, Harvest Document 1-18EM-071-NAP (**Exhibit F**).

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

Biological Communities/Land Cover Type	Pre-Project Conditions (acres)
Douglas fir forest	7.83
Mixed Oak Woodland	8.67
Blue Oak Woodland	4.56
Developed Area (vineyard, residential and ruderal)	17.38
Reservoir/pond	1.5
Seasonal Wetland	0.05

Source: WRA, April 2019 and January 2020

- a. **Special-Status Plants:** No special status plant species were observed on the project site during of the surveys conducted by WRA. Additionally, preferred habitats for many of the special status plant species know to occur within the vicinity of the subject parcel are not present within the project area. While preferred habitats for many of the special-status plant species known to occur within the vicinity of the project parcel are not present (such as absence of hydrologic conditions, lack of serpentinite soils, and lack of vegetation/habitat

associates), the project biologist has indicated the following plant species have a potential to occur within the project area: *Amsinckia lunaris* (bent-flowered fiddleneck); *Astragalus breweri* (Brewer's milk-vetch); *Astragalus claranus* (Clara Hunt's milk-vetch); *Balsamorhiza macrolepis* (big-scale balsamroot); *Brodiaea leptandra* (narrow-anthered brodiaea); *Harmonia nutans* (nodding harmonia); *Leptosiphon acicularis* (bristly leptosiphon); *Leptosiphon jepsonii* (Jepson's leptosiphon); *Lilium rubescens* (redwood lily); *Ranunculus lobbii* (Lobb's buttercup); *Stuckenia filiformis* ssp. *Alpine* (slender-leaved pondweed); and *Viburnum ellipticum* (oval-leaved viburnum). While the project parcel and project site may contain potentially suitable habitat for these species, as noted above, these plant species were not observed within the project area during time-appropriate surveys conducted by WRA, which is an indicator that potentially suitable habitat for these species is not likely present within the project area. Therefore, no impacts to special-status plant species or their habitat are expected.

**Special-Status Animals:** A total of 58 special-status wildlife species have been documented in Napa County. Six of these species have a moderate or high potential to occur within the project parcel: *Antrozous pallidus* (pallid bat); *Myotis thysanodes* (fringed myotis bat); *Myotis Volans* (long-legged myotis bat); *Contopus cooperi* (olive-sided flycatcher); *Progne subis* (purple martin); *Emys marmorata* (Pacific/Western pond turtle).

With respect to bat species, on October 23, 2019, WRA conducted a survey that assessed all the trees and substrates within the project area to determine if bat roosting/habitat was present. Their survey found that there were no potential bat habitat trees located within the project area. Furthermore, the project as proposed includes protection measures for bats (or 'Environmental Commitments') as part of the project (**Figure 4**). To ensure the implementation of the proposed environmental commitments are in accordance with, California Department of Fish and Wildlife (CDFW) and County protocol and practice, the following conditions of approval will be implemented, should the project be approved. Therefore, the project as proposed would result in less than significant impacts to bat species.

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

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

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.

Specific to NSO, they are typically found in dense, multi-layered old growth conifer, redwood and fir forest habitats for nesting and roosting. The NOS usually requires multi-layered forest for breeding, and tree or snag cavities, or broken tops of large trees for nesting. The nearest documented territory center is located approximately 1.7 miles to the southeast, with additional territories further to the south (CDFW 2018a). Potential NOS habitat within the parcel and project area is generally limited to the approximate 7.8-acres of Douglas Fir forest located in the northeast portion of the parcel. According to the project biologist, while coniferous forest is present within and adjacent to the project area, the forest stand currently features relatively young trees that lack typical habitat characteristics (e.g. multi-layered forest, tree or snag cavities, and broken tops of large trees). Additionally, as previously indicated the project parcel was significantly damaged by the Tubbs Wildfire (October 2017) and a portion of the burned vegetation, which included the parcel's Douglas Fir Forest, was removed in 2018 under Notice of Emergency Timber Operation, Harvest Document 1-18EM-071-NAP (**Exhibit F**), which has negatively affected potential NSO habitat. Therefore, the Douglas fir forest within the parcel provides poor quality habitat that may not

provide for sufficient habitat to support NSO. Additionally, the NSO is highly sensitive to habitat disturbance, and, given that land uses within approximately one mile consist of agriculture (i.e. vineyards) generally to the north and south, and the City of Calistoga and Highway 29 located with a mile to the east, in addition to the disturbance caused by the parcel's Emergency Timber Operations, the disturbance levels in the immediate area may negatively affect potential NSO habitat.

For these reasons (poor habitat quality, disturbance level within the immediate vicinity of the subject parcel and of the subject parcel itself, and lack of confirmed presence) impacts to special-status bird species, including NSO, and their habitat are expected to be less than significant. However, there is the potential for these species to move into the project area or adjacent areas prior to commencement of the project, should the project be approved. 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.

To reduce potentially significant impacts to special-status bird and bat species to a less than significant level, the owner/applicant has included protection measures ("Environmental Commitments") as part of the project (**Exhibit 1**) so that special-status bird species would not be adversely affected during project implementation. To ensure the implementation of the proposed environmental commitments are consistent with, and in accordance with, California Department of Fish and Wildlife (CDFW) and County protocol and practice the following conditions of approval will be implemented, should the project be approved. The project as proposed, including implementation of proposed environmental commitments and conditions of approval, will result in less than significant impacts to special-status bird species.

**Environmental Commitment, Bird protection condition:** The Permittee shall include in #19-00220-ECPA the following measures to minimize impacts associated with the loss and disturbance of nesting birds and raptors consistent with and pursuant to California Department of Fish and Wildlife (CDFW) Code Sections 3503 and 3503.5:

- a. For earth-disturbing activities occurring between February 1 and August 31, (which coincides with the grading season of April 1 through October 15 – NCC Section 18.108.070.L, and bird breeding and nesting seasons), a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local avian resources with potential to occur at the project site) shall conduct preconstruction surveys for nesting birds, raptors, and the Northern Spotted Owl, within all suitable habitat on the project site, and where there is potential for impacts adjacent to the project areas. The preconstruction survey shall be conducted no earlier than 14 days prior to vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than 14 days from the survey date, surveys should be repeated. A copy of the survey will be provided to the Napa County Conservation Division and the CDFW prior to commencement of work.
- b. After commencement of work, if there is a period of no work activity of 5 days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.
- c. In the event that nesting birds are found, the Permittee shall identify appropriate avoidance methods and exclusion buffers in consultation with the County Conservation Division and the U.S. Fish and Wildlife Service (USFWS) and/or CDFW prior to initiation of project activities. Exclusion buffers may vary in size, depending on habitat characteristics, project activities/disturbance levels, and species as determined by a qualified biologist in consultation with County Conservation Division and the USFWS and/or CDFW.
- d. Exclusion buffers shall be fenced with temporary construction fencing (or the like), the installation of which shall be verified by Napa County prior to the commencement of any earthmoving and/or development activities. Exclusion buffers shall remain in effect until the young have fledged or nest(s) are otherwise determined inactive by a qualified biologist.
- e. Alternative methods aimed at flushing out nesting birds prior to pre-construction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or chemical (i.e., spraying nesting birds or their habitats) would be considered an impact to nesting birds and is prohibited. Any act associated with flushing birds from project areas should undergo consultation with the USFWS/CDFW prior to any activity that could disturb nesting birds.

Western pond turtle (WPT) is the only native freshwater turtle in California. This turtle is uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and Transverse Ranges. WPT inhabit perennial aquatic habitats, such as lakes, ponds, rivers, streams, and canals that provide submerged cover and suitable basking structures, such as rocks and logs (Zeiner et al. 2000). WPT prefer to nest on unshaded upland slopes close to their aquatic habitat (15 to 300 feet distant), and hatchlings require shallow water with relatively dense emergent and submergent vegetation for foraging for aquatic invertebrates (Rathbun et al. 1992, Jennings and Hayes 1995). WPT may utilize the on-site person-made pond/reservoir for aquatic foraging habitat as well as the adjacent uplands for nesting. It is not anticipated that WPT will occur in the project site because there were no observations of this species during biological surveys, that overall quality of the habitat to support WPT is generally lacking, and that upland nesting is unlikely along the western and north sides of the pond given the existing disturbed vineyard/development footprint. (WRA: April 2019 - **Exhibit B-1**, and January 2020 - **Exhibit B-2**). However, there is the potential for the project to impact WPT that could potentially occur on the undeveloped eastern and

northeastern side of the pond/reservoir which would be considered a potentially significant impact. To reduce potential impacts to WPT to a less than significant level, **Mitigation Measure BR-1** will be implemented.

