

## CHAPTER 3. PROJECT DESCRIPTION

### 3.1 INTRODUCTION

#### 3.1.1 Project Location and Overview

The Upper Range Vineyard Project proposes to implement an Erosion Control Plan (#02-454-ECPA) for earthmoving activities in connection with a new vineyard in Napa County, California. The project would involve installing erosion control features and measures associated with a new approximately 161-acre vineyard on seven contiguous parcels under a single ownership (APNs 030-200-002, 030-130-008, 030-220-009, and 030-220-027/028/029/030 (formerly 030-220-001)). The project site is located in the hills between the Silverado Trail and Lake Hennessey, about 2 miles northeast of Rutherford and 13 miles north of the City of Napa (see **Figure 3-1**, corner inset map).

The entire project site is comprised of seven parcels totaling approximately 678 acres. The erosion control measures and features would be implemented in the proposed vineyard area, which would cover 161 acres (approximately 24 percent of the total acreage). The remaining 517 acres (approximately 76 percent of the total site acreage) would not be affected by implementation of the proposed erosion control measures and features. Of the 161 vineyard acres, approximately 138 acres of these would be planted with vines and 23 acres would be for vineyard avenues, “turn-around” areas for farm equipment.

A new 10,000-gallon water tank and irrigation line would be installed (see blue dotted line on Figure 3-1) from the existing well. The existing well also is the source of water for the Rutherford Volunteer Fire Department facility on Silverado Trail (The Smith-Rodgers Family donated the land and water source to the fire facility. The Rutherford Volunteer Fire facility has their own separate 10,000-gallon water tank that would be screened from view by existing trees). Ground water would be pumped from the existing well and be stored in the existing water tank.

The Napa County Land Use Plan shows the project parcels in an area designated Agriculture, Watershed, and Open Space (AWOS) and zoned Agricultural Watershed (AW). The properties are currently grazed by cattle during spring and summer with some supplemental feed. The cattle are moved off the properties during the fall and winter to allow the vegetation to grow back. The grazing is mainly to keep vegetation in check, as the cattle provide a “natural lawn mower”, and to reduce the potential for a wildfire. A reduced number of cattle would continue to be grazed on the non-vineyard portions of the properties.

### ***Surrounding Land Uses***

Surrounding land uses in the area include vineyards, rural residential, cattle grazing, open space watershed, Conn Dam, and the Lake Hennessey Municipal drinking water reservoir and recreation area. The Rutherford Fire Volunteer Fire Department is building a new station next to the project site along Silverado Trail (south of proposed Vineyard Block 14).

### ***Site Characteristics and Setting***

The proposed project site is part of the greater Pritchell Hill area in the Vaca Mountains, which frame the eastern side of the Napa Valley. The site ranges in elevation from 168 to 1,033 feet above mean sea level. It features a north-south trending ridge at its crest and along portions of its gentle to moderately steep flanks. Five main drainages originate within the proposed project site and drain into either Lake Hennessey or Conn Creek/Napa River. Ground slopes within the proposed vineyard area of approximately 161 acres range between 5 and 35 percent, with slopes greater than 30% limited to small, isolated areas that together total approximately 4.5 acres. The seven contiguous parcels are within the Rutherford and Yountville U.S. Geological Service Quadrangles.

Vegetation on the project site includes native and non-native grasslands, chemise, foothill pine/California bay chaparral, blue oak forest, coast live oak forest, and Douglas-fir forest. The proposed project would change approximately 161 acres of woodlands and grasslands to vineyard. There are two small stock ponds located on the project site.

### ***Project Objectives***

The specific objective of the #02454-ECPA is to control the potential excessive water and sediment run-off that could result from ECPA installation and subsequent maintenance and operation activities of the vineyard. The objectives associated with the maintenance and operations of the vineyard are:

- Produce premium quality grapes for Napa Valley wine programs.
- Take fullest advantage of the site's unique topography, soils and microclimate for development of a vineyard.
- Provide additional opportunities for vineyard employment and economic development in the Napa region.
- Farm vineyards in a sustainable manner.

INSERT Figure 3-1 Vineyard Site Plan [11x17]

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- Preserve the portions of the site for open space that have the greatest value as wildlife habitat and support special status species.
- Maximize operational efficiencies and economics of scale consolidating vineyard operation in a rational vineyard block configuration.
- Make efficient use of water from existing water sources.

## 3.2 REGULATORY FRAMEWORK

### 3.2.1 Napa County General Plan

The Napa County Land Use Plan shows the project properties within an area designated Agriculture, Watershed, and Open Space (Napa County 1998). The seven contiguous privately owned parcels are zoned AW (Agricultural Watershed), which is applied to areas of the county where the predominant use is agriculturally oriented and where watershed areas, reservoirs and floodplain tributaries are located (Napa County 2001). Agriculture is an allowed land use in AW.

#### *Napa County Code – Erosion Control Plans and CEQA Review*

Agricultural uses (e.g., vineyards) are within the County’s “right to farm” policy. However, if these activities occur on slopes greater than 5%, control measures for water and sediment runoff are required by County Code and the Clean Water Act. Napa County enacted conservation regulations in 1991 to control excessive erosion and protect water quality during earthmoving activities on slopes greater than 5%, which include vineyard development activities (County Code, Chapter 18.108.070). These regulations also seek to preserve natural resources and to ensure the long-term viability of agriculture by protecting lands from excessive soil loss, which leads to loss of economic productivity and could degrade local water quality and quantity. By County Code, these control measures must be incorporated into a site-specific design, an Erosion Control Plan, and approved by the County Planning Department.

The California Environmental Quality Act (CEