FINAL ENVIRONMENTAL IMPACT REPORT

SUSCOL MOUNTAIN VINEYARDS

EROSION CONTROL PLAN
APPLICATION NO. P09-00176-ECPA

DECEMBER 2012

LEAD AGENCY:

Napa County
Planning, Building, and Environmental Services
1195 Third Street, Suite 210
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INTRODUCTION

1.1 OVERVIEW

This document includes comments and responses to comments received on the Draft Environmental Impact Report (Draft EIR, 2012) for the Suscol Mountain Vineyards Erosion Control Plan Application #P09-00176-ECPA (proposed project).

This document, together with the Draft EIR, comprises the Final EIR for the proposed project. The Final EIR was prepared in accordance with CEQA Guidelines Section 15132. The Final EIR provides responses to comments received on the Draft EIR and incorporates the analysis of the Draft EIR. The Draft EIR is incorporated by reference and is available as a separately bound document from the Napa County Planning, Building and Environmental Services Department (Napa County). The Draft EIR was submitted to the State Clearinghouse (SCH# 2009102079) and released for public and agency review for a 45-day review and comment period on April 16, 2012. The comment period closed on May 30, 2012.

The Final EIR is an informational document that must be reviewed and considered by Napa County before Napa County approves, revises or rejects the proposed project. If Napa County finds the Final EIR is adequate and complete, Napa County may certify the Final EIR. The rule of adequacy generally holds that the EIR can be certified if it 1) shows a good faith effort at full disclosure of environmental information, and 2) provides sufficient analysis to allow decisions to be made regarding the project in contemplation of its environmental consequences. In addition to certification and consideration of the Final EIR in approving the proposed project, Napa County is required to make findings of fact regarding the significant environmental impacts identified in the Final EIR and project alternatives, as well as a statement of overriding considerations for significant impacts which cannot be mitigated to a level of less than significant. The findings, and any statement of overriding considerations, are made after Napa County has considered and certified the Final EIR and are included in the public record.

1.2 ORGANIZATION OF THE DOCUMENT

The Final EIR consists of the following chapters:

- **Chapter 2.0**, Executive Summary, provides a brief project description and presents a summary table of project environmental effects.

- **Chapter 3.0**, Written Comment Letters on the Draft EIR, provides a list of commenters and copies of written comments (bracketed for reference).

- **Chapter 4.0**, Responses to Written Comment Letters on the Draft EIR, provides the lead agency responses to the written comments in **Chapter 3.0**.

- **Chapter 5.0**, Minor Changes and Edits to the Draft EIR, provides changes and edits to the text of the Draft EIR that have been identified in response to the comments received; no new significant impacts are identified that would require recirculation pursuant to CEQA *Guidelines* Section 15088.5.

- **Chapter 6.0**, Mitigation Monitoring and Reporting Program, includes mitigation measures associated with the proposed project, timing and implementation, monitoring and enforcement responsibility, and compliance verification responsibility.

- **Chapter 7.0**, Report Preparation, provides a list of individuals involved in the preparation of the Final EIR.

CHAPTER 2.0
EXECUTIVE SUMMARY

2.1 INTRODUCTION

2.1.1 PROJECT LOCATION

The 2,123-acre Suscol Mountain Vineyards property (project site) is located approximately 2.5 miles southeast of the City of Napa in Napa County, California (**Figure 2-1**). Primary access for the property is provided by Anderson Road, a low-volume road located off of State Route 221. The project site is situated within portions of Sections 29, 30, 31, and 32, Township 5 North, Range 3 West, and Sections 25 and 26, Township 5 North, Range 4 West, Mount Diablo Base and Meridian (MDBM) of the "Cordelia, California" and "Mt. George, California" U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles(**Figure 2-2**). An aerial photograph of the project site and surrounding Napa County parcels is shown in **Figure 2-3**.

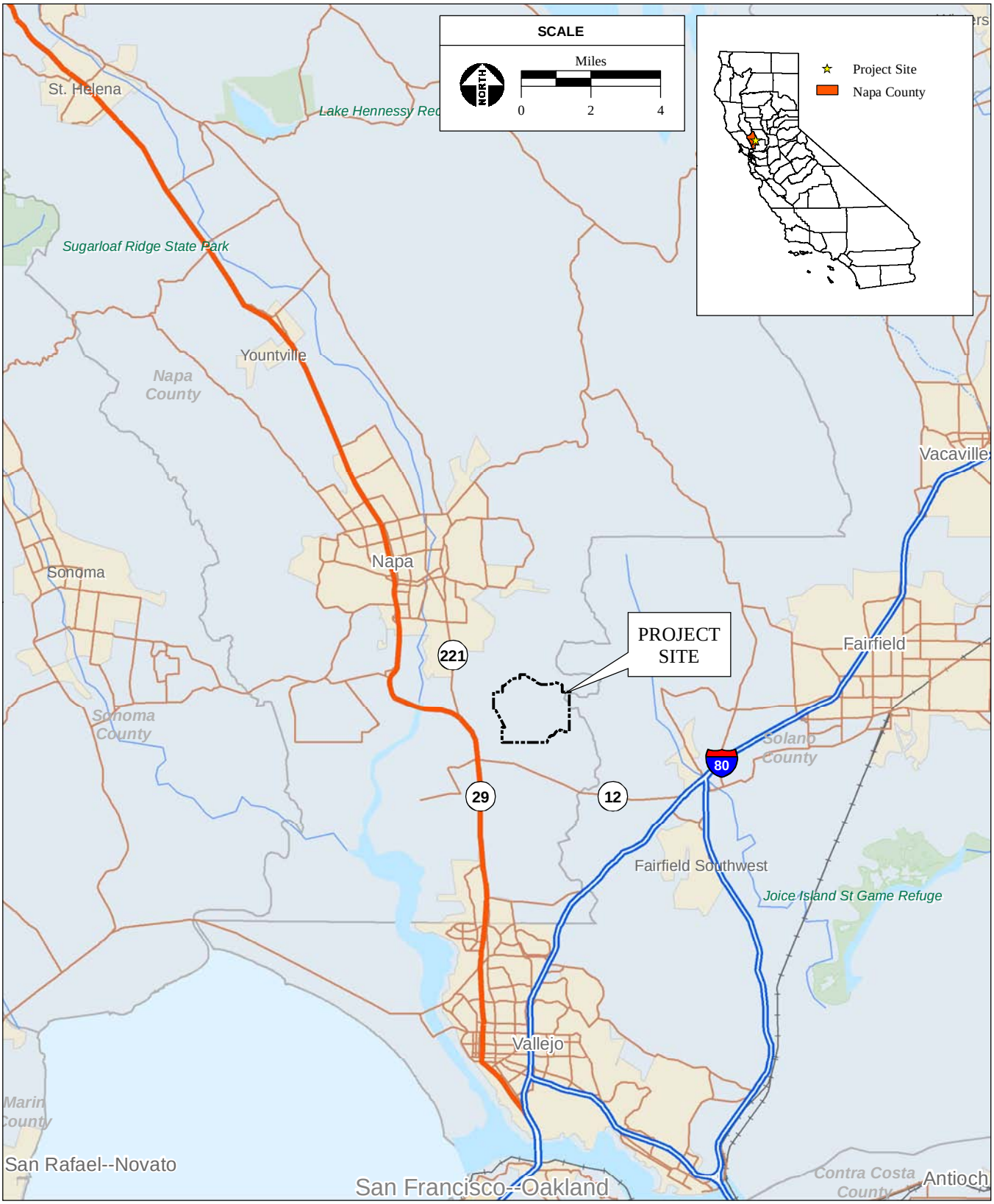
2.1.2 PROJECT DESCRIPTION

The purpose of #P09-00176-ECPA is to develop approximately 438 to 561 acres of vineyard. This includes vegetation removal and earthmoving and grading activities associated with soil cultivation, installation and maintenance of drainage and erosion control features, and vineyard planting.

For the purposes of the California Environmental Quality Act (CEQA), the project as proposed includes:

- Earthmoving and grading activities on slopes greater than five percent associated with soil cultivation, installation and maintenance of drainage, irrigation and erosion control features, and vineyard plantings on approximately 438 net acres within 561 gross acres of cleared and disturbed land;
- Implementation of a Long Term Vineyard Road Management Plan to maintain approximately 25 miles of existing roads; and
- Development of vineyard water supply and irrigation systems.

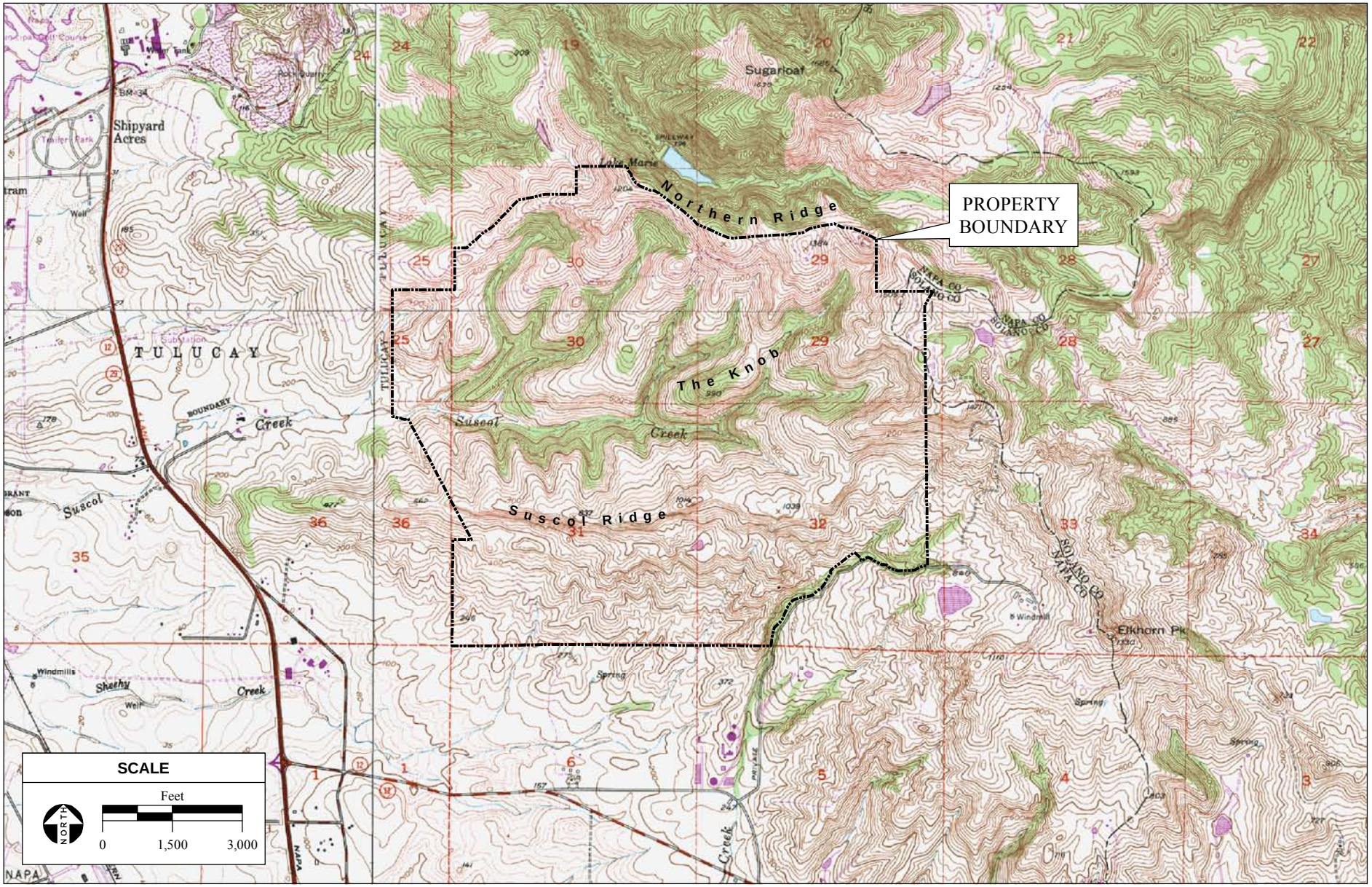
The proposed erosion control measures associated with the project include the following:



SOURCE: StreetMap USA, 2007; AES 2012

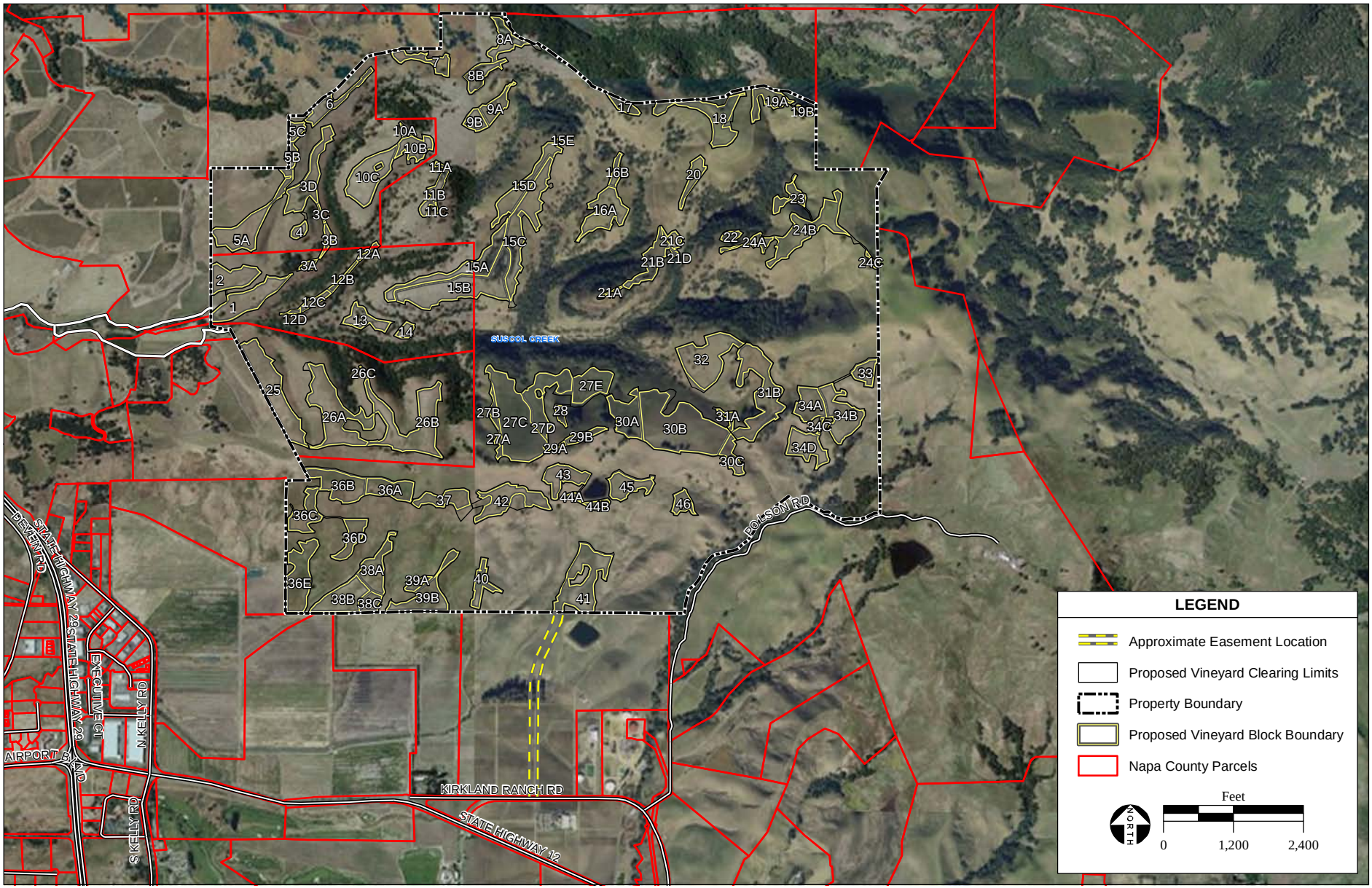
Figure 2-1

Regional Location Map



SOURCE:Sections 6, 25, 29, 30, 31, 32, and 36, Township 5 North, Range 3 West, Mount Diablo Base and Meridian of the "Cordelia, California" and "Mt. George, California" U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles; AES 2012

Figure 2-2
Site and Vicinity



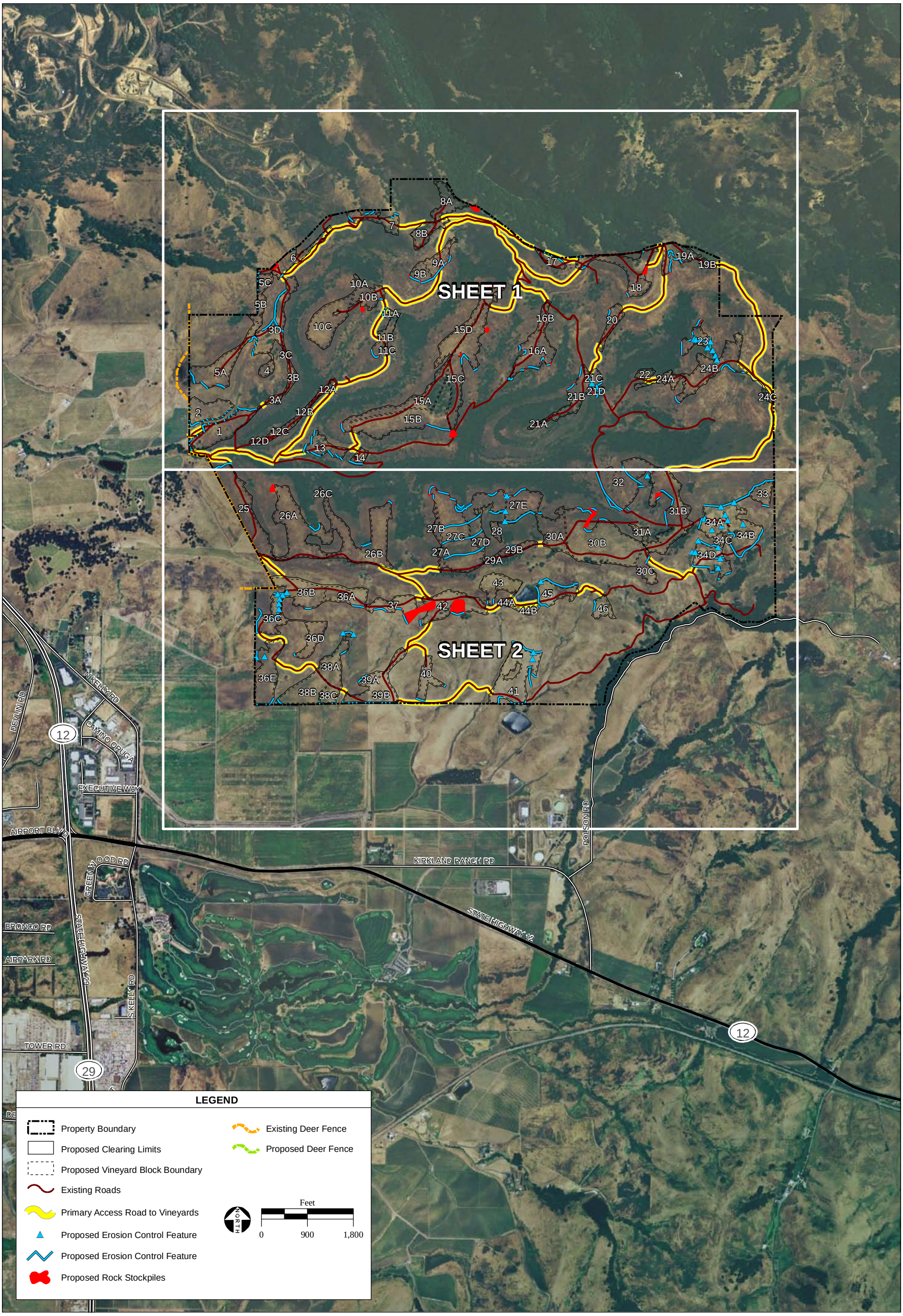
SOURCE: PPI Engineering, 2010; USGS DOQQ Aerial Photograph, 2008; Napa County, 2008; AES, 2012

Figure 2-3
Aerial Photograph

- Surface drainage pipelines to collect surface runoff at low points throughout the project area and transport it to protected outlets;
- Standard drop inlets and concrete drop inlets;
- Concrete outlet structures;
- Gravity outlets to act as energy dissipaters and minimize erosion;
- Pipe and rock level spreaders at the ends of proposed pipelines to return concentrated flows within the pipe to sheet flow;
- Infield diversion ditches;
- Outsloped infield spreaders;
- Subsurface drainage pipeline;
- Rock repositories/outsloped turnarounds;
- Rock berms;
- Cutoff collars on all solid pipelines with slopes greater than five percent;
- Maintenance of approximately 25 miles of existing roads through the implementation of a Long Term Vineyard Road Management Plan;
- Utilization of rock brought up by ripping for road surfacing; the remaining rock would be stockpiled in designated areas adjacent to vineyard areas for future use;
- All disturbed areas and avenues would be seeded with a permanent no-till cover crop with minimum vegetative cover requirements between 70 to 80 percent depending on the cover crop management specifications, all vineyard avenues would be maintained with a minimum 70 percent cover; and
- Straw wattles, waterbars, and other temporary erosion control measures, as specified in the erosion control plan application.

Subsequent agricultural activities such as vineyard maintenance and ongoing vineyard operations (including harvest) associated with the proposed project are considered indirect physical changes due to the proposed project, and are considered in the EIR.

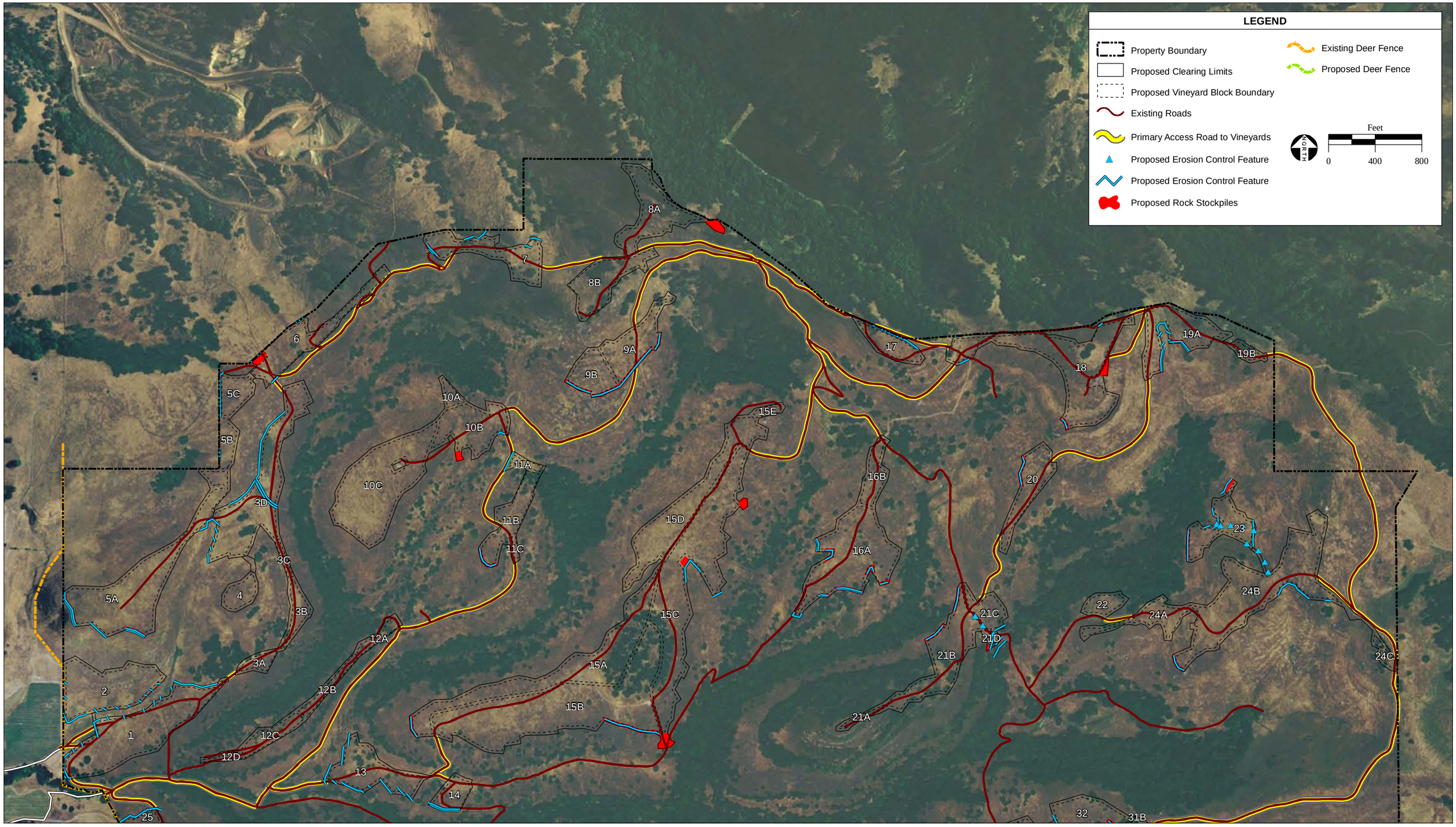
Figures 2-4 through **2-6** illustrate the site plans for the proposed project and the locations of proposed erosion control measures.



SOURCE: PPI Engineering, 2010; LandVoyage Aerial Photograph, 6/15/2005; Napa County, 2008; AES, 2012

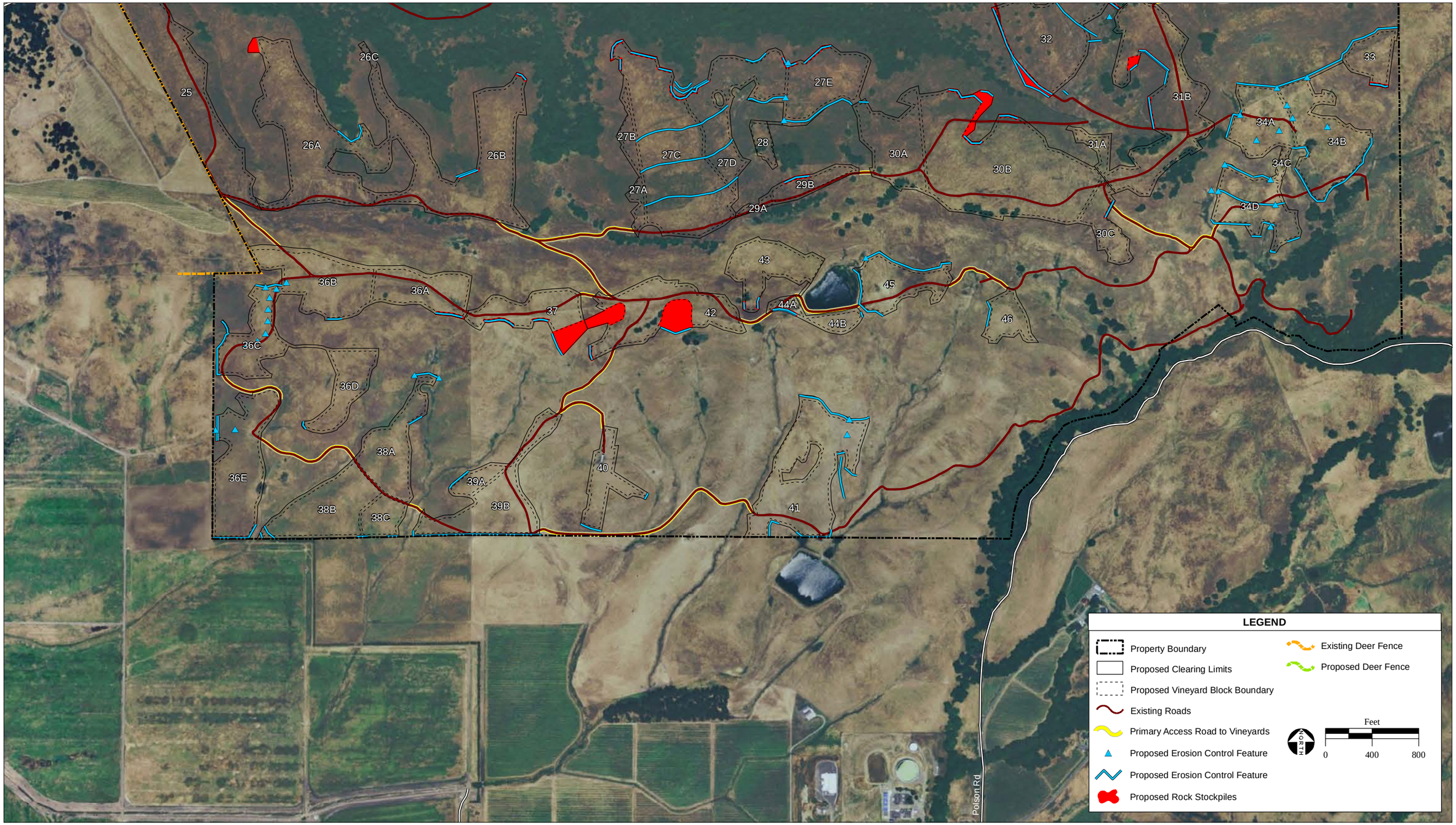
Figure 2-4

Proposed Project Reference Sheet



SOURCE: PPI Engineering, 2010; LandVoyage Aerial Photograph, 6/15/2005; Napa County, 2008; AES, 2012

Figure 2-5
Proposed Project - Sheet 1



SOURCE: PPI Engineering, 2010; LandVoyage Aerial Photograph, 6/15/2005; Napa County, 2008; AES, 2012

Figure 2-6
Proposed Project - Sheet 2

2.2 ALTERNATIVES TO THE PROPOSED PROJECT

CEQA *Guidelines* (Sections 15126 and 15126.6) requires an EIR to consider a range of alternatives that could feasibly attain the basic objectives of the proposed project. The Draft EIR fully evaluated three development alternatives. Descriptions for each of the alternatives are provided below.