**Mitigation Measure BR-1:** The owner/permittee shall revise Erosion Control Plan #P19-00220-ECPA prior to approval to include the following measures to avoid and minimize impacts associated with the potential loss and disturbance of western pond turtle (WPT):

- a. A preconstruction survey for WPT shall be completed between 7 days and 24 hours before the start of construction. Surveys shall take place between 9 a.m. and 3 p.m. and be conducted in areas that western pond turtle are likely to inhabit and focus on detection of basking and foraging turtles. Surveyors shall station in place for periods of 30 minutes in each area that is suitable for western pond turtle and use binoculars to visually detect and identify western pond turtle. The preconstruction survey shall also identify the location of WPT exclusion fencing.
- b. Exclusion fence shall be installed around the north and east sides of the pond/reservoir, and any other areas determined necessary by the project biologist, in such a manner as to preclude WPT from entering ground disturbance areas from the pond. The fencing shall have a minimum height above ground of 38 inches, the bottom of the fence buried to a minimum depth of 4 inches. The locations and installation of WPT exclusion fencing shall be inspected by the project biologist to ensure that it is placed correctly and effective, and remain installed until on-site mechanized ground disturbance is completed. WPT exclusion fencing shall also be inspected and approved prior to the commencement of vegetation removal and earth-disturbing activities.
- c. Following the pre-construction survey and prior to the initiation of work, a biological education program shall be provided by the qualified biologist to all personnel that will be present at the site during ground disturbance and related activities. The worker education program shall include information regarding the identification and identification and natural history of WPT (including photographs), the potential for occurrence of these species within work areas, the legal status of each and the ramifications for take, the purpose of the exclusion fencing and importance of maintaining it, and specific measures being implemented to avoid impacts to WPT (which shall include halting all ground disturbance and immediately alerting the qualified biologist if WPT are observed in the course of the work.
- d. If WPT are detected, all ground disturbance shall halt immediately and the project biologist shall be alerted so that additional avoidance measure can be developed and implemented in coordination with the Planning Department.

The project as proposed, with implementation of Environmental Commitments, conditions of approval, and **Mitigation Measure BR-1** will reduce potential impacts to special-status species to a less than significant level.

- b-c. There are no mapped blue-line streams located on the project parcel or immediate vicinity. There are no identified riparian habitats, sensitive natural communities, or vernal pools located within the project site property or project area (WRA April 2019).

There are two primary intermittent (or ephemeral) streams located in the project parcel. One bisects the western third of the project parcel in a north-south direction, and the other originates in the central portion of the parcel immediately west of the site's reservoir which flows in a northerly direction: this intermittent stream is associated with the reservoir's outfall and includes a potential wetland at its point of origin. There is no distinctly riparian vegetation associated with these moderate-gradient and narrow channeled intermittent streams. There are two other short drainage swales/channels within the parcel, one located off the northeast corner of the reservoir, and the other located within the northern end of the parcel (see **Exhibit A**). The project site and parcel ultimately drain to Blossom Creek, located approximately 0.3 miles to the north, and then flows east where it joins the Napa River, located approximately 2 miles to the east.

The proposed project has been designed to include minimum 35-foot stream setbacks from the ephemeral/intermittent streams and drainage swales/channels on the subject property, in conformance with County Code Section 18.108.025 (General provisions – Intermittent/perennial streams). The proposed project has also been designed to include 50-foot minimum setbacks from the reservoir and potential wetland associated with its outfall, consistent with NCC Section 18.108.026 (Wetlands). 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 #P14-00397-ECPA shall be replaced on-site with fifteen-gallon trees at a ratio of 2:1 at locations approved by the planning director

**Wetland Protection – Condition of Approval:** The potential wetland associated with the reservoir’s outfall (located northwest of Vineyard Block C) shall be flagged in the field by a qualified biologist and protective construction fencing shall be installed along its boundary for County inspection and approval prior to the commencement of vegetation removal and earth-disturbing activities. No equipment or work shall be allowed within the pond bottom or wetland: all work shall be conducted from the top of the pond embankment. The protective construction fencing shall be maintained and remain in place until all grading and erosion control measure installation are complete.

- d The project parcel is currently fenced with deer fencing that is generally located around the property’s perimeter. The existing deer fence is generally approximately 6 feet tall and consists of smooth wire with mesh spacing approximately 4 inches by 4 inches. No new wildlife exclusion fencing is proposed as part of the project: existing fencing will be maintained in place and repaired as necessary as part of ongoing vineyard operations.

According to the project biologist, per Caltrans (2010), approximately half of the subject parcel (the western portion) 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. The subject parcel is a relatively very small portion of this linkage block, and much of it already contains vineyard development and associated deer fencing around the property perimeter; therefore, the proposed development is unlikely to impact the functionality of the linkage. At local scale, the avoidance and preservation of the ephemeral drainages will provide for movement and shelter habitat for wildlife species. For these reasons, the proposed project is not anticipated to substantially interfere with wildlife movement, and, therefore, potential impacts to wildlife movement are expected to be less than significant.

In order to ensure that deer fencing (or wildlife exclusion fencing) is maintained in a manner that does not negatively affect wildlife movement, the following condition of approval would be incorporated should the project be approved.

**Fencing – Condition of Approval:** The owner/permittee shall revise Erosion Control Plan #P19-00220-ECPA prior to approval to include a Vineyard Fencing Plan. The Vineyard Fencing Plan shall be submitted to the Planning Department for review and approval prior to its incorporation into #P19-00220-ECPA, and include the following components:

- Replacement 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 fencing to allow trapped wildlife to escape. Smooth wire instead of barbed wire shall be utilized to top wildlife exclusion fencing to prevent entanglement.
- Any new wildlife exclusion fencing installed in associated with #P19-00220-ECPA shall be prohibited, and would require County review and approval to ensure any new fencing would not result in potential impacts to wildlife movement.

Furthermore, because wildlife nursery sites were not identified in the project area or parcel, there would be no impacts to wildlife nursery sites.

- e. Based on the Biological Resources Reconnaissance Survey Report (WRA, 2019), land cover types (or biological communities) occurring within the project parcel include 8.67-acres of mixed oak woodland, 4.56-acres blue oak woodland, 7.83-acres Douglas fir forest, 17.38-acres of developed and ruderal areas, 0.05 acre of seasonal wetland and reservoir encompassing approximately 1.5 acres. The project would remove: approximately 5.55-acres of Douglas fir forest, approximately 1.05-acres of mixed oak woodland, approximately 0.71-acres of blue oak woodland, and approximately 1.5-acres of ruderal vegetation (**Table 5**). Specific to oak woodland, approximately 1.8-acres of the parcel’s 13.2-acres (or 13.6%) of oak woodland would be removed, resulting in approximately 10.5-acres (or 79.5%) of the parcel’s oak woodland being retained (includes approximately 1-acre of blue oak woodland removed as part of implementation of #95091-ECPA).

With respect to individual tree removal, approximately 143 trees with a diameter at breast height (DBH) of 6 inches or greater are proposed to be removed as part of the project, including the following: approximately 39 Madrone; approximately 22 live oaks; approximately 41



Douglas fir; approximately 14 blue oak; approximately 12 black oak; approximately 13 bigleaf maple; one buckeye; and one ash. As designed, all of the valley oak trees located within the parcel will be avoided.

**Table 5 –Land Cover Types/Biological Community Removal and Retention<sup>10</sup>**

Land Cover Type or Biological Community	Acreage within Parcel <sup>1</sup> (Pre-Project)	Acreage Removed	Percent Removed	Percent Remaining	Post-Project Conditions
Douglas fir forest	7.83	5.55	71%	29%	2.28
Mixed oak woodland	8.67	1.05	12%	88%	7.62
Blue oak woodland	4.56	0.71 <sup>1</sup>	16%	84%	2.85
Reservoir/pond	1.5	0	0%	100%	1.5
Seasonal Wetland	.05	0	0%	100%	0.05
Developed/Ruderal	17.38	1.5	8.7%	100%	26.2
<b>Totals</b>	<b>40</b>	<b>8.8<sup>1</sup></b>	<b>22%</b>	<b>78%</b>	<b>40</b>

<sup>1</sup> Does not include the approximate 1-acre of blue oak woodland removed as part of development of #95091-ECPA that occurred outside of the approved boundaries of #95091-ECPA

Sources: WRA April 2019 and January 2020; Napa County May 2020

Napa County General Plan Conservation Element Policy CON-24c specifically provides for the preservation of oak woodland (on an acreage basis) at a 2:1 ratio where feasible, where preservation/avoidance of oak woodland is not feasible replacement of oak woodland at a 2:1 ratio is required. In addition to the approximate 1-acre of blue oak woodland removed as part of the development of #95091-ECPA that occurred outside of the approved boundaries of #95091-ECPA, the project would remove approximately 1.75-acres (total 2.75 acres, or 13%) and would retain 10.5-acres (79.5%) of the 13.2-acres of oak woodlands on the parcel; thus, the proposed project would meet the 2:1 ratio required by Policy CON-24. Additionally, from a cumulative perspective, taking into account the oak woodland removal associated with the portion of #95091-ECPA that has not been implemented/developed yet, at least 9-acres of the subject property's 13.2-acres of oak woodlands (or 68%) would be retained.

Considering the size of the project, and amount of oak woodland and associated habitat to remain within the subject property as part of the project, potential direct impacts to oak woodlands are anticipated to be less than significant. However, there is the potential for significant indirect and cumulative impacts to oak woodlands and associated habitat through future disturbance and/or removal, in that future loss could result in the preservation of on-site oak woodland below the 2:1 ratio provided for under General Plan Policy CON-24. Additionally, while the project has been designed to avoid the remaining Valley oak trees within the parcel, there is the potential for them to be indirectly impacted as a result of their proximity to the project area, in that vineyard avenues and turnaround areas may potentially occur within the drip lines of adjacent valley oak tree canopies. Project land preparation activities (i.e. land ripping) would negatively affect the root structure of these trees.

The University of California, Division of Agricultural and Natural Resources (UC-ANR), and the County's *Voluntary Oak Woodland Management Plan* (Napa County, October 2010) have identified several factors, such as irrigation, soil compaction (resulting in decreased infiltration and oxygen availability to roots), pesticide and herbicide use, fertilizer use, and mechanical practices such as disking or seeding for cover crops, when conducted within the dripline of oak trees can contribute to their decline<sup>11</sup>. Additionally, these sources identify a root protection zone (RPZ) that is roughly one-third larger than the drip line (or outermost edge of the foliage based on the longest branch).

To reduce these potentially significant indirect and cumulative impacts to oak woodland and valley oak trees to a less than significant level **Mitigation Measure BR-2** will be implemented. **Mitigation Measure BR-2** will include provisions to ensure the permanent protection of oak woodlands at a 2:1 preservation ratio so that compliance with Policy CON 24(c) is realized on the project site, and avoid earth disturbance and agricultural use within the drip-lines of valley oak trees so that the root structures of these trees are not adversely affected. Implementation of this measure may slightly reduce the project by up to approximately 0.25-acres. Additionally, because the existing trees to be retained on-site provide a natural means of erosion control, especially in the areas immediately adjacent to the proposed vineyard, the provisions of Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) will be incorporated into **Mitigation Measure BR-2**, which further reduce potential indirect impacts.

**Mitigation Measure BR-2:** The owner/Permittee shall revise #P19-00220-ECPA prior to County approval to implement the following measures to reduce potential cumulative and indirect impacts to oak woodland and valley oak trees as a result of the project:

<sup>10</sup> 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 project modifications, 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.

<sup>11</sup> The University of California – Division of Agricultural and Natural Resources, Publication 21577, "Vineyards in an Oak Landscape", 1998.

- a. Revise the proposed boundaries of Vineyard Blocks C, E and F of #P19-00299-ECPA, or add project specifications/notes prior to County approval to eliminate and ensure vineyard avenues, equipment turn around areas, and grapevines will not occur within the driplines of valley oak trees.
- b. For vineyard avenues and turnaround areas located adjacent to valley oak trees, land preparation shall be limited to planted areas of the vineyard. No grading or land ripping shall occur within avenues and turnaround areas located adjacent to valley oak trees to facilitate avenue construction: vineyard avenues may be disked to establish the specified vineyard cover crop. Prior to the commencement of any vegetation removal and earthmoving activities, the limits of land ripping shall be demarcated in the field, the precise locations of said demarcations shall be inspected and approved by the Planning Division: no grading shall occur within driplines to facilitate avenue construction.
- c. To protect trees and woodland during construction, temporary fencing shall be placed at the edge of the dripline of trees to be retained that are located within 50-feet of the project area prior to any vegetating removal or earthmoving activities. The precise locations of protective fencing shall be inspected and approved by the Planning Division prior to the commencement of any vegetation removal or earthmoving activities. No disturbance, including grading, planting, placement of fill material, storage of equipment, etc. shall occur within the designated areas for the duration of erosion control plan installation and vineyard installation and maintenance.
- d. The Permittee shall refrain from severely trimming the trees and vegetation to be retained adjacent to the vineyard conversion areas.
- e. In accordance with County Code Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) trees that are inadvertently removed that are not within the boundary of the project and/or not identified for removal as part of #P19-00220-ECPA shall be replaced on-site with fifteen-gallon trees at a ratio of 2:1 at locations approved by the planning director. Replacement trees shall be installed and documented that they are in good health prior to completion and finalization of the erosion control plan.
- f. A Preservation Area containing the remaining oak woodland on the parcel that are located outside the boundaries of both #P20-00220-ECPA and #95091-ECPA shall be designated for preservation in a mitigatory or conservation easement with an organization such as the Land Trust of Napa County as the grantee, or other means of permanent protection acceptable to the County. Land placed in protection shall be restricted from development and other uses that would degrade the quality of the woodland (including, but not limited to conversion to other land uses such as agriculture or urban development, and excessive off-road vehicle use that increases erosion) and should be otherwise restricted by the existing goals and policies of Napa County. The owner/permittee shall record the mitigatory or conservation easement within 60 days of approval of #P19-00220-ECPA by the County: in no case shall the ECPA be initiated until said mitigatory or conservation easement is recorded.

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

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

**Discussion**

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

The Russell Kobayashi, May 14, 2018, Archaeological Survey Report for the Johnson Property Emergency Notice (incorporated herein by reference), in addition to the Napa County GIS Archaeological sensitive areas and Archaeological sites layers were utilized in this analysis.

a-b. The Archaeological Survey Report conducted for the project did not identify any historical or archaeological resources within the project parcel. However, there is a known cultural resource (#P28-001537) located on an adjacent parcel. Because the proposed project would avoid historical or archaeological resources, no impacts are anticipated.

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

c. The Archaeological Survey Report did not identify potential for any human remains in the proposed development areas, and does not anticipate the discovery of human remains due to the 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 historical and archaeological resources, or human remains during construction, grading, or other earth moving activities:

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

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

**Discussion**

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

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

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

b. The transportation sector is a major end-user of energy in California, accounting for approximately 39 percent of total statewide energy consumption in 2014 (U.S. Energy Information Administration 2016). In addition, energy is consumed in connection with construction and

maintenance of transportation infrastructure, such as streets, highways, freeways, rail lines, and airport runways. California's 30 million vehicles consume more than 16 billion gallons of gasoline and more than 3 billion gallons of diesel each year, making California the second largest consumer of gasoline in the world (CEC 2016). In Napa County, farm equipment (not including irrigation pumps) accounted for approximately 60% of agricultural emissions in Napa County in 2014, with the percentage anticipated to increase through 2050 (Napa County 2018 - <https://www.countyofnapa.org/DocumentCenter/View/9247/Revised-Draft-Climate-Action-Plan>).

With respect to transportation energy, existing energy standards are promulgated through the regulation of fuel refineries and products such as the Low Carbon Fuel Standard (LCFS), which mandates a 10% reduction in the non-biogenic carbon content of vehicle fuels by 2020. Additionally, there are other regulatory programs with emissions and fuel efficiency standards established by USEPA and the California ARB such as Pavley II/LEV III from California's Advanced Clean Cars Program and the Heavy-Duty (Tractor-Trailer) GHG Regulation. Further, construction sites will need to comply with State requirements designed to minimize idling and associated emissions, which also minimizes use of fuel. Specifically, idling of commercial vehicles and off-road equipment would be limited to five minutes in accordance with the Commercial Motor Vehicle Idling Regulation and the Off-Road Regulation<sup>13</sup>. 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.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>VII. GEOLOGY AND SOILS.</b> Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Discussion**

- a. The project site could experience potentially strong ground shaking and other seismic related hazards based on the number of active faults in the San Francisco Bay region. The 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

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

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 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 located ±1.75 miles to the south and ±3 miles to the southeast (Napa County GIS: Faults and Earthquake Layers).
  - ii) While 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 area is not in an area subject to high liquefaction potential: liquefaction potential is identified to be very low (Napa County GIS, Liquefaction Layer). Therefore, this impact would be less than significant.
  - iv) Landslides, landslide deposits, and areas of instability have not been identified within the project site or immediately adjacent areas (Napa County GIS: Landslide Layers). 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.
- b. The project site's soils are mapped as: Forward gravelly loam, 5 to 39 percent slopes (Soil Series #139); Forward gravelly loam, 12 to 57 percent slopes (Soil Series #140); and Forward-Kidd complex (Soil Series #141), 50 to 75 percent slopes (Napa Valley Vineyard Engineering, January 2020 - **Exhibit A** and **Exhibit E**).

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

Soil loss calculations were prepared using the Universal Soil Loss Equation (USLE) in order to evaluate potential effects of erosion as a result of the proposed project. The USLE model evaluates the environmental conditions and physical forces that lead to the detachment and potential movement of soil particles through surface erosion. The USLE model does not describe travel distances of soil particles once dislodged. Potential soil loss and sedimentation associated with the proposed agricultural development and operations would primarily be controlled through a no-till cover crop with vegetative cover densities of at least 80%. Vineyard avenues would also include vegetative cover densities of at least 80%. 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 Napa Valley Vineyard Engineering (**Exhibit E**), the proposed conversion of approximately 10-acres of woodland to vineyard and the operation of the 1-acre existing vineyard is anticipated to reduce soil loss, or surface erosion, within the project area as compared to existing conditions (**Table 6**)<sup>12</sup>. Under existing conditions, the annual soil loss is anticipated to average 23.35 tons per acre per year across the entire project site depending on soil type, slope length, and gradient. Under proposed project conditions, annual soil loss is anticipated to average 9.97 tons per acre per year, or a reduction of approximately 57% as compared to existing conditions.