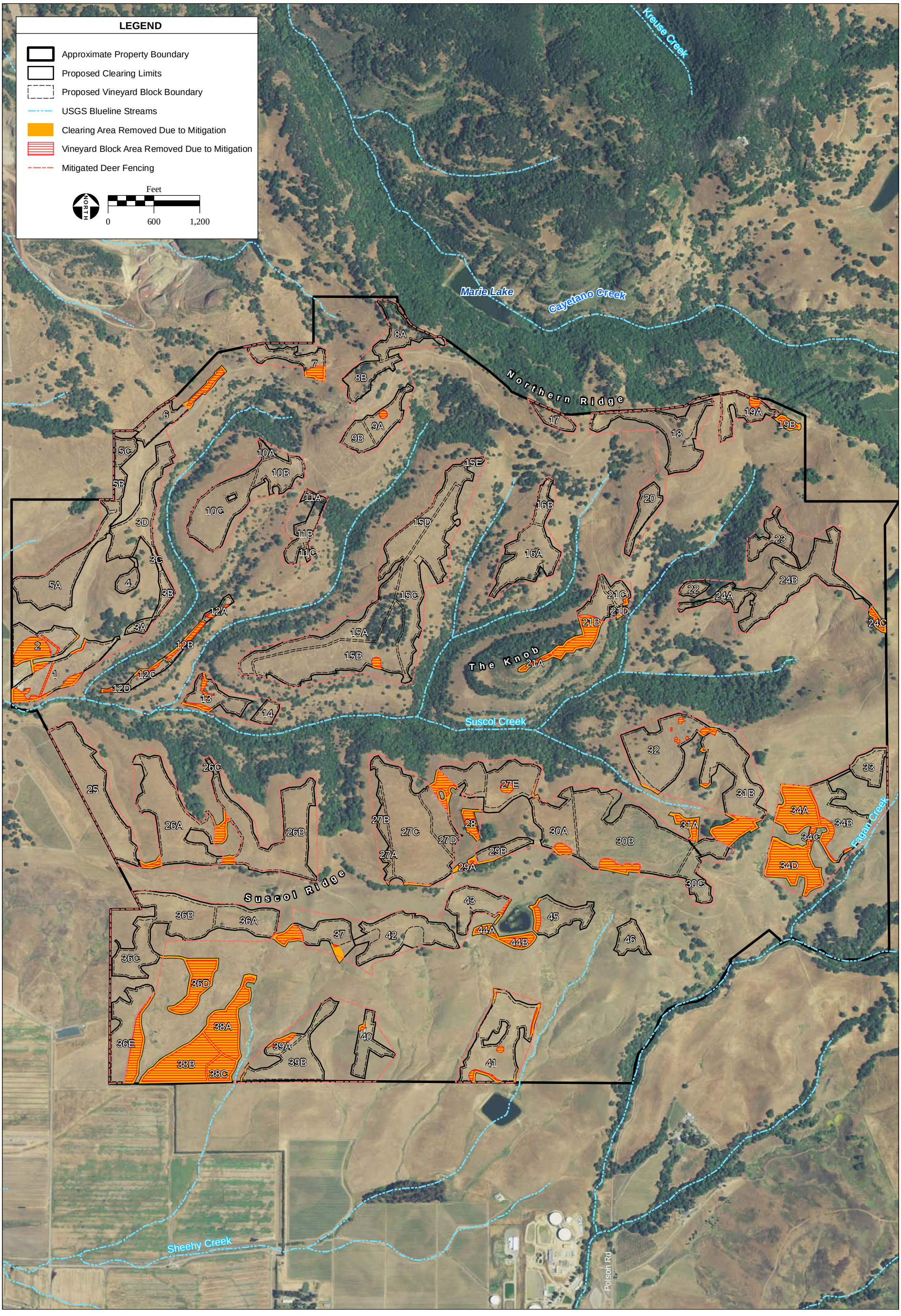
ALTERNATIVE 1: NO PROJECT ALTERNATIVE

The development of project features associated with #P09-00176-ECPA would not occur under the No Project Alternative. With the No Project Alternative, the project site would continue to operate as a cattle grazing area, and the approximately 2,123 acres of rangeland on the project site would continue to be grazed and maintained. No changes to the existing agricultural facilities, fencing, well, access roads or open space areas would occur. The vegetation cover proposed for removal through the proposed project would remain with the No Project Alternative, including approximately 530 acres of annual grassland, nine acres of Wild Oat Grassland, 30 acres of woodland, and 0.25 acres of Chamise Chaparral. The 1,182 trees proposed for removal would be retained, which includes 272 bay, nine buckeye, eight hollyleaf cherry, two eucalyptus, 887 live oak, and four valley oak. Under the No Project Alternative, cattle would continue to have unlimited access to the watercourses, thereby affecting native habitat and water quality. Cattle trampling has left deep, narrow channels with banks prone to slumping and widening. Continued livestock access to the watercourses would cause further trampling-related disturbance, which would likely promote systemic bank widening along Suscol and Fagan Creeks and impact riparian habitat and water quality. Native species would continue to be reduced through grazing, and vegetation trampling would lead to a sustained elevated rate of nutrient deposition into watercourses over natural conditions. Degradation of riparian habitat may increase as native vegetation is further subdued, and sediment yield may continue at the present elevated rate over non-grazed conditions, or may increase.

ALTERNATIVE 2: REDUCED INTENSITY ALTERNATIVE

Under the Reduced Intensity Alternative, less vineyard acreage would be developed than is proposed under #P09-00176-ECPA. The objectives of the Reduced Intensity Alternative are to further reduce impacts beyond the mitigated project as described in the Draft EIR Chapter 6.1, Cumulative Impacts and depicted on **Figure 2-7**.

The mitigated project would reduce impacts to native grasses on the property (Mitigation Measures 4.2-1 and 4.2-2); reduce impacts to oak woodlands (Mitigation Measure 4.2-4), avoid impacts to wetlands, seeps, and springs (Mitigation Measures 4.2-6 and 4.2-7); maintain wildlife movement corridors throughout the site (Mitigation Measure 4.2-8); avoid and replace streamside daisy (Mitigation Measure 4.2-9), protect California red legged frog habitat and



SOURCE: PPI Engineering, 2010; LandVoyage Aerial Photograph, 6/15/2005; Napa County, 2008; AES, 2011

Figure 2-7
Mitigated Project

prime upland nesting habitat and overwintering habitat for the western pond turtle (Mitigation Measures 4.2-11 and 4.2-12); protect upland nesting habitat for the grasshopper sparrow (Mitigation 4.2-14); avoid all existing rock walls and other identified cultural resources (Mitigation Measure 4.3-1); and avoid active landslides (Mitigation Measure 4.4-3). Implementation of the mitigation measures identified in the Draft EIR would reduce the gross acreage of the project from 561 acres to approximately 477 acres and would reduce the net acreage from 438 acres to approximately 379 acres.

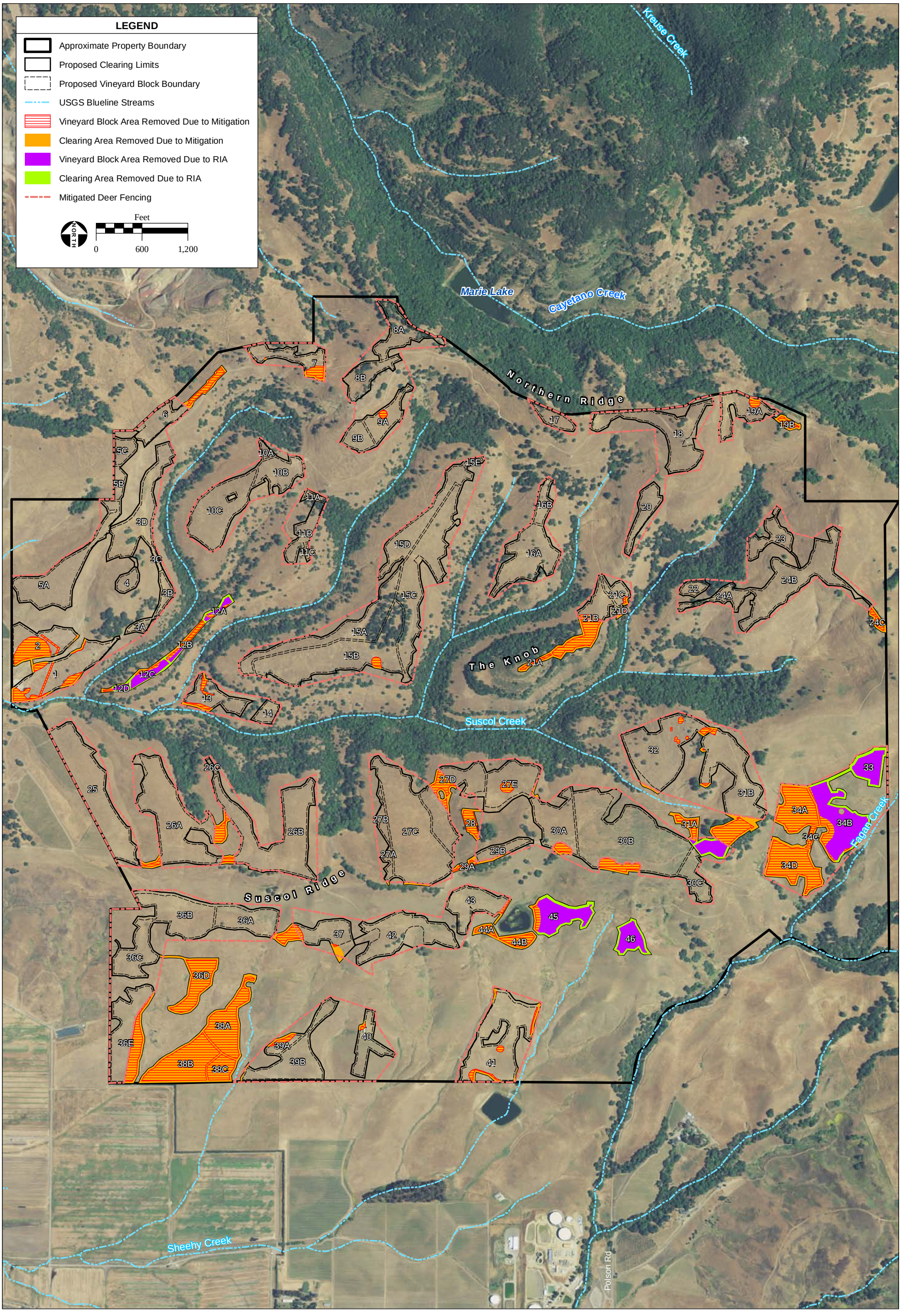
With the Reduced Intensity Alternative, the block configurations of the mitigated project have been evaluated to make adjustments that are intended to achieve the following: adjust block boundaries where the configuration after project mitigation has compromised the practical farming of the area; enhance riparian protection; enhance wildlife movement on the site; and increase stream setbacks.

In all, avoiding the areas described above in addition to the areas removed through mitigation would result in a total reduction of approximately 110 gross acres of developed area, from approximately 561 acres to approximately 451 acres and 79 net acres from approximately 438 acres to approximately 359 acres under the Reduced Intensity Alternative. As discussed above, all other mitigation associated with the proposed project for avoidance and/or minimization of impacts to biological resources would apply with the Reduced Intensity Alternative. Modifications to the vineyard blocks under the Reduced Intensity Alternative are depicted in **Figure 2-8**.

With the Reduced Intensity Alternative, construction-related dust and particulate matter would be generated, additional vehicles would travel to the project site during project construction and operation compared to current conditions, and odors would be generated similar to the proposed project. These impacts are considered less than significant with the proposed project, and would similarly be anticipated to result in less-than-significant impacts under the Reduced Intensity Alternative, as the vineyard acreage would be decreased.

The Reduced Intensity Alternative could result in the potential to affect previously unknown cultural resources, and could result in the discovery and disturbance of unknown human remains, similar to the proposed project. The mitigation measures included in the proposed project would be required for the Reduced Intensity Alternative to minimize potential impacts to cultural resources.

Like the proposed project, the Reduced Intensity Alternative would result in a reduction in erosion and sediment yield compared to current conditions; however, the Reduced Intensity Alternative would result in slightly greater sediment yield than what would occur with the proposed project, as sediment yield is greater for grasslands and oak woodlands than for



SOURCE: PPI Engineering, 2010; LandVoyage Aerial Photograph, 6/15/2005; Napa County, 2008; AES, 2012

Figure 2-8
Reduced Intensity Alternative

vineyard (based on results of the Hydrologic Assessment; Balance Hydrologics, 2010; Appendix G of the Draft EIR). The Reduced Intensity Alternative would not result in any changes that would alter the geologic setting to an extent that would initiate or exacerbate the potential for seismic hazards to occur on the property, resulting in a risk of loss of life or property.

The Reduced Intensity Alternative would require the use, storage and disposal of hazardous materials, similar to the proposed project. The release of hazardous materials into the environment during construction, operation and maintenance of the proposed project are potentially significant impacts. The mitigation measures included in the proposed project would be required for the Reduced Intensity Alternative to minimize potential impacts to hazardous materials to less-than-significant levels.

Like the proposed project, the Reduced Intensity Alternative would result in a reduction in the volume and rate of runoff compared to current conditions; however, the Reduced Intensity Alternative would result in a slightly greater volume and rate of runoff than what would occur with the proposed project, as the volume and rate of runoff is slightly greater for grasslands and oak woodlands than for vineyards (based on results of the Hydrologic Assessment; Balance Hydrologics, 2010; Appendix G of the Draft EIR). Changes to channel stability, the potential for downstream flooding, and impacts to water quality were less than significant with the proposed project, and would similarly be anticipated to be less than significant under the Reduced Intensity Alternative, as the vineyard acreage and associated operational needs would be decreased. Like the proposed project, the Reduced Intensity Project could impact local groundwater resources and the mitigation measure included with the proposed project would be required. The Reduced Intensity Alternative would result in less demand for groundwater resources than the proposed project, as fewer vineyard acres would be developed. This would reduce the potential for impacts to offsite wells and would reduce the potential for impacts to base flows in Suscol Creek. Like the proposed project, the Reduced Intensity Alternative would not result in transportation and traffic impacts.

ALTERNATIVE 3: REDUCED INTENSITY WITH RECYCLED WATER SUPPLY ALTERNATIVE

The project as proposed would be developed in phases, with Phase I being served by groundwater pumped from existing Well 1. With the Reduced Intensity with Recycled Water Supply Alternative, the groundwater and surface monitoring program would be the same as described in Mitigation Measure 4.6-4; however, the program would be modified such that groundwater would be utilized for Phases I and II, and Phase III would make use of recycled water from the Napa Sanitation District's Soscol Water Recycling Facility (WRF). The project site and an adjacent existing vineyard have been identified as properties that are potentially eligible for up to 150 acre-feet (af) of recycled water. The recycled water produced at the Soscol WRF is disinfected tertiary quality, which is the highest quality recognized under the

California Department of Health Services, Title 22 requirements. Phase I of project development would require a maximum of 78 af of water per year which would be well within the capacity of existing Well 1. Phase II of the project would require a maximum of 117 af of water per year. Phase III of the project would require a maximum of 68 af of water per year. With implementation of the project mitigation, the water demand would be further reduced due to loss of planned vineyard area. Phase III would not be initiated until recycled water has been secured and infrastructure required to deliver the water to the site has been completed. This alternative assumes that the mitigation and avoidance measures proposed in the Reduced Intensity Alternative would be implemented. Upon acceptance of recycled water, a minimum of 50 percent of the acreage within Phase III would be irrigated with recycled water. Given the likelihood that the volume and schedule of delivery of water may vary from year to year, the 50 percent use would be averaged over a three year period.

As currently proposed, Phase III includes 113 net acres of vineyard which would require approximately 68 af per annum for irrigation. The project site has been identified as potentially eligible to receive a portion of a projected 150 af annual allocation.

Implementation of the Reduced Intensity with Recycled Water Supply Alternative would reduce potential impacts to offsite wells and reduce the potential for impacts to base flows in Suscol Creek. The introduction of additional water into the onsite watersheds could potentially increase baseflows in the streams, increase flows to seeps and springs and improve aquatic habitat on the project site. All other impacts associated with this alternative would be similar to those described for the Reduced Intensity Alternative.

Since actual allocation of recycled water has not been provided to this project from the Napa Sanitation District, this alternative is not considered feasible. Without a reliable allocation of recycled water, the objectives of the project would not be achieved. However, the language in Mitigation Measure 4.6-4 that would encourage use of recycled water would remain and the project objective to use recycled water to supplement water demands if it becomes available in the region and is commercially feasible to do so would also remain.

2.3 SUMMARY OF ENVIRONMENTAL IMPACTS

Table 2-1 presents a summary of project impacts and proposed mitigation measures that would avoid or minimize potential impacts. In the table, the level of significance of each environmental impact is indicated both before and after the application of the recommended mitigation measure(s). For detailed discussions of all project impacts and mitigation measures, the reader is referred to environmental analysis sections in Chapter 4.0 of the Draft EIR. Changes to Draft EIR text as a result of responses to comments on the Draft EIR are discussed in **Chapter 5.0** and final mitigation language is included in the Mitigation Monitoring and Reporting Program in **Chapter 6.0**.

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
4.1 Air Quality			
4.1-1: During construction, land clearing, earthmoving, movement of vehicles, and wind erosion of exposed soil associated with implementation of the proposed project would have the potential to cause nuisance related to fugitive dust.	Potentially Significant	**4.1-1:** The owner shall implement a fugitive dust abatement program during the construction of #P09-00176-ECPA, which shall include the following elements: • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard; this mitigation is included in the BAAQMD-approved Urban Emissions (URBEMIS) 2007 model (Version 9.2.4; URBEMIS 9.2.4 model). • Cover all exposed stockpiles. • Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent streets. • Limit traffic speeds on unpaved roads to 15 miles per hour (mph); this mitigation is included in the URBEMIS 9.2.4 model. • Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph. • Any burning of cleared vegetation shall be conducted according to the rules and regulations of the BAAQMD's Regulation 5 (BAAQMD, 2006). Prior notification to BAAQMD shall be made by submitting an Open Burning Prior Notification Form to BAAQMD's office in San Francisco. The measures above (which are consistent with the BAAQMD recommended measures) are in addition to the permanent erosion control measures specified in #P09-00176-ECPA, which include establishing a permanent no till cover crop on all disturbed areas and applying straw mulch over disturbed areas. The permanent erosion control measures would avoid the creation of nuisance dust and PM_{10} during operation of the vineyard, reducing these potentially significant impacts to a less-than-significant level.	Less than Significant
4.1-2: Construction of the proposed project would result in regional emissions from operation of construction equipment.	Potentially Significant	**4.1-2:** The owner shall implement the required basic construction mitigation measures as recommended by the BAAQMD during the construction of the proposed project, which shall include the	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		following elements: • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day; this mitigation is included in the URBEMIS 9.2.4 model. • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of the California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations. • The owner shall use only aqueous diesel fuel during construction; this mitigation is included in the URBEMIS 9.2.4 model. As shown in Table 4.1-3 in the Draft EIR, construction of the proposed project would not exceed the BAAQMD criteria pollutant threshold.	
4.1-3: Operation of the proposed project would attract additional vehicles to the project site, resulting in new regional emissions.	Less than Significant	**4.1-3:** No mitigation is required.	Not Applicable
4.1-4: Construction of the proposed project would slightly increase traffic volumes and congestion levels on local roadways.	Less than Significant	**4.1-4:** No mitigation is required.	Not Applicable
4.1-5: Project emissions have the potential to cause distress to sensitive receptors.	Less than Significant	**4.1-5:** No mitigation is required.	Not Applicable
4.1-6: Project operation could result in operational odors.	Less than Significant	**4.1-6:** No mitigation is required.	Not Applicable

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
4.2 Biological Resources			
4.2-1: Development of the proposed project would convert native grassland vegetation to vineyard, changing management of these grasslands, and potentially conflict with Napa County Policy CON-17 that preserves and protects native grasslands.	Potentially Significant	**4.2-1**: Indirect impacts would be reduced to less-than-significant levels by a combination of avoidance of all Purple Needle Grass Grassland and Creeping Rye Grass Turf (as proposed and mapped in Figure 4.2-1 in the Draft EIR), and grassland management. These Sensitive Biotic Communities shall be managed to maintain native species and control highly invasive species using light grazing guided through a Resource Management Plan (RMP). This RMP shall be prepared by a qualified biologist, ecologist or State-licensed Certified Rangeland Manager (CRM), in consultation with the Napa County Resource Conservation Director (RCD). This would be consistent with Napa County Policies CON-2 and CON-17. The RMP shall be submitted to Napa County prior to any vegetation removal, grading and earthmoving activities. In addition to the avoidance and management of all mapped Purple Needle Grass Grassland and Creeping Rye Grass Turf discussed above, the following are other objectives that shall be included in the RMP: the management of onsite Wild Oat Grasslands not proposed for development (Mitigation Measure 4.2-2) to prevent further invasion of Wild Oats Grasslands by highly invasive plant species; management of the Oak Woodland Avoidance and Management Areas (Mitigation Measure 4.2-4); and aquatic habitat enhancement in the vicinity of the proposed Suscol Creek crossing (Mitigation Measure 4.2-17); standard adaptive management erosion control and fire management practices within onsite wildlife corridors (Mitigation Measure 4.2-8). Implementation of the RMP would protect wetland habitats from potential water quality related impacts (Mitigation Measure 4.2-7), and continue to provide habitat for grasshopper sparrow nesting and foraging (Mitigation Measure 4.2-14), as well as Swainson's hawk (Impact 4.2-15) and raptor and loggerhead shrike foraging habitat (Impact 4.2-16). Required performance standards for the RMP are as follows. Performance criteria for enhancement of grassland resource values are shown in parentheses (LSA, 2010; Appendix D in the Draft EIR):	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		• Management goals. (Goals shall include habitat enhancement criteria such as increased native grass cover, native plant diversity, and wildlife values). • Range improvements such as existing and proposed fences and water sources. (Additional water sources and fencing shall be installed for more even distribution of grazing use and to lessen impacts on wetlands and riparian habitats). • Kind and class of livestock. • Livestock carrying capacity and stocking rate. (A stocking rate that results in light to moderate use levels shall be specified to promote habitat values). • Residual dry matter levels (RDM) related to slope. (Minimum RDM levels consistent with light to moderate use levels shall be attained. This equates to an average of about 700 pounds per acre on gentle slopes to 1,000 pounds per acre on steeper slopes in an average rainfall year).	
4.2-2: Development of the proposed project would reduce the acreage of all non-sensitive grassland vegetation types, which provide cover for erosion control, important forage and nesting habitat for invertebrates, birds and mammals, appropriate vegetative structure for many native plant species, and contribute to overall biodiversity in the region.	Potentially Significant	**4.2-2:** Impacts to non-sensitive grasslands would be reduced to less-than-significant levels through the development and execution of a RMP (refer to Mitigation Measure 4.2-1). Management under the RMP of Wild Oat Grasslands not proposed for development would prevent further invasion of Wild Oats Grasslands by highly invasive plant species. This would have the added effect of enhancing forage for cattle and habitat quality for native species. The majority of Wild Oats Grassland containing minor components of purple needle grass, creeping wild rye, and meadow barley would also be avoided and managed to preserve nesting habitat for grasshopper sparrows (Impact and Mitigation Measure 4.2-14). An important component of the RMP would be to provide measurable benchmarks for livestock grazing for fire prevention and weed management. When livestock are grazed outside of vineyard areas, temporary fencing shall be utilized as needed to prevent livestock access to wetlands, Suscol Creek and its tributaries, and tributaries to Sheehy and Fagan Creeks. The initial temporary fencing design shall be field verified by a qualified biologist prior to commencement of grazing activities. The Applicant/Owner shall use criteria established in the RMP (discussed in Mitigation Measure 4.2-1) to ensure the property is not overgrazed outside the vineyard blocks.	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
4.2-3: Development of the proposed project would convert to vineyard approximately 0.26 acre (1.6 percent) of the almost 16 acres of the Chamise Alliance known to occur within the project site.	Less than Significant	**4.2-3:** No mitigation is required.	Not Applicable
4.2-4: Development of the proposed project would convert Coast Live Oak Woodland and scattered valley oaks to vineyard, which could result in adverse impacts to biological resources. In addition, the proposed development may conflict with Napa County General Plan Goals CON-2 and CON-6 and Policies CON-17 and CON-24.	Potentially Significant	**4.2-4:** Impacts to oak woodland shall be reduced to a less-than-significant level and result in the greatest quality of oak woodland mitigation through a combination of 1) avoidance of oak woodlands to the maximum extent feasible; 2) preservation and conservation of oak woodlands having the highest habitat values and qualities at minimum 2:1 preservation-to-vineyard ratio on a per acre basis; and 3) through the restoration and enhancement of existing oak woodlands implemented by an oak woodland restoration plan. Prior to approval of the ECP, the plan shall be modified to include the following measures. *Avoidance* Avoidance measures would preserve areas identified as high value oak woodlands that occur within or in close proximity to riparian galleries, on the fringe of vineyard blocks, species that are of limited distribution in the vicinity of the project site (e.g., valley oak), and woodlands on or near ridge tops. Appendix J discussed in Chapter 6.0 in the Draft EIR identifies constraints by vineyard block; thereby showing the reason(s) for mitigation. As seen in Appendix J in the Draft EIR, some trees are preserved primarily for slope stability purposes and are preserved for biological resources as a secondary consideration. The following proposed blocks shall be modified to avoid oak woodland areas, illustrated in Figure 4.2-6 in the Draft EIR as Oak Woodland Avoidance and Management Areas (includes the oak woodlands identified as management areas by LSA (2010), see Appendix D in the Draft EIR): Blocks 1, 7, 9, 19, 21, 24, 26, 27, 29, 30, 31, and 32. The required Oak Woodland Avoidance and Management Areas total approximately 12.2 acres, including ridge top woodlands in proposed Blocks 21, 24, 26, 27, 29, 30, and 31, and the retention of several large specimen trees within vineyard blocks, including two coast live oaks with trunk diameters at breast height (dbh) of 40 inches and four valley oaks.	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		All avoided trees within 50 feet of ground-disturbing activities shall be protected with visible plastic fencing during all phases of construction activities. Visible fencing shall be placed ten feet outside the edge of the dripline (edge of the tree canopy) to protect above- and below-ground tissues of these trees and shall be field verified by Napa County prior to the commencement of any grading or vegetation removal. The following shall not occur within the buffers of any retained tree(s): parking or storage of vehicles, machinery or other equipment; stockpiling of excavated soils, rocks or construction materials; or dumping of oils or other chemicals. A certified arborist shall perform any pruning deemed necessary. Protective fencing shall be maintained in place until the vineyard area adjacent to the subject woodlands has been planted and all grading and earthwork necessary for the project has been completed. *Preservation and Enhancement* Direct impacts to approximately four percent of oak woodlands would be mitigated through the avoidance of the remaining onsite oak woodlands, in excess of the 2:1 preservation ratio, on a per-acre basis. As shown in Table 4.2-4 in the Draft EIR, at least 40 acres (or 20 acres times two) of onsite oak woodland should be preserved for the 20 acres of oak woodland developed into vineyard, with mitigation incorporated as described above. Over 500 acres of oak woodland would remain on the project site with the mitigated project, in excess of the 40 acres required to meet the 2:1 preservation ratio. Permanent protection for the avoided woodlands is required at a 2:1 acre ratio. Oak woodland areas identified for preservation in perpetuity shall be identified in a deed restriction/conservation easement to be held by an organization such as the Napa County Regional Park and Open Space District or Land Trust of Napa County (as the grantee), or other means of permanent protection acceptable to Napa County. Management of the Oak Woodland Avoidance and Management Areas (Figure 4.2-6 in the Draft EIR), including planting and other enhancement activities, shall be detailed by a qualified professional with knowledge of California oak woodland resource management concepts (including Registered Professional Foresters or Certified Rangeland Managers) and shall be included in the RMP.	

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
4.2-5: Development of the proposed project would convert some very small rock outcrops on slopes of less than 30 percent that contribute to the overall biological diversity of the project site.	Less than Significant	**4.2-5:** No mitigation is required.	Not Applicable
4.2-6: Development of the proposed project could result in indirect and direct impacts to wetlands and waters of the U.S. and therefore may be inconsistent with Policies CON-26 and CON-30.	Potentially Significant	**4.2-6:** Prior to County approval of the ECP, the plan shall be modified to include the following: To ensure that all wetlands and waters of the U.S that could be directly or indirectly impacted by the project have been identified, a formal delineation of waters of the U.S. within all areas proposed for disturbance and surrounding buffers shall be prepared and submitted to the USACE for verification. The width of the buffers shall be a minimum of 50-feet measured from the outer edge of each vineyard block, and may be wider in specific locations where potential wetlands are subject to downhill runoff from vineyards. Otherwise, the delineation need not extend to parts of the property that are not proposed for disturbance with the project and have no potential to be affected by vineyard related runoff. A Section 404 Nationwide Permit shall be obtained from the USACE prior to the discharge of any dredged or fill material within jurisdictional wetlands or other waters of the U.S. A Section 1602 Lake and Streambed Alteration Agreement (LSAA) shall be obtained from CDFG prior to construction activities that alter the bed or bank of streams or ponds. Pursuant to General Plan Policy CON-30, impacts to wetlands and waters of the U.S. shall be mitigated through avoidance to the extent feasible. In the event avoidance is infeasible, as determined by the County, the compensatory mitigation shall be implemented onsite or at an agency approved offsite location at a minimum of 1:1 ratio and shall be approved by the USACE prior to any discharge into jurisdictional features and by CDFG prior to altering the bed or bank of a stream or pond. To avoid indirect impacts to waters of the U.S. and wetlands (in addition to Mitigation Measure 4.2-7 protecting seeps and springs), minimum avoidance buffers of 50-feet shall be maintained around each of the wetlands. Temporary orange construction fencing shall be installed around wetlands and any drainage features in the vicinity of and outside of the construction	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		area. Fencing shall be located a minimum of 50 feet from the edges of wetlands and waters of the U.S. as identified in the formal wetland delineation report and located on the ground by a qualified professional acceptable to Napa County. All fencing shall be installed prior to the commencement of any earthmoving activities and shall be field verified by a qualified biologist; documentation from the biologist verifying that protective fencing has been installed in accordance with this measure shall also be provided to the County prior to the commencement of earthmoving activities. The fencing shall remain in place until all construction activities in the vicinity have been completed. Staging areas shall also be located a minimum of 50 feet from the areas of wetland habitats (including seeps and springs). Temporary stockpiling of excavated or imported material shall occur only in approved construction staging areas within the project area (i.e., vineyard blocks as modified through mitigation). Excess excavated soil shall be used on site or disposed of at a regional landfill or other appropriate facility. Stockpiles that are to remain on the site through the wet season (October 1 through March 31) shall be protected to prevent erosion through the implementation of BMPs such as seeding and mulching, cover with tarps, and/or installing silt fences, straw wattles or straw bales. Standard precautions shall be employed by the construction contractor to prevent the accidental release of fuel, oil, lubricant, or other hazardous materials associated with construction activities into jurisdictional features. A contaminant program shall be developed and implemented in the event of release of hazardous materials (as detailed in Mitigation Measure 4.5-1).	

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
4.2-7: Development of the proposed project could result in the loss or degradation of seeps and springs (collectively referred to as wetland habitats).	Potentially Significant	**4.2-7:** Prior to County approval of the ECP, the plan shall be modified to include the following components. Any associated project features that become unnecessary as a result of implementation of this measure shall also be eliminated in the revised in the plan. The Applicant shall permanently avoid all of the wetland habitats throughout the project site. Prior to construction, a formal wetland delineation (Mitigation Measure 4.2-6) shall be completed to establish 50-foot setbacks from all springs and seeps. Vineyard blocks shall be adjusted as necessary to accommodate the setbacks. Highly visible construction fencing shall be located a minimum of 50 feet from the edges of the wetland features as identified by a qualified biologist. All fencing shall be installed prior to the commencement of any earthmoving activities, documentation from the biologist confirming protection fencing has been installed in accordance with the measure shall be provided to the County and fencing locations shall be field verified by Napa County. The fencing shall remain in place until all earthmoving activities in the vicinity of the resource have been completed. Implementation of Mitigation Measure 4.2-7 and the implementation of the RMP (see Mitigation Measure 4.2-1) would reduce the potential impacts to seeps and springs to a less-than-significant level.	Less than Significant
4.2-8: Development of the proposed project could interfere with existing wildlife movement corridors and conflict with General Plan Policy CON-18 which requires vineyard development to be designed to minimize the reduction of wildlife movement to the maximum extent feasible.	Potentially Significant	**4.2-8:** Prior to approval of the ECP, the plan shall be modified to include the following: Wildlife movement corridors, including those recommended by LSA, are needed to address significant impediments to movement to adjacent properties (Table 4.2-5 in the Draft EIR) and maintain consistency with General Plan Policy CON-18, particularly to undeveloped protected lands northeast of the project site. Movement areas described below shall be effectively open at both ends with no fencing as shown in Figure 4.2-6 in the Draft EIR.	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation

TABLE 4.2-5
MITIGATED WILDLIFE MOVEMENT AREAS WITHIN PROPERTY BOUNDARIES

Location of Added Wildlife Movement Area Within Property Boundaries	Purpose
Block 6	To connect with offsite movement corridors.
Between proposed Blocks 10 and 11	To connect existing movement corridor from riparian to upland habitat.
Between proposed Blocks 13, 14 and 15	To continue riparian movement corridor.
Between proposed Blocks 17, 18 and 19	To connect with offsite movement corridors.
Between proposed Blocks 25 and 26	To continue riparian movement corridor down through southern half of project site.
Between proposed Blocks 26A, B and C	To continue riparian movement corridor down through southern half of project site.
Between proposed Blocks 27, 28 and 29	To connect upland movement to riparian corridor along Suscol Creek. A portion of Block 27D and all of Blocks 28 and 29A shall be removed. Additional constraints avoided: a cluster of at least three seeps and an oak woodland management area.
Between proposed Blocks 30 and 31, 32	To extend existing riparian corridor. Additional constraints avoided: wetlands and an oak woodland management area.
Proposed Block 34	A portion of Block 34 shall be removed to provide unhindered movement between the Suscol Creek watershed and Fagan Creek. Other constraints avoided include at least four large seeps,

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure		Level of Significance After Mitigation
			other wetlands, Wild Oats Grassland containing over five percent of a mix of three native grasses, and known grasshopper sparrow nesting habitat.	
		Between proposed Blocks 36 and 37	To permit wildlife movement through a fenced set of blocks that restrict movement across the lower approximately 5/6 of the project site, in addition to the removal of proposed Block 38 and a portion of proposed Blocks 36 and 39 that are in active slide areas (discussed in Mitigation Measure 4.4-3).	
		Between proposed Blocks 43, 44, and 45	To provide unhindered access to a permanent water source that has extremely high value to wildlife, particularly during the dry season. This pond is verified WPT aquatic habitat. All of Block 44 shall be removed and Blocks 43 and 45shall receive 100-foot buffers to the east/west, respectively.	
		Source: LSA, 2010; Napa County, 2012; PPI, 2012; AES, 2012. Fencing with larger ground-level openings should include no less than six inches square for unrestricted movement of small animals. As shown in Figure 4.2-6 in the Draft EIR, key wildlife movement locations shall receive “17/96” vineyard fencing with six-inch square openings at ground level rather than the standard “20/96” fencing that has three-inch high openings at ground level. This would reduce potential restrictions on small animals while excluding deer, wild pigs and cattle from the vineyards. Fencing locations shall be modified in the ECP as described in Table 4.2-5 and Figure 4.2-6 in the Draft EIR. Fencing shall not be located within the boundaries of sensitive resources and fencing locations are approximate until final County approval of the ECP.		