**Table 6 – USLE Soil Loss Analysis**

Vineyard Block Transect	Pre-project Soil Loss (tons/year)	Post-project Soil Loss (tons/year)	Difference	Percent Change (approximate)
A1	1.35	0.78	-0.57	-42%
A2	6.13	2.13	-4.0	-65%
B	3.69	1.16	-2.53	-69%
C	0.50	0.26	-0.24	-48%
2	1.41	0.39	-1.02	-72%
E upper	4.94	1.96	-2.98	-60%
E lower	1.50	1.50	0	0%
F	3.83	1.79	-2.04	-53%
<b>Vineyard Totals</b>	<b>23.35</b>	<b>9.97</b>	<b>-13.38</b>	<b>-57%</b>

Source: Napa Valley Vineyard Engineering, January 2020

<sup>12</sup> On March 20, 2020, the Engineering Division determined the project's modeling technically adequate.

Other proposed erosion control features that are anticipated to further reduce potential soil loss as a result of the project, including soil loss experienced during vineyard and cover crop establishment, consist of water bars, straw mulching, straw bale dikes, and other practices as needed.

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

**Erosion and Runoff Control (i.e., Hydromodification) Installation and Operation – Conditions of Approval:** The following conditions shall be incorporated by referenced into Erosion Control Plan #P19-00220-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, rock-filled avenues, rocked crossings, and permanent no-till cover, shall be installed no later than October 15 during the same year that initial vineyard development occurs. This requirement shall be clearly stated on the final Erosion Control Plan. Additionally, pursuant to NCC Section 18.108.135 “Oversight and Operation” the qualified professional that has prepared this erosion control plan (#P19-00220-ECPA) shall oversee its implementation throughout the duration of the project, and that installation of erosion control measures, sediment retention devices, and hydromodification facilities specified for the vineyard have be installed and are functioning correctly. Prior to the first winter rains after construction begins, and each year thereafter until the project has received a final inspection from the county or its agent and been found complete, the qualified professional shall inspect the site and certify in writing to the planning director, through an inspection report or formal letter of completion verifying that all of the erosion control measures, sediment retention devices, and hydromodification facilities required at that stage of development have been installed in conformance with the plan and related specifications, and are functioning correctly.
- Cover Crop Management/Practice: The permanent vineyard cover crop shall not be tilled (i.e., shall be managed as a no till cover crop) for the life of the vineyard and the owner/permittee shall maintain a plant residue density of 80% within the vineyard and vineyard avenues. The cover crop may be spot spraying within 12” of 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.
- Temporary and permanent erosion control measures and devices shall be free of plastic monofilament netting and should generally be composed of biodegradable or compostable materials and/or utilize biodegradable or compostable materials in their construction so that animals do not become entangled within them.

It is not expected that land preparation activities associated with vineyard, such as removal of rocks from the soil profile, would substantially affect the USLE modeling results. The USLE model evaluates the environmental conditions and physical forces that lead to the detachment and movement of soil particles. The primary goal of cultivating the soils within the development area during implementation is to prepare the site for planting, including fracturing and mixing layers of compressed soil and rock to facilitate root growth and improve permeability, rather than to remove all the rock within the development area soils. Soil cultivation may result in a greater number of smaller rocks at the soil surface. Smaller rocks that emerge through development would be left within the vineyard, and only larger rocks that surface would be removed. Because the larger rocks that may be removed from the site are generally underneath the soil surface, the removal of 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 (should the proposed project be approved), 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 area, resulting in no impact with regard to soil erosion, soil loss, and sedimentation. Also see **Section IX (Hazards and Hazardous Materials)** and **Section X (Hydrology and Water Quality)** for additional disclosures related to water quality. Additionally, as shown in the soil loss modeling following development, overall soil loss is anticipated to be less than pre-development conditions. This is consistent with General Plan Conservation Element Policy CON-48, which requires post-development sediment erosion conditions (i.e., soil loss) be less than or equal to pre-development conditions.

- c. As discussed above, the project area is not located in an area prone to landslides, ground failure or liquefaction. The proposed project identifies the soil types in the project area and addresses any potential soil instability. Therefore, impacts from offsite landslides, lateral spreading, subsidence, liquefaction or collapse would be less than significant.
- d. Soils of the project parcel consist of Forward gravelly loam (Soil Series #139 and #140) which exhibits low to moderate shrink-swell potential, and Forward-Kidd complex (Soil Series #141) which exhibits 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 parcel. 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 parcel and the nature of the project (which would involve relatively shallow vineyard), the probability of encountering paleontological resources within the project area is minimal. Furthermore, project approval, if granted, would be subject to the standard conditions described below that would avoid and reduce potential paleontological resource impacts. Therefore, impacts to geologic features and paleontological resources are anticipated to be less than significant.

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

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>VIII. GREENHOUSE GAS EMISSIONS.</b> Would the project:				
a) Generate a net increase in greenhouse gas, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an 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 (CO<sub>2</sub>), methane, ozone, and the fluorocarbons, which contribute to climate change. CO<sub>2</sub> 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<sub>2e</sub>) is the most commonly reported type of GHG emission and a way to get one number that approximates total emissions from all the different gasses that contribute to GHG, as described in BAAQMD’s CEQA Guidelines. In this case CO<sub>2</sub> is used as the reference atom/compound to obtain atmospheric carbon CO<sub>2</sub> effects of GHG. Carbon stocks are converted to CO<sub>2e</sub> 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>).<sup>13</sup>

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

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

### **Construction Emissions:**

Equipment Emissions: As discussed in **Section III (Air Quality)**, three County Certified EIRs assessed and analyzed potential air quality and GHG emissions associated with vineyard development. Within those EIRs, potential GHG emissions associated with construction equipment were calculated and disclosed. An estimation of potential construction equipment emissions per acre of vineyard development was derived using the most generous emissions results from these EIRs. The Circle-S Ranch EIR anticipated approximately 4,293 metric tons (MT) CO<sub>2e</sub> of construction equipment emissions for a 459-acre vineyard development, resulting in approximately 9.4 MT CO<sub>2e</sub> of

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<sup>13</sup> “Carbon stock” refers to the total amount of carbon stored in the existing plant material including trunks, stems, branches, leaves, fruits, roots, dead plant material, downed trees, understory, and soil organic material. Carbon stock is expressed in units of metric tons of carbon per acre. When land is cleared, some percentage of the carbon stored is released back to the atmosphere as CO<sub>2</sub>. 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).



construction equipment emissions per acre of vineyard development.<sup>14</sup> Using this emission factor it is anticipated that Construction Equipment Emissions associated with the proposed ±10 gross acres of vineyard development would be approximately 94 MT CO<sub>2e</sub> (10 acres multiplied by 9.4 MT CO<sub>2e</sub>).

**Project Site Emissions:** Project site emissions are emissions resulting from vegetation removal and soil preparation associated with the conversion of approximately 10-acres of existing vegetation to vineyard. Because there is not yet a universally accepted scientific methodology or modeling method to calculate GHG emissions due to vegetation conversion and soil disturbance, the Greenhouse Gas Emissions Checklist and associated carbon stock factors developed as part of the 2012 CAP efforts are utilized to determine potential project site carbon stocks and emissions. Utilizing the 2012 Draft CAP carbon stocks and the acreages of vegetation types within the project area, total carbon stocks for the project site are estimated to be approximately 530.8 MT C or approximately 1,948.1 MT CO<sub>2e</sub> (Table 7).

**Table 7 – Estimated Development Area Carbon Stocks/Storage**

Vegetation Type/Carbon Storage <sup>1</sup>	Project Acreage <sup>1</sup>	Carbon Storage/Stock per Acre (MT C/acre) <sup>1</sup>	Total Carbon Storage (MT)	Total Carbon Storage in MT CO <sub>2e</sub>
Coniferous Forest	5.6	58.1	325.4	1,194.2
Oak Woodland <sup>3</sup>	2.1	95.1	199.7	732.9
Ruderal/Developed <sup>2</sup>	1.5	3.8	5.7	21.0
<b>Total<sup>3</sup></b>			<b>530.8</b>	<b>1,948.1</b>

<sup>1</sup> For estimated GHG emissions associated with this project, acreages of various vegetation types being removed has conservatively been rounded up to the nearest tenth of an acre.

<sup>2</sup> For the purpose of these GHG calculations the carbon stock associated with Grassland is applied to Ruderal/Developed lands.

<sup>3</sup> Does not include the ±1-acre of vineyard developed outside the limits of #95091-ECPA

Sources: Napa County Draft Climate Action Plan, March 2012; Napa County Conservation Division, April 2020.

There is currently no scientific agreement about the percentage of carbon that would be lost (or emitted) from soils through grading. Some analyses have suggested 20-25% while others have suggested 50%.<sup>15</sup> 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 1,789.2 MT CO<sub>2e</sub> (Table 8).

**Table 8 – Estimated Project Carbon Emissions Due to Vegetation Removal**

Vegetation Type/Carbon pool <sup>1</sup>	Project Acreage	Carbon Loss/Emission Per Acre (MT C acre) <sup>1</sup>	Total Carbon Loss in Metric Tons	Total Carbon Loss/Emission MT CO <sub>2e</sub>
Coniferous Forest	5.6	52.5	294.0	1,079.0
Oak Woodland <sup>3</sup>	2.1	89.6	188.2	690.7
Ruderal/Developed <sup>2</sup>	1.5	3.5	5.3	19.5
<b>Total<sup>3</sup></b>			<b>487.5</b>	<b>1,789.2</b>

<sup>1</sup> For estimated GHG emissions associated with this project, acreages of various vegetation types being removed has conservatively been rounded up to the nearest tenth of an acre.

<sup>2</sup> For the purpose of these GHG calculations the carbon stock associated with Grassland is applied to Ruderal/Developed lands.

<sup>3</sup> Does not include the ±1-acre of vineyard developed outside the limits of #95091-ECPA

Sources: Napa County Draft Climate Action Plan, March 2012; Napa County Conservation Division, April 2020.

### Operational Emissions:

**Operational Equipment Emissions:** The referenced vineyard development EIRs also assessed ongoing vineyard operation emissions associated with vehicles and equipment. Estimated potential construction equipment emissions per acre of vineyard development were derived using the most generous emissions results from these EIRs. The Suscol Mountain Vineyard EIR anticipated approximately 373 MT CO<sub>2e</sub> of operational emissions for a 560-acre vineyard, resulting in approximately 0.67 MT CO<sub>2e</sub> of operational emissions per acre of vineyard per year. Using this emission factor, it is anticipated that Operational Equipment Emissions associated with the proposed 10-acre agricultural development would be approximately 6.7 MT CO<sub>2e</sub> (10 multiplied by 0.67 MT CO<sub>2e</sub>).

**Operational Sequestration Emissions:** Emissions associated with loss of sequestration due to land use change (i.e. the conversions of woodland and other vegetation types to vineyard) have been calculated based the Annual Carbon Sequestration Factors within the 2012 Draft CAP: coniferous forest sequester approximately 0.67 MT C per acre per year, oak woodland sequester approximately 0.43 MT C per

<sup>14</sup> 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.

<sup>15</sup> Napa County, July 12, 2010, Green House Gas Emissions Associated with Vineyard Development & Vineyard Operations, A Compilation of Quantitative Data from Three Recent Projects.

acre per year, and ruderal land is estimated to sequester approximately 0.06 MT C per acre per year<sup>16</sup>. 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 4.9 MT C per acre per year or 18 MT CO<sub>2e</sub> per year<sup>17</sup>.

Furthermore, grapevines are photosynthetic plants and therefore have value in terms of carbon capture. Additionally, the use of cover crops, which are also photosynthetic plants, tends to result in less CO<sub>2</sub> loss from vineyard soils. Carbon sequestration loss would be further offset by the proposed vineyard, which would likely act as a sink for atmospheric CO<sub>2</sub>, 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 1,883.2 MT CO<sub>2e</sub> and annual ongoing emissions associated with vineyard operations (including loss of sequestration) estimated to be approximately 24.7 MT CO<sub>2e</sub> per year (**Table 9**).

**Table 9 – Estimated Overall Project-Related GHG Emissions**

Construction Emissions in Metric Tons of CO <sub>2e</sub>		Annual Ongoing Emissions in Metric Tons of CO <sub>2e</sub>	
Source	Quantity	Source	Quantity
Vehicles and Equipment	94.0	Vehicles and Equipment	6.7
Vegetation and Soil	1,789.2	Loss of Sequestration	18.0
<b>Total</b>	<b>1,883.2</b>	<b>Total</b>	<b>24.7</b>

Source: Napa County Conservation Division, April 2020

There is no adopted CEQA significance threshold at the state, regional, or local level for construction-related GHG emissions, and the County has therefore evaluated the significance of one-time project-generated emissions of up to approximately 1,883.2 MT CO<sub>2e</sub> by considering the size of the proposed vineyard in relation to projected vineyard development in the County. The program level EIR for the 2008 Napa County General Plan Update (SCH#2005102088 certified June 3, 2008) projected 12,500 acres of new vineyard development in the County between 2005 and 2030. The County concluded in the General Plan EIR that emissions from all sources over the planning period would result in significant and unavoidable GHG emissions despite measures adopted to address the impact. Because this determination was based on emissions from all sources, not just agriculture, the General Plan did not determine that emissions solely from projected agricultural development would result in significant unavoidable impacts. Pursuant to Section 15183(a) of the California Code of Regulation (CCR), projects that are consistent with the general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific effects which are peculiar to the project or its site.

In the context of 12,500 acres of projected vineyard development, the proposed project would constitute less than approximately 0.1% 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 80%, vegetated vineyard avenues, and the maintenance and establishment of grape vines. These measures, in conjunction with the Air Quality conditions of approval (detailed in **Section III [Air Quality]**), would further reduce potential GHG air quality impacts associated with construction and ongoing operation of the project.

For these reasons, the County does not consider one-time GHG emissions from the proposed vineyard development to be a significant impact on a project level basis or to be a “considerable” contribution to significant unavoidable cumulative impacts identified in the General Plan EIR. Furthermore, as indicated in the Background/Project History section, the project parcel was significantly damaged by the Tubbs Wildfire (October 2017) and a portion of the burned vegetation (including approximately 7.8-acres of Douglas Fir Forest) was removed in 2018 under Notice of Emergency Timber Operation, Harvest Document 1-18EM-071-NAP (**Exhibit F**); therefore, the anticipated emissions associated with vegetation removal are as a result of the project could be potentially up to 1,000 MT CO<sub>2e</sub> less than identified in **Table 8** and **Table 9**.

As described above, total annual GHG emissions from ongoing operations are anticipated to be approximately 24.7 MT CO<sub>2e</sub> per year, which is well below the threshold of 1,100 MT CO<sub>2e</sub> 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.

<sup>16</sup> To provide the most conservative estimate of potential sequestration loss the sequestration factor for Croplands as identified March 2012 Draft Climate Plan has been applied to ruderal lands.

<sup>17</sup> 1.5-acres of grassland/ruderal times 0.06 MT C = 0.1 MT C, 2.1 acres of oak woodland times 0.43 MT C = 1.0 MT C, and 5.6-acres of coniferous forest times 0.67 MT C = 3.8 MT C, totaling 4.9 MT C

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>IX. HAZARDS AND HAZARDOUS MATERIALS.</b> Would the project:				
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 wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Discussion**

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

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 stored and mixed at the existing chemical storage shed and shop/barn located along the eastern property between proposed Vineyard Block C and the existing residence, which is at least 50 feet from the nearest aquatic source and approximately 400 feet from the site's well. 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 chemical storage and staging area would generally be located immediately west of the existing chemical storage shed and shop/barn.

There is a seasonal wetland within the project parcel located immediately northwest of proposed Vineyard Block C that is provided with a 65 foot setback. The existing reservoir has been provided with a minimum 50 foot setback, and ephemeral drainages have been provided with minimum 35 foot setbacks consistent with NCC Section 18.108.02.

The risk of potentially hazardous materials reaching or affecting adjacent wetlands or other aquatic resources is significantly reduced because: i) the project would provide minimum setbacks of 35 feet and 50 from the site's aquatic resources; ii) project staging and storage

areas, including agricultural chemical storage and mixing would be located at least 50 feet from aquatic resources and the site's well; and iii) only federal and/or California approved chemicals would be applied to the vineyard in strict compliance with applicable state and federal laws. Project approval, if granted, would also be subject to the following standard conditions that would further avoid and/or reduce potential impacts associated with routine transport and use of hazardous materials during project implementation and ongoing vineyard operations and maintenance.

**Hazardous Materials – Conditions of Approval:** The owner/operator shall implement the following 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 (should the proposed project be approved), impacts associated with the use and transport of hazardous materials would be less than significant.

- c. The closest schools (Calistoga Elementary and Calistoga High) are located approximately 2.5 miles to the southeast of the project site in the City of Calistoga. 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 (Parrett Field) is located over 20 miles east/southeast in Angwin. No portion of the proposed project is within an airport compatibility zone identified in the Airport Compatibility Plan (Napa County Airport Land Use Compatibility Plan, and Napa County GIS Airport layer). Therefore, no impact would occur.
- f. There would be negligible numbers of workers visiting the project parcel on a temporary basis for ECP and vineyard installation and on a seasonal basis for subsequent vineyard operations, resulting in no permanent substantial increase in the number of people working or residing at the project site. Therefore, the proposed project would not impair implementation of or physically interfere with any adopted emergency response plan or emergency evacuation plan, and no impact would occur.
- g. No structures are proposed as part of the project. The project site is located in an area identified as having a very high fire severity (CALFIRE 2007 - <https://egis.fire.ca.gov/FHSZ/>; and Napa County GIS Fire hazard severity zones layer). The risk of fire in vineyards is very low due to limited amount of fuel, combustibles, and ignition sources that are present. Vineyards are irrigated and cover crops are typically mowed in May and August, thereby reducing the fuel loads within the vineyard. The removal of vegetation and the management of vineyard results in an overall reduction of fuel loads within the project area as compared with existing conditions. Therefore, the proposed project would not increase the exposure of people or structures to wildland fires and impacts would be less than significant.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>X. HYDROLOGY AND WATER QUALITY.</b> Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water 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, in a manner 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; or | <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 the Milliken Creek Main Fork watershed below the Milliken Reservoir. The Milliken Creek Main Fork drainage is a tributary to the Napa River which is designated 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 CWA. 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).