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		Streams and drainages with minimum 100-foot corridors (total width) shall be preserved as wildlife movement corridors. All drainages and immediately adjacent vegetation buffers shall be left unfenced and open to wildlife use and movement. Corridors should be restricted from development and other uses that would degrade the quality of the habitat (including, but not limited to conversion to other land uses such as agriculture or urban development, and excessive off-road vehicle use that increases erosion and habitat degradation) and should be otherwise restricted by the existing Goals and Policies of Napa County. Standard adaptive management erosion control and fire management practices consistent with the RMP and State and local regulations shall be observed in these areas.	
4.2-9: Development of the proposed project would result in the removal of several populations of streamside daisy (CNPS List 3 plant). The removal of this sensitive species may conflict with Napa County General Plan Policies CON-3, -4, -13, and -17.	Potentially Significant	**4.2-9:** Prior to County approval of the ECP, the plan shall be modified to include the following: Mitigation for the removal of the estimated 0.6 acre of streamside daisy populations would be accomplished by avoiding populations in close proximity to vineyard boundaries and preserving the following areas containing suitable habitat and populations of streamside daisy, along with minimum 20-foot buffers around the populations. The boundaries of the vineyard blocks shall be redesigned to avoid portions of proposed Blocks 6, 7, and 32 that support stands of streamside daisy (refer to Figure 4.2-6 in the Draft EIR, or the Mitigated Project figure (Figure 6-1) in Chapter 6.0 Other CEQA-Required Sections in the Draft EIR for these locations). Avoidance of the remaining populations of streamside daisy within proposed Blocks 8, 18, 27 and 32 would result in gaps in the vineyards which would be difficult to manage, and would have low ecological value because of isolation from natural habitat. Instead, these patches shall be replaced at a 2:1 ratio by cultivating streamside daisy from seed and divisions, and planting in suitable habitat in areas on the site to be preserved, to achieve a no net loss of streamside daisy acreage. A qualified professional shall include appropriate restoration provisions within the RMP.	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		The most suitable locations for planting would be adjacent to existing occurrences of streamside daisy where environmental conditions would be similar. These areas shall be maintained to ensure establishment and remove competing non-native vegetation. Monitoring of these mitigation areas shall be conducted for a period of five years to ensure successful attainment of no net loss criteria. The RMP shall specify these criteria, and provide for corrective actions if they are not attained.	
4.2-10: of the proposed project would have the potential to affect habitat for special status plant species on the project site and could result in conflicts with Goal CON-2 that requires the maintenance and enhancement of existing levels of biodiversity.	Less than Significant	**4.2-10:** No mitigation is required.	Not Applicable
4.2-11: Portions of the proposed project would have the potential to affect special status amphibian species, specifically CRLF (federal threatened) and FYLF (California species of concern) through the direct conversion of habitat and subsequent vineyard operations.	Potentially Significant	**4.2-11:** To further prevent potential impact to CRLF, a qualified biologist shall conduct a pre-construction survey for CRLF within proposed Blocks 30B, 30C, 31A, 31B, 32, 33, 34B, 41, and 46. This survey shall be conducted within two weeks prior to initiation of any grading or other construction activities. If the species is observed during the pre-construction surveys, USFWS shall be contacted and construction activities shall be delayed until an appropriate course of action can be established and approved by USFWS. If no CRLF are observed during the pre-construction surveys construction activities may begin. If construction is delayed or halted for more than two weeks, another pre-construction survey for CRLF shall be conducted. Due to the CRLF's ability to travel somewhat long distances, all construction and vineyard personnel onsite shall be educated by a qualified biologist prior to commencement of development activities to identify and avoid CRLF. CRLF typically lay eggs between December and early April. Eggs are attached to vegetation in shallow water. Tadpoles develop into terrestrial frogs between July and September. Breeding ponds must retain water until this time. In drier inland areas they aestivate in upland habitat from late summer to early winter (USFWS, 2002 and USFWS, 2006). Thus, during active construction phases (April 1 through October 1), USFWS-approved exclusionary fencing shall be installed around all grading and construction areas within or immediately bordering aquatic features within designated CRLF critical habitat areas onsite.	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
4.2-12: Development of the project would have the potential to affect western pond turtle (WPT).	Potentially Significant	**4.2-12:** Prior to approval of the ECP, the plan shall be modified to include the following: To protect prime upland nesting habitat a 100-foot buffer (30.5 meters) shall be maintained along water habitats surrounded by open grassland and agricultural areas. These areas include the pond and portions of Suscol and Fagan Creeks (Figure 4.2-6 in the Draft EIR). A minimum 275-foot buffer (84 meters), placed along the portions of Suscol and Fagan Creeks that are surrounded by oak woodland shall be maintained to provide ample protection of overwintering habitats. Furthermore, open areas interspersed within this overwintering buffer would provide additional nesting habitat. As discussed in Mitigation Measure 4.2-8 above, proposed Blocks 43 and 45 shall be modified to reflect the 100-foot buffers from the high water line of the pond. All of proposed Block 44 shall be removed and fencing shall be modified to ensure access to upland nesting and overwintering sites (see Impact and Mitigation Measure 4.2-8). The buffers and avoidance areas shall be staked and flagged in the field by a qualified professional prior to construction. The buffer areas shall be verified in the field by Napa County prior to the initiation of any grading or earthmoving activities. Two weeks prior to the commencement of ground disturbing activities near aquatic habitats, a qualified biologist shall perform WPT surveys within suitable aquatic habitat on the project site. If a pond turtle is located in an aquatic habitat during the nesting season (May to July), a subsequent survey of the surrounding upland habitats shall be conducted to determine the suitability of the upland habitats for nesting and to examine the area for any evidence of turtle nesting activity. Ground disturbance within suitable nesting habitat would not proceed until the work area is surveyed and a recommendation made by a qualified biologist. Due to the WPT's tendency to travel long distances and cross disturbed habitats, all construction and vineyard personnel onsite shall be educated by a qualified biologist prior to commencement of development activities to identify and avoid WPT. From May through July, a temporary turtle exclusion fence shall be installed around all grading and construction activities within or bordering nesting habitat to prevent impacts. From October through March	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		a temporary turtle exclusion fence shall be installed around all activities within or bordering overwintering habitat to prevent impacts and the fencing shall be field verified by Napa County. The fence shall be constructed from silt fencing to avoid turtle injury and entrapment. A qualified biologist shall also be present during development activities to relocate any turtles that are found in proximity to or within construction areas.	
4.2-13: Development of the proposed project has the potential to affect valley elderberry longhorn beetles (VELB).	Less than Significant	**4.2-13:** No mitigation is required.	Not Applicable
4.2-14: Development of the proposed project has the potential to impact grasshopper sparrow nesting habitat.	Potentially Significant	**4.2-14**: The retention of approximately 1,100 acres of total Wild Oats Grassland (Table 4.2-4 in the Draft EIR), including large areas in the eastern portion of the site where the grasshopper sparrow was observed would preserve grassland habitat utilized by the grasshopper sparrow. Areas of low vegetative cover between bunch grasses provide habitat for grasshopper sparrows to forage on ground-dwelling insects (CDFG, 2010b). Proposed Blocks 34A, C, and D shall also be avoided (discussed in Mitigation Measure 4.2-8 related to wildlife corridors) to preserve grasshopper sparrow nesting habitat (Figure 4.2-6 in the Draft EIR). Varied intensities and timing of livestock grazing would similarly benefit grasshopper sparrow nesting habitat (Shuford and Gardali, 2008). The RMP shall require measures that will maintain and enhance the quality of large expanses of grassland in the eastern portion of the project site, ensuring continued presence of high quality grasshopper sparrow nesting and foraging habitat on the project site.	Less than Significant
4.2-15: Development of the proposed project has the potential to impact Swainson's hawk foraging habitat.	Potentially Significant	**4.2-15:** Avoidance of most of the grassland habitat, and management and enhancement of the avoided habitat under the RMP discussed in Mitigation Measure 4.2-1 would reduce impacts to Swainson's hawk foraging habitat to a less-than-significant level. No additional mitigation is required.	Less than Significant
4.2-16: Development of the proposed project has the potential to impact raptor and loggerhead shrike foraging habitat.	Potentially Significant	**4.2-16:** Avoidance of most of the grassland habitat, and management and enhancement of the avoided habitat under the RMP discussed in Mitigation Measure 4.2-1 would reduce impacts to Swainson's hawk foraging habitat to a less-than-significant level. No additional mitigation is required.	Less than Significant
4.2-17: Development of the proposed project would have the potential to affect California Central Coast	Potentially Significant	**4.2-17:** One Suscol Creek crossing that would be used for primary access requires a new bridge construction; this crossing	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
ESU Steelhead and its associated critical habitat within Suscol Creek, as well as other special status aquatic species within Suscol Creek and other onsite creeks.		shall not be used for vineyard construction or operations until it has been replaced with a bridge that spans the creek a minimum of two feet above the 100-year flood level. Prior to bridge construction, the Applicant shall obtain all required authorizations and permits from agencies with jurisdiction over the creek habitat, bridge construction, pollution control, and special status species protection those agencies oversee. Such agencies include but are not limited to the USACE, CDFG, USFWS, NOAA, County of Napa, and the San Francisco Bay RWQCB. As part of the bridge construction to protect aquatic resources in Suscol Creek, riparian and aquatic habitat along Suscol Creek shall be enhanced by implementing a riparian restoration plan. This plan shall include measures to repair existing erosion at the proposed bridge crossing in combination with bio-engineering using native riparian plant species. Stream enhancement shall include replacement of exotic Himalayan blackberry with red willow and other native riparian species, and realignment of Suscol Creek into its original stream channel. Aquatic habitat shall be enhanced through the implementation of the RMP developed for the project site (see Mitigation Measure 4.2-1), which shall exclude livestock from access to Suscol Creek and its tributaries. Maintenance, replacement or modification to existing road crossings retained for vineyard operations shall occur depending on the road type, crossing type (instream or culverted) and physical condition of each crossing as part of the overall Long Term Vineyard Road Management Plan. Prior to construction, stream crossings shall be inventoried to assess structural condition, appropriate flow capacity, and erosion or hazard potential, as well as to assess sedimentation potential from continued use based on the road type with a primary goal of reducing the long term potential for sediment loading into the stream channel. The following methods shall be used to evaluate all retained stream crossings on the property: *Crossings on Type 1 Roads* Based on the heavy rate of use for these designated routes, all Type 1 Road instream crossings shall be required to span the	

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		stream channel by bridge. All Type 1 Road culverted crossings shall be maintained based on the results of an annual inventory, which shall be conducted as follows. If a Type 1 Road culverted crossing is deemed inadequate based on flow capacity, structural integrity and/or erosion or hazard potential it shall be replaced by a spanning structure. If a culvert crossing is deemed to be adequate during initial inventory based on flow capacity, structural integrity and/or erosion or hazard potential it shall be maintained as a culverted crossing and be inspected on an annual basis. During subsequent annual inspections, if any culverted Type 1 Road crossing is deemed to be inadequate, based on the aforementioned criteria, it shall be replaced by a spanning bridge structure. Any modification to these crossings would likely require a CDFG Section 1600 Streambed Alteration Agreement; the Applicant shall obtain all required authorizations and permits from agencies with jurisdiction over the creek prior to construction. *Crossings on Type 2 Roads* Based on the heavy rate of use for these designated routes and the high topsoil composition, all Type 2 Road instream crossings shall be required to span the stream channel by bridge. All Type 2 Road culverted crossings shall be maintained based on the results of an annual inventory, which shall be conducted as follows. If a Type 2 Road culvert crossing is deemed inadequate based on flow capacity, structural integrity and/or erosion or hazard potential it shall be replaced by a spanning structure. If a culvert crossing is deemed to be adequate during the initial inventory based on flow capacity, structural integrity and/or erosion or hazard potential it shall be maintained as a culverted crossing and be inspected on an annual basis. During subsequent annual inspections, if any culverted Type 2 Road crossing is deemed to be inadequate, based on the aforementioned criteria, it shall be replaced by a spanning bridge structure. Any modification to these crossings would likely require a CDFG Section 1600 Streambed Alteration Agreement; the Applicant shall obtain all required authorizations and permits from agencies with jurisdiction over the creek prior to construction.	

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		Crossings on Type 3 Roads Based on the incidental rate of use for irrigation maintenance and emergency access, these designated Type 3 Road routes will have a low potential for sediment loading from vehicular use. All Type 3 Road instream crossings shall be maintained to reduce sediment loading into the stream channels by adding coarse (greater than three inches) crushed and washed rock. In addition, water check bars shall be established along the slopes leading into these stream crossings to reduce erosion into the stream channels and redirect concentrated flows. All Type 3 Road culverted crossings shall be maintained based on the low frequency of use. All Type 3 Road culverted crossings shall be maintained as culverted crossings to maintain capacity, structural integrity and to reduce erosion or hazard potential. Any physical modification to culverted Type 3 Road crossings or addition of crushed rock to stabilize instream crossings would likely require a CDFG Section 1600 Streambed Alteration Agreement; the Applicant shall obtain all required authorizations and permits from agencies with jurisdiction over the creek prior to construction. The extraction of groundwater within the vicinity of Suscol Creek has the potential to affect instream flows during periods of heavy pumping. Under certain unique conditions this could potentially result in egg desiccation and stranding of juvenile steelhead or could restrict migratory movements of adults. Mitigation Measure 4.6-4 includes a groundwater monitoring plan with a detailed surface water monitoring component that would suitably monitor and record any apparent changes to stage and/or discharge during times of heavy groundwater pumping demand. If significant changes to stage and/or discharge are attributed to groundwater extraction, this measure includes alternative water use approaches to ensure that impacts to steelhead in Suscol Creek are less than significant. In addition, no impacts to wetlands, seeps, or springs would occur within the Suscol Creek drainage through the implementation of Mitigation Measures 4.2-6 and 4.2-7. These measures ensure that no loss of upslope surface water sources would occur and impacts to steelhead would be less than significant.	

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
4.2-18: Development of the proposed project would have the potential to affect special status bird species.	Potentially Significant	**4.2-18:** The Applicant shall implement the following measures to avoid disturbing any special status species nesting above ground. Vegetation removal conducted during the nesting period shall require a pre-construction survey for active bird nests, conducted by a qualified biologist. No known active nests shall be disturbed without a permit or other authorization from USFWS and/or CDFG. 1. For earth-disturbing activities occurring during the breeding season (as early as February 1 for raptors through September 1), a qualified biologist shall conduct pre-construction surveys of all potential nesting habitat for all birds within 500 feet of earthmoving activities. 2. If active special status bird nests are found during pre-construction surveys 1) a 500-foot no-disturbance buffer shall be created around active raptor nests during the breeding season or until it is determined that all young have fledged, and 2) a 250-foot buffer zone shall be created around the nests of other special status birds and all other birds that are protected by California Fish and Game Code 3503. These buffer zones are consistent with CDFG avoidance guidelines and CDFG buffers required on other similar ECPA projects; however, they may be modified in coordination with CDFG based on existing conditions at the project site. 3. If pre-construction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required. Shrubs and trees that have been determined to be unoccupied by special status birds or that are located 500 feet from active nests may be removed. 4. If vegetation removal activities are delayed or suspended for more than two weeks after the pre-construction survey, the areas shall be resurveyed. The Applicant shall implement the following measures to avoid disturbing any burrowing owls. No more than two weeks before earthmoving activities begin, a survey for burrows and burrowing owls shall be conducted by a qualified biologist within the project area containing grasslands suitable for burrows and within 500	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		feet of construction activities. The survey shall conform to protocol described by the California Burrowing Owl Consortium (1997), which includes up to four surveys on different dates if there are suitable burrows present. If occupied owl burrows are found during pre-construction surveys, CDFG shall be consulted. Mitigation measures may include one or more of the following: 1. A qualified biologist shall determine whether the construction activities will adversely disrupt breeding behaviors of the owl (within 500 feet of construction activities). If it is determined that construction activities would not disrupt breeding behaviors, construction may proceed without further restrictions. 2. If it is determined that the project could adversely affect occupied burrows during the September 1 to February 1 non-breeding season, a qualified biologist may relocate the owl(s) from the occupied burrow(s) using one-way doors. There shall be at least two burrows suitable for the owls within 300 feet of the occupied burrow before one-way doors are installed. The unoccupied burrows shall be at least 160 feet away from construction activities and can be natural or artificially created according to current design specifications. Artificial burrows shall be installed at least one week before one-way doors are installed on occupied burrows. One-way doors shall be in place at least 48 hours before burrows are excavated. If it is determined that construction activities would disrupt breeding behaviors during the nesting season (February 1 through September 1), then avoidance is the only mitigation available (California Burrowing Owl Consortium 1997; CDFG 1995). Implementation of the project within 250 feet of occupied burrows during this time would be delayed until a qualified biologist can determine that the owls are no longer nesting or that juvenile owls are self-sufficient enough to move from their natal burrow.	
4.2-19: Development of the proposed project would have the potential to affect special status bat species.	Potentially Significant	**4.2-19:** Construction activities conducted between April 1 and September 15 shall require a pre-construction survey for active bat roosts, conducted by a qualified biologist. No known active bat roosts shall be disturbed without a permit or other	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		authorization from USFWS and/or CDFG. Implementation of the following mitigation measures would reduce the potential impact to a less-than-significant level. 1. For earth-disturbing activities occurring during the grading season (April 1 through September 15), a qualified wildlife biologist shall conduct pre-construction surveys of all potential bat-roosting habitat for special status bats within 200 feet of earthmoving activities. Roosting habitat surveys shall focus on a) trees slated for removal that have loose bark, or holes/crevices in the trunk and b) rock piles slated for removal that contain crevices. 2. If active special status bat roosts are found during pre-construction surveys, CDFG shall be consulted. A no-disturbance buffer (acceptable in size to CDFG) will be created around active bat roosts during the breeding season or until it is determined that all young have fledged. 3. If pre-construction surveys indicate that roosts are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required. Trees that have been determined to be unoccupied by special status bats may be removed. 4. If vegetation removal activities are delayed or suspended for more than two weeks after the pre-construction survey, the areas shall be resurveyed.	
4.2-20: Development of the proposed project would have the potential to affect American badger, a CDFG Species of Special Concern.	Potentially Significant	**4.2-20:** Pre-construction surveys for American badger shall be performed by a qualified biologist prior to development of the vineyard blocks that occur in potential badger habitat. The Applicant shall implement the following measures to avoid disturbing any American badger: 1. No more than two weeks before earthmoving activities begin, a survey for burrows and American badgers shall be conducted by a qualified biologist within 500 feet of construction activities. 2. If occupied burrows are found during pre-construction surveys, the biologist would consult with CDFG to determine whether the construction activities would adversely disrupt breeding behaviors of the badger. 3. If it is determined that construction activities would disrupt	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		breeding behaviors, then avoidance between March through August may be the only mitigation available. Implementation of the project within 500 feet of occupied burrows during this time would be delayed until a qualified biologist can determine that juvenile badgers are self-sufficient enough to move from their natal burrow.	
4.2-21: Development of the proposed project could result in conflicts with Napa County Code Section 18.108.025 (General provisions – Intermittent/perennial streams).	Less than Significant	**4.2-21:** No mitigation is required.	Not Applicable
4.3 Cultural Resources			
4.3-1: Grading activities and planting of new vineyard within the boundaries of the seven identified resources would negatively impact these cultural resources.	Potentially Significant	**4.3-1:** The two archaeological sites CA-NAP-24 and CA-NAP-783 shown in the figure on file with Napa County shall be avoided by all ground disturbing activities during project implementation and operation with a permanent five-meter (16-foot) buffer around the perimeter. If avoidance is infeasible, prior to any land clearing in Blocks 1 and 2, the Applicant shall complete a boundary determination, conducted by a qualified archaeologist, and evaluate CA-NAP-24 for eligibility for inclusion in the California Register of Historic Resources. The Applicant may enter into a California Archaeological Resource Identification and Data Acquisition Program (CARIDAP) for CA-NAP-783 if avoidance is infeasible. Documentation on the evaluation for CA-NAP-24 and documentation that CA-NAP-783 has been accepted into the program should be provided to the Napa County Planning, Building and Environmental Services Department prior to land clearing in Blocks 1 and 2. The rock walls (SUS-01, -02, -04, CA-NAP-856H, and P-28-968) shall be avoided by all ground disturbing activities during project implementation and operation with a permanent ten-foot buffer around the perimeter (including vineyard avenues). Erosion Control Plan P09-00176-ECPA shall be revised to avoid all resources prior to County approval. The Applicant shall install and maintain protective fencing along the outside of the buffer to ensure protection during construction. The precise locations of protective fencing shall be inspected and approved by the Planning Division prior to the commencement of any earthmoving activities and shall be maintained and remain in place until all	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		grading, earthmoving, and vineyard development activities are completed.	
4.3-2: Planting of new vineyard has the potential to negatively impact previously unknown cultural resources within the project site.	Potentially Significant	**4.3-2:** There is a possibility that subsurface archaeological deposits may exist within proposed vineyard areas, as archaeological sites may be buried with no surface manifestation, or may be obscured by vegetation. In accordance with CEQA Guidelines Section 15064.5 (f), should any previously unknown prehistoric or historic resources, such as, but not limited to, obsidian and chert flaked-stone tools or toolmaking debris; shellfish remains, stone milling equipment, concrete, or adobe footings, walls, filled wells or privies, deposits of metal, glass, and/or ceramic refuse be encountered during onsite construction activities, earthwork within 100 feet of these materials shall be stopped and the owner shall consult with a professional archaeologist. Once the archaeologist has had the opportunity to evaluate the significance of the find and suggest appropriate mitigation measures, as necessary, said measures shall be carried out prior to any resumption of related ceased earthwork. All significant cultural resource materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.	Less than Significant
4.3-3: Planting of new vineyard blocks could result in the discovery and disturbance of unknown human remains.	Potentially Significant	**4.3-3:** In the event that human remains are discovered, the provisions of the California Health and Safety Code Section 7050.5 (b) shall be followed. The Napa County Coroner shall be contacted within 24 hours of the find. Upon recognizing the remains as being Native American in origin, the Coroner shall be responsible for contacting the Native American Heritage Commission (NAHC) within 24 hours. The NAHC has various powers and duties to provide for the ultimate disposition of any Native American remains, as does the assigned Most Likely Descendant (MLD).	Less than Significant
4.4 Geology and Soils			
4.4-1: Development of the proposed project would alter the rate of sediment erosion and yield onsite.	Less than Significant	**4.4-1:** No mitigation is required.	Not Applicable

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
4.4-2: Development of the proposed project would involve earthmoving and grading activities that would alter the existing topographic and geologic conditions at the project site.	Less than Significant	**4.4-2:** No mitigation is required.	Not Applicable
4.4-3: As discussed in Section 4.4.1-4, the development of the proposed project would occur on some areas prone to slope failure.	Potentially Significant	**4.4-3:** Prior to approval of #P09-00176-ECPA, the plan shall be modified to include the following specifically for Blocks 33 through 46 to avoid potential slope stability and associated sedimentation impacts: 1. Revise the proposed vineyard layout of #P09-00176-ECPA prior to County approval to avoid and provide a 50-foot buffer from all active landslides mapped by Gilpin Geosciences (August 2010): active landslides shall include those designated as active and recently active (i.e., 1 and 1r) of Figure 3 of said report. 2. The limits of all identified active landslides including the 50-foot buffers shall be field verified by the project's engineering geologist prior to implementation of earthmoving activities. Prior to any vegetation removal and earthmoving activities associated with #P09-00176-ECPA the limits of all identified active landslides including the 50-foot buffers shall be demarcated (i.e., flagged) in the field and temporary fencing shall be placed at the edge of the 50-foot buffer. The precise locations of said fences shall be inspected and approved by the Planning Division prior to the commencement of any vegetation or earthmoving activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated buffer areas for the duration of erosion control plan installation, vineyard installation and ongoing vineyard operation. 3. Rock repositories shall be prepared by grubbing and excavating a keyway at the toe of the proposed storage area. The keyway should extend two feet into firm soil or bedrock at the downslope edge of the keyway. The limits of the rock storage area proposed for Block 42 shall be constrained so that the downslope limit of storage is excavated where the older colluviums was encountered at depth with the test pits. 4. Should unstable landslide deposits be encountered and/or	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		localized slope failures occur during construction, the slope shall be restored to a stable configuration using specifications provided by the project's engineering geologist. The specifications shall be reviewed and approved by the County prior to commencement of slope re-stabilization.	
4.5 Hazardous Materials			
4.5-1: The proposed project would include the storage of hazardous materials, including common vineyard-related chemicals (**Table 4.5-1**). There is potential for incidental AST leakage, rupture and spillage when fueling agricultural equipment, which could result in hazards to the public or environment. If substantial quantities of diesel or unleaded gasoline reach soil or drainage areas, surface and/or groundwater quality may be degraded.	Potentially Significant	**4.5-1:** Prior to the development of the proposed project, the owner of Suscol Mountain Vineyards would prepare a HMBP for all proposed hazardous materials to be used onsite. If storage amount or use of hazardous materials change during project operation, the project owner should update, as necessary, the HMBP. The HMBP should include: • An inventory of the type and quantity of hazardous materials stored onsite; • A site map; • Risks of using the hazardous materials; • Spill prevention methods; • Emergency response plan; • Employee training; and • Emergency contacts. The plan should also include a review of each chemical used onsite and a determination on whether any substitution for the chemicals (less toxic, flammable, more stable, etc.) can be made; changes should be made as appropriate. The hazardous materials inventory, site map, emergency response plan, business owner form, and business activities form must be submitted to the DEM. If there is any change in storage of a hazardous material or 100 percent increase in quantity of a hazardous material, the DEM must be notified within 30 days. An employee training record must be filed onsite and would be inspected by the DEM once every three years.	Less than Significant
4.5-2: The proposed project has the potential to release hazardous materials into the environment during construction through the use of equipment.	Potentially Significant	**4.5-2:** In addition to the erosion control measures that are outlined in Table 3-3 in the Draft EIR, personnel shall follow written SOPs for filling and servicing construction equipment and vehicles. The SOPs, which are designed to reduce the potential	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		for incidents involving hazardous materials, include: • Refueling shall be conducted only with approved pumps, hoses, and nozzles. • Catch-pans shall be placed under equipment to catch potential spills during servicing. • All disconnected hoses shall be placed in containers to collect residual fuel from the hose. • Vehicle engines shall be shut down during refueling. • No smoking, open flames, or welding shall be allowed in refueling or service areas. • Refueling and all construction work shall be performed outside of the stream buffer zones to prevent contamination of water in the event of a leak or spill. • Service trucks shall be provided with fire extinguishers and spill containment equipment, such as absorbents. • A spill containment kit that is recommended by the DEM or local fire department will be onsite and available to staff if a spill occurs. In the event that contaminated soil and/or groundwater or other hazardous materials are generated or encountered during construction, all work shall be halted in the affected area and the type and extent of the contamination shall be determined. Should a spill contaminate soil, the soil shall be put into containers and disposed of in accordance with federal, state, and local regulations. If the size of the spill and containment is beyond the scope of the contractor, proper authorities shall be notified.	
4.5-3: The proposed project has the potential to release hazardous materials into the environment during operation and maintenance of the vineyard.	Potentially Significant	**4.5-3:** In addition to Mitigation Measures 4.5-1, 4.5-2, and 4.5-4, chemical mixing and loading areas should be established outside the proposed setbacks and away from any areas that could potentially drain off site or potentially affect surface and groundwater quality. When farm equipment is cleaned at the existing facility, only rinse water that is free of gasoline residues, pesticides and other chemicals, and waste oils should be allowed to diffuse back into vineyard areas. All other rinse water from farm equipment and rinse water from equipment used to apply chemicals such as pesticides, herbicides and fungicides should be collected and stored in containers that are of sufficient size to contain the water until a hazardous materials transporter can	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		remove the rinse water. No rinse water shall be drained to a septic system or discharged to ground or surface water to prevent the release of hazardous materials into the environment during operation and maintenance of the proposed project.	
4.5-4: The proposed project may include the use of pesticides for vineyard maintenance.	Potentially Significant	**4.5-4:** Personnel shall follow SOPs when applying pesticides to the vineyard. SOPs for pesticide use include the following: • Purchase only enough pesticide that would be used per season. • Utilize IPM techniques where feasible, such as for fungicides, the use of a permanent cover crop, beneficial insects, and minimal to no use of pesticides except when found necessary from monitoring. • Store all pesticides in their original containers. Do not remove labels on the containers. • Keep pesticides in a well-ventilated locked area. • Maintain pesticide storage areas 100 feet from any drainage area, stream, or groundwater well. • The best way to dispose of a small amount of pesticide is to use it. If a pesticide must be disposed of, contact the Napa County Agricultural Commissioner to locate a hazardous waste facility for proper disposal. • Never pour pesticides down the sink, toilet, or stream. • Utilize proper personal protection equipment when working with pesticides.	Less than Significant
4.6: Hydrology and Water Quality			
4.6-1: Development of the proposed project would alter the existing drainage pattern of the project site.	Less than Significant	**4.6-1:** No mitigation is required.	Not Applicable
4.6-2: Development of the proposed project would alter the existing drainage pattern of the project site.	Less than Significant	**4.6-2:** No mitigation is required.	Not Applicable
4.6-3: The proposed project would not be located in a FEMA flood zone. Development of the proposed project would not exacerbate flooding or expose people or structures to a risk of loss.	Less than Significant	**4.6-3:** No mitigation is required.	Not Applicable
4.6-4: The proposed project would require the use of local groundwater resources for irrigation purposes, which might alter local groundwater levels and local	Potentially Significant	**4.6-4:** In order to mitigate potential impacts to adjacent property owners or stream flows in Suscol Creek, the following performance standard has been added as a mitigation measure, and shall be implemented as set forth below. Specifically, this	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
groundwater flow directions.		measure is intended to help ensure that any affected property owner will have access to water of similar quality and quantity as existed before new pumping for the project. This intent assumes that each offsite well owner properly maintains and rehabilitates his/her own well and pump on a regular basis in the future. *Monitoring Wells* To assess potential project impacts from groundwater pumping on neighboring offsite wells in areas west of the project site, two monitoring wells shall be constructed into the Sonoma Volcanics on the project site, and in a manner that is generally similar to the construction of Well 1; these monitoring wells are to be located along the western property boundary and north of Suscol Creek adjacent to these offsite areas. Placement of these wells will be modified, if necessary, to avoid any sensitive resources (Chapters 4.2 Biological Resources and 4.3 Cultural Resources) in consultation with a qualified biologist/archaeologist. *Pre-Irrigation Baseline Monitoring* The Applicant shall measure the groundwater levels in the two new monitoring wells and in Well 1 on a regular basis using pressure transducers, which can be programmed to automatically record water levels on a basis of approximately one reading every 15 minutes. This monitoring should occur for six months prior to the first irrigation season of the proposed project. Currently, the Applicant is measuring water levels in Well 1 via an automatically-recording pressure transducer. In addition, property owners with existing water wells located west of the project site and east of Highway 29 that extract groundwater from the Sonoma Volcanics (Figure 4.6-2 in the Draft EIR) shall be asked and given the opportunity to participate in groundwater level monitoring contingent upon the owner granting the Applicant a right of access in a form approved by County Counsel. The offsite property owners will be contacted in advance to request their participation in groundwater monitoring with adequate assurances provided by the Applicant to address groundwater-related liability, water supply interruption, or other related concerns regarding participation in the groundwater monitoring. The monitoring of the new onsite monitoring wells and participating offsite wells will include collection of groundwater	