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<sup>18</sup>”; 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

<sup>18</sup> 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.

and vineyard storm runoff. The General Permit will fill gaps in local regulation so that all four sediment sources are effectively controlled to reduce fine sediment deposition in stream channels that provide habitat for endangered steelhead populations, locally-rare Chinook salmon populations, and exceptionally diverse assemblages of native fish species in these watersheds. Additional details on the Vineyard Properties General Permit can be obtained from the Regional Water Board<sup>19</sup>.

There are no actively flowing drainages and/or creeks on the project parcel; thus, onsite drainage is strictly ephemeral and flows only occur during and directly after rainfall. Precipitation infiltrates quickly resulting in short-lived sheet flows that either exit the site towards Atlas Creek Road to the south, or collect within two seasonal seep-swailes complexes that occupy 0.87 acre of the project parcel.

- a. Waste discharge is not anticipated as part of the 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 area. Agricultural Erosion Control Plan #P19-00220-ECPA includes BMPs that are consistent with NCC Section 18.108.080(c), as well as with Regional Water Board guidance from the Stormwater Best Management Practice Handbooks for Construction and for New Development and Redevelopment, and the Erosion and Sediment Control Field Manual. Therefore, the proposed project is not anticipated to violate any water quality standards or otherwise substantially degrade surface or groundwater quality, and this impact would be less than significant.

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

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

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

A Water Demand and Water Availability Analysis (WAA) was prepared in order to determine if the proposed increase in water demand as a result of the proposed project would result in a significant impact to groundwater supplies (Napa Valley Vineyard Engineering, January 2020 - **Exhibit D**). The WAA estimates the onsite groundwater recharge, overall availability, and use, both existing and proposed, in order to assess potential impact on groundwater.

The project proposes to irrigate the vineyard from the one onsite well as identified in the WAA. Water demands for the existing vineyard and onsite residence are currently being met by the existing groundwater well. The approximately 11.2-acre of existing vineyard utilizes approximately 3.25 acre-feet of water per year (AF/yr) and the existing residence and associated landscaping and pool utilizes

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<sup>19</sup> [https://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/agriculture/vineyard/](https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/agriculture/vineyard/)

approximately 0.38 AF/yr, for a total existing water use of approximately 3.63 AF/yr. There are no known offsite wells located within 500 feet of the project well.

The proposed vineyard (approximately 7.09 net planted acres) is anticipated to utilize approximately 2.1 AF/yr of groundwater annually; typically, the annual irrigation season ranges from late May to September. After development, the proposed project in conjunction with existing groundwater use (that includes: ±18.03 net planted acres of vineyard with a demand of approximately 0.29 AF/yr per acre of vineyard; vineyard frost protection of 0.11 AF/yr as identified and characterized in **Exhibit D**; and residential use including pool and landscaping) would result in approximately 5.73 AF/year of groundwater demand (**Table 10**).

**Table 10 – Pre- and Post-Project Parcel Water Use**

Property Water Uses	Pre-project (acre-feet/year)	Post-project (acre-feet/year)
Vineyard and residential	3.63	5.73

Source: Napa Valley Vineyard Engineering, January 10, 2020, Water Demand and Water Availability Analysis, Johnson Vineyard - **Exhibit D**

**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 23.9 inches per year over the approximate 40 acres of the parcel's land area available for recharge and a 10% deep percolate recharge estimate, estimates the average annual groundwater recharge of the parcel to be approximately 13 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 ±7.38 AF/yr, where ±57% of the average precipitation occurs (see **Exhibit D** for details and calculations).

The project as proposed, in conjunction with existing use, is estimated to have an annual onsite future groundwater demand of 5.73 AF/year, which is below the estimated average annual recharge volume of 13 AF/year, and below the anticipated recharge rate during drier years of 7.38 AF/yr.

Considering: i) anticipated annual water use of the project parcel for existing and proposed use of approximately 5.73 AF/year is below the parcel's anticipated annual groundwater recharge rate of approximately 13 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 80% (including vineyard avenues and turnarounds/turn-spaces), and the annual application of straw mulch cover on all disturbed areas at a rate of 2,000 pounds per acre. These features would slow and filter surface runoff water, thereby minimizing sediment, nutrients, and chemicals from leaving the project site and entering nearby aquatic resources. Refer to **Exhibits A, C and E** for details related to the following discussion.

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

Proposed 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 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 each with a length of less than 200 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 (Napa Valley Vineyard Engineering, January 2020 - **Exhibit C**). The Analysis identifies four watershed basins within the project area, and utilizes the Natural Resource Conservation Service (NRCS) Technical Release 20 (TR-20) method. The Analysis concluded that there would be no change in peak flow or times of concentration (the time it takes for runoff to flow from the upper most point in each watershed to the watershed's outlet) for all watersheds in the project area as result of the project (**Table 11**)<sup>20</sup>.

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

	Peak Discharge Flow (cfs) by 24-hour Storm Event Frequency Return Interval (cubic feet/second)			
	2-year	10-year	50-year	100-year
<b>Watershed A</b>				
Pre-project conditions	3.62	9.85	17.92	21.40
Post-project conditions	3.62	9.85	17.92	21.40
<b>Watershed B</b>				
Pre-project conditions	0.33	0.94	1.74	2.08
Post-project conditions	0.33	0.94	1.74	2.08
<b>Watershed C</b>				
Pre-project conditions	7.28	14.99	24.05	27.79
Post-project conditions	7.28	14.99	24.05	27.79
<b>Watershed D</b>				
Pre-project conditions	2.55	6.50	11.52	13.67
Post-project conditions	2.55	6.50	11.52	13.67

Source: Napa Valley Vineyard Engineering, January 9, 2020, Hydrologic Study - **Exhibit C**

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.

<sup>20</sup> On March 20, 2020, the County Engineering Division determined the project's modeling technical adequate.



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

- d. The project site is not located within a Federal Emergency Management Agency (FEMA) 100-year flood zone, in a dam or levee failure inundation area, or in an area subject to seiche or tsunami (Napa County GIS FEMA flood zone and dam levee inundation areas layers; Napa County General Plan - Safety Element, pg. 10-20). Therefore, no impact would occur.
- e. The proposed project would not have an adverse impact on water quality because the ECPA has been designed to keep polluted runoff and sediment from leaving the project area and project site. As discussed in **Section IX (Hazards and Hazardous Materials)**, the project proposes the use of potentially hazardous materials during implementation activities (i.e., oil, gasoline, and transmission fluids associated with construction equipment) and the application of chemicals (i.e., fertilizers) for ongoing vineyard maintenance. Only federal and/or California-approved chemicals would be applied to the vineyard, in strict compliance with applicable state and federal law. As discussed in **Sections IV (Biological Resources) and IX (Hazards and Hazardous Materials)**, buffers provided in the ECP adjacent to 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 13.38 tons/year (or an approximate 57% reduction), have no effect on runoff rates, and maintain project site drainage characteristics as compared to existing conditions. The ECPA includes BMPs that are consistent with NCC Section 18.108.080(c), as well as with Regional Water Board guidance from the Storm Water Best Management Practice Handbooks for Construction and for New Development and Redevelopment, and the Erosion and Sediment Control Field Manual.

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

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

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XI. LAND USE AND PLANNING.</b> Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<sup>21</sup> Compliance with Section 18.108.135 is achieved by including their provisions as conditions of approval for a project, if granted.

- b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

### Discussion

- a. The proposed site is in a rural area of Napa County and the nearest established community, the City of Calistoga, is approximately 1 mile southeast of the project site. Therefore, the proposed vineyard and subsequent vineyard operations would not physically divide an established community and no impact would occur.
- b. Surrounding land uses consist predominantly of undeveloped land 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 (should the proposed project be approved), the project has been found consistent with applicable code requirements and General Plan Goals and Policies, including but not limited to the following:

- The project as proposed is consistent with NCC Section 18.108.010, which requires that soil loss and runoff as a result of a project be minimized to protect water quality. As discussed in **Sections VII (Geology and Soils)** and **X (Hydrology and Water Quality)**, the project is anticipated to decrease soil loss and potential sedimentation by approximately 57% and maintain runoff conditions as compared to existing conditions.
- The 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 project, with implementation of **Mitigation Measures BR-1 and BR-2**, 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 project. The project as proposed, with implementation of **Mitigation Measures BR-1 and BR-2**, would avoid potential direct, indirect, and cumulative impacts to special-status species and associated habitat occurring on the parcel. With implementation of the Project's Environmental Commitments potential impacts to special-status bird and bat species would be avoided.
- With implementation of **Mitigation Measures BR-1 and BR-2**, the project is consistent with Goals CON-2 and CON-3, which require the continued enhancement of existing levels of biodiversity and protection of special-status species and habitat, and the County Conservation Regulations through preservation of natural habitats and existing vegetation. With these measures and conditions, the project would maintain levels of biodiversity and would avoid impacts to special-status animal 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 project (**Exhibit B-1**).
- The project is consistent with Policy CON-30, which encourages the avoidance of wetlands. The seasonal wetlands onsite are avoided with a minimum 50-foot buffer.
- The project as proposed is consistent with Policy CON-18, which encourages the reduction of impacts to habitat conservation and connectivity. With incorporation of the fencing conditions of approval, and that the project does not include the installation of new wildlife exclusion fencing, wildlife movement would not be further impaired as a result of the project.
- The project is consistent with Policies CON-48 and CON-50c, which require pre-development sediment erosion conditions and runoff characteristics following development to be no greater than pre-project conditions. As discussed in **Section VII (Geology and Soils)** and **Section X (Hydrology and Water Quality)**, with incorporation of the Permanent Erosion and Runoff Control Measures condition of approval, the 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 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 project, with incorporation of environmental commitments, mitigation measures, and conditions of approval, would not be in conflict with applicable County regulations, policies, or goals and is anticipated to have a less than significant impact with respect to applicable County regulations, policies, or goals.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XII. MINERAL RESOURCES.</b> Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<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 25 miles to the south of the project site. Proposed site improvements and development of vineyard on the parcel would not physically preclude future mining activities from occurring. Therefore, no impact would occur.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XIII. NOISE.</b> Would the project:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<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 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 offsite residences are located approximately 1,065 feet to the north, approximately 1,269 feet to the southeast and approximately 1,588 feet to the southwest. Additionally, adjacent proprietries and properties in the immediate area contain vineyard.