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		level data, well location and well construction information, and pump setting depth, as applicable. Groundwater levels in participating offsite wells shall also be obtained with pressure transducers for a six-month period (assuming the Applicant received permission to install the transducer in the well) prior to the first irrigation season of the proposed project to provide additional baseline data. The Applicant shall submit a report at the three-month and the six-month period to the County and property owners to the west of the project site and east of Highway 29, as prepared by a hydrogeologist acceptable to the County, with the results of the pre-baseline water level monitoring; each report shall also include rainfall data from a nearby raingage. *Criteria for Future Well Pumping Tests* The above monitoring shall be completed prior to initiation of irrigation of the initial phase of the project. Subsequent phases of vineyard development would require the construction of additional onsite water-supply wells. Provided that no significant impacts created solely by the pumping effects are determined during the monitoring conducted during irrigation of the initial phase, the development of future wells shall be subject to the pumping test recommendations provided below. Borehole locations for several future wells are shown in Figure 4.6-2 in the Draft EIR. Criteria for the evaluation of construction of all future wells at the project site should focus on the possible water level drawdown impacts on nearby offsite wells that could be caused when pumping the newly-constructed wells in the future. Existing onsite Well 1 is located on the west side of the subject property, and roughly 1,370 feet from the closest known offsite well owned by others. Hence, existing onsite Well 1 could be used as an additional monitoring well in addition to the two proposed monitoring wells described above during the pumping test for each future well constructed at the project site. As many as two offsite wells that have been volunteered to be included in the pre-irrigation baseline monitoring shall also be monitored during the pumping test for subsequent onsite wells. *Recommendations* Placement of each well for the project shall avoid any sensitive	

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		resources (Chapters 4.2 Biological Resources and 4.3 Cultural Resources). After each new well is constructed at the project site, it should be subjected to a maximum 72-hour constant rate pumping test. The pumping rate for each new test will be determined by a qualified, licensed geologist, and will be based on the results of the initial three-point step-drawdown test of each new well. During each 72-hour constant rate pumping test, water levels shall be collected in existing Well 1, the two new onsite monitoring wells, in as many as two offsite wells that have agreed to allow monitoring, and in the new pumping well using automatically recording water level pressure transducers. A manual, electric tape sounding device should also be used on an occasional basis during each test to help corroborate the automatically-recorded transducer data (depending on down-well access, it may not be possible to collect manual readings in any offsite wells). Based on the data that will be collected from both the newly constructed well (the new pumping well), existing onsite Well 1, the two monitoring wells and any participating offsite wells, the following criteria for the evaluation of each new well constructed at the subject property are recommended: • The final water level in the pumping well at/near the end of the pumping portion of the aquifer test should be relatively stable. That is, the water level decline rate should be on the order of one-foot per hour, or less, at the average pumping rate determined from the pumping well using totalizer flow dial readings. • The amount of water level decline in Well 1 and the other two onsite monitoring wells that can be attributed solely to water level drawdown interference induced by the pumping of the new onsite wells should not exceed a total of ten feet at the end of the 72-hour constant rate pumping test. Ongoing water level monitoring in all onsite monitoring wells and water wells, and monitoring of pumping rates and pumping volumes in each pumping well are essential to assessing the ongoing status of the aquifer system(s) beneath the property. The property owner has already begun monitoring water levels at the subject property by installing an automatically recording water level pressure transducer into existing onsite Well 1. This	

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		monitoring effort will help to identify changes in the aquifer that are occurring at this time, prior to the commencement of onsite pumping. *On-Going Monitoring* Following the baseline monitoring period, the Applicant shall continue monitoring of both onsite and participating offsite wells with automatically-recording pressure transducers when groundwater pumping is not occurring and also during the groundwater irrigation season. During this ongoing monitoring, the Applicant shall have his consultant submit a report on a semi-annual basis to the County to present findings and conclusions regarding groundwater levels, rainfall and ongoing groundwater extractions. Specifically, the Applicant shall submit a semi-annual report prepared by a qualified hydrogeologist to Napa County and property owners to the west of the project site (volunteer participants) and east of Highway 29 with the results of the monitoring program, including a summary of data collection and necessary recommendations regarding possible project operational modifications and/or physical improvements necessary to meet the stated performance standard, if needed. The groundwater monitoring plan shall include phasing of the project over at least three years with development of three phases (discussed in Chapter 3.0 Project Description in the Draft EIR) and intervening monitoring periods between phases; this is described in more detail below. *Development Phasing* In order to monitor potential changes in the groundwater table and its potential impact on adjacent property owners, the proposed vineyard development shall be developed in no less than three phases over three years. Proposed phasing is shown on Figure 3-4 in Chapter 3.0 Project Description in the Draft EIR. The project area would be irrigated with groundwater pumped from existing Well 1 and future wells as previously described. Boreholes for several future wells are as shown in Figure 4.6-2 in the Draft EIR. The project would be completed in three phases and the initial phase (Phase I) would include no more than 130 net acres of vineyard. The initial phase would be irrigated using existing Well 1, which has been fully tested and evaluated using	

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		the well development and monitoring requirements described above. Well development for the next phase (Phase II) shall be completed using the well testing and monitoring as described above. A maximum of 195 net acres of vineyard would be developed in Phase II. Proposed wells needed to serve the final phase (Phase III) shall be tested and monitored as described above. The final 113 net acres of vineyard would be developed in Phase III. A hydrogeologist, whose qualifications are acceptable to the County, shall review the water level, rainfall and pumping data monitored and/or collected on a regular basis prior to and during each phase. A map of existing nearby offsite wells is presented in Figure 4.6-2 in the Draft EIR. Additionally, see Figure 1 in Appendix A of Appendix H in the Draft EIR for the location of recommended well monitoring stations. If there is substantial evidence that groundwater extractions strictly by project wells are causing the production rate of pre-existing nearby offsite wells to drop to a level which would not support existing land uses or planned uses for which permits have been granted at the time of the project approval, the County shall implement one or more, but not limited to, the following mitigation measures to the extent necessary to meet the performance standard: i. Redistribute onsite pumping operations to reduce pumping stress in the area of impact. ii. Reduce the pumping rate from selected project wells. iii. Consider use of recycled water expected to be available to the project site from the Suscol Water Recycling Facility in the future to supplement onsite groundwater supplies iv. Repair, service or replace the existing well, at no expense to the affected property owner, such that the affected property owner will have access to water of similar quality and quantity as existed before new pumping began on project. v. Construct additional onsite wells to reduce potential impacts. The decision of the hydrogeologist shall be based upon substantial evidence. The Applicant shall complete the required mitigation measures before development of subsequent phases.	

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
		Stream Monitoring of Suscol Creek Flows in Suscol Creek shall be monitored during the pre-irrigation baseline monitoring period to establish baseline flow conditions. The pre-irrigation baseline data shall be used to evaluate natural, diurnal variability in stream stage and discharge attributed to evapotranspiration and infiltration which are completely dependent on climactic conditions such as annual precipitation and temperature. The baseline data will help establish the correlative relationships between stream stage and discharge, annual precipitation and temperature so that a study design can be formulated to determine whether direct effects to stage and discharge occur during groundwater pumping. After the baseline data are collected and analyzed, an adaptive stream monitoring and management plan shall be implemented to determine whether groundwater pumping effects stream stage and discharge using established significant criterion for northern California coastal steelhead streams. The specific and detailed stream monitoring parameters used to determine significance will be developed by a professional hydrologist and/or fisheries biologist whose qualifications are acceptable to Napa County. This established criteria will take into account the minimum stage discharge standards for steelhead trout based on the timing (seasonal irrigation demand) of groundwater pumping relative to steelhead life stage requirements. The significance criteria may be developed using all or a combination of passage, spawning and/or rearing standards based on the timeframe when groundwater pumping demand is highest. If during the operation of the onsite wells it is determined that there is a direct, measurable and significant impact to stream stage and discharge in Suscol Creek, using the established significance criteria for stage reductions in northern California coastal steelhead streams, the Applicant shall implement an adaptive management strategy using one or a combination of the performance standards listed above to eliminate direct impacts to stream stage and discharge in Suscol Creek.	
4.6-5: The proposed project would require the construction of pipelines to transport water onsite, the construction of which could create potentially significant impacts to water quality and stream conditions.	Potentially Significant	**4.6-5:** In order to ensure preservation of regional water quality and local stream conditions, the Irrigation Plans for the project shall include following measures:	Less than Significant

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measure	Level of Significance After Mitigation
Additionally, two Suscol Creek crossings would be required to transport water from the wells to points south of Suscol Creek.		• Any proposed pipeline crossings over Suscol Creek shall be attached to the main Suscol Creek bridge or constructed at current creek crossings in accordance with Department of Fish and Game design criteria for pipeline crossings (described in Impact and Mitigation Measure 4.2-17). • Any proposed underground or aboveground pipelines shall span be constructed in such a manner that there is no disturbance the bed and bank of any onsite drainages or streams.	
4.7: Transportation and Traffic			
4.7-1: Construction of the proposed project would temporarily increase traffic volumes on roadways in the area.	Less than Significant	**4.7-1:** No mitigation is required.	Not Applicable
4.7-2: Operation of the proposed project would increase traffic volumes on roadways in the area.	Less than Significant	**4.7-2:** No mitigation is required.	Not Applicable
4.7-3: Installation of the proposed project, and to a lesser extent subsequent vineyard activities, could increase potential conflicts between vehicles on area roads.	Less than Significant	**4.7-3:** No mitigation is required.	Not Applicable
4.7-4: Development and subsequent operation of the proposed project would increase wear-and-tear of area roads.	Less than Significant	**4.7-4:** No mitigation is required.	Not Applicable
6.0: Other CEQA-Required Sections			
6-1: Construction of the proposed project would emit GHGs and would have the potential to exacerbate global climate change.	Less than Significant	**6-1:** No mitigation is required.	Not Applicable
6-2: Operation of the proposed project would emit GHGs and would have the potential to exacerbate global climate change.	Less than Significant	**6-2:** No mitigation is required.	Not Applicable

CHAPTER 3.0

WRITTEN COMMENT LETTERS ON THE DRAFT ENVIRONMENAL IMPACT REPORT (DRAFT EIR)

Comment Letter	Name, Title	Affiliation	Date
1	Dave Steiner, Senior Soil Conservationist	Napa County Resource Conservation District	April 16, 2012
2	Marvin and Cindy Fagundes	Residents	May 1, 2012
3	Marvin and Cindy Fagundes	Residents	May 7, 2012
4	Murray Berner	Napa-Solano Audubon Society	May 29, 2012
5	Roger Hartwell, Conservation Chair	Sierra Club - Napa Group of Redwood Chapter	May 30, 2012
6	Jennifer Johnson, P.E., Associate Engineer	Napa Sanitation District	May 30, 2012

Comment Letter 1

NAPA COUNTY
RCD
RESOURCE CONSERVATION DISTRICT

Napa County Resource Conservation District
1303 Jefferson St., Ste. 500B
Napa, California 94559
Phone: (707) 252-4188
Fax: (707) 252-4219
www.naparcd.org

Interoffice Memorandum

Date: April 16, 2012

To: Brian Bordona, Napa County CDPD

From: Dave Steiner, Senior Soil Conservationist

Re: Erosion Control Plan for Suscol Mountain, new vineyard development, file #P09-00175, AP #045-360-008, et. al.

cc: Jim Bushey, PPI Engineering
Don Barrella, Napa County CDPD
Mark Couchman
Beth Painter

Hi, Brian:

The Draft EIR for the Suscol Mountain ECP was delivered to RCD today. I looked over the Geology and Soils section, in particular Mitigation Measure 4.4-3, which calls for modification of Blocks 33-46, to set back from active landslides, "to avoid potential slope stability and associated sedimentation impacts." This perusal reminded me that, although I was pleased to see the elimination of concentrated flow discharges charges in this area of the property in the most recent, revised iteration (August 3, 2010) RCD has not actually conducted a formal review resulting in a "finding of technical adequacy." Presumably, a revised iteration incorporating this and any other required mitigations will be submitted, eventually, to RCD for our formal committee review and "findings." In the meantime, of course, I'm happy to discuss any pertinent issues. In particular, I'm wondering whether or not the prospective mitigations will require further soil loss analysis. Thanks. 1-1

Dave

Comment Letter 2

RECEIVED
MAY 02 2012
NAPA CO. CONSERVATION DEVELOPMENT & PLANNING DEPT.

May 1, 2012

Conservation, Development & Planning Department
Napa County

Marvin & Cindy Fagundes
5000 Jameson Cyn Rd.
American Cyn, Ca. 94503

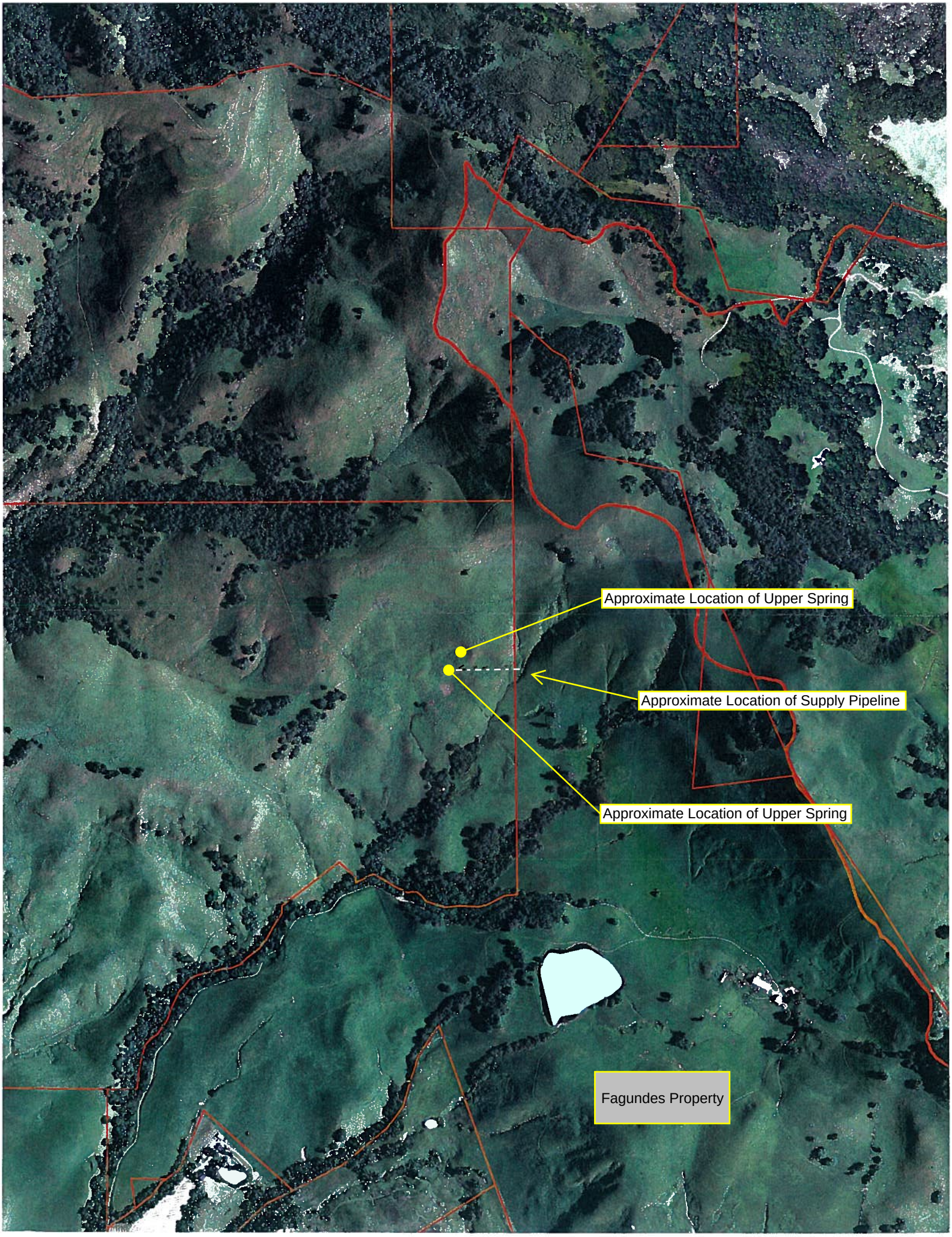
Attn: Brian Bordona &
Donald Barrella

RE: Suscol Mountain Vinyards - Vinyard Conversion
Agricultural Erosion Control Plan #P09-007 ECPA

As nearby property owners of the above mentioned project, we have a direct involvement in a certain area described on project map as 33, 34A, B, C and D as shown in Fig. 4.2-6. There are two developed springs that serve as the only water source to our adjoining property. These springs were developed in the late 1800's when the owners at that time partioned the property we own now for other members of their family. We feel that any well drilling or development of any kind in this area may hinder or destroy the springs or effect the aquafer in this section of the project. These springs have been in continuous use for over one hundred years and we do not want any of this sensitive area disturbed. Please take this into careful consideration when you review this project! 2-1

Sincerely, Marvin & Cindy Fagundes

Photos enclosed showing the developed springs


Approximate Location of Upper Spring
Approximate Location of Supply Pipeline
Approximate Location of Upper Spring
Fagundes Property

Fagundes Springs

Suscol Mt. #P09-00176-ECPA
May 2, 2012 Comment Letter

Upper Spring – Looking Northeast

Upper Spring – Looking South: lower spring located below the crest of hill

Upper Spring – Looking Northeast

Upper Spring

Upper Spring Lid

Lower Spring – Looking South
Picture taken from upper spring

Lower Spring – Shown with Seep

Lower Spring Lid

Comment Letter 3

Conservation, Development &

Planning Department

Napa County

Attn: Brian Bardona and Donald Barrella

May 7, 2012

RE: Suscol Mountain Vineyards –Vineyard Conversion Agricultural Erosion Control Plan #P09-007ECPA

As nearby property owners of the above mentioned project, we have a direct involvement in a certain area described on the project map as 33, 34A, B, C and D as shown in Fig.4.2-6. There are two developed springs that serve as the only water source to our adjoining property. These springs were developed in the late 1800's when the owners at that time portioned off the property we own now for other members of their family. We feel that any well drilling or development of any kind in this area may hinder or destroy the springs or affect the aquifer in this section of the project. These springs have been in continuous use for over one hundred years and we do not want any of this sensitive area disturbed.

In closer review of the hydrology and geology in this area we are also concerned that development could affect the quality of the water in the springs. Run off from proposed 33,34A and B could potentially contaminate the springs with pesticides, fertilizers and herbicides. There are a lot of ditches proposed in that area (Fig 3-7), the runoff will be significant. At present we own a lateral pipe from the lowest developed spring to our property that goes to a storage tank that will be disturbed during development. From our past experiences any soil disturbance seems to cause movement and breakage in pipe lines.

3-1

We also have concerns about future well other than the ones that they have shown (Fig-3-13). Wells can also dry up springs as we have firsthand knowledge on our own property. Our own well since we have been using it has dried up or has decreased the flow of several springs as far as ¼ mile or more away from the well. What would limit their ability to drill wells any where they want, now and in the future?

3-2

We also have concerns about the Block 24 Complex. We have a stock pond located east and below the Block 24 Complex on our property that relies strictly on surface runoff. This is the only water that fills the pond so there is great concern about water contamination. It appears that this block will affect the quality of the pond water and will eventually drain into Suisun Bay. This may need closer study if this runoff goes into our pond and beyond.

3-3

In reviewing all of this information we feel that the reduced intensity alternative with possibly more reduction/mitigation is best in view of all the cumulative impacts created. Unstable soils are a large problem especially south of Suscol Ridge. Has there been enough study of the installation of the large pipe line system planned (Fig.3-13) which in not clear, why are there gaps in the pipeline shown? Do they follow the "roads"? There are large distances between the proposed wells and the eastern blocks of vineyard, is this feasible? Do they plan on pumping water out of Fagan or Suscol Creeks? Do they plan on using water from the springs? Do they plan on using wells or water from other vineyards in the southern part of the project adjacent to parcels already developed? How much ground water can be

3-4

taken from this watershed area before it starts to effect surrounding properties? Has there been enough erosion study of the vast "road" network which at present is only passable in the dry season or a dry year. These "roads" were graded by the previous owner for hunting trails used by jeeps,A TV's and 4x4 Pickups and by Syar when they were testing to mine rock. Don't they need permanent all season roads to access their vineyard blocks. Please take all of these things into consideration when you do the final review of this project. Thank you.

3-4 Cont.

3-5

Sincerely,

Marvin and Cindy Fagundes

Cindy Fagundes

5000 Jameson Canyon Road

American Canyon, CA. 94503

Comment Letter 4

Napa-Solano Audubon Society

PO Box 10006, Napa, CA 94581

napasolanoaudubon.com

Napa County Conservation, Development and Planning Dept.
1195 Third St., Suite 210
Napa, CA 94559

Attn: Brian Bordona, Supervising Planner

Subject: Notice of Completion – Draft Environmental Impact Report Agricultural Erosion Control Plan Application #P09-00176-ECPA Suscol Mountain Vineyards

Suscol Mountain (hereafter Suscol Ridge) is important to birds in two primary respects: as a foraging area for diurnal raptors, and as nesting habitat for grassland birds.

Between13 September 2009 and 24 April 2012, during field observations varying between 15 and 45 minutes in duration on 24 individual dates, 15 species of diurnal raptors were observed in flight atop Suscol Ridge or along its south slope (pers. obs.) These include Osprey, White-tailed Kite, Northern Harrier (CA state species of special concern), Swainson's Hawk (CA state threatened), Ferruginous Hawk, Rough-legged Hawk, Golden Eagle (seen on eight dates, a maximum of five birds on 13 Feb 2010), Merlin, and Peregrine Falcon (five dates; CA state endangered; USFWS conservation concern, CA coastal populations). Historic observations from 1977 at this site of Ferruginous Hawk and Golden Eagle indicate long-term use. Red-tailed Hawk is the most common species at all seasons. It is not unusual to see 20-plus red-taileds aloft along the ridge September-April; e.g., 31 on 22 Nov 2011 and 22 on 18 Apr 2012. 4-1

Swainson's Hawk has recently nested successfully west of Highway 29 between Suscol and Sheehy Creeks. Annually since 2006, individuals are occasionally observed foraging over Suscol Cr. east of Highway 29 at n ¼ Sec. 36 T.5 N R.3 W. A hatch year juvenile was at sw ¼ Sec. 36 T.5 N R.3 W on 8 Aug 2007. During May-July 2009, Swainson's Hawk was observed east of N. Kelly Rd. Up to six individuals were present, including a pair with a juvenile in the upper part of the Sheehy Cr. drainage. In April 2012, four were observed foraging and engaged in courtship display along the entirety of the south slope of Suscol Ridge. Supplemental biological assessment must determine both where these birds are nesting and the impact the proposed development will have on this isolated Napa Co. population. 4-2

The unique nature of Suscol Ridge attracts foraging diurnal raptors at all seasons. The large open grassland habitat supports diverse rodent populations; it has a steep south-facing escarpment; and it has strong, reliable winds. In addition, the natural pressure gradient wind flow between the Pacific Coast and the Central Valley is amplified at Suscol Ridge as it is compressed between the 1000 foot elevation ridge line and the atmospheric inversion layer which lies at about 1500 feet. The updrafts created at 4-3

Suscol Ridge allow raptors to expend minimal energy during extended foraging bouts, finding prey atop the ridge as well as along the length of both its northern and southern slopes. Where it lacks woody vegetative cover, the ridge provides raptors ideal conditions for the visual detection of prey, as well as unobstructed physical access. The rare geographic and atmospheric features that support large numbers of hawks, falcons, vultures and eagles at Suscol Ridge is virtually impossible to replace or mitigate if lost. The proposed placement of vineyard blocks atop and on both the north and south slopes of Suscol Ridge will diminish the reproductive success of raptors that are able to establish nesting territories and will displace dozens of wintering birds.

4-3 Cont.

Grassland habitat at Suscol Ridge supports breeding populations of Loggerhead Shrike (CA state species of special concern; USFWS conservation concern, CA coastal populations) and Grasshopper Sparrow (CA state species of special concern). Due to habitat degradation and development pressure, the north San Francisco Bay population of Loggerhead Shrike is in precipitous decline. Active territories in the Napa-Sonoma marshlands may now be fewer than five, squeezed into remnant grasslands lying between tidal marsh and the built out vineyards of the Carneros District. The "four or five" shrikes present on the project site during the 2009 nesting season may exceed the total number present in the balance of the county during the 2012 nesting season. Field work during the recently completed Solano County Breeding Bird Atlas project confirmed Grasshopper Sparrow nesting at Lynch Canyon, Eastern Swett Ranch, and Rancho Solano, nearby grassland sites identical to the project site. Habitat also exists that may support at minimum a wintering population of Burrowing Owl (CA state species of special concern; USFWS conservation concern), a winter resident at several locations south of Jameson Canyon. The development proposes 561 acres of vineyards and associated disturbance within an overall land area of 2123 acres. The resulting habitat fragmentation will reduce the number of available songbird nesting territories beyond the acreage directly disturbed by vineyards, and may effectively eliminate all grassland nesting species from the entire 2123 acres.

4-4

Perhaps locally unprecedented in scope, this single project also will substantially alter the landscape of the majority of an entire watershed, Suscol Creek. This is cause for concern.

Submitted on behalf of the Napa-Solano Audubon Society by

Murray Berner
210 Monte Vista Dr.
Napa, CA 94559

Comment Letter 5

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Brian Bordona, Supervising Planner
Conservation, Development and Planning
1195 Third Street, Suite 210
Napa, CA 94559
brian.bordona@countyofnapa.org
(707) 253-4417

May 30, 2012

Re: *Public Review: Suscol Mountain Vineyards Draft Environmental Impact Report*

Dear Supervising Planner Bordona:

On behalf of Napa Group of the Redwood Chapter of the Sierra Club we are providing comments on the April 2012 Suscol Mountain Vineyards Draft Environmental Impact Report prepared by Analytical Environmental Services. We appreciate this opportunity to comment on this vineyard conversion project.

Our comments contain a number of recommendations for the environmental improvement of this project. Highlights include: avoidance of planting the woodland patch in block 15, which would improve wildlife corridors and save significant woodland/habitat. We also question whether avoidance of conversion of this woodland acreage meets the criteria of the draft county Climate Action Plan. Additional comments deal specifically with habitat and protection of special-status species, and the establishment of a trigger-point for the use of recycled water. 5-1

Suscol Mountain Vineyards DEIR Comments

DEIR

Table 2-1, 4.2-4: The oak woodland patch in Block 15 should be made into a wildlife corridor rather than converted to vineyards. Block 15 has road access on either end that would allow the vineyard to be broken into smaller blocks, which are still larger than many others being developed, would save the cost of taking out the oaks, and would reduce the numbers of oaks to be removed by over 250 trees. Also, retention of the trees would protect against frost and require fewer wind machines. This is a simple fix that would save many well-established trees that now hold the soil on the 15-17% slope of that area. 5-2

Table 2-1, 4.2-11: If California Red-legged Frogs (CRLF) are found, all connecting drainages, including those outside designated critical habitat, should be protected. 5-3

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Table 2-1, 6.1: Construction of the proposed project would significantly diminish the amount and rate of carbon sequestration on the site. Mature trees sequester carbon at far greater rates than newly planted trees and especially vineyards. The removal of 1182 trees would increase this effect. Reducing the number of trees removed at any point, such not removing the circular woodland in Block 15, would help minimize the negative GHG (greenhouse gas) impact of the project. 5-4

Pg 3.4.2 Development of the project would result in the removal of 1,182 trees, which includes 272 bay, 9 buckeye, 8 hollyleaf cherry, 2 eucalyptus, 887 live oak, and 4 valley oak. Some of the bay trees are greater than 60" dbh and one is 77" dbh. Retention of these large trees is important to retain habitat within the project area, ameliorate nearby temperatures, and retain habitat for coopers hawks that prey on the grape-eating starlings. The presence of coopers hawks reduces the time starlings are likely to spend near the vineyards. 5-5

Pg 4.1-10 Measures that could be selected for implementation by project applicants include on- or offsite habitat restoration, on- or offsite reforestation, on- or offsite avoided deforestation, or participation in a program demonstrated to offset project emissions. Comment: They could reduce emissions by dividing Block 15 and avoid deforestation of the central oak woodland clump. 5-6

Table 4.2-1 Summary of Biological Field Surveys – Red-legged Frog. Comment: These studies were done quite late in the season. Rain fell primarily in winter with cold temperatures in spring. Determine if these factors might affect the presence of CRLF. 5-7

Page 4.2-1, paragraph 2: The abundance of a county-wide habitat does not reduce its potential importance as a local habitat. 5-8

Table 4.2-3 Also, the American peregrine falcon is a California Fully Protected Species (and is listed as California Endangered). It has been observed hunting ducks in the mashes west of the project site within the 5-mile radius, and it has perched on the Hwy 29 Napa River Bridge (Gary Beeman, Wildlife Biologist, pers. comm. and Roger Hartwell pers. obs). It nests in the Stags Leap District to the north (CDFG) and on the Carquinez Bridge and Vallejo Cliffs to the south (Gary Beeman, pers. comm.). 5-9

Pg 4.2-84, paragraph 2, line 4. Resident rainbow trout may be present in the creek at any time. Anadromous rainbow trout (i.e., steelhead) may remain in the creek as long as two years before emigrating to San Pablo Bay and toward the ocean. 5-10

Pg 4.2-94 Policy CON 24 b)"… and retain, to the maximum extent feasible, existing oak woodland and chaparral communities and other significant vegetation as part of residential, commercial, and industrial approvals." This directive applies to the woodland patch in Block 15 which comprises a particular habitat that takes many decades to develop. 5-11

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Pg 4.2-101 "In the absence of grazing, these [exotic] species would increase, to the detriment of any remaining native species." This has not been my experience. The statement would be more accurate if it said "In the absence of well-timed grazing, these species may increase, however the effect on native species varies with water year and from site to site. 5-12

Pg 4.2-105, paragraph 2, line 5: "if timed properly" Comment: timing is essential, not optional. 5-13

Pg 4.2-106, paragraph 4, line 2: insert "sequester carbon," after "mitigate flooding." 5-14

Pg 4.5-109, paragraph 4, line 4: "generally less than one meter square in size, with no special status or unusual species associated with them." This statement contradicts what was said before about grasshopper sparrows using such rocks for perches. 5-15

Pg 4.4-13, Section 4.4.2-1 Policy CON-6: "The County shall impose conditions on discretionary projects which limit development in environmentally sensitive areas." Removing the small but dense oak woodland in Block 15 is against CON-5 because it will reduce productivity of watershed and increase GHGs. 5-16

Pg 4.4-15, G2.1. "Emphasize erosion prevention over sediment retention as a priority in agricultural planning and operations." This sub-recommendation applies to the small patch of woodland in the center of Block 15. 5-17

Pg 4.4-19, paragraph 1, line 5: "Since the larger rocks that may be removed from the site are generally underneath the soil surface, the removal of large rocks that emerge during development would not significantly alter the composition of soil." The soil may not be changed, but how it reacts to erosion processes may change without the rocks. 5-18

Pg 4.5-3, Table 4.5-1: The commercially named pesticide/herbicide products should be referred to by their chemical names for purposes of comment. The commercial names are not widely known. 5-19

Pg 4.5-3, paragraph 1, line 4: It is unclear whether the writers mean insecticides or the more general definition of pesticide which includes fungicides, herbicides and rodenticides. 5-20

Pg 4.6-16 "Each new well would also be provided with a sanitary seal that would allow it to be used for both irrigation supply and domestic purposes, although the wells are only being proposed for irrigation supply for this project. " Is this a growth inducing factor since the wells could be used for housing later? Assurance should be given that these wells will only be used for agriculture. 5-21

Pg 4.6-18 "Suscol Creek has no designated existing or potential beneficial uses at this time (SFRWQCB, 2007)." Steelhead habitat is a beneficial use since SH is a federally listed species in recovery. 5-22

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Pg 4.6-23, G2.3 "Establish tree cover in unused areas to decrease erosion of topsoil." If a stand of trees is already performing this function (i.e., Block 15), why not fence around it and keep the soil undisturbed? 5-23

Pg 4.6-36, paragraph 2, line 11: Rodenticides are deadly to golden eagles, vultures, coyotes and other animals. They should not be used. Owl boxes are more efficient at long term rodent control, and have less collateral effects on other species. 5-24

Pg 4.6-37, paragraph 1, line 7: Wind machines are a good idea. 5-25

Pg 4.6-47: The use of recycled water should not be "considered." There should be a trigger point (if additional wells do not work or are not feasible) when recycled water will be used: piped and implemented at the project site. 5-26

Pg 4.6-48 The persons monitoring Suscol Creek should be trained in the identification of sensitive species that may be present (SH, CRLF, WPT). Notes should be kept as part of the data and sightings reported to the California Natural Diversity Database. 5-27

Pg 6-13 "Conservation of carbon sequestration from the avoidance of woodland conversion and deforestation." This is like being awarded money for not littering a highway, or for taking only part of the money from the till in a convenience-store robbery. 5-28

Pg 6-15, paragraph 2: "[T]he project as proposed would offset GHG construction emissions by approximately 86 percent through avoidance of oak woodland and management of Oak Woodland Avoidance and Management Areas (Mitigation Measure 4.2-4) and sequestration from the proposed vineyard….. The project is consistent with Napa County's draft CAP."