Activities associated with the proposed project, including earthmoving and subsequent vineyard operations, could generate noise levels above existing conditions. Equipment necessary for project construction and operation includes a bulldozer, excavator, dump truck, trencher, backhoe, and small trucks. **Table 12** characterizes typical equipment noise levels at a reference distance of 50 feet. As identified in **Table 12**, equipment used for vineyard development could produce a maximum of 89dBA (A-weighted decibels) at a distance of 50 feet.

**Table 12 – Construction Equipment Noise Emission Levels**

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

Source: Napa County Baseline Date Report Chapter 6 (Noise Resources) November 2005 (Version 1)

**Table 13** 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. Based on distances to existing residences, noise associated with project construction would be approximately 65 to 75 dBA at the nearest existing offsite residences.

**Table 13 – Estimated Distance to dBA Contours from Construction Activities <sup>1</sup>**

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

<sup>1</sup> Based on a source noise level of 90 dBA

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

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 14** characterizes the typical reduction of farming activity noise levels as the distance increases from the source using a noise source level of 84 dBA.

**Table 14 – Estimated Distance to dBA Contours from Farming Activities <sup>1</sup>**

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

<sup>1</sup> 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 approximately 60 dBA to 65 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). As the closest offsite residence would experience construction noise levels of approximately 50 to 55 dBA, noise and vibration impacts associated with project development are anticipated to be less than significant. 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 project in excess of County standards.

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

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

**Discussion**

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XV. PUBLIC SERVICES.</b> Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
i. Fire protection?	<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?

**Discussion**

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

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XVI. RECREATION.</b> Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<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.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XVII. TRANSPORTATION.</b> Would the project:				
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 § 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 parcel is developed with approximately 13-acre of existing vineyard, one single-family residence and associated infrastructure and site improvements (reservoir, well, water storage tanks and supply/delivery lines; driveway and access roads; shop/barn, an agricultural chemical storage shed, and pool and associated residential landscaping) encompassing approximately 2-acres.

The proposed project is expected to generate approximately 12 one-way trips per day during construction and installation for anticipated work crews of 12 to 20 employees. It is anticipated that approximately six truck trips would be needed to mobilize and demobilize construction equipment (i.e. deliver and remove heavy equipment at the start and end of project construction). Vehicular equipment anticipated for project implementation typically includes a tractor/trailer, D6 bulldozers, backhoe, excavator, dump truck, pickup trucks, water truck, flatbed trucks, and ATVs. Pruning would occur approximately 2-4 days of the year and is anticipated to generate 8 daily employees, resulting in approximately four one-way trips per day during pruning. Weed control would occur between February and July/August and is anticipated to generate 2-4 employees. Harvest is anticipated to generate up to 12 daily employees resulting in approximately six one-way trips per day for a period of 10 days of the year. Up to eight grape haul truck trips are anticipated during harvest and an additional 12 trucks would be used during the remainder of the year. 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 located approximately 0.5 miles west of State Highway 128 and is accessed from a paved private access drive off Highway 128 located approximately 0.5 miles north of its intersection with Tubbs Lane. Vehicles and other equipment would use County roads and State highways for very short periods during construction and subsequent vineyard operations.

Traffic generated by construction of the proposed project and subsequent vineyard operation, including harvest, would increase traffic on area roadways and result in additional vehicle miles traveled compared to current conditions. These activities would occur on a temporary and/or seasonal basis, and they would generally occur during non-peak hours. Trips already occur due to the existing vineyard on the subject property, and it is anticipated that a number of existing employees would be utilized to develop and manage the proposed vineyard; therefore, it is anticipated that trips to and from the site would significantly change as a result of the project. The proposed project would result in a minimal increase in traffic levels (of up to approximately 12 one way trips during construction) 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 and existing site development. 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 State Highway 128 for project development (**Figures 1-3**). The project does not include roadway improvements and/or modifications to Atlas Peak Road, or include any other design feature that would result in hazardous conditions due to a geometric design feature or incompatible uses. The installation of the vineyard is consistent with the allowed use of the property and other agricultural uses in the area. Therefore, the potential for the creation, 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 parcel and project area, resulting in no impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
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**XVIII. TRIBAL CULTURAL RESOURCES.** Would the project:

Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- |  |                          |                                     |                          |                          |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|
| a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| a) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**Discussion**

Notice of the proposed project was sent to the Yocha Dehe Wintun Nation, the Middletown Rancheria, and the Mishewal Wappo Tribe of Alexander Valley on May 29, 2019. On June 6, 2019, the County received a response letter from the Middletown Rancheria indicating they have cultural resources or sites in the vicinity of the project area, and requested the following condition be applied to the permit (should the project be approved): *Applicant must engage with the Middletown Rancheria in a Cultural Resource Monitoring Agreement for the preservation and protection of all cultural resources during all ground disturbance activities as identified by the Middletown Rancheria.* On July 1, 2019, the County received a response letter from the Yocha Dehe Wintun Nation indicating that the project is not with the aboriginal territories and therefore decline to make any comments on the proposed project.

On July 11, 2019, the County sent correspondence to the Middletown Rancheria and to the Yocha Dehe Wintun Nation acknowledging their response letters and closing the consultation invitation because consultation was not requested 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 May 29, 2019, consultation invitation was received, on July 11, 2019 the County sent a consultation closure notice to the Tribe.

a-b. As discussed in **Section V (Cultural Resources)**, the proposed project’s Cultural Resource Reconnaissance (Russell Kobayashi, May 14, 2018), did not identify any historical or archaeological resources within the project parcel. However, there is a known cultural resource (#P28-001537) located on an adjacent parcel. Because the proposed project would avoid historical or archaeological resources no impacts are anticipated.

As indicated above, the Middletown Rancheria has requested a project-specific condition of approval (should the project be approved) that the owner/Permittee engage with the Middletown Rancheria in a Cultural Resource Monitoring Agreement to protect any potential cultural resources that may be encountered. To ensure that Monitoring Agreement is entered into with the Middletown Rancheria so that cultural resources are adequately protected, the project shall be subject to the project-specific condition of approval below, should the project be approved.

As such, the proposed project, with incorporation of the standard cultural resource conditions identified in **Section V (Cultural Resources)** and the project specific Tribal Cultural Resources condition of approval, 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).

**Tribal Cultural Resources – Conditions of Approval:** Prior to the commencement of vegetation removal and earth-moving activities of #P19-00220-ECPA, the owner/Permittee shall provide documentation to the Napa County Planning Department that a Monitoring Agreement with the Middletown Rancheria has been entered into. Should the owner/Permittee be unsuccessful in entering into a monitoring agreement with the Middletown Rancheria, the owner/Permittee shall provide, for review and approval by Napa County, a Cultural Monitoring Plan prepared by a professional archaeologist certified by the Registry of Professional Archeologists (RPA). The Cultural Monitoring Plan shall outline monitoring requirements including but not limited to, sensitivity training for site workers, identification of project activities and project site areas requiring an on-site monitor, find procedures, and monitoring documentation and reporting procedures.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XIX. UTILITIES AND SERVICE SYSTEMS.</b> Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<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 waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?	<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 and/or within proposed clearing limits. The proposed project would include the installation of a limited number of onsite storm water drainage features such as straw wattles, water bars, and a permanent no-till vineyard cover crop, which have been designed to meet project-related storm water drainage needs. The effect of the proposed storm water drainage system is described in **Sections IV (Biological Resources), VII (Geology and Soils), and X (Hydrology and Water Quality)**. As discussed in the referenced sections, the environmental impacts of construction of these features, with incorporation of standard conditions identified in **Sections III (Air Quality), IV (Biological Resources), V (Cultural Resources) and IX (Hazards and Hazardous Materials)**, would result in a less than significant impact.