Pg 3.12 of the County's draft CAP sets criteria for lands utilized as mitigation elements. Specifically, the document states that mitigation requires, "Conservation of natural lands that the County considers otherwise certain for conversion". Footnote 19 on the same page states that for mitigation to qualify, "mitigation in the form of "avoided conversion" of natural land covers must be consistent with the criteria found in the Climate Action Registry Forest Project Protocol requiring demonstration that the land faces a probability of conversion due to a feasible development/conversion potential otherwise allowable by local, state and federal law." 5-29

There is no demonstration in the DEIR that the woodlands to be spared conversion would otherwise be suitable for vineyard development and face "certain conversion."_Rather, it is reasonable to assume that the project developers have selected the choicest areas for vineyard development, and that the areas spared development are less attractive for vineyard conversion. Let us see an assessment by an independent expert that the avoided-conversion acres are indeed at high risk for agricultural development, rather than marginal for vineyard conversion.

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Furthermore, in the draft CAP Appendix B GHG Checklist for New Vineyards section 3.2, we find that qualifying land as mitigation acreage requires "permanent protection of land that is suitable for vineyard development..... [including] proposed easement holder". The DEIR does not promise permanent protection of the avoided-conversion woodlands, nor does it name any proposed holder of a conservation easement. 5-29 Cont.

Pg 6-15, paragraph 2: Portions of the area grasslands will still need to be grazed for fire control. Goats produce far less CH4 than cattle. The comparison calculations should be made and goats should be an alternative. 5-30

Pg 6-16, Table 6-3: If there is a change in use of ruminants as a result of the project, the difference in CH4 production should be included. 5-31

Pg 6-18, paragraph 5: The Grace Benoist Vineyards on Rodgers Creek in Sonoma Valley is a fine example of an area where owners have left the large trees and wide wildlife corridors. The wine from these vineyards is among the best from Chateau St Jean and hence among best in the world. 5-32

Pg 6-18, paragraph 2, line 5: A Range Management Plan (Ranch Plan) is already required by the SFRWQCB for the grazing waiver participants, just as a Farm Plan is required for a vineyard waiver participants (though these plans never are open to public scrutiny). 5-33

Pg 6-19, paragraph 3, line 2: "However, with the mitigated project this acreage would be reduced to approximately 20 acres." Much better. How many trees would be avoided? That is an important metric. Not removing the woodland in Block 15 would go far in saving numbers of trees. 5-34

Pg 7-2, 7.3: If steelhead exist on the property, why aren't NOAA (NMFS) listed as a contact for consultation? Unless NMFS has deferred to USFWS, anadromous fish, as they are presented in the biological section, are addressed by NMFS. Resident trout are addressed by USFWS. 5-35

Appendices

Removal of large oak woodland area in the center of Block 15 is not justified. Block 15 can be entered by car from either end and so dividing Block 15 up into sub-blocks at either end of the centrally located woodland would be relatively easy to do, would save the effort to remove the 296 trees (up to 54" dbh) and the area could be closed off by deer fencing for a wildlife corridor as in Block 16A/16B. Also, retention of the trees would protect against frost and require fewer wind machines. 5-36

Peregrine falcons are State Protected species not included in the species list. They have been observed perching on transmission towers (2.2 miles @ 274 degrees from project site) and hunting ducks in the marsh west of Highway 29 and on the support structure of the Highway 29 Napa River 5-37

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bridge. They have nested on the cliffs at Stags Leap since 1995 as well as at the Palisades near Calistoga. 5-37 Cont.

White Tailed Kites nest in the large redwood trees on the 300 block of Franklin Street in the historical district of Old Town Napa (3.7 miles @ 316 degrees from project site). (Roger Hartwell, pers. obs,, 2012). 5-38

Sincerely,

Roger Hartwell
Conservation Chair
Sierra Club, Napa Group of Redwood Chapter

submitted by Nancy Tamarisk,
Chair, Napa Sierra Club
nancy@aya.yale.edu

Dedicated to Preserving the Napa River for Generations to Come

RECEIVED
JUN 01 2012
NAPA CO. CONSERVATION
DEVELOPMENT & PLANNING DEPT.

May 30, 2012

Napa County Department of Conservation, Development & Planning
ATTN: Brian Bordona
1195 Third Street, Suite 210
Napa, CA 94559

SUBJECT: Suscol Mountain Vineyards – Vineyard Conversion
Agricultural Erosion Control Plan #P09-00176-ECPA
Draft Environmental Impact Report (DEIR)

Dear Mr. Bordona:

Thank you for including Napa Sanitation District (NSD or the District) in the environmental review process for the above-referenced project. The following comments are based on the review of the DEIR. 6-1

NSD Service Area
The entire Suscol Mountain Vineyards property lies outside of the service area for Napa Sanitation District.

NSD Property
NSD has approximately 367.7 acres of property, referred to as Jameson Ranch, which abuts a portion of the southwest corner of the proposed Suscol Mountain Vineyards. Jameson Ranch lies entirely within the Sheehy Creek Sub-watershed of the Napa River Watershed and the general topography of the area flows in the southwest direction from the proposed Vineyards through Jameson Ranch. The District utilizes the ranch property to spread Class B biosolids from the District's Soscol Water Recycling Facility (SWRF). The District also has an extensive irrigation system on the ranch that utilizes recycled water produced by the SWRF. 6-2

Hydrology
Several USGS delineated streams flow from the proposed Vineyard Parcel #4 through NSD's Jameson Ranch property. These streams eventually merge into Sheehy Creek and leave Jameson Ranch on the western side of the property. The District is concerned that construction of the Vineyards could possibly negatively impact the hydrology and the water quality of the stream. What mitigation measures are in place during construction and post-construction to ensure that the post-construction water quality is equal to or better than pre-construction water quality? 6-3

935 Hartle Court, PO Box 2480, Napa, CA 94558
www.NapaSanitationDistrict.com
Office (707) 258-6000
Fax (707) 258-6048

Erosion Control

NSD's Jameson Ranch is located downhill of the proposed Vineyard Parcel #4. It appears that some grading will be required for the proposed Vineyard. NSD would like to ensure that no erosion occurs on District property or sedimentation from the Vineyard is deposited onto the District's property during or after the construction of the proposed Vineyard.

6-4

Sincerely,

Jennifer Johnson, P.E.
Associate Engineer

CHAPTER 4.0

RESPONSES TO WRITTEN COMMENT LETTERS ON THE DRAFT EIR

The following responses are provided to address the comments received on the Draft Environmental Impact Report (Draft EIR; Napa County, 2012) for the Suscol Mountain Vineyards Erosion Control Plan Application Project (#P09-00176-ECPA).

Comment Letter 1 – Napa County Resource Conservation District

Comment 1–1
The commenter states that the Napa County Resource Conservation District (RCD) has not issued a "finding of technical adequacy" for the Erosion Control Plan (ECP), and asks whether the RCD will review a revised ECP that incorporates mitigation measures discussed in the Draft EIR for formal committee review and issuance of findings. The commenter also inquires into whether the prospective mitigation measures will require further soil loss analysis.

Response 1–1
The revised ECP represents a reduction in the overall footprint relative to the version that was reviewed by the RCD and therefore further soil loss analysis is anticipated to be unnecessary. However, prior to County approval, RCD will review the revised ECP that incorporates the required mitigation measures and Reduced Intensity Alternative.

Comment Letter 2 – Marvin and Cindy Fagundes

Comment 2–1
The commenters state that there are two undeveloped springs in the area described as 33, 34A, 34B, 34C and 34D in Figure 4.2-6 of the Draft EIR that serve as the only water source to their adjoining property. The commenters are concerned that well drilling or development of the land in this area may negatively impact the springs or the aquifer in this area. The springs have been in continuous use for over 100 years. Photographs of the springs were attached to the letter.

Response 2–1
After consideration of all potential environmental impacts associated with the proposed

project that were presented in the Draft EIR, the Reduced Intensity Alternative (pages 5-3 through 5-8 in Chapter 5.0 Alternatives to the Proposed Project in the Draft EIR) is the project that would be approved by Napa County, as opposed to the proposed project. Blocks 33 and 34 would not be developed under the Reduced Intensity Alternative and no impacts to springs would occur. See also **Response 3–2**.

Comment Letter 3 – Marvin and Cindy Fagundes

Comment 3–1
The commenters state that there are two undeveloped springs in the area described as 33, 34A, 34B, 34C and 34D in Figure 4.2-6 of the Draft EIR that serve as the only water source to their adjoining property. The commenters are concerned that well drilling or development of the land in this area may negatively impact the springs or the aquifer in this area. The springs have been in continuous use for over 100 years. The commenters are also concerned that runoff from the project could affect the quality of the water in the springs. The commenters own a pipe that extends from the lowest developed spring to a storage tank on their property and they are concerned that development may impact the pipeline.

Response 3–1
See **Responses 2–1** and **3–2**.

Comment 3–2
The commenters have concerns about future wells other than the ones shown on Figure 3-13 in the Draft EIR and their potential to dry up springs. Their own well has dried up or decreased the flow of several springs as far as ¼ mile from the well. The commenters ask what limits the Applicant's ability to drill wells on the property.

Response 3–2
The project may develop additional wells on the property other than the three shown in Figure 3-13 in the Draft EIR, depending on the long-term operational rate of each future well that is determined after it has been drilled and tested. However, the project focuses on developing groundwater resources in the northwestern portion of the property based on the geologic conditions (thick Sonoma Volcanics) and the high likelihood that new wells constructed in this area could produce groundwater at rates sufficient for the project, potentially from 50 gallons per minute (gpm) to 250 gpm (see the Groundwater Report that was prepared for the project and included as Appendix H of the Draft EIR; RCS, 2010). As discussed on page 4.6-41 in Chapter 4.6 Hydrology and Water Quality in the Draft EIR, the northern two thirds of the project site are underlain by Sonoma Volcanics, shown on Figure 4.6-3 in the Draft EIR. The Markely Formation and the Nortonville shale are exposed on the southern portion of the project site. These rocks may underlie the Sonoma Volcanics at depth beneath the entire project site, but because of their highly consolidated nature, they

do not represent significant water bearing formations capable of supplying the project (Appendix H of the Draft EIR; RCS, 2010); therefore, wells would likely not be developed in those areas.

Mitigation Measure 4.6-4 in the Draft EIR identifies regulatory limitations on drilling additional wells on the property in areas other than those identified in the Draft EIR. Criteria for the evaluation of construction of all future wells focuses on the potential water level drawdown impacts on nearby offsite wells that could be caused when pumping the newly-constructed wells (Mitigation Measure 4.6-4 in the Draft EIR). Placement of the wells would also avoid all sensitive resources described in Chapters 4.2 Biological Resources and 4.3 Cultural Resources in the Draft EIR, including all seeps and springs (discussed in Mitigation Measure 4.2-7). As discussed in Mitigation Measure 4.6-4 in the Draft EIR, any new well constructed would be subjected to a maximum 72-hour constant rate pumping test to ensure that:

- The final water level in the pumping well at/near the end of the pumping portion of the aquifer test would be relatively stable, i.e., the water level decline rate would be on the order of one-foot per hour, or less, at the average pumping rate determined from the pumping well using totalizer flow dial readings; and
- The amount of water level decline in existing Well 1 and the other two onsite monitoring wells that can be attributed solely to water level drawdown interference induced by the pumping of the new onsite wells would not exceed a total of ten feet at the end of the 72-hour constant rate pumping test.

Following the pumping test, ongoing monitoring of the onsite and participating offsite wells would be conducted during the groundwater irrigation season and when groundwater pumping is not occurring to examine whether project wells are causing the production rate of pre-existing nearby offsite wells to drop to a level which would not support existing land uses or planned uses for which permits have been granted at the time of the project approval. Mitigation measures that would be implemented should the monitoring show a negative impact could include one or more of the following, but not be limited to:

- Redistributing onsite pumping operations to reduce pumping stress in the area of impact.
- Reducing the pumping rate from selected project wells.
- Considering the use of recycled water expected to be available to the project site in the future from the Suscol Water Recycling Facility to supplement onsite groundwater supplies.
- Repairing, servicing or replacing the existing well, at no expense to the affected property owner, such that the affected property owner will have access to water of similar quality and quantity as existed before new pumping began on project.

- Constructing additional onsite wells (also with the above pumping test and monitoring requirements) to reduce potential impacts.

Comment 3–3

The commenters have concerns about the Block 24 complex as they have a stock pond east and below the block that relies strictly on surface runoff. The commenter states that the block may affect water quality in the stock pond and further downstream to the Suisun Bay.

Response 3–3

A small portion of the Suscol Mountain Vineyards property is located within Solano County and this area drains to Green Valley Creek, which is tributary to Suisun Bay; no development is proposed to occur within the portion of the property that drains east into Solano County (page 4.6-2 in Chapter 4.6 Hydrology and Water Quality in the Draft EIR). Further, the project has been designed with erosion control measures to minimize increases in erosion and protect water quality. Development of the proposed project would result in an overall net decrease in the peak discharge runoff compared to current conditions for each of the modeled watersheds (or approximately an eight percent decrease for a 2-year storm event, approximately a six percent decrease for a 5-year storm event, approximately a five percent decrease for a 10-year and 25-year storm event, and approximately a four percent decrease for a 50-year and 100-year storm event), see Tables 4.6-2 and 4.6-3 in the Draft EIR. Development of Blocks 24A and 24B would also result in more than a ten percent reduction in soil loss compared to current conditions (Table 4.4-2 in the Draft EIR). As described in the Draft EIR, Block 24C would not be developed and instead the area would be preserved as an Oak Woodland Avoidance and Management Area (Mitigation Measure 4.2-4 and Figure 4.2-6 in the Draft EIR). No water quality impacts would occur to the offsite stockpond or any tributaries to the Suisun Bay.

Comment 3–4

The commenters feel that the Reduced Intensity Alternative with possibly more mitigation is best given the cumulative impacts. The commenters state that unstable soils are problematic south of Suscol Ridge and ask if there has been enough study of the proposed pipeline system. The commenters ask why there are gaps in the pipeline shown in Figure 3-13 of the Draft EIR and whether the pipeline would follow the roads. The commenters also ask if it feasible to have large distances between the proposed wells and the eastern vineyard blocks, if water would be pumped from Fagan or Suscol Creeks, if they would use spring water, if they would use wells or water from other vineyards in the southern part of the project adjacent to parcels already developed, and how much groundwater can be taken from the watershed before it impacts surrounding properties.

Response 3–4

As stated in **Response 2–1**, the Reduced Intensity Alternative (pages 5-3 through 5-8 in Chapter 5.0 Alternatives to the Proposed Project in the Draft EIR) is the project that would be approved by Napa County, as opposed to the proposed project.

The analysis provided in the Draft EIR, supported by the geologic evaluation (Appendix F in the Draft EIR; Gilpin Geosciences, 2010) prepared for the project, addresses slope stability issues of the project site. Mitigation Measure 4.4-3 specifically would ensure that the proposed project maintains minimum 50-foot buffers from active landslides as mapped by Gilpin Geosciences (2010), which is reflected in both the mitigated project figure (Figure 6-1 in the Draft EIR) and the Reduced Intensity Alternative figure (Figure 5-1 in the Draft EIR). Any unstable landslide deposits encountered or localized slope failures that may occur during construction would be restored to a stable configuration under the guidance of an engineering geologist and with County approval.

The Draft EIR provides sufficient information about the irrigation pipelines associated with the project. As stated on page 3-27 in Chapter 3.0 Project Description in the document, all primary irrigation lines and pump stations would be located within vineyard blocks or along the year-round vineyard road system and would not result in additional ground clearing. The pipeline's route between the proposed blocks are shown in Figure 3-13 in the Draft EIR. The Applicant is not required to design the pipeline route within the interior of the blocks prior to project approval because the entire clearing areas within the blocks were evaluated in the Draft EIR. Irrigation Plans for the project would be submitted to Napa County prior to project construction and would include pipeline erosion control measures specified by a licensed Civil Engineer for critical areas such as where natural topography concentrates surface flows or on steeper ground slopes. Measures for erosion prevention near irrigation pipelines, such as additional compaction and testing requirements or the installation of cutoff collars (see Figure 3-8 of the Draft EIR), would also be included in the Irrigation Plans (Erosion Control Plan, Appendix B in the Draft EIR; PPI Engineering, 2010).

The eastern vineyard blocks would be linked to the primary irrigation lines and would receive water from the proposed wells. As noted on page 3-9 in the Draft EIR, the project would be developed in three phases, with the easternmost blocks developed in the third phase. Well 1 and proposed Wells B and C (shown in Figure 3-13) would be linked to the primary irrigation lines and three booster pumps would be located within the proposed vineyard footprint areas to supply water to the vineyard. Well A (Figure 3-13) would serve the vineyard in the vicinity of that well and would not be linked to the irrigation lines. See also **Response 3–2**, which explains the project's focus on developing groundwater resources in the northwestern portion of the property.

The project proposes to irrigate the vineyards with groundwater from onsite wells; no water would be used from Suscol or Fagan Creeks, or from springs or offsite wells. As discussed in Chapter 4.6 Hydrology and Water Quality in the Draft EIR, tertiary quality recycled water, which is the highest quality recognized under the California Department of Health Services, Title 22 requirements, from Napa Sanitation District's Soscol Water Recycling Facility may be used to supply a portion of the water to the proposed vineyard if it becomes available in the region and is commercially feasible to do so.

Pages 6-29 through 6-32 in Chapter 6.0 Other CEQA-Required Considerations in the Draft EIR discuss cumulative groundwater impacts for the region. The groundwater supply for the region was estimated at 3,100 acre-feet (af) per year, and the cumulative annual demand, including the 263 af per year for the proposed project, was estimated at 1,299.5 af/year. Based on this data, the cumulative annual demand of 1,229.5 af/year represents about 40 percent of the estimated annual recharge for the region; therefore, groundwater recharge for the region would be more than adequate to meet cumulative demand. As discussed in Impact 4.6-4 in the Draft EIR, significant groundwater storage is found in the Sonoma Volcanics bedrock that lies beneath the Suscol Creek watershed. Taken together with the conservative assumptions used in the calculations about the amount of recharge to the watershed (from rainfall only), the analysis is considered conservative. The groundwater monitoring program described in Mitigation Measure 4.6-4 in the Draft EIR includes pre-irrigation baseline monitoring of onsite and offsite wells, pumping test criteria for future onsite wells, on-going monitoring of onsite and offsite wells, and development phasing to ensure that groundwater levels would not be substantially impacted from the proposed project.

Comment 3–5

The commenters ask if there has been enough study of the road network, and state that the roads are only passable in the dry season or in a dry year. The commenters ask if all-season roads are needed to access the vineyard blocks.

Response 3–5

Erosion from the road network was considered in the environmental analysis presented in the Draft EIR. Pages 3-21 through 3-23 in Chapter 3.0 Project Description in the Draft EIR identify the existing, year round roads that would be used to access the vineyard blocks and describes the Long Term Vineyard Road Management Plan for the project. All roads would be maintained and managed, and specific sections of the primary year-round vineyard access roads (shown in Figure 3-11 in the Draft EIR as Types 1 and 2 Roads) would be resurfaced with gravel during Phase I and prior to all Phase II and III development activities. Roads would be maintained to retain the current and/or improve the native grade and sheet flow conditions. Mitigation Measure 4.2-17 in the Draft EIR describes maintenance, replacement and modification of existing road crossings based on road type, crossing type

and physical condition of each crossing. As stated in Impact 4.4-1 in the Draft EIR, there would be no increases in soil loss, erosion, or sedimentation resulting from the increased use of existing dirt and gravel roads as a result of vineyard development and operation. In some cases, runoff flows and erosion potential associated with existing roads are anticipated to decrease compared to current conditions due to the improvements from implementing the Long Term Vineyard Road Management Plan.

Comment Letter 4 – Napa-Solano Audubon Society

Comment 4–1
The commenter states that Suscol Mountain (also known as Suscol Ridge) is important as a foraging area for diurnal raptors and as nesting habitat for grassland birds.

The commenter also states that between September 13, 2009 and April 24, 2012, there have been 15 species of diurnal raptors observed in flight atop Suscol Ridge or along the south slope, including osprey, white-tailed kite, Northern harrier (a California Species of Special Concern), Swainson's hawk (a California Threatened Species), ferruginous hawk, rough-legged hawk, golden eagle, merlin, and peregrine falcon (California State Endangered, U.S. Fish and Wildlife Service (USFWS) Conservation Concern, California Coastal Populations). The commenter states that historic observations since 1977 at this site indicate long-term use by ferruginous hawk and golden eagle. The commenter states that red-tailed hawk is the most common species at all seasons.

Response 4–1
Comments noted. These topics are addressed below in **Responses 4–2** through **4–4**.

Comment 4–2
The commenter states that Swainson's hawk recently nested west of Highway 29 between Suscol and Sheehy Creeks and that the species has been observed foraging over Suscol Creek east of Highway 29 annually since 2006. The commenter requests supplemental biological assessment to determine where the birds are nesting and the impact of the proposed development on the isolated Napa County population.

Response 4–2
Swainson's hawk (a California Threatened Species) was observed during the biological surveys for the project and is reported as follows on page 4.2-77 in Chapter 4.2 Biological Resources of the Draft EIR: "According to LSA (2010) (Appendix D), an adult Swainson's hawk was observed near the pond along the access road (approximately 0.25 mile west the project site) on July 31, 2008. Soaring individuals were observed over the southern portion of the project site (south of Suscol Ridge) in 2009 on May 5 (two light morph adults), July 8 (two adults, one juvenile), and on September 10 (one adult). A pair of Swainson's hawk

adults (a light and a dark morph) and a juvenile were frequently observed perched in trees in the riparian woodland along Suscol Creek, approximately one mile west of the project site, and perched on telephone poles along east side of the Napa-Vallejo Highway. These observations are reflected by three records in the CNDDB database (CDFG, 2003). Based on these observations, LSA speculates that it is likely a nest site is located in this offsite area in the riparian woodland along the creek. The closest suitable nesting habitat for this pair would likely be large trees in the area west of Highway 12/29, a little over a mile from the project site. Clearly Swainson's hawks use the site for foraging, but no nests were observed by LSA (2010). Large trees on the project site provide potential nesting habitat for this species."

An updated California Natural Diversity Database (CNDDB) report (CDFG, 2012) documents four nesting sites in the vicinity of the project but none on the site:

- In a valley oak on the south bank of Suscol Creek 700 feet downstream from Devlin Road (west of SR29), South Napa.
- In a conifer windbreak along railroad tracks on the east side of the wastewater treatment plant north of the Napa County Airport.
- In a eucalyptus grove on the east side of the wastewater treatment plant north of the Napa County Airport.
- In a eucalyptus grove within the right of way of SR 29 about 0.3 miles north of Sheehy Creek north of the Napa County Airport.

This more recent and detailed account is consistent with the LSA report (2010) and the Draft EIR, and does not change the conclusions of those documents.

As stated in Mitigation Measure 4.2-18 in the Draft EIR, in consultation with the California Department of Fish and Game (CDFG) and in accordance with their guidelines, pre-construction surveys for active bird nests, including Swainson's hawk nests, would be conducted by a qualified biologist within 500 feet of earthmoving activities to determine if the birds are nesting in this area. Avoidance buffers would be established around active nests. Large blocks of grassland foraging habitat would also remain available to foraging raptors as described in Mitigation Measures 4.2-14 through 4.2-16 in the Draft EIR, and would be enhanced as described in Mitigation Measures 4.2-1 and 4.2-2. Further, after consideration of all potential environmental impacts associated with the proposed project that were presented in the Draft EIR, the Reduced Intensity Alternative (Figure 5-1 and pages 5-3 through 5-8 in Chapter 5.0 Alternatives to the Proposed Project in the Draft EIR) would be approved by Napa County, as opposed to the proposed project. Approximately 110 fewer gross acres would be developed with the Reduced Intensity Alternative, which would preserve an additional 26 acres of grassland compared to the mitigated project (Table 4.2-4 in the Draft EIR).

Comment 4–3

The commenter states that Suscol Ridge attracts diurnal raptors year-round given the area's grassland habitat that supports rodent populations, steep, south-facing escarpment, strong winds and amplified natural pressure gradient wind flow. The commenter states that rare geographic and atmospheric features at Suscol Ridge that support a diversity of raptors would be virtually impossible to replace or mitigate if lost. The commenter states that the vineyard blocks proposed on the north and south slopes of Suscol Ridge will diminish the reproductive success of raptors and displace dozens of wintering birds.

Response 4–3

Of the 15 species of raptors the commenter names using Suscol Ridge for soaring and foraging in **Comment 4–1**, osprey, white-tailed kite, northern harrier, Swainson's hawk, and peregrine falcon would be new nesting records since publication of the Breeding Birds of Napa County (Berner, et al., 2003), if found nesting on the project site. However, it is unlikely that any of those raptors are nesting on site, with the possible exception of the white-tailed kite (in trees along drainages) and Swainson's hawk (in solitary trees in open fields, often using abandoned nests of other raptors). The following nest habitats are marginal or absent on the project site: exposed structures such as emergent treetops and utility poles (osprey); tall dense herbaceous vegetation on the ground (northern harrier); rocky cliffs and human-made structures in urban environments (peregrine falcon). All raptor nesting habitat will be protected as described in Mitigation Measure 4.2-18 in the Draft EIR.

Therefore, the major issue is whether sufficient raptor foraging habitat will remain in the area with project development. According to the Biological Survey Report for the project (Appendix D in the Draft EIR; LSA, 2010), raptors foraging primarily for mammals in grasslands that were observed during biological surveys included white-tailed kite, northern harrier, red-tailed hawk, and Swainson's hawk. The golden eagle nests in southeast Napa County, both north and south of the project site (Berner et al., 2003), and was observed soaring over the site during several field surveys. Ferruginous and red-tailed hawks may nest in woodlands adjacent to the grasslands on the project site. Rough-legged hawk and merlin do not nest in California (Fix and Bezener, 2000).

Swainson's hawk is discussed in **Response 4–2** above. Northern harrier (a California Species of Special Concern) was reported as follows on page 4.2-77 in Chapter 4.2 Biological Resources of the Draft EIR: "The closest known documented nesting area is near the Napa County Airport (Berner et al., 2003). According to LSA (2010) (Appendix D), both male and female northern harriers were observed on the property during the field surveys, May 7 and July 8, 2009 respectively. These observations were not mapped because the birds were soaring over a wide area; the male was seen flying over the grasslands in the eastern portion of the project site and the female was seen soaring over the southwest corner of the site. These observations coincide with the breeding season of this species

(the male observation could have also been a migrating individual). Northern harriers could nest on the project site, although most grasslands on the site are relatively sparse or occur on steep terrain that does not provide enough cover for suitable nesting habitat." Large blocks of grassland foraging habitat will remain available to foraging raptors as described in Mitigation Measures 4.2-14 through 4.2-16 in the Draft EIR, and would be enhanced as described in Mitigation Measures 4.2-1 and 4.2-2. Further, adoption of the Reduced Intensity Alternative (Figure 5-1 in the Draft EIR) would preserve an additional 26 acres of grassland compared to the mitigated project. Pre-construction surveys in potential nesting habitat would also be conducted, as described in Mitigation Measure 4.2-18.

White-tailed kites (a California Fully Protected species) were reported on page 4.2-79 in Chapter 4.2 Biological Resources in the Draft EIR (2010) as follows: "A combination of suitable foraging habitat and adjacent suitable nesting habitat is essential for this species. There are three CNDDB records in Napa County: in the Napa River Ecological Reserve, due west of the site about four miles, south of Rector Canyon, approximately three miles northwest of the project site, and near Haystack Mountain, about two miles southwest of the project site. White-tailed kites were observed during the biological surveys and could potentially nest on the site in the trees along the drainages or in adjacent areas." Large blocks of grassland foraging habitat would remain available to foraging raptors, as described in Mitigation Measures 4.2-14 through 4.2-16 and would be enhanced as described in Mitigation Measures 4.2-1 and 4.2-2, and adoption of the Reduced Intensity Alternative (Figure 5-1 in the Draft EIR) would preserve an additional 26 acres of grassland compared to the mitigated project. Pre-construction surveys in potential nesting habitat would also be conducted, as described in Mitigation Measure 4.2-18.

Some raptors that are no longer considered California species of special concern were also discussed on page 4.2-81 in Chapter 4.2 Biological Resources in the Draft EIR as follows: "Some of these raptors were observed or have potential to occur on the project site, including sharp-shinned hawk, Cooper's hawk, ferruginous hawk, and golden eagle. All these species are known to nest in southern Napa County; golden eagles were observed on the property during the October 2, 2008 and March 10, 2009 field surveys, and a Cooper's hawk was also seen on March 10, 2009. The sharp-shinned hawk and ferruginous hawk are likely to occur as well, but primarily as a migrants and/or winter visitors." All nesting special status bird species would be protected as outlined in Mitigation Measure 4.2-18.

Suscol Ridge (1,035 feet above mean sea level (msl)) on the south side of and parallel to Suscol Creek), "The Knob" (990 feet above msl) approximately in the center of the property, and the "Northern Ridge" (up to 1,384 feet above msl) along the northern edge of the property are all prominent hills that are approximately 500 to almost 900 feet higher than Suscol Creek. Suscol Ridge and Northern Ridge run approximately east-west. The Knob is oriented roughly north-south.

The prevailing winds recorded from the weather station at the Napa County Airport indicate that the winds tend to blow from a south-southwest direction, but trending from the east November to February, and from the west March through May (Western Regional Climate Center, 2002).

Within five miles of the project site there are eight peaks (mostly unnamed) between Sugarloaf Mountain to the northeast and Jameson Canyon to the southeast that are all over 900 feet above msl. These peaks and ridges vary in orientation from east-west to north-south. As a consequence, they vary in the strength of updrafts and their value for soaring depending on prevailing wind direction. The variously oriented peaks and ridges together provide a diversity of soaring options throughout the year not restricted to the three peaks on the project site. The regional landscape is dominated by agricultural uses, with the notable exceptions of the Napa Quarry, Skyline Wilderness Park, a Land Trust conservation easement, and City of Napa Protected Lands, which are adjacent and northeast of the project site. The series of peaks and ridges are all likely used by raptors for soaring and foraging, and may represent a regional raptor corridor. There is little information available to determine the degree to which the type of surface vegetation (i.e., grassland versus vineyard versus oak woodland) may affect the natural air pressure gradients on the peaks and ridges. To minimize impacts from vineyard development along the ridges that would reduce foraging area for raptors, large blocks of grassland foraging habitat would remain available as described in Mitigation Measures 4.2-14 through 4.2-16, would be enhanced as described in Mitigation Measures 4.2-1 and 4.2-2, and adoption of the Reduced Intensity Alternative (Figure 5-1 in the Draft EIR) would preserve an additional 26 acres of grassland compared to the mitigated project.

Comment 4–4

The commenter states that grassland habitat at Suscol Ridge supports breeding populations of loggerhead shrike (a California Species of Special Concern, USFWS Conservation Concern, California Coastal Populations) and grasshopper sparrow (a California Species of Special Concern). The commenter states that the north San Francisco Bay population of loggerhead shrike is in decline due to habitat degradation and development pressure and that grasshopper sparrow has been observed nesting in nearby grassland sites identical to the project site. The commenter also states that the habitat may support a wintering population of burrowing owl (a California Species of Special Concern, USFWS Conservation Concern). The commenter is concerned that the development of 561 acres within an overall area of 2,123 acres will result in habitat fragmentation that will reduce the number of available songbird nesting territories beyond the acreage directly disturbed by vineyards and that this may effectively eliminate all grassland nesting species from the 2,123 acres. The commenter expresses concern that the large-scale project will substantially alter the landscape of the entire Suscol Creek watershed.

Response 4–4

The loggerhead shrike is a widespread breeder in California although there has been a statewide decline in numbers. No estimates of average territory sizes are available for California, but average territory sizes throughout the North America range from 6.7 acres (2.7 hectares) in Alberta to 62 acres (25 hectares) in Idaho, averaging about 15 to 22 acres (six to nine hectares) in size (Dechant et al., 2002, and references therein). Four to five individuals were observed in the southwestern portion of the project site during the 2009 nesting season (LSA, 2010; Appendix D in the Draft EIR). The trees and shrubs along the edges of the drainages are potential nesting areas for this species and the adjacent grasslands provide foraging habitat. The best nesting areas on the project site are isolated shrubs and trees in the area south of Suscol Ridge, and along the hedgerow of horsetail trees just east of the southwestern corner of the property. This species is unlikely to nest on the ridgeline as it would be more vulnerable to raptor predation. The vast majority of potential nesting sites would be preserved through project design and the mitigated project described in the Draft EIR. Large blocks of grassland habitat sufficient to support multiple loggerhead shrike territories near these potential nesting sites would be avoided. Nests were not found during the field surveys, but local nesting pairs apparently forage in the grasslands on the project site. The Resource Management Plan (RMP) (see Mitigation Measure 4.2-1) would include management objectives for the avoided grassland areas, which includes the enhancement of potential loggerhead shrike foraging areas. An example of an enhancement activity specific for this species would be the maintenance of low, thick shrubs and trees along fence lines and sparse shrubs and trees throughout the otherwise avoided grassland areas (Deschant et al., 2002).

Grasshopper sparrows require suitable habitat large enough to support breeding populations. In studies from Nebraska, Illinois and New York, the minimum area on which grasshopper sparrows were found ranged from 20 to 74 acres (eight to 30 hectares; Dechant et al., 2003, and references therein). Although few data exist that describe where grassland birds prefer to nest relative to local topography, grasshopper sparrows have been found to nest at the mid-range of elevation in a hilly landscape (Frey, et al., 2008). This is consistent with the sightings of grasshopper sparrows on the project site during the biological surveys (LSA, 2010): a single singing male was observed in the eastern portion of the project site during the initial field survey on June 27, 2007, a date suggestive of local breeding; and a minimum of four singing males during the spring of 2009 (near proposed Blocks 31A and 34C). Breeding was not confirmed, but the grassland where the birds were observed appears to be suitable nesting habitat. There are few shrubs in the area where the birds were seen, but scattered small rock outcrops, just higher than the grass cover, provide suitable singing perches. Grasshopper sparrow populations are well known to fluctuate between years and the species may be present in a given area one year and absent the next (Shuford and Gardali, 2008). As stated in Mitigation Measure 4.2-1 in the Draft EIR: “The retention of approximately 1,023 acres of Wild Oats Grassland, including

large areas in the eastern portion of the site where the grasshopper sparrow was observed, combined with grassland management under the RMP (see Mitigation Measure 4.2-1) will preserve and enhance grassland not proposed for development." Further, all of Blocks 33 and 34 would be avoided with the Reduced Intensity Alternative, thereby preserving grasshopper nesting habitat in concert with varied intensities and timing of grazing.

No burrowing owls or nesting signs of burrowing owls have been found on the project site. The soil substrate is generally shallow and few large burrowing rodents (such as ground squirrels) occur there. Nevertheless, appropriate pre-construction surveys for presence and nesting sites would be conducted as described in Mitigation Measure 4.2-18.

Comment Letter 5 – Sierra Club - Napa Group of Redwood Chapter

Comment 5–1
The commenter states that the comments provide recommendations for environmental improvements for the project, including avoiding the woodland patch in Block 15, thereby improving wildlife corridors and saving woodland habitat, as well as habitat and protection of special status species and the establishment of a trigger-point for the use of recycled water.

Response 5–1
Comment noted. These topics are addressed below in **Responses 5–2** through **5–35**.

Comment 5–2
Table 2-1, Impact 4.2-4, the commenter states that the woodland patch in Block 15 should be made into a wildlife corridor since the block has road access on either end that would allow it to be broken into smaller blocks, which would reduce the number of oaks impacted by over 250 trees. The commenter also states that retention of the trees would protect against frost, require fewer wind machines, and protect the slope in the 15 to 17 percent slope area.

Response 5–2
After consideration of all potential environmental impacts associated with the proposed project that were presented in the Draft EIR, the Reduced Intensity Alternative (pages 5-3 through 5-8 in Chapter 5.0 Alternatives to the Proposed Project in the Draft EIR) is the project that would be approved by Napa County, as opposed to the proposed project. With the Reduced Intensity Alternative, approximately 504 acres of oak woodlands would be avoided, just over 96 percent of the total woodland areas on the project site.

Permanent protection for the avoided woodlands is required at a 2:1 acre ratio, that is, two acres conserved for every one acre impacted by development, or a total of approximately 37 acres with the Reduced Intensity Alternative. Oak woodland areas identified for

preservation in perpetuity will be identified in a deed restriction/conservation easement to be held by an organization such as the Napa County Regional Park and Open Space District or Land Trust of Napa County (as the grantee), or other means of permanent protection acceptable to Napa County. This further detail is in **Chapter 5.0** and the Mitigation Monitoring and Reporting Program in **Chapter 6.0**.

Further, the Applicant is working with CDFG to restore an approximate 1,000 lineal foot portion of Suscol Creek in the vicinity of the proposed bridge. This area is discussed in Mitigation Measure 4.2-17 in the Draft EIR. Suscol Creek is degraded in this area due in large part to the ongoing grazing operation, and has many dead trees and open areas where the riparian woodland is not well developed. This condition has allowed numerous Himalayan blackberry bushes (and other invasive plants) to dominate most of the corridor immediately adjacent to the creek. The restoration would remove such invasive plants and replace them with native riparian woodland species such as oaks, willows, alders and understory vegetation native to the area thereby increasing the overall riparian habitat quality for wildlife, including birds (discussed further below) and increase the aquatic habitat value for native fish, such as steelhead/rainbow trout (*Oncorhynchus mykiss*) and amphibians, by establishing a closed canopy to provide deep shade over the creek during the hot summer months.

Restoration efforts represent an ongoing aspect of the property maintenance and therefore were not included as part of the project analyzed in the Draft EIR (aside from the discussion related to the bridge installation and related Mitigation Measure 4.2-17). Given the high ecological value of the riparian corridor along Suscol Creek, the restoration discussed in Mitigation Measure 4.2-17 functions to offset the potential impacts related to the removal of the oak woodlands within proposed Block 15. Riparian corridors are especially valuable for wildlife movement across the larger landscape and are generally considered more valuable to a range of wildlife than isolated woodlots because they tend to be continuous, provide a water source, and link to diverse habitats in linear arrays. Isolated woodlots do not provide connectivity across landscapes. Mitigation Measure 4.2-8 in the Draft EIR, combined with Mitigation Measures 4.2-1, 4.2-4, 4.2-6, 4.2-7 and 4.2-12, would ensure that wildlife movement on the property is not significantly impacted. Further, in a recent meta-analysis of birds using riparian corridors surrounded by development, a majority of woodland and insectivorous birds were most strongly affected by local vegetation conditions (i.e., the corridor itself) or local and regional vegetation in combination (Oneal and Rotenberry, 2009). In other words, when riparian woodland habitat is high quality, it can support many riparian bird species independent of the surrounding habitat. As attested by LSA (2009), the existing "white alder woodland provides nesting habitat for a wide variety of birds associated with riparian woodlands such as Pacific-slope flycatcher (*Empidonax difficilis*), warbling vireo (*Vireo gilvus*), and black-headed grosbeak (*Pheucticus melanocephalus*), all of which are expected to nest on the property.

Chaparral bird species (and red-shouldered hawks) are more likely to be affected by broader landscape context (red-tailed hawks were unaffected by spatial scale development; Oneal and Rotenberry, 2009). With the Reduced Intensity Alternative, approximately 1,125 acres of open grassland and grassland with small shrubs is being avoided to protect habitat for a variety of grassland birds, including loggerhead shrike and grasshopper sparrow.

The isolated woodland on the hilltop contained in Block 15 likely provides perches for raptors hunting by sight, which often search for prey from elevated perches or hovering positions above the prey habitat (Andersson et al., 2009), but woodlands surrounding proposed Block 15 similarly provide perches and vineyard development in the area should not significantly affect wind flow patterns for soaring raptors.

Comment 5–3

Table 2-1, Impact 4.2-11, the commenter states that if California red-legged frogs (CRLF) are found, all connecting drainages, including those outside designated critical habitat, should be protected.

Response 5–3

As discussed in Chapter 4.2 Biological Resources in the Draft EIR, critical habitat designated for the CRLF intersects the southeastern corner of the project site as part of Critical Habitat Unit SOL-2, and includes proposed Blocks 30B, 30C, 31A, 31B, 32, 33, 34, 41, and 46. The critical habitat within the areas of the proposed vineyard blocks includes upland (non-breeding, non-aquatic) habitat. These areas consist mostly of wild oat and purple needle grass grassland between Fagan and Suscol Creeks. CRLF have not been found to date in any drainages that connect with these creeks. Recorded occurrences (Figure 4.2-5 in the Draft EIR) are approximately five miles to the southeast in a different watershed separated by ridges from the project site.

Nonetheless, all precautions would be taken in accordance with USFWS guidelines to avoid any impacts to CRLF during construction and maintenance of the project, as detailed in Mitigation Measure 4.2-11 in the Draft EIR. If any CRLF are found, all construction activities would be halted, USFWS would be contacted, and protected areas would be established and approved by USFWS to ensure no impact to CRLF.

Critical habitat Unit SOL-2 for CRLF comprises a total of 3,360 acres as designated in the revised Final Rule (U.S. Federal Register, 2010). Construction of vineyard blocks within the upland CRLF habitat included as critical habitat in the southeastern portion of the project site would not create an additional barrier to CRLF movement between riparian and upland habitats, if any exists between Suscol and Fagan Creeks and surrounding areas, since vineyard is considered suitable dispersal habitat for CRLF (Section 4.2.4-3 in the Draft EIR).

In the original proposal, approximately 75.24 acres of proposed vineyard blocks were within upland CRLF critical habitat areas. With the Reduced Intensity Alternative, the gross vineyard acreage would be reduced to 451 acres, with approximately 51.32 acres in upland CRLF critical habitat areas (or approximately 1.5 percent of the critical habitat designation in unit SOL-2).

Comment 5–4

Table 2-1, Impact 6-1, the commenter states that construction of the project would significantly diminish the amount and rate of carbon sequestration on the site, as mature trees sequester carbon at far greater rates than newly planted trees or vineyards. The commenter states that the removal of 1,182 trees would increase this effect and that retaining trees, such as those in the woodland in Block 15, would help minimize greenhouse gas (GHG) emissions from the project.

Response 5–4

As was presented in the cumulative air quality analysis in the Draft EIR (Section 6.1.4-1), the project would not result in significant greenhouse gas (GHG) emissions from construction and operation of the project. GHG construction emissions would be offset by more than 86 percent (page 6-15 in the Draft EIR), exceeding Napa County's draft Climate Action Plan (CAP) requirement to offset emissions by 39 percent, and total annual operational GHG emissions are less than 40 percent of the Bay Area Air Quality Management District's (BAAQMD) operational GHG threshold.

Comment 5–5

Page 3.4.1, the commenter states that development of the project would impact some bay trees that are greater than 60 inches diameter at breast height (dbh), and one that is 77 inches dbh. The commenter states that retention of these large trees is important to retain the habitat within the project area, improve nearby temperatures, and retain habitat for Cooper's hawk that prey on grape-eating starlings.

Response 5–5

The majority of large trees and oak woodlands present on the project site would be avoided, as detailed in Mitigation Measure 4.2-4 in the Draft EIR. As originally proposed, 49 trees with 40 inch dbh or greater would have been impacted, including six bay trees with 60 inch dbh or greater in proposed Blocks 19A, 19B, 30A, 30B and 31B, and two eucalyptus with 60 inch dbh or greater in proposed Block 36E. No trees over 60 inch dbh would be impacted with the Reduced Intensity Alternative; a total of 15 trees between 40 inch dbh and 54 inch dbh would be impacted, including one bay tree in proposed Block 31B and 14 Coast live oaks in proposed Blocks 8B, 15B, 15C, 30A, 36A, 42 and 43. With the Reduced Intensity Alternative, approximately 504 acres of oak woodlands would be avoided, or just over 96 percent of the total woodland areas on the project site. These trees and woodlands would

continue to provide sufficient nesting habitat for Cooper's hawk and other raptors and songbirds on the project site.

Comment 5–6
Page 4.1-10, the commenter states that measures that could be selected for implementation include on or offsite habitat restoration, on or offsite reforestation, on or offsite avoided deforestation, or participation in a program demonstrated to offset project emissions. The commenter also notes that emissions could be reduced by dividing Block 15 and avoiding the central oak woodland habitat.

Response 5–6
See **Responses 5–2** and **5–4**. The project is consistent with Napa County's draft CAP requirement to offset emissions by 39 percent, the Applicant would conduct onsite habitat restoration, and the project includes onsite avoided deforestation.

Comment 5–7
Table 4.2-1, the commenter states that the CRLF surveys were completed late in the season and asks if rain that fell primarily in the winter with cold temperatures in the spring could affect the presence of CRLF.

Response 5–7
As shown in Table 4.2-1 in the Draft EIR, surveys for CRLF were conducted in the summer (July 31 and August 7, 2008). The surveys were conducted in the dry season when CRLF would be found in close association with aquatic habitat. Although these were not protocol level surveys, they were conducted within the seasonal window prescribed in USFWS guidelines: "Surveys may begin anytime during January and should be completed by the end of September. Multiple survey visits conducted throughout the survey-year (January through September) increases the likelihood of detecting the various life stages of the CRF. For example, adult frogs are most likely to be detected at night between January 1 and June 30, somewhere in the vicinity of a breeding location, whereas, sub-adults are most easily detected during the day from July 1 through September 30 (USFWS, 2005)." Had the aquatic sites been used by CRLF for breeding, adult and/or sub-adult frogs should have been observable during these survey periods.

The conditions of rain the previous winter (which is typical) and cold the previous spring (which is also typical) would not have affected the presence of CRLF in aquatic habitat the following summer. Regardless, the Draft EIR conservatively assumes that CRLF could be present in the project vicinity during vineyard construction, and as detailed in Mitigation Measure 4.2-11 in the Draft EIR, all precautions would be taken in accordance with USFWS guidelines to avoid any impacts to CRLF.

Comment 5–8
Page 4.2-1, paragraph 2, the commenter states that the abundance of county-wide habitat does not reduce its potential importance as a local habitat.

Response 5–8
The abundance of particular habitat types across the County is important for understanding the relative abundance and overall diversity of habitat types in the County, and to place particular emphasis on those that are considered relatively uncommon in the modern landscape. The importance of local habitat diversity is taken into account in both the biological resources and cumulative impact analyses in the Draft EIR (Chapter 4.2 Biological Resources and Section 6.2.4-2).

Comment 5–9
Table 4.2-3, the commenter states that the American peregrine falcon is a California fully protected species and listed as California Endangered, and that is has been observed hunting in marshes within five-miles west of the project site and it has been observed perched on the Highway 29 Napa River Bridge. The commenter also states that it nests in the Stags Leap District to the north and on the Carquinez Bridge and Vallejo Cliffs to the south.

Response 5–9
American peregrine falcon was delisted in California in 2009, but is considered a California fully protected species and it is also protected as a bird of prey. It has been observed soaring over the project site and likely uses it for foraging. However, there is no appropriate nesting habitat on the project site. Protection and enhancement of bird foraging and nesting habitat is detailed in Mitigation Measures 4.2-14 through 4.2-16 in the Draft EIR and enhancement of grasslands is detailed in Mitigation Measures 4.2-1 and 4.2-2. See **Responses 4–2** through **4–4** for additional information regarding avoidance and management of grasslands to support bird populations.

Comment 5–10
Page 4.2-84, paragraph 2, line 4, the commenter states that resident rainbow trout may be present in the creek at any time and anadromous rainbow trout (i.e., steelhead) may remain in the creek as long as two years before emigrating to San Pablo Bay and toward the ocean.

Response 5–10
Comment noted. Protection of all aquatic fish habitat is detailed in Mitigation Measures 4.2-6 and 4.2-17 in the Draft EIR, including avoidance of all wetlands and waters of the U.S.; riparian enhancement; stream setbacks; maintenance, replacement or modification of road crossings; and surface water monitoring of Suscol Creek.

Comment 5–11
Page 4.2-94, Policy CON 24b, the commenter states that the policy applies to the woodland patch in Block 15, which consists of a particular habitat that takes many decades to develop.

Response 5–11
See **Response 5–2**.

Comment 5–12
Page 4.2-101, the commenter states that the sentence would be more accurate if it said "In the absence of well-timed grazing, these species may increase, however the effect on native species varies with water year and from site to site."

Response 5–12
The commenter is correct in stating that both the amount and timing of grazing are essential components of a rangeland management plan, and the prevailing wisdom based on anecdotal evidence is that invasive species generally decrease in density during drought years. Over the long term, however, reducing the propagule sources of highly invasive annual species through well-timed grazing can reduce their ability to dominate native grassland canopies. Without management, dry California grasslands invaded with aggressive exotic annuals may be dominated by those exotic annuals over time (Everard et al., 2010). Properly timed grazing can both increase plant propagules and establishment opportunities for native species (Seabloom, 2011).

Comment 5–13
Page 4.2-105, paragraph 2, line 5, the commenter states that timing is essential, not optional.

Response 5–13
Well-timed grazing, sustainably managed, is the primary intention of the RMP described in Mitigation Measures 4.2-1 and 4.2-2 in the Draft EIR. The goals of the RMP include optimizing native plant growth and overall native plant and animal biodiversity in the avoided areas.

Comment 5–14
Page 4.2-106, paragraph 4, line 2, the commenter states that "sequester carbon" should be inserted after "mitigate flooding".

Response 5–14
Carbon sequestration as it relates to climate change is a subset of the air quality discussion in the Draft EIR. The referenced sentence notes that oak woodlands help improve air quality.

Comment 5–15
Page 4.2-109, paragraph 4, line 4, the commenter says that the statement contradicts what was said previously about grasshopper sparrows using such rocks for perches.

Response 5–15
The small rock outcroppings referred to are merely exposed rock at the soil surface, not elevated above the soil surface such that they could be used as perches.

Comment 5–16
Page 4.4-13, Section 4.4.2-1, Policy CON-6, the commenter states that removing the small but dense oak woodland in Block 15 is against this policy because it will reduce the productivity of the watershed and increase GHGs.

Response 5–16
See **Responses 5–2** and **5–4**.

Comment 5–17
Page 4.4-15, G2.1, the commenter states that this sub-recommendation applies to the small patch of oak woodland in Block 15.

Response 5–17
As shown in Table 4.4-2 in the Draft EIR, comparing pre- and post-project Universal Soil Loss Equation (USLE) calculations for proposed Blocks 15A, 15B and 15C where the small patch of oak woodland referenced in the comment occurs, development of the blocks would result in an approximately 37 percent decrease in soil loss compared to current conditions. This is consistent with the Napa County RCD recommendations.

Comment 5–18
Page 4.4-19, paragraph 1, line 5, the commenter states that the soil may not be changed, but how it reacts to erosion processes without rocks may change.

Response 5–18
The referenced Draft EIR quotation relates to the USLE calculations that estimate pre- and post-project soil loss and erosion potential. As stated on page 4.4-18 in the Draft EIR in the text preceding the referenced quote, the USLE model evaluates the detachment and movement of soil particles from environmental conditions and physical forces. The soil erosiveness factor used in the USLE calculations did not change for the pre- and post-project calculations.

For the hydrologic study of pre-and post-project peak flows and runoff volumes (Balance, 2010; Appendix G in the Draft EIR), however, the Hambright soils group would be

reclassified from hydrologic group D to C when ripping to a depth of approximately 36 inches, which would be expected to improve infiltration (Appendix E of Appendix G in the Draft EIR).

Comment 5–19

Page 4.5-3, Table 4.5-1, the commenter states that the commercially named pesticide/ herbicide products should be referred to by their chemical names for purposes of comment.

Response 5–19

Chemical and manufacturer information for the chemicals listed in Table 4.5-1 in the Draft EIR are provided in **Table 4-1** below.

TABLE 4-1
SUSCOL MOUNTAIN VINEYARDS PROPOSED CHEMICAL USE

Commercial Name from Table 4.5-1 in Draft EIR	Chemical Name and Manufacturer Information
Nitrogen (Fertilizer)	Calcium Nitrate 17 Total Nitrogen (N) 17.0%, 5.4% Ammoniacal Nitrogen, 11.6% Nitrate Nitrogen r
Phosphorus (Fertilizer)	Phosphoric acid (green)
Potassium (Fertilizer)	Sulfate of Potash (Potassium sulfate)
Liquid Sulfur (Fungicide)	Liquid Sulfur Six: Helena Chemical Company Active Ingredient: 52% Sulfur
Sulfur Dust (Fungicide)	Sulfur 98%
Champ (Fungicide)	Champ Formula 2: Nufarm Company Active Ingredient: Copper Hydroxide
Rally (Fungicide)	Rally: Dow AgroSciences Company LLC Active Ingredient: Myclobutanil
Pristine (Fungicide)	Pristine: BASF Ag Products Active Ingredients: Pyraclostrobin and Boscalid
Elite (Fungicide)	Elite 45 WP: Bayer CropScience Active Ingredient: Tebuconazole
Flint (Fungicide)	Flint: Bayer CropScience Active Ingredient: Trifloxystrobin
Procure (Fungicide)	Procure 480 SC: Chemtura Corporation Active Ingredient: Triflumizole
Quintec (Fungicide)	Quintec: Dow AgroSciences Company LLC Active Ingredient: Quinoxyfen
Rely (Herbicide)	Rely 280: Bayer CropScience Active Ingredient: Glugosinate-ammoniate
Roundup (Herbicide)	Round-Up Ultra: Monsando Company Active ingredient: Glyphosate
Chateau (Herbicide)	Chateau SW: Valent USA Corporation Active Ingredient: Flumioxazin
Goal (Herbicide)	Goal 2XL: Dow AgroSciences Company LLC Active Ingredient: Oxyfluorfen

Sources: Napa County, 2012; Balanced Planning, 2012

Comment 5–20

Page 4.5-3, paragraph 1, line 4, the commenter states that it is unclear whether the writers mean insecticides or the more general definition of pesticide which includes fungicides, herbicides and rodenticides.

Response 5–20
Fungicides, herbicides, insecticides, and rodenticides are all considered pesticides in the general discussion of Integrated Pest Management (IPM) techniques on page 4.5-3 in the Draft EIR. Chemical use would require safe handling, application and disposal practices in concert with IPM and best management practices (BMP) (Impacts and Mitigation Measures 4.5-1, 4.5-3 and 4.5-4 in the Draft EIR).

Comment 5–21
Page 4.6-16, the commenter asks whether the statement about the sanitary seal on the wells was a growth inducing factor since the wells could be used for housing in the future, and request assurance that the wells will only be used for agriculture.

Response 5–21
The project does not propose the use of the wells for domestic use, and it is highly unlikely that they would be used for domestic water in the future since it is not typical that agricultural wells for larger scale vineyards are compatible with domestic needs. The pump sizes are not usually compatible and pumping schedules are not the same, with the vineyard only needing water about four to six months a year and a residence needing water 12 months a year. This is a not a growth inducing factor as the property is zoned Agricultural Watershed, with the parcels only allowed one residence, a second dwelling and a guest house.

Comment 5–22
Page 4.6-18, the commenter states steelhead habitat is a beneficial use since the species is federally listed in recovery.

Response 5–22
The statement in the Draft EIR that Suscol Creek has no designated existing or potential beneficial uses at this time is specifically in the discussion of the San Francisco Bay Regional Water Quality Control Board's Basin Plan for the San Francisco Bay. Protection of all aquatic fish habitat as required by federal, state, and county regulation is discussed in Chapter 4.2 Biological Resources and detailed in Mitigation Measures 4.2-6 and 4.2-17 in the Draft EIR.

Comment 5–23
Page 4.6-23, G2.3, the commenter asks if a stand of trees (like in Block 15) is already performing erosion control functions, why not fence around it and keep the soil undisturbed.

Response 5–23
See **Response 5–17**.

Comment 5–24
Page 4.6-36, paragraph 2, line 11, the commenter states that rodenticides are deadly to golden eagles, vultures, coyotes and other animals and that they should not be used. The commenter states that owl boxes are more efficient at long term rodent control and have fewer negative effects on other species.

Response 5–24
In the water quality impact discussion on page 4.6-36 in the Chapter 4.6 Hydrology and Water Quality of the Draft EIR, the text incorrectly states that rodenticides are proposed for use on the project site. Table .4.5-1 in Chapter 4.5 of the Draft EIR lists proposed chemical use associated with the project; rodenticides are not proposed for use on the project site. The Draft EIR text is corrected in **Chapter 5.0**. Rodenticide use on the project site would negatively impact the numerous species of rodent- and mammal-eating birds of prey and mammals that use the project site.

Comment 5–25
Page 4.6-37, paragraph 1, line 7, the commenter states that wind machines are a good idea.

Response 5–25
Comment noted.

Comment 5–26
Page 4.6-47, the commenter states that there should be a trigger point if additional wells do not work or are not feasible when recycled water will be used at the project site.

Response 5–26
As discussed on page 4.6-17 in Chapter 4.6 Hydrology and Water Quality in the Draft EIR, the Applicant has expressed interest to Napa Sanitation District (NSD) in purchasing recycled water, but has not been provided with a confirmation of service from NSD. Page 4.6-47 of the Draft EIR lists potential options available should monitoring reveal that groundwater use on the project site is negatively impacting nearby offsite wells, including the use of recycled water.

Comment 5–27
Page 4.6-48, the commenter states that the persons monitoring Suscol Creek should be trained in the identification of sensitive species that may be present, such as steelhead, California red-legged frog and Western pond turtle. The commenter states that notes should be kept as part of the data and sightings should be reported in the California Natural Diversity Database.

Response 5–27
Comment noted. As stated on page 4.6-48 in the Draft EIR, the specific and detailed stream monitoring parameters used to determine significance for stage reductions in Northern California coastal steelhead streams will be developed by a professional hydrologist and/or fisheries biologist whose qualifications are acceptable to Napa County, which will allow the persons monitoring Suscol Creek to base impacts on the established significance criteria.

Comment 5–28
Page 6-13, the commenter expresses disagreement with the text about conservation of carbon sequestration from the avoidance of woodland conversion and deforestation.

Response 5–28
Comment noted. See also **Response 5–29**.

Comment 5–29
Page 6-15, paragraph 2, regarding the statement that the project is consistent with Napa County's draft Climate Action Plan (CAP) and the criteria within the draft CAP, the commenter states that there is no demonstration in the Draft EIR that the woodlands that are spared conversion would otherwise be suitable for vineyard development. The commenter also states that there is no promise of permanent protection of the avoided-conversion woodlands, as discussed in the draft CAP.

Response 5–29
The oak woodland impact discussion in Chapter 4.2 Biological Resources in the Draft EIR (Impact 4.2-4 and Figure 4.2-2) illustrates that approximately 81 percent of the oak woodland that could be developed on the project site because it is located on slopes less than 30 percent and outside stream setback areas was avoided by the original project design. These areas could otherwise have been developed with appropriate environmental review. The adoption of the Reduced Intensity Alternative would result in the protection of approximately an additional 11 acres of oak woodland compared to the proposed project, for a total impact of approximately 19 acres out of approximately total 523 acres onsite.

Comment 5–30
Page 6-15, paragraph 2, the commenter states that portions of the area grasslands will need to be grazed for fire control and that goats produce less CH4 than cattle. The commenter requests comparison calculations and states that goats should be an alternative.

Response 5–30
Comment noted. The property has historically been used as a cattle ranch and the Applicant has not stated the intention of grazing goats onsite.

Comment 5–31
Page 6-16, Table 6-3, the commenter states that if there is a change in use of ruminants as a result of the project that the difference in CH4 should be included.

Response 5–31
Refer to **Response 5–30**.

Comment 5–32
Page 6-18, paragraph 5, the commenter states that the Grace Benoist Vineyards in Sonoma Valley is an example of an area where the owners left large trees and wide wildlife corridors.

Response 5–32
Comment noted. Quality wildlife corridors are an important component of this project and are discussed in Impact and Mitigation Measure 4.2-8 in the Draft EIR.

Comment 5–33
Page 6-18, paragraph 2, line 5, the commenter states that a Range Management Plan (Ranch Plan) is already required by the San Francisco Regional Water Quality Control Board for the grazing waiver participants just as a Farm Plan is required for vineyard waiver participants.

Response 5–33
The referenced Draft EIR sentence was intended to refer to the "Resource Management Plan (RMP)" that is discussed in Mitigation Measures 4.2-1 and 4.2-2. The Draft EIR text is corrected in **Chapter 5.0**. The goals of the RMP include well-timed and sustainably managed grazing, as well as optimizing native plant growth and overall native plant and animal biodiversity in the avoided areas.

Comment 5–34
Page 6-19, paragraph 3, line 2, the commenter asks how many trees would be avoided with the mitigated project and restates that not removing the woodland in Block 15 would go far in saving the number of trees.

Response 5–34
See **Response 5–2**.

Comment 5–35
The commenter asks why the National Marine Fisheries Service (NMFS) is not listed as an agency for consultation if steelhead exist on the property.

Response 5–35
NMFS was provided with a copy of the Draft EIR for review during the public comment period and was included as a reviewing agency in the Notice of Completion. No comments were received from NMFS. NMFS literature was reviewed during preparation of the Draft EIR, but no direct communication was required with the agency for the report preparation. NMFS (also known as NOAA) is noted as a jurisdictional agency that may require authorizations and permits for work along Suscol Creek in Mitigation Measure 4.2-17 in the Draft EIR.

Comment 5–36
The commenter restates that the removal of the oak woodland area in Block 15 is not justified.

Response 5–36
See **Response 5–2**.

Comment 5–37
The commenter states that peregrine falcons are state protected and are not included in the species list; they have been observed perching, hunting and nesting in the vicinity.

Response 5–37
See **Response 5–9**.

Comment 5–38
The commenter states that white-tailed kites nest in Old Town Napa.