- b. The proposed approximate 7.09 net planted acres of vineyard, in conjunction with the existing approximate 11.2 net planted acres of vineyard and residential use would be supplied by an existing onsite well. The WAA conducted by Napa Valley Vineyard Engineering (**Exhibit D**) concluded that after full development, water use for the project parcel is estimated to be approximately 5.73 AF/year. Based on the site-specific recharge analysis, the project parcel is estimated to have a groundwater recharge allotment of approximately 13 AF/year. Furthermore, with implementation of **Mitigation Measures BR-2**, groundwater use may be slightly reduced. 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.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. <b>WILDFIRE.</b> If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<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 (CALFIRE, 2007, Napa County GIS Fire Hazard Layer). The majority of the project parcel and vicinity was significantly burned/damaged by the Tubbs Wildfire (October 2017) and a portion of the burned vegetation on the project site and within the project areas was removed in 2018 under Notice of Emergency Timber Operation, Harvest Document 1-18EM-071-NAP (**Exhibit F**). The fire intensity was at a level which both cleared and charred, and damaged trees and large shrubs, and cleared the herbaceous layer.

- a. Project construction and operation would not require any road closures and would not substantially increase traffic in the area compared to current conditions. Existing roads would continue to provide adequate emergency access to the project site and project area. Therefore, the proposed project would not impact an adopted emergency response plan or emergency evacuation plan.
- b-c. Project construction would require the use of vehicles and heavy equipment for grading and other activities, and these vehicles and equipment could spark and ignite flammable vegetation. During construction, the risk of igniting a fire would be low because vegetation would be cleared prior to developing the vineyard, and the risk would be temporary due to the short duration of construction (approximately six months). Operation and maintenance activities would be similar to activities already occurring on the project site with the existing vineyard. The proposed project does not include any infrastructure that would exacerbate fire risk. Although the project site is in an area that historically has experienced wildfires, the proposed project would not exacerbate wildfire risk and this impact would be less than significant.
- d. Although the proposed project would alter land cover and could include burning cane, the project includes temporary and permanent erosion control measures which would reduce the impact of stormwater runoff or drainage changes being discharged on or offsite, and there would be no change or a decrease in peak flow for all watersheds in the project site (see **Section X - Hydrology and Water Quality**). The nearest offsite residences are over 1,000 feet from the project site. Additionally, as discussed in **Section IX (Hazards and Hazardous Materials)** the risk of fire in vineyards is very low due to limited amount of fuel, combustibles, and ignition sources that are present. Vineyards are irrigated and cover crops are typically mowed in May and August, thereby reducing the fuel loads within the vineyard. The removal of vegetation and the management of vineyard results in an overall reduction of fuel loads within the project area as compared with existing conditions. For these reasons, no structures or people are anticipated to be exposed to downslope or downstream flooding or landslides as a result of wildfire, and the impact would be less than significant.

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

- a. As discussed in this Initial Study, implementation of # P19-00220-ECPA, with the incorporation of its Environmental Commitments (i.e. Raptor and Passerine Bird Protection and Bat Protection) and identified conditions of approval (should the project be approved), would not have the potential to significantly degrade the quality of the environment.

Incorporation and implementation of the Environmental Commitments included in this project (as modified by conditions of approval) would minimize and avoid potential impacts to special-status bird species, including NSO, and special-status bat species that may utilize trees/woodland within and adjacent to project area for nesting, roosting, or maternal activities. Given the historic residential and agricultural development and use of the property and surrounding area, and the effects of the Tubbs Fire and subsequent Emergency Timber Operations, the overall environmental conditions of the project site and subject property are not considered regionally unique or

rare. The wetland and other aquatic resources (i.e. ephemeral/intermittent streams and reservoir) identified on the subject parcel have been avoided and provided with buffers consistent with code requirements. No cultural resources or examples of California history or prehistory have been identified within the project area, and with incorporation of standard and project specific conditions 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, with incorporation of mitigation measure(s), Environmental Commitments, and conditions of approval, is not anticipated to result in potential significant direct, indirect, and cumulative impacts to the quality of the environment or wildlife species.

- b. The subject property is located within the Blossom Creek drainage that contains approximately 1,683 acres. In 1993, vineyard acreage within this drainage was approximately 223 acres, or 13% of the drainage. Since 1993 approximately 139 acres of additional vineyard (or 8.3% of the drainage) have been developed to vineyard, resulting in approximately 21.5% of the drainage (or approximately 362-acres) containing vineyard.

It is estimated, based on evaluation of the County's GIS layer identifying Potentially Productive Soils (PPS) within the Blossom Creek Drainage, that there are approximately 484 acres (28.8% of the drainage) having the potential to be developed to vineyard, this in conjunction with existing and approved vineyard development (approximately 362-acres) results in a total potential build out of approximately 846 acres or approximately 50.3% 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 of reasonably foreseeable vineyard that may be developed over time, the acreage of vineyard development including approved vineyard projects in the cumulative environment (i.e., Blossom Creek drainage) over the last 26 years (1993-2019) were used to project an estimation of vineyard development for the next three to five years. Over the past 26 years within the Blossom Creek drainage, approximately 5.4-acres of agriculture were developed per year (139 divided by 26). 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 16.2 to 27-acres over the next three to five years within the Blossom 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), setbacks of 50 feet from wetlands, and retention of 70% of a property's cover canopy, and General Plan Conservation Policy CON 24c that requires the retention of oak woodland at a 2:1 ratio, all of which limit 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 project (#P19-00220-ECPA) includes the removal of vegetation and installation of vineyard and erosion control measures concurrent with other projects in the air basin that would generate emissions of criteria pollutants, including suspended particulate matter (PM) and equipment exhaust emissions. For construction-related dust impacts the Regional Water Board recommends that significance be based on the consideration of the control measures to be implemented (Regional Water Board, May 2017). As discussed in **Section III (Air Quality)** and shown in **Table 3** (Emissions from Vineyard Development and Operation) criteria pollutant emissions associated with development and operations are anticipated to be well below identified thresholds, and therefore are not expected to result in project or cumulatively significant impacts. Additionally, the project would be subject to standard air quality conditions of approval (should the project be approved) that require implementation of Air Quality BMPs to further reduce potential less than significant air quality effects of the project and ongoing operation. Conversion of existing vegetation and disturbance of soil would result in releases of carbon dioxide, one of the gasses that contribute to climate change (**Tables 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, April 2019 and January 2020 - **Exhibits B-1 and B-2**) was performed for the project. The survey included a record search to identify the presence or potential presence of special-status species within the project area. The records search included the CNDDDB and CNPS databases. As discussed in **Section IV (Biological**

**Resources**), no special-status plant species or their habitat were identified in the subject project parcel and project area. However, it was identified that there is the potential for special-status animal species (i.e. birds, raptors including northern spotted owl, and western pond turtle) to occur within the project area because, while degraded due to recent wildfires and emergency timber operations, potential habitat for these species (i.e. oak woodland, coniferous forest and reservoir) exist within the parcel. With implementation of the project's Environmental Commitments and **Mitigation Measures BR-1**, the project would reduce potential impacts to these species to a less than significant level. Potential indirect and cumulative impacts to oak woodlands and valley oak trees and associated habitat would be reduced through implementation of **Mitigation Measures BR-2** and incorporation of standard conditions of approval. Therefore, the project as proposed, with implementation of its environmental commitments, standard and project specific conditions of approval, and mitigation measure would not contribute to a cumulatively significant impact to special-status and animals or habitats.

#### **Cultural and Tribal Resources – Sections V and XVIII:**

The Cultural Survey Report conducted for the project did not identify any historical or archaeological resources within the project parcel; however, there is a known cultural resource (#P28-001537) located on an adjacent parcel. With the incorporation of standard and project specific conditions to protect cultural and tribal resources that may be discovered accidentally, significant impacts to cultural and tribal resources are not expected (see **Section V Cultural Resources** and **Section XVIII 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 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 13.38 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, thereby reducing soil loss potential. Because the project would reduce soil loss as compared to existing conditions the project is not anticipated to contribute cumulatively to sediment production within the Blossom 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 reasonable to anticipate that those projects would also have a less than significant project specific and cumulative impact on erosion and associated sedimentation.

#### **Hydrology and Water Quality - Section X:**

Water use calculations provided in the WAA prepared by Napa Valley Vineyard Engineering (January 2020 - **Exhibit D**) indicate that the proposed development consisting of approximately 7.09 net acres of planted vineyard would result in approximately 2.1 acre-feet per year (AF/yr), with water use for existing and proposed use totaling approximately 5.73 AF/yr (**Table 11**).

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 10% of average rainfall or 13 AF/yr would be available for groundwater recharge.

Considering the anticipated water use for existing uses and proposed vineyard of 5.73 AF/yr is below the properties anticipated annual groundwater recharge rate of approximately 13 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 Napa Valley Vineyard Engineering (January 2020 - **Exhibit C**). 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 C**), 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 the mitigation measures and conditions of approval identified in this Initial Study, achieves compliance with applicable NCC requirements and General Plan Goals and Policies (also see **Section VIII [Greenhouse Gas Emissions]**).

***Proposed Project Impacts found to be Less Than Significant***

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

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

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

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**LIST OF EXHIBITS:**

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Exhibit C	Hydrologic Study
Exhibit D	Water Demand and Water Availability Analysis
Exhibit E	USLE (Soil Loss) Analysis
Exhibit F	Notice of Emergency Timber Operation and Notice of Inspection, Harvest Document 1-18EM-071-NAP
Exhibit G	Agricultural Erosion Control Plan #95091
Exhibit H	Project Revision Statement