Response 5–38
See **Response 4–3**.

Comment Letter 6 – Napa Sanitation District

Comment 6–1
The commenter states that the Suscol Mountain Vineyards property lies outside of the service area for NSD.

Response 6–1
Comment noted. As discussed on page 4.6-17 in Chapter 4.6 Hydrology and Water Quality in the Draft EIR, the Applicant has expressed interest to NSD in purchasing recycled water, but has not been provided with a confirmation of service from NSD.

Comment 6–2
The commenter states that NSD owns Jameson Ranch, which abuts a portion of the southwest corner of the Suscol Mountain Vineyards property, and is located entirely within the Sheehy Creek subwatershed of the Napa River watershed. The commenter states that the general topography of the area flows in a southwest direction from the proposed vineyards through Jameson Ranch and that the NSD utilizes the ranch to spread Class B biosolids from NSD's Soscol Water Recycling Facility (SWRF). The commenter also notes that an extensive irrigation system on the ranch utilizes recycled water produced by the SWRF.

Response 6–2
The comments about the characteristics of NSD's Jameson Ranch property are noted.

Comment 6–3
The commenter states that several U.S. Geological Survey delineated streams flow from proposed vineyard parcel #4 through Jameson Ranch, merge into Sheehy Creek, and exit Jameson Ranch on the western side of the property. The commenter states that NSD is concerned that the proposed vineyards could negatively impact the hydrology and water quality of the stream and asks what mitigation measures are in place during and post-construction to ensure that post-construction water quality is equal to or better than pre-construction water quality.

Response 6–3
The analysis provided in the Draft EIR, supported by the hydrologic study (Appendix G in the Draft EIR; Balance Hydrologics, 2010) prepared for the project, illustrates that the project has been designed with erosion control measures to protect hydrology and water quality. As shown in Tables 4.6-2 and 4.6-3 in Chapter 4.6 Hydrology and Water Quality in the Draft EIR), development of the proposed project would result in an overall net decrease in the peak discharge runoff compared to current conditions for each of the modeled watersheds, including Sheehy Creek (or approximately an 11 percent decrease for a 2-year storm event, approximately a nine percent decrease for a 5-year storm event, approximately an eight percent decrease for a 10-year storm event, approximately a seven percent decrease for a 25-year and 50-year storm event, and approximately a six percent decrease for 100-year storm event).

Further, the acreage of development within the Sheehy Creek watershed would be reduced by approximately 12 acres with the implementation of the Reduced Intensity Alternative (pages 5-3 through 5-8 in Chapter 5.0 Alternatives to the Proposed Project in the Draft EIR), which after consideration by the County, is the project that would be approved, as opposed to the proposed project.

As discussed in Impact and Mitigation Measure 4.2-6 in Chapter 4.2 Biological Resources in the Draft EIR, the project would maintain minimum 55-foot setbacks from all County-definitional streams, 20-foot minimum setbacks from all jurisdictional waters of the U.S. that do not meet the Napa County definition of a stream, and 50-foot minimum setbacks around all wetlands. The project would also implement erosion control measures and BMPs prior to, during and after construction (detailed in Section 3.4.1 #P09-00176-ECPA Features in the Draft EIR) to prevent erosion and protect water quality. Written Standard Operating Procedures (SOPs) would be followed to reduce the potential for the project to release hazardous materials into the environment during construction, operation and maintenance of the vineyard (Mitigation Measures 4.5-2 through 4.5-4).

No negative impacts to the hydrology or water quality of Sheehy Creek or its tributaries would occur.

Comment 6–4

The commenter states that Jameson Ranch is located downhill of the proposed vineyard parcel #4 and states that NSD would like to ensure that no erosion occurs on NSD property and that no sedimentation from the vineyard is deposited onto NSD property during or after construction of the proposed project.

Response 6–4

The analysis provided in the Draft EIR, supported by the geologic evaluation (Appendix F in the Draft EIR; Gilpin Geosciences, 2010) prepared for the project, illustrates that the project's erosion control measures (detailed in Section 3.4.1 #P09-00176-ECPA Features in the Draft EIR) minimize increases in erosion. As shown in Table 4.4-2 in the Draft EIR in Chapter 4.4 Geology and Soils in the Draft EIR, development of the blocks in the Sheehy Creek watershed as proposed would result in a reduction in soil loss of approximately 29 percent compared to current conditions.

Even with the reduction of approximately 12 acres developed within the Sheehy Creek watershed through the implementation of the Reduced Intensity Alternative (see also **Response 6–3**), soil loss would be reduced compared to current conditions.

No erosion would occur on the NSD's property and no sedimentation would be deposited onto the District's property.

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CHAPTER 5.0
MINOR CHANGES AND EDITS TO THE DRAFT EIR

5.1 OVERVIEW

Changes and edits to the text of the Draft Environmental Impact Report (EIR) for Suscol Mountain Vineyards Erosion Control Plan Application No. P09-00176-ECPA have been identified in response to the comments received. Changes are noted with the following revision marks: ~~strikeout~~ for deletion and underline for new language. None of these changes constitute new or significant information or result in any new or more severe significant impacts in the proposed project.

5.2 CHANGES TO THE DRAFT EIR SECTIONS

CHAPTER 4.2 BIOLOGICAL RESOURCES

Page 4.2-109, Mitigation Measure 4.2-4. The following detail was added to the text for clarification:

Direct impacts to approximately four percent of oak woodlands would be mitigated through the avoidance of the remaining onsite oak woodlands, in excess of the 2:1 preservation ratio, on a per-acre basis. As shown in Table 4.2-4 in the Draft EIR, at least 40 acres (or 20 acres times two) of onsite oak woodland should be preserved for the 20 acres of oak woodland developed into vineyard, with mitigation incorporated as described above. Over 500 acres of oak woodland would remain on the project site with the mitigated project, in excess of the 40 acres required to meet the 2:1 preservation ratio. Permanent protection for the avoided woodlands is required at a 2:1 acre ratio. Oak woodland areas identified for preservation in perpetuity shall be identified in a deed restriction/conservation easement to be held by an organization such as the Napa County Regional Park and Open Space District or Land Trust of Napa County (as the grantee), or other means of permanent protection acceptable to Napa County.

CHAPTER 4.6 HYDROLOGY AND WATER QUALITY

Page 4.6-36, second paragraph. The following edit was made to the text:

> Pesticides proposed for potential use at the project site include a variety of herbicides~~,~~ and fungicides~~, and rodenticides~~ (discussed in **Chapter 4.5 Hazardous Materials**).

CHAPTER 5.0 ALTERNATIVES TO THE PROPOSED PROJECT

Page 5-3, Section 5.2.2 Reduced Intensity Alternative. The following addition was made to the text:

> Under the Reduced Intensity Alternative, less vineyard acreage would be developed than is proposed under #P09-00176-ECPA. The objectives of the Reduced Intensity Alternative are to further reduce impacts beyond the mitigated project as described in **Chapter 6.1, Cumulative Impacts** and depicted on **Figure 6-1**. For the reasons described in the following paragraphs, the Reduced Intensity Alternative is considered the environmentally superior alternative.

Page 5-8, second paragraph. The following edits were made to the text:

> Like the proposed project, the Reduced Intensity Alternative would result in a reduction in the volume and rate of runoff compared to current conditions; however, the Reduced Intensity Alternative would result in a slightly greater volume and rate of runoff than what would occur with the proposed project, as the hydrologic group changes from D to C, with a resulting reduction in peak flows, in the majority of the converted areas by amending the soils and reducing grazing in portions of the project site ~~volume and rate of runoff is slightly greater for grasslands and oak woodlands than for vineyards~~ (based on results of the Hydrologic Assessment; Balance Hydrologics, 2010; **Appendix G**).

Page 5-8, Section 5.2.3 Reduced Intensity with Recycled Water Supply Alternative. The following edits were made to the text:

> Phase I of project development would require a maximum of 78 af of ~~ground~~water per year which would be well within the capacity of existing Well 1. Phase II of the project would require a maximum of 117 af of ~~ground~~water per year. Phase III of the project would require a maximum of 68 af of ~~ground~~water per year.

CHAPTER 6.0 OTHER CEQA-REQUIRED SECTIONS

Page 6-19, second paragraph. The following edit was made to the text:

> In addition, a Resource ~~Range~~ Management Plan (RMP) would be developed and implemented according to guidelines listed in **Mitigation Measure 4.2-1** to minimize indirect impacts of development on avoided grassland areas.

CHAPTER 6.0

MITIGATION MONITORING AND REPORTING PROGRAM

In order to mitigate or avoid significant effects resulting from the proposed project, Public Resources Code Section 21081.6 requires that monitoring and reporting procedures take place through a Mitigation Monitoring and Reporting Program (MMRP). **Table 6-1** provides the MMRP for the proposed project in accordance with those guidelines. Clarifications to the mitigation identified in the response to comments on the Draft EIR (**Chapter 5.0**) have been incorporated into the MMRP.

TABLE 6-1
MITIGATION MONITORING AND REPORTING PROGRAM

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
4.1	**Air Quality**						
4.1-1	The owner shall implement a fugitive dust abatement program during the construction of #P09-00176-ECPA, which shall include the following elements: • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard; this mitigation is included in the BAAQMD-approved Urban Emissions (URBEMIS) 2007 model (Version 9.2.4; URBEMIS 9.2.4 model). • Cover all exposed stockpiles. • Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent streets. • Limit traffic speeds on unpaved roads to 15 miles per hour (mph); this mitigation is included in the URBEMIS 9.2.4 model. • Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph. • Any burning of cleared vegetation shall be conducted according to the rules and regulations of the BAAQMD's Regulation 5 (BAAQMD, 2006). Prior notification to BAAQMD shall be made by submitting an Open Burning Prior Notification Form to BAAQMD's office in San Francisco. The measures above (which are consistent with the BAAQMD recommended measures) are in addition to the permanent erosion control measures specified in #P09-00176-ECPA, which include establishing a permanent no till cover crop on all disturbed areas and applying straw mulch over disturbed areas. The permanent erosion control measures would avoid the creation of nuisance dust and PM_{10} during operation of the vineyard, reducing these potentially significant impacts to a less-than-significant level.	Applicant	Napa County Department of Planning, Building and Environmental Services; Bay Area Air Quality Management District	Project construction	Project construction through operation	County standards	Applicant

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
4.1-2	The owner shall implement the required basic construction mitigation measures as recommended by the BAAQMD during the construction of the proposed project, which shall include the following elements: • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day; this mitigation is included in the URBEMIS 9.2.4 model. • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of the California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations. • The owner shall use only aqueous diesel fuel during construction; this mitigation is included in the URBEMIS 9.2.4 model. As shown in Table 4.1-3 in the Draft EIR, construction of the proposed project would not exceed the BAAQMD criteria pollutant threshold.	Applicant	Napa County Department of Planning, Building and Environmental Services; Bay Area Air Quality Management District	Project construction	Project construction	County standards	Applicant

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
4.2	**Biological Resources**						
4.2-1	Indirect impacts would be reduced to less-than-significant levels by a combination of avoidance of all Purple Needle Grass Grassland and Creeping Rye Grass Turf (as proposed and mapped in Figure 4.2-1 in the Draft EIR), and grassland management. These Sensitive Biotic Communities shall be managed to maintain native species and control highly invasive species using light grazing guided through a Resource Management Plan (RMP). This RMP shall be prepared by a qualified biologist, ecologist or State-licensed Certified Rangeland Manager (CRM), in consultation with the Napa County Resource Conservation Director (RCD). This would be consistent with Napa County Policies CON-2 and CON-17. The RMP shall be submitted to Napa County prior to any vegetation removal, grading and earthmoving activities. In addition to the avoidance and management of all mapped Purple Needle Grass Grassland and Creeping Rye Grass Turf discussed above, the following are other objectives that shall be included in the RMP: the management of onsite Wild Oat Grasslands not proposed for development (Mitigation Measure 4.2-2) to prevent further invasion of Wild Oats Grasslands by highly invasive plant species; management of the Oak Woodland Avoidance and Management Areas (Mitigation Measure 4.2-4); and aquatic habitat enhancement in the vicinity of the proposed Suscol Creek crossing (Mitigation Measure 4.2-17); standard adaptive management erosion control and fire management practices within onsite wildlife corridors (Mitigation Measure 4.2-8). Implementation of the RMP would protect wetland habitats from potential water quality related impacts (Mitigation Measure 4.2-7), and continue to provide habitat for grasshopper sparrow nesting and foraging (Mitigation Measure 4.2-14), as well as Swainson's hawk (Impact 4.2-15) and raptor and loggerhead shrike foraging habitat (Impact 4.2-16).	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through operation	County standards	Applicant

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
	Required performance standards for the RMP are as follows. Performance criteria for enhancement of grassland resource values are shown in parentheses (LSA, 2010; Appendix D in the Draft EIR): • Management goals. (Goals shall include habitat enhancement criteria such as increased native grass cover, native plant diversity, and wildlife values). • Range improvements such as existing and proposed fences and water sources. (Additional water sources and fencing shall be installed for more even distribution of grazing use and to lessen impacts on wetlands and riparian habitats). • Kind and class of livestock. • Livestock carrying capacity and stocking rate. (A stocking rate that results in light to moderate use levels shall be specified to promote habitat values). • Residual dry matter levels (RDM) related to slope. (Minimum RDM levels consistent with light to moderate use levels shall be attained. This equates to an average of about 700 pounds per acre on gentle slopes to 1,000 pounds per acre on steeper slopes in an average rainfall year).						
4.2-2	Impacts to non-sensitive grasslands would be reduced to less-than-significant levels through the development and execution of a RMP (refer to Mitigation Measure 4.2-1). Management under the RMP of Wild Oat Grasslands not proposed for development would prevent further invasion of Wild Oats Grasslands by highly invasive plant species. This would have the added effect of enhancing forage for cattle and habitat quality for native species. The majority of Wild Oats Grassland containing minor components of purple needle grass, creeping wild rye, and meadow barley would also be avoided and managed to preserve nesting habitat for grasshopper sparrows (Impact and Mitigation Measure 4.2-14). An important component of the RMP would be to provide measurable benchmarks for livestock	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through operation	County standards	Applicant

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
	grazing for fire prevention and weed management. When livestock are grazed outside of vineyard areas, temporary fencing shall be utilized as needed to prevent livestock access to wetlands, Suscol Creek and its tributaries, and tributaries to Sheehy and Fagan Creeks. The initial temporary fencing design shall be field verified by a qualified biologist prior to commencement of grazing activities. The Applicant/Owner shall use criteria established in the RMP (discussed in Mitigation Measure 4.2-1) to ensure the property is not overgrazed outside the vineyard blocks.						
4.2-4	Impacts to oak woodland shall be reduced to a less-than-significant level and result in the greatest quality of oak woodland mitigation through a combination of 1) avoidance of oak woodlands to the maximum extent feasible; 2) preservation and conservation of oak woodlands having the highest habitat values and qualities at minimum 2:1 preservation-to-vineyard ratio on a per acre basis; and 3) through the restoration and enhancement of existing oak woodlands implemented by an oak woodland restoration plan. Prior to approval of the ECP, the plan shall be modified to include the following measures. *Avoidance* Avoidance measures would preserve areas identified as high value oak woodlands that occur within or in close proximity to riparian galleries, on the fringe of vineyard blocks, species that are of limited distribution in the vicinity of the project site (e.g., valley oak), and woodlands on or near ridge tops. Appendix J discussed in Chapter 6.0 in the Draft EIR identifies constraints by vineyard block; thereby showing the reason(s) for mitigation. As seen in Appendix J in the Draft EIR, some trees are preserved primarily for slope stability purposes and are preserved for biological resources as a secondary consideration. The following proposed blocks shall be modified to avoid oak woodland areas, illustrated in Figure 4.2-6 in the Draft EIR	Applicant	Napa County Department of Planning, Building and Environmental Services	Prior to approval of #P09-00176-ECPA	Pre-construction through construction	County standards	Applicant

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
as Oak Woodland Avoidance and Management Areas (includes the oak woodlands identified as management areas by LSA (2010), see Appendix D in the Draft EIR): Blocks 1, 7, 9, 19, 21, 24, 26, 27, 29, 30, 31, and 32. The required Oak Woodland Avoidance and Management Areas total approximately 12.2 acres, including ridge top woodlands in proposed Blocks 21, 24, 26, 27, 29, 30, and 31, and the retention of several large specimen trees within vineyard blocks, including two coast live oaks with trunk diameters at breast height (dbh) of 40 inches and four valley oaks. All avoided trees within 50 feet of ground-disturbing activities shall be protected with visible plastic fencing during all phases of construction activities. Visible fencing shall be placed ten feet outside the edge of the dripline (edge of the tree canopy) to protect above- and below-ground tissues of these trees and shall be field verified by Napa County prior to the commencement of any grading or vegetation removal. The following shall not occur within the buffers of any retained tree(s): parking or storage of vehicles, machinery or other equipment; stockpiling of excavated soils, rocks or construction materials; or dumping of oils or other chemicals. A certified arborist shall perform any pruning deemed necessary. Protective fencing shall be maintained in place until the vineyard area adjacent to the subject woodlands has been planted and all grading and earthwork necessary for the project has been completed. *Preservation and Enhancement* Direct impacts to approximately four percent of oak woodlands would be mitigated through the avoidance of the remaining onsite oak woodlands, in excess of the 2:1 preservation ratio, on a per-acre basis. As shown in Table 4.2-4 in the Draft EIR, at least 40 acres (or 20 acres times two) of onsite oak woodland should be preserved for the 20						

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
	acres of oak woodland developed into vineyard, with mitigation incorporated as described above. Over 500 acres of oak woodland would remain on the project site with the mitigated project, in excess of the 40 acres required to meet the 2:1 preservation ratio. Permanent protection is required at a 2:1 acre ratio. Oak woodland areas identified for preservation in perpetuity shall be identified in a deed restriction/conservation easement to be held by an organization such as the Napa County Regional Park and Open Space District or Land Trust of Napa County (as the grantee), or other means of permanent protection acceptable to Napa County. Management of the Oak Woodland Avoidance and Management Areas (Figure 4.2-6 in the Draft EIR), including planting and other enhancement activities, shall be detailed by a qualified professional with knowledge of California oak woodland resource management concepts (including Registered Professional Foresters or Certified Rangeland Managers) and shall be included in the RMP.						
4.2-6	Prior to County approval of the ECP, the plan shall be modified to include the following: To ensure that all wetlands and waters of the U.S that could be directly or indirectly impacted by the project have been identified, a formal delineation of waters of the U.S. within all areas proposed for disturbance and surrounding buffers shall be prepared and submitted to the USACE for verification. The width of the buffers shall be a minimum of 50-feet measured from the outer edge of each vineyard block, and may be wider in specific locations where potential wetlands are subject to downhill runoff from vineyards. Otherwise, the delineation need not extend to parts of the property that are not proposed for disturbance with the project and have no potential to be affected by vineyard related runoff. A Section 404 Nationwide Permit shall be obtained from the USACE prior to the discharge of	Applicant	Napa County Department of Planning, Building and Environmental Services; USACE	Prior to approval of #P09-00176-ECPA	Pre-construction through construction	County and Federal standards	Applicant

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
any dredged or fill material within jurisdictional wetlands or other waters of the U.S. A Section 1602 Lake and Streambed Alteration Agreement (LSAA) shall be obtained from CDFG prior to construction activities that alter the bed or bank of streams or ponds. Pursuant to General Plan Policy CON-30, impacts to wetlands and waters of the U.S. shall be mitigated through avoidance to the extent feasible. In the event avoidance is infeasible, as determined by the County, the compensatory mitigation shall be implemented onsite or at an agency approved offsite location at a minimum of 1:1 ratio and shall be approved by the USACE prior to any discharge into jurisdictional features and by CDFG prior to altering the bed or bank of a stream or pond. To avoid indirect impacts to waters of the U.S. and wetlands (in addition to Mitigation Measure 4.2-7 protecting seeps and springs), minimum avoidance buffers of 50-feet shall be maintained around each of the wetlands. Temporary orange construction fencing shall be installed around wetlands and any drainage features in the vicinity of and outside of the construction area. Fencing shall be located a minimum of 50 feet from the edges of wetlands and waters of the U.S. as identified in the formal wetland delineation report and located on the ground by a qualified professional acceptable to Napa County. All fencing shall be installed prior to the commencement of any earthmoving activities and shall be field verified by a qualified biologist; documentation from the biologist verifying that protective fencing has been installed in accordance with this measure shall also be provided to the County prior to the commencement of earthmoving activities. The fencing shall remain in place until all construction activities in the vicinity have been completed. Staging areas shall also be located a minimum of 50 feet from the areas of wetland habitats (including seeps and springs). Temporary stockpiling of excavated or imported material shall occur only in approved construction staging						

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
	areas within the project area (i.e., vineyard blocks as modified through mitigation). Excess excavated soil shall be used on site or disposed of at a regional landfill or other appropriate facility. Stockpiles that are to remain on the site through the wet season (October 1 through March 31) shall be protected to prevent erosion through the implementation of BMPs such as seeding and mulching, cover with tarps, and/or installing silt fences, straw wattles or straw bales. Standard precautions shall be employed by the construction contractor to prevent the accidental release of fuel, oil, lubricant, or other hazardous materials associated with construction activities into jurisdictional features. A contaminant program shall be developed and implemented in the event of release of hazardous materials (as detailed in Mitigation Measure 4.5-1).						
4.2-7	Prior to County approval of the ECP, the plan shall be modified to include the following components. Any associated project features that become unnecessary as a result of implementation of this measure shall also be eliminated in the revised in the plan. The Applicant shall permanently avoid all of the wetland habitats throughout the project site. Prior to construction, a formal wetland delineation (Mitigation Measure 4.2-6) shall be completed to establish 50-foot setbacks from all springs and seeps. Vineyard blocks shall be adjusted as necessary to accommodate the setbacks. Highly visible construction fencing shall be located a minimum of 50 feet from the edges of the wetland features as identified by a qualified biologist. All fencing shall be installed prior to the commencement of any earthmoving activities, documentation from the biologist confirming protection fencing has been installed in accordance with the measure shall be provided to the County and fencing locations shall be field verified by Napa County. The fencing shall remain	Applicant	Napa County Department of Planning, Building and Environmental Services	Prior to approval of # P09-00176-ECPA	Pre-construction through construction	County standards	Applicant

<table>
<tr><th></th><th>Mitigation Measure</th><th>Individual Responsible for Monitoring and/or Reporting</th><th>Individual of Organization Responsible for Verifying Compliance</th><th>Timing of Initial Action</th><th>Frequency and Duration of Monitoring</th><th>Performance Criteria</th><th>Proposed Funding</th></tr>
<tr><td></td><td>in place until all earthmoving activities in the vicinity of the resource have been completed. Implementation of Mitigation Measure 4.2-7 and the implementation of the RMP (see Mitigation Measure 4.2-1) would reduce the potential impacts to seeps and springs to a less-than-significant level.</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>4.2-8</td><td>Prior to approval of the ECP, the plan shall be modified to include the following:

Wildlife movement corridors, including those recommended by LSA, are needed to address significant impediments to movement to adjacent properties (Table 4.2-5 in the Draft EIR) and maintain consistency with General Plan Policy CON-18, particularly to undeveloped protected lands northeast of the project site. Movement areas described below shall be effectively open at both ends with no fencing as shown in Figure 4.2-6 in the Draft EIR.

TABLE 4.2-5
MITIGATED WILDLIFE MOVEMENT AREAS WITHIN PROPERTY BOUNDARIES
<table><tr><th>Location of Added Wildlife Movement Area Within Property Boundaries</th><th>Purpose</th></tr><tr><td>Block 6</td><td>To connect with offsite movement corridors.</td></tr><tr><td>Between proposed Blocks 10 and 11</td><td>To connect existing movement corridor from riparian to upland habitat.</td></tr><tr><td>Between proposed Blocks 13, 14 and 15</td><td>To continue riparian movement corridor.</td></tr><tr><td>Between proposed Blocks 17, 18 and 19</td><td>To connect with offsite movement corridors.</td></tr><tr><td>Between proposed Blocks 25 and 26</td><td>To continue riparian movement corridor down through southern half of</td></tr></table></td><td>Applicant</td><td>Napa County Department of Planning, Building and Environmental Services</td><td>Prior to approval of #P09-00176-ECPA</td><td>Pre-construction through construction</td><td>County standards</td><td>Applicant</td></tr>
</table>

Mitigation Measure		Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
	project site.						
Between proposed Blocks 26A, B and C	To continue riparian movement corridor down through southern half of project site.						
Between proposed Blocks 27, 28 and 29	To connect upland movement to riparian corridor along Suscol Creek. A portion of Block 27D and all of Blocks 28 and 29A shall be removed. Additional constraints avoided: a cluster of at least three seeps and an oak woodland management area.						
Between proposed Blocks 30 and 31, 32	To extend existing riparian corridor. Additional constraints avoided: wetlands and an oak woodland management area.						
Proposed Block 34	A portion of Block 34 shall be removed to provide unhindered movement between the Suscol Creek watershed and Fagan Creek. Other constraints avoided include at least four large seeps, other wetlands, Wild Oats Grassland containing over five percent of a mix of three native grasses, and known grasshopper sparrow nesting habitat.						
Between proposed Blocks 36 and 37	To permit wildlife movement through a fenced set of blocks that restrict movement across the lower approximately 5/6 of the project site, in addition to						

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding

	the removal of proposed Block 38 and a portion of proposed Blocks 36 and 39 that are in active slide areas (discussed in Mitigation Measure 4.4-3).
Between proposed Blocks 43, 44, and 45	To provide unhindered access to a permanent water source that has extremely high value to wildlife, particularly during the dry season. This pond is verified WPT aquatic habitat. All of Block 44 shall be removed and Blocks 43 and 45shall receive 100-foot buffers to the east/west, respectively.

Source: LSA, 2010; Napa County, 2012; PPI, 2012; AES, 2012.

Fencing with larger ground-level openings should include no less than six inches square for unrestricted movement of small animals. As shown in Figure 4.2-6 in the Draft EIR, key wildlife movement locations shall receive "17/96" vineyard fencing with six-inch square openings at ground level rather than the standard "20/96" fencing that has three-inch high openings at ground level. This would reduce potential restrictions on small animals while excluding deer, wild pigs and cattle from the vineyards. Fencing locations shall be modified in the ECP as described in Table 4.2-5 and Figure 4.2-6 in the Draft EIR. Fencing shall not be located within the boundaries of sensitive resources and fencing locations are approximate until final County approval of the ECP.

Streams and drainages with minimum 100-foot corridors (total width) shall be preserved as wildlife movement corridors. All drainages and immediately adjacent vegetation buffers shall be left unfenced and open to

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
	wildlife use and movement. Corridors should be restricted from development and other uses that would degrade the quality of the habitat (including, but not limited to conversion to other land uses such as agriculture or urban development, and excessive off-road vehicle use that increases erosion and habitat degradation) and should be otherwise restricted by the existing Goals and Policies of Napa County. Standard adaptive management erosion control and fire management practices consistent with the RMP and State and local regulations shall be observed in these areas.						
4.2-9	Prior to County approval of the ECP, the plan shall be modified to include the following: Mitigation for the removal of the estimated 0.6 acre of streamside daisy populations would be accomplished by avoiding populations in close proximity to vineyard boundaries and preserving the following areas containing suitable habitat and populations of streamside daisy, along with minimum 20-foot buffers around the populations. The boundaries of the vineyard blocks shall be redesigned to avoid portions of proposed Blocks 6, 7, and 32 that support stands of streamside daisy (refer to Figure 4.2-6 in the Draft EIR, or the Mitigated Project figure (Figure 6-1) in Chapter 6.0 Other CEQA-Required Sections in the Draft EIR for these locations). Avoidance of the remaining populations of streamside daisy within proposed Blocks 8, 18, 27 and 32 would result in gaps in the vineyards which would be difficult to manage, and would have low ecological value because of isolation from natural habitat. Instead, these patches shall be replaced at a 2:1 ratio by cultivating streamside daisy from seed and divisions, and planting in suitable habitat in areas on the site to be preserved, to achieve a no net loss of streamside daisy acreage. A qualified professional shall include appropriate restoration provisions within the RMP.	Applicant	Napa County Department of Planning, Building and Environmental Services	Prior to approval of #P09-00176-ECPA	Pre-construction through operation	County standards	Applicant

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
	The most suitable locations for planting would be adjacent to existing occurrences of streamside daisy where environmental conditions would be similar. These areas shall be maintained to ensure establishment and remove competing non-native vegetation. Monitoring of these mitigation areas shall be conducted for a period of five years to ensure successful attainment of no net loss criteria. The RMP shall specify these criteria, and provide for corrective actions if they are not attained.						
4.2-11	To further prevent potential impact to CRLF, a qualified biologist shall conduct a pre-construction survey for CRLF within proposed Blocks 30B, 30C, 31A, 31B, 32, 33, 34B, 41, and 46. This survey shall be conducted within two weeks prior to initiation of any grading or other construction activities. If the species is observed during the pre-construction surveys, USFWS shall be contacted and construction activities shall be delayed until an appropriate course of action can be established and approved by USFWS. If no CRLF are observed during the pre-construction surveys construction activities may begin. If construction is delayed or halted for more than two weeks, another pre-construction survey for CRLF shall be conducted. Due to the CRLF's ability to travel somewhat long distances, all construction and vineyard personnel onsite shall be educated by a qualified biologist prior to commencement of development activities to identify and avoid CRLF. CRLF typically lay eggs between December and early April. Eggs are attached to vegetation in shallow water. Tadpoles develop into terrestrial frogs between July and September. Breeding ponds must retain water until this time. In drier inland areas they aestivate in upland habitat from late summer to early winter (USFWS, 2002 and USFWS, 2006). Thus, during active construction phases (April 1 through October 1), USFWS-approved exclusionary fencing shall be installed around all grading	Applicant	USFWS	Pre-construction	Pre-construction through construction	Federal standards	Applicant

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
	and construction areas within or immediately bordering aquatic features within designated CRLF critical habitat areas onsite.						
4.2-12	Prior to approval of the ECP, the plan shall be modified to include the following: To protect prime upland nesting habitat a 100-foot buffer (30.5 meters) shall be maintained along water habitats surrounded by open grassland and agricultural areas. These areas include the pond and portions of Suscol and Fagan Creeks (Figure 4.2-6 in the Draft EIR). A minimum 275-foot buffer (84 meters), placed along the portions of Suscol and Fagan Creeks that are surrounded by oak woodland shall be maintained to provide ample protection of overwintering habitats. Furthermore, open areas interspersed within this overwintering buffer would provide additional nesting habitat. As discussed in Mitigation Measure 4.2-8 above, proposed Blocks 43 and 45 shall be modified to reflect the 100-foot buffers from the high water line of the pond. All of proposed Block 44 shall be removed and fencing shall be modified to ensure access to upland nesting and overwintering sites (see Impact and Mitigation Measure 4.2-8). The buffers and avoidance areas shall be staked and flagged in the field by a qualified professional prior to construction. The buffer areas shall be verified in the field by Napa County prior to the initiation of any grading or earthmoving activities. Two weeks prior to the commencement of ground disturbing activities near aquatic habitats, a qualified biologist shall perform WPT surveys within suitable aquatic habitat on the project site. If a pond turtle is located in an aquatic habitat during the nesting season (May to July), a subsequent survey of the surrounding upland habitats shall be conducted to determine the suitability of the upland habitats for nesting and to examine the area for any evidence of turtle nesting activity. Ground disturbance	Applicant	Napa County Department of Planning, Building and Environmental Services	Prior to approval of #P09-00176-ECPA	Pre-construction through construction	County standards	Applicant

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
	within suitable nesting habitat would not proceed until the work area is surveyed and a recommendation made by a qualified biologist. Due to the WPT's tendency to travel long distances and cross disturbed habitats, all construction and vineyard personnel onsite shall be educated by a qualified biologist prior to commencement of development activities to identify and avoid WPT. From May through July, a temporary turtle exclusion fence shall be installed around all grading and construction activities within or bordering nesting habitat to prevent impacts. From October through March a temporary turtle exclusion fence shall be installed around all activities within or bordering overwintering habitat to prevent impacts and the fencing shall be field verified by Napa County. The fence shall be constructed from silt fencing to avoid turtle injury and entrapment. A qualified biologist shall also be present during development activities to relocate any turtles that are found in proximity to or within construction areas.						
4.2-14	The retention of approximately 1,100 acres of total Wild Oats Grassland (Table 4.2-4 in the Draft EIR), including large areas in the eastern portion of the site where the grasshopper sparrow was observed would preserve grassland habitat utilized by the grasshopper sparrow. Areas of low vegetative cover between bunch grasses provide habitat for grasshopper sparrows to forage on ground-dwelling insects (CDFG, 2010b). Proposed Blocks 34A, C, and D shall also be avoided (discussed in Mitigation Measure 4.2-8 related to wildlife corridors) to preserve grasshopper sparrow nesting habitat (Figure 4.2-6 in the Draft EIR). Varied intensities and timing of livestock grazing would similarly benefit grasshopper sparrow nesting habitat (Shuford and Gardali, 2008). The RMP shall require measures that will maintain and enhance the quality of large expanses of grassland in the eastern portion of the project site, ensuring continued presence of high quality grasshopper sparrow nesting and foraging habitat on the project site.	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through construction	County standards	Applicant

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
4.2-15	Avoidance of most of the grassland habitat, and management and enhancement of the avoided habitat under the RMP discussed in Mitigation Measure 4.2-1 would reduce impacts to Swainson's hawk foraging habitat to a less-than-significant level. No additional mitigation is required.	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through operation	County standards	Applicant
4.2-16	Avoidance of most of the grassland habitat, and management and enhancement of the avoided habitat under the RMP discussed in Mitigation Measure 4.2-1 would reduce impacts to Swainson's hawk foraging habitat to a less-than-significant level. No additional mitigation is required.	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through operation	County standards	Applicant
4.2-17	One Suscol Creek crossing that would be used for primary access requires a new bridge construction; this crossing shall not be used for vineyard construction or operations until it has been replaced with a bridge that spans the creek a minimum of two feet above the 100-year flood level. Prior to bridge construction, the Applicant shall obtain all required authorizations and permits from agencies with jurisdiction over the creek habitat, bridge construction, pollution control, and special status species protection those agencies oversee. Such agencies include but are not limited to the USACE, CDFG, USFWS, NOAA, County of Napa, and the San Francisco Bay RWQCB. As part of the bridge construction to protect aquatic resources in Suscol Creek, riparian and aquatic habitat along Suscol Creek shall be enhanced by implementing a riparian restoration plan. This plan shall include measures to repair existing erosion at the proposed bridge crossing in combination with bio-engineering using native riparian plant species. Stream enhancement shall include replacement of exotic Himalayan blackberry with red willow and other native riparian species, and realignment of Suscol Creek into its original stream channel. Aquatic habitat shall be enhanced through the implementation of the RMP developed for the project site (see Mitigation	Applicant	Napa County Department of Planning, Building and Environmental Services; USACE; CDFG; USFWS; NOAA; San Francisco Bay RWQCB	Pre-construction	Pre-construction through operation	County, State and Federal standards	Applicant

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
Measure 4.2-1), which shall exclude livestock from access to Suscol Creek and its tributaries. Maintenance, replacement or modification to existing road crossings retained for vineyard operations shall occur depending on the road type, crossing type (instream or culverted) and physical condition of each crossing as part of the overall Long Term Vineyard Road Management Plan. Prior to construction, stream crossings shall be inventoried to assess structural condition, appropriate flow capacity, and erosion or hazard potential, as well as to assess sedimentation potential from continued use based on the road type with a primary goal of reducing the long term potential for sediment loading into the stream channel. The following methods shall be used to evaluate all retained stream crossings on the property: *Crossings on Type 1 Roads* Based on the heavy rate of use for these designated routes, all Type 1 Road instream crossings shall be required to span the stream channel by bridge. All Type 1 Road culverted crossings shall be maintained based on the results of an annual inventory, which shall be conducted as follows. If a Type 1 Road culverted crossing is deemed inadequate based on flow capacity, structural integrity and/or erosion or hazard potential it shall be replaced by a spanning structure. If a culvert crossing is deemed to be adequate during initial inventory based on flow capacity, structural integrity and/or erosion or hazard potential it shall be maintained as a culverted crossing and be inspected on an annual basis. During subsequent annual inspections, if any culverted Type 1 Road crossing is deemed to be inadequate, based on the aforementioned criteria, it shall be replaced by a spanning bridge structure. Any modification to these crossings would likely require a CDFG Section 1600 Streambed Alteration Agreement; the Applicant shall obtain all required authorizations and permits from agencies with jurisdiction over the creek prior						

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
to construction. *Crossings on Type 2 Roads* Based on the heavy rate of use for these designated routes and the high topsoil composition, all Type 2 Road instream crossings shall be required to span the stream channel by bridge. All Type 2 Road culverted crossings shall be maintained based on the results of an annual inventory, which shall be conducted as follows. If a Type 2 Road culvert crossing is deemed inadequate based on flow capacity, structural integrity and/or erosion or hazard potential it shall be replaced by a spanning structure. If a culvert crossing is deemed to be adequate during the initial inventory based on flow capacity, structural integrity and/or erosion or hazard potential it shall be maintained as a culverted crossing and be inspected on an annual basis. During subsequent annual inspections, if any culverted Type 2 Road crossing is deemed to be inadequate, based on the aforementioned criteria, it shall be replaced by a spanning bridge structure. Any modification to these crossings would likely require a CDFG Section 1600 Streambed Alteration Agreement; the Applicant shall obtain all required authorizations and permits from agencies with jurisdiction over the creek prior to construction. *Crossings on Type 3 Roads* Based on the incidental rate of use for irrigation maintenance and emergency access, these designated Type 3 Road routes will have a low potential for sediment loading from vehicular use. All Type 3 Road instream crossings shall be maintained to reduce sediment loading into the stream channels by adding coarse (greater than three inches) crushed and washed rock. In addition, water check bars shall be established along the slopes leading into these stream crossings to reduce erosion into the stream channels and redirect concentrated flows. All Type 3 Road culverted crossings shall be maintained based on the low frequency of use. All Type 3 Road culverted						

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
	crossings shall be maintained as culverted crossings to maintain capacity, structural integrity and to reduce erosion or hazard potential. Any physical modification to culverted Type 3 Road crossings or addition of crushed rock to stabilize instream crossings would likely require a CDFG Section 1600 Streambed Alteration Agreement; the Applicant shall obtain all required authorizations and permits from agencies with jurisdiction over the creek prior to construction. The extraction of groundwater within the vicinity of Suscol Creek has the potential to affect instream flows during periods of heavy pumping. Under certain unique conditions this could potentially result in egg desiccation and stranding of juvenile steelhead or could restrict migratory movements of adults. Mitigation Measure 4.6-4 includes a groundwater monitoring plan with a detailed surface water monitoring component that would suitably monitor and record any apparent changes to stage and/or discharge during times of heavy groundwater pumping demand. If significant changes to stage and/or discharge are attributed to groundwater extraction, this measure includes alternative water use approaches to ensure that impacts to steelhead in Suscol Creek are less than significant. In addition, no impacts to wetlands, seeps, or springs would occur within the Suscol Creek drainage through the implementation of Mitigation Measures 4.2-6 and 4.2-7. These measures ensure that no loss of upslope surface water sources would occur and impacts to steelhead would be less than significant.						
4.2-18	The Applicant shall implement the following measures to avoid disturbing any special status species nesting above ground. Vegetation removal conducted during the nesting period shall require a pre-construction survey for active bird nests, conducted by a qualified biologist. No known	Applicant	USFWS; CDFG	Pre-construction	Pre-construction	Federal and State standards	Applicant

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
active nests shall be disturbed without a permit or other authorization from USFWS and/or CDFG. 1. For earth-disturbing activities occurring during the breeding season (as early as February 1 for raptors through September 1), a qualified biologist shall conduct pre-construction surveys of all potential nesting habitat for all birds within 500 feet of earthmoving activities. 2. If active special status bird nests are found during pre-construction surveys 1) a 500-foot no-disturbance buffer shall be created around active raptor nests during the breeding season or until it is determined that all young have fledged, and 2) a 250-foot buffer zone shall be created around the nests of other special status birds and all other birds that are protected by California Fish and Game Code 3503. These buffer zones are consistent with CDFG avoidance guidelines and CDFG buffers required on other similar ECPA projects; however, they may be modified in coordination with CDFG based on existing conditions at the project site. 3. If pre-construction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required. Shrubs and trees that have been determined to be unoccupied by special status birds or that are located 500 feet from active nests may be removed. 4. If vegetation removal activities are delayed or suspended for more than two weeks after the pre-construction survey, the areas shall be resurveyed. The Applicant shall implement the following measures to avoid disturbing any burrowing owls. No more than two weeks before earthmoving activities begin, a survey for burrows and burrowing owls shall be conducted by a qualified biologist within the project area containing grasslands suitable for burrows and within 500 feet of						

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
construction activities. The survey shall conform to protocol described by the California Burrowing Owl Consortium (1997), which includes up to four surveys on different dates if there are suitable burrows present. If occupied owl burrows are found during pre-construction surveys, CDFG shall be consulted. Mitigation measures may include one or more of the following: 1. A qualified biologist shall determine whether the construction activities will adversely disrupt breeding behaviors of the owl (within 500 feet of construction activities). If it is determined that construction activities would not disrupt breeding behaviors, construction may proceed without further restrictions. 2. If it is determined that the project could adversely affect occupied burrows during the September 1 to February 1 non-breeding season, a qualified biologist may relocate the owl(s) from the occupied burrow(s) using one-way doors. There shall be at least two burrows suitable for the owls within 300 feet of the occupied burrow before one-way doors are installed. The unoccupied burrows shall be at least 160 feet away from construction activities and can be natural or artificially created according to current design specifications. Artificial burrows shall be installed at least one week before one-way doors are installed on occupied burrows. One-way doors shall be in place at least 48 hours before burrows are excavated. If it is determined that construction activities would disrupt breeding behaviors during the nesting season (February 1 through September 1), then avoidance is the only mitigation available (California Burrowing Owl Consortium 1997; CDFG 1995). Implementation of the project within 250 feet of occupied burrows during this time would be delayed until a qualified biologist can determine that the owls are no longer nesting or that juvenile owls are self-sufficient enough to move from their natal burrow.						

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
4.2-19	Construction activities conducted between April 1 and September 15 shall require a pre-construction survey for active bat roosts, conducted by a qualified biologist. No known active bat roosts shall be disturbed without a permit or other authorization from USFWS and/or CDFG. Implementation of the following mitigation measures would reduce the potential impact to a less-than-significant level. 1. For earth-disturbing activities occurring during the grading season (April 1 through September 15), a qualified wildlife biologist shall conduct pre-construction surveys of all potential bat-roosting habitat for special status bats within 200 feet of earthmoving activities. Roosting habitat surveys shall focus on a) trees slated for removal that have loose bark, or holes/crevices in the trunk and b) rock piles slated for removal that contain crevices. 2. If active special status bat roosts are found during pre-construction surveys, CDFG shall be consulted. A no-disturbance buffer (acceptable in size to CDFG) will be created around active bat roosts during the breeding season or until it is determined that all young have fledged. 3. If pre-construction surveys indicate that roosts are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required. Trees that have been determined to be unoccupied by special status bats may be removed. 4. If vegetation removal activities are delayed or suspended for more than two weeks after the pre-construction survey, the areas shall be resurveyed.	Applicant	USFWS; CDFG	Pre-construction	Pre-construction	Federal and State standards	Applicant
4.2-20	Pre-construction surveys for American badger shall be performed by a qualified biologist prior to development of the vineyard blocks that occur in potential badger habitat. The Applicant shall implement the following measures to avoid disturbing any American badger:	Applicant	CDFG	Pre-construction	Pre-construction	State standards	Applicant

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
	1. No more than two weeks before earthmoving activities begin, a survey for burrows and American badgers shall be conducted by a qualified biologist within 500 feet of construction activities. 2. If occupied burrows are found during pre-construction surveys, the biologist would consult with CDFG to determine whether the construction activities would adversely disrupt breeding behaviors of the badger. If it is determined that construction activities would disrupt breeding behaviors, then avoidance between March through August may be the only mitigation available. Implementation of the project within 500 feet of occupied burrows during this time would be delayed until a qualified biologist can determine that juvenile badgers are self-sufficient enough to move from their natal burrow.						
4.3	**Cultural Resources**						
4.3-1	The two archaeological sites CA-NAP-24 and CA-NAP-783 shown in the figure on file with Napa County shall be avoided by all ground disturbing activities during project implementation and operation with a permanent five-meter (16-foot) buffer around the perimeter. If avoidance is infeasible, prior to any land clearing in Blocks 1 and 2, the Applicant shall complete a boundary determination, conducted by a qualified archaeologist, and evaluate CA-NAP-24 for eligibility for inclusion in the California Register of Historic Resources. The Applicant may enter into a California Archaeological Resource Identification and Data Acquisition Program (CARIDAP) for CA-NAP-783 if avoidance is infeasible. Documentation on the evaluation for CA-NAP-24 and documentation that CA-NAP-783 has been accepted into the program should be provided to the Napa County Planning, Building and Environmental Services Department prior to land clearing in Blocks 1 and 2.	Applicant	Napa County Department of Planning, Building and Environmental Services	Prior to approval of #P09-00176-ECPA	Pre-construction through operation	State standards	Applicant

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
	The rock walls (SUS-01, -02, -04, CA-NAP-856H, and P-28-968) shall be avoided by all ground disturbing activities during project implementation and operation with a permanent ten-foot buffer around the perimeter (including vineyard avenues). Erosion Control Plan P09-00176-ECPA shall be revised to avoid all resources prior to County approval. The Applicant shall install and maintain protective fencing along the outside of the buffer to ensure protection during construction. The precise locations of protective fencing shall be inspected and approved by the Planning Division prior to the commencement of any earthmoving activities and shall be maintained and remain in place until all grading, earthmoving, and vineyard development activities are completed.						
4.3-2	There is a possibility that subsurface archaeological deposits may exist within proposed vineyard areas, as archaeological sites may be buried with no surface manifestation, or may be obscured by vegetation. In accordance with CEQA Guidelines Section 15064.5 (f), should any previously unknown prehistoric or historic resources, such as, but not limited to, obsidian and chert flaked-stone tools or toolmaking debris; shellfish remains, stone milling equipment, concrete, or adobe footings, walls, filled wells or privies, deposits of metal, glass, and/or ceramic refuse be encountered during onsite construction activities, earthwork within 100 feet of these materials shall be stopped and the owner shall consult with a professional archaeologist. Once the archaeologist has had the opportunity to evaluate the significance of the find and suggest appropriate mitigation measures, as necessary, said measures shall be carried out prior to any resumption of related ceased earthwork. All significant cultural resource materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Continuously during construction	State standards	Applicant

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
4.3-3	In the event that human remains are discovered, the provisions of the California Health and Safety Code Section 7050.5 (b) shall be followed. The Napa County Coroner shall be contacted within 24 hours of the find. Upon recognizing the remains as being Native American in origin, the Coroner shall be responsible for contacting the Native American Heritage Commission (NAHC) within 24 hours. The NAHC has various powers and duties to provide for the ultimate disposition of any Native American remains, as does the assigned Most Likely Descendant (MLD).	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Continuously during construction	State standards	Applicant
4.4	**Geology and Soils**						
4.4-3	Prior to approval of #P09-00176-ECPA, the plan shall be modified to include the following specifically for Blocks 33 through 46 to avoid potential slope stability and associated sedimentation impacts: 1. Revise the proposed vineyard layout of #P09-00176-ECPA prior to County approval to avoid and provide a 50-foot buffer from all active landslides mapped by Gilpin Geosciences (August 2010): active landslides shall include those designated as active and recently active (i.e., 1 and 1r) of Figure 3 of said report. 2. The limits of all identified active landslides including the 50-foot buffers shall be field verified by the project's engineering geologist prior to implementation of earthmoving activities. Prior to any vegetation removal and earthmoving activities associated with #P09-00176-ECPA the limits of all identified active landslides including the 50-foot buffers shall be demarcated (i.e., flagged) in the field and temporary fencing shall be placed at the edge of the 50-foot buffer. The precise locations of said fences shall be inspected and approved by the Planning Division prior to the commencement of any vegetation or earthmoving activities. No disturbance, including grading, placement of fill material, storage of	Applicant	Napa County Department of Planning, Building and Environmental Services	Prior to approval of #P09-00176-ECPA	Pre-construction through operation	County standards	Applicant

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
equipment, etc. shall occur within the designated buffer areas for the duration of erosion control plan installation, vineyard installation and ongoing vineyard operation. 3. Rock repositories shall be prepared by grubbing and excavating a keyway at the toe of the proposed storage area. The keyway should extend two feet into firm soil or bedrock at the downslope edge of the keyway. The limits of the rock storage area proposed for Block 42 shall be constrained so that the downslope limit of storage is excavated where the older colluviums was encountered at depth with the test pits. 4. Should unstable landslide deposits be encountered and/or localized slope failures occur during construction, the slope shall be restored to a stable configuration using specifications provided by the project's engineering geologist. The specifications shall be reviewed and approved by the County prior to commencement of slope re-stabilization.						
4.5 Hazardous Materials						
4.5-1 Prior to the development of the proposed project, the owner of Suscol Mountain Vineyards would prepare a HMBP for all proposed hazardous materials to be used onsite. If storage amount or use of hazardous materials change during project operation, the project owner should update, as necessary, the HMBP. The HMBP should include: • An inventory of the type and quantity of hazardous materials stored onsite; • A site map; • Risks of using the hazardous materials; • Spill prevention methods; • Emergency response plan; • Employee training; and	Applicant	Napa County Department of Environmental Management	Pre-construction	Pre-construction through operation	County standards	Applicant

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
	• Emergency contacts. The plan should also include a review of each chemical used onsite and a determination on whether any substitution for the chemicals (less toxic, flammable, more stable, etc.) can be made; changes should be made as appropriate. The hazardous materials inventory, site map, emergency response plan, business owner form, and business activities form must be submitted to the DEM. If there is any change in storage of a hazardous material or 100 percent increase in quantity of a hazardous material, the DEM must be notified within 30 days. An employee training record must be filed onsite and would be inspected by the DEM once every three years.						
4.5-2	In addition to the erosion control measures that are outlined in Table 3-3 in the Draft EIR, personnel shall follow written SOPs for filling and servicing construction equipment and vehicles. The SOPs, which are designed to reduce the potential for incidents involving hazardous materials, include: • Refueling shall be conducted only with approved pumps, hoses, and nozzles. • Catch-pans shall be placed under equipment to catch potential spills during servicing. • All disconnected hoses shall be placed in containers to collect residual fuel from the hose. • Vehicle engines shall be shut down during refueling. • No smoking, open flames, or welding shall be allowed in refueling or service areas. • Refueling and all construction work shall be performed outside of the stream buffer zones to prevent contamination of water in the event of a leak or spill. • Service trucks shall be provided with fire extinguishers and spill containment equipment, such as absorbents. • A spill containment kit that is recommended by the DEM or local fire department will be onsite and	Applicant	Napa County Department of Environmental Management	Pre-construction	Pre-construction through construction	County standards	Applicant

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
	available to staff if a spill occurs. In the event that contaminated soil and/or groundwater or other hazardous materials are generated or encountered during construction, all work shall be halted in the affected area and the type and extent of the contamination shall be determined. Should a spill contaminate soil, the soil shall be put into containers and disposed of in accordance with federal, state, and local regulations. If the size of the spill and containment is beyond the scope of the contractor, proper authorities shall be notified.						
4.5-3	In addition to Mitigation Measures 4.5-1, 4.5-2, and 4.5-4, chemical mixing and loading areas should be established outside the proposed setbacks and away from any areas that could potentially drain off site or potentially affect surface and groundwater quality. When farm equipment is cleaned at the existing facility, only rinse water that is free of gasoline residues, pesticides and other chemicals, and waste oils should be allowed to diffuse back into vineyard areas. All other rinse water from farm equipment and rinse water from equipment used to apply chemicals such as pesticides, herbicides and fungicides should be collected and stored in containers that are of sufficient size to contain the water until a hazardous materials transporter can remove the rinse water. No rinse water shall be drained to a septic system or discharged to ground or surface water to prevent the release of hazardous materials into the environment during operation and maintenance of the proposed project.	Applicant	Napa County Department of Environmental Management	Operation	Operation and maintenance	County standards	Applicant
4.5-4	Personnel shall follow SOPs when applying pesticides to the vineyard. SOPs for pesticide use include the following: • Purchase only enough pesticide that would be used per season. • Utilize IPM techniques where feasible, such as for fungicides, the use of a permanent cover crop, beneficial insects, and minimal to no use of pesticides	Applicant	Napa County Department of Environmental Management	Operation	Operation and maintenance	County standards	Applicant

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
	except when found necessary from monitoring. • Store all pesticides in their original containers. Do not remove labels on the containers. • Keep pesticides in a well-ventilated locked area. • Maintain pesticide storage areas 100 feet from any drainage area, stream, or groundwater well. • The best way to dispose of a small amount of pesticide is to use it. If a pesticide must be disposed of, contact the Napa County Agricultural Commissioner to locate a hazardous waste facility for proper disposal. • Never pour pesticides down the sink, toilet, or stream. • Utilize proper personal protection equipment when working with pesticides.						
4.6	**Hydrology and Water Quality**						
4.6-4	In order to mitigate potential impacts to adjacent property owners or stream flows in Suscol Creek, the following performance standard has been added as a mitigation measure, and shall be implemented as set forth below. Specifically, this measure is intended to help ensure that any affected property owner will have access to water of similar quality and quantity as existed before new pumping for the project. This intent assumes that each offsite well owner properly maintains and rehabilitates his/her own well and pump on a regular basis in the future. *Monitoring Wells* To assess potential project impacts from groundwater pumping on neighboring offsite wells in areas west of the project site, two monitoring wells shall be constructed into the Sonoma Volcanics on the project site, and in a manner that is generally similar to the construction of Well 1; these monitoring wells are to be located along the western property boundary and north of Suscol Creek adjacent to these offsite areas. Placement of these wells will be modified, if necessary, to avoid any sensitive resources (Chapters 4.2 Biological Resources and 4.3 Cultural	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through operation	County standards	Applicant

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
Resources) in consultation with a qualified biologist/archaeologist. *Pre-Irrigation Baseline Monitoring* The Applicant shall measure the groundwater levels in the two new monitoring wells and in Well 1 on a regular basis using pressure transducers, which can be programmed to automatically record water levels on a basis of approximately one reading every 15 minutes. This monitoring should occur for six months prior to the first irrigation season of the proposed project. Currently, the Applicant is measuring water levels in Well 1 via an automatically-recording pressure transducer. In addition, property owners with existing water wells located west of the project site and east of Highway 29 that extract groundwater from the Sonoma Volcanics (Figure 4.6-2 in the Draft EIR) shall be asked and given the opportunity to participate in groundwater level monitoring contingent upon the owner granting the Applicant a right of access in a form approved by County Counsel. The offsite property owners will be contacted in advance to request their participation in groundwater monitoring with adequate assurances provided by the Applicant to address groundwater-related liability, water supply interruption, or other related concerns regarding participation in the groundwater monitoring. The monitoring of the new onsite monitoring wells and participating offsite wells will include collection of groundwater level data, well location and well construction information, and pump setting depth, as applicable. Groundwater levels in participating offsite wells shall also be obtained with pressure transducers for a six-month period (assuming the Applicant received permission to install the transducer in the well) prior to the first irrigation season of the proposed project to provide additional baseline data. The Applicant shall submit a report at the three-month and the six-month period to the County and property owners to the west of the project site and east of Highway 29, as prepared by a hydrogeologist acceptable						

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
to the County, with the results of the pre-baseline water level monitoring; each report shall also include rainfall data from a nearby raingage. *Criteria for Future Well Pumping Tests* The above monitoring shall be completed prior to initiation of irrigation of the initial phase of the project. Subsequent phases of vineyard development would require the construction of additional onsite water-supply wells. Provided that no significant impacts created solely by the pumping effects are determined during the monitoring conducted during irrigation of the initial phase, the development of future wells shall be subject to the pumping test recommendations provided below. Borehole locations for several future wells are shown in Figure 4.6-2 in the Draft EIR. Criteria for the evaluation of construction of all future wells at the project site should focus on the possible water level drawdown impacts on nearby offsite wells that could be caused when pumping the newly-constructed wells in the future. Existing onsite Well 1 is located on the west side of the subject property, and roughly 1,370 feet from the closest known offsite well owned by others. Hence, existing onsite Well 1 could be used as an additional monitoring well in addition to the two proposed monitoring wells described above during the pumping test for each future well constructed at the project site. As many as two offsite wells that have been volunteered to be included in the pre-irrigation baseline monitoring shall also be monitored during the pumping test for subsequent onsite wells. *Recommendations* Placement of each well for the project shall avoid any sensitive resources (Chapters 4.2 Biological Resources and 4.3 Cultural Resources). After each new well is constructed at the project site, it should be subjected to a maximum 72-hour constant rate pumping test. The pumping rate for each new test will be determined by a						

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
qualified, licensed geologist, and will be based on the results of the initial three-point step-drawdown test of each new well. During each 72-hour constant rate pumping test, water levels shall be collected in existing Well 1, the two new onsite monitoring wells, in as many as two offsite wells that have agreed to allow monitoring, and in the new pumping well using automatically recording water level pressure transducers. A manual, electric tape sounding device should also be used on an occasional basis during each test to help corroborate the automatically-recorded transducer data (depending on down-well access, it may not be possible to collect manual readings in any offsite wells). Based on the data that will be collected from both the newly constructed well (the new pumping well), existing onsite Well 1, the two monitoring wells and any participating offsite wells, the following criteria for the evaluation of each new well constructed at the subject property are recommended: • The final water level in the pumping well at/near the end of the pumping portion of the aquifer test should be relatively stable. That is, the water level decline rate should be on the order of one-foot per hour, or less, at the average pumping rate determined from the pumping well using totalizer flow dial readings. • The amount of water level decline in Well 1 and the other two onsite monitoring wells that can be attributed solely to water level drawdown interference induced by the pumping of the new onsite wells should not exceed a total of ten feet at the end of the 72-hour constant rate pumping test. Ongoing water level monitoring in all onsite monitoring wells and water wells, and monitoring of pumping rates and pumping volumes in each pumping well are essential to assessing the ongoing status of the aquifer system(s) beneath the property. The property owner has already begun monitoring water levels at the subject property by						

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
installing an automatically recording water level pressure transducer into existing onsite Well 1. This monitoring effort will help to identify changes in the aquifer that are occurring at this time, prior to the commencement of onsite pumping. *On-Going Monitoring* Following the baseline monitoring period, the Applicant shall continue monitoring of both onsite and participating offsite wells with automatically-recording pressure transducers when groundwater pumping is not occurring and also during the groundwater irrigation season. During this ongoing monitoring, the Applicant shall have his consultant submit a report on a semi-annual basis to the County to present findings and conclusions regarding groundwater levels, rainfall and ongoing groundwater extractions. Specifically, the Applicant shall submit a semi-annual report prepared by a qualified hydrogeologist to Napa County and property owners to the west of the project site (volunteer participants) and east of Highway 29 with the results of the monitoring program, including a summary of data collection and necessary recommendations regarding possible project operational modifications and/or physical improvements necessary to meet the stated performance standard, if needed. The groundwater monitoring plan shall include phasing of the project over at least three years with development of three phases (discussed in Chapter 3.0 Project Description in the Draft EIR) and intervening monitoring periods between phases; this is described in more detail below. *Development Phasing* In order to monitor potential changes in the groundwater table and its potential impact on adjacent property owners, the proposed vineyard development shall be developed in no less than three phases over three years. Proposed phasing is shown on Figure 3-4 in Chapter 3.0 Project Description in the Draft EIR. The project area would be						

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irrigated with groundwater pumped from existing Well 1 and future wells as previously described. Boreholes for several future wells are as shown in Figure 4.6-2 in the Draft EIR. The project would be completed in three phases and the initial phase (Phase I) would include no more than 130 net acres of vineyard. The initial phase would be irrigated using existing Well 1, which has been fully tested and evaluated using the well development and monitoring requirements described above. Well development for the next phase (Phase II) shall be completed using the well testing and monitoring as described above. A maximum of 195 net acres of vineyard would be developed in Phase II. Proposed wells needed to serve the final phase (Phase III) shall be tested and monitored as described above. The final 113 net acres of vineyard would be developed in Phase III. A hydrogeologist, whose qualifications are acceptable to the County, shall review the water level, rainfall and pumping data monitored and/or collected on a regular basis prior to and during each phase. A map of existing nearby offsite wells is presented in Figure 4.6-2 in the Draft EIR. Additionally, see Figure 1 in Appendix A of Appendix H in the Draft EIR for the location of recommended well monitoring stations. If there is substantial evidence that groundwater extractions strictly by project wells are causing the production rate of pre-existing nearby offsite wells to drop to a level which would not support existing land uses or planned uses for which permits have been granted at the time of the project approval, the County shall implement one or more, but not limited to, the following mitigation measures to the extent necessary to meet the performance standard: i. Redistribute onsite pumping operations to reduce pumping stress in the area of impact. ii. Reduce the pumping rate from selected project wells. iii. Consider use of recycled water expected to be available to the project site from the Suscol Water Recycling Facility in the future to supplement onsite						

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groundwater supplies iv. Repair, service or replace the existing well, at no expense to the affected property owner, such that the affected property owner will have access to water of similar quality and quantity as existed before new pumping began on project. v. Construct additional onsite wells to reduce potential impacts. The decision of the hydrogeologist shall be based upon substantial evidence. The Applicant shall complete the required mitigation measures before development of subsequent phases. *Stream Monitoring of Suscol Creek* Flows in Suscol Creek shall be monitored during the pre-irrigation baseline monitoring period to establish baseline flow conditions. The pre-irrigation baseline data shall be used to evaluate natural, diurnal variability in stream stage and discharge attributed to evapotranspiration and infiltration which are completely dependent on climactic conditions such as annual precipitation and temperature. The baseline data will help establish the correlative relationships between stream stage and discharge, annual precipitation and temperature so that a study design can be formulated to determine whether direct effects to stage and discharge occur during groundwater pumping. After the baseline data are collected and analyzed, an adaptive stream monitoring and management plan shall be implemented to determine whether groundwater pumping effects stream stage and discharge using established significant criterion for northern California coastal steelhead streams. The specific and detailed stream monitoring parameters used to determine significance will be developed by a professional hydrologist and/or fisheries biologist whose qualifications are acceptable to Napa County.						

	Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual of Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and Duration of Monitoring	Performance Criteria	Proposed Funding
	This established criteria will take into account the minimum stage discharge standards for steelhead trout based on the timing (seasonal irrigation demand) of groundwater pumping relative to steelhead life stage requirements. The significance criteria may be developed using all or a combination of passage, spawning and/or rearing standards based on the timeframe when groundwater pumping demand is highest. If during the operation of the onsite wells it is determined that there is a direct, measurable and significant impact to stream stage and discharge in Suscol Creek, using the established significance criteria for stage reductions in northern California coastal steelhead streams, the Applicant shall implement an adaptive management strategy using one or a combination of the performance standards listed above to eliminate direct impacts to stream stage and discharge in Suscol Creek.						
4.6-5	In order to ensure preservation of regional water quality and local stream conditions, the Irrigation Plans for the project shall include following measures: • Any proposed pipeline crossings over Suscol Creek shall be attached to the main Suscol Creek bridge or constructed at current creek crossings in accordance with Department of Fish and Game design criteria for pipeline crossings (described in Impact and Mitigation Measure 4.2-17). • Any proposed underground or aboveground pipelines shall span be constructed in such a manner that there is no disturbance the bed and bank of any onsite drainages or streams.	Applicant	Napa County Department of Planning, Building and Environmental Services; CDFG	Pre-construction	Pre-construction through operation	County and State standards	Applicant

CHAPTER 7.0
REPORT PREPARATION

7.1 LEAD AGENCY

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7.2 EIR CONSULTANTS

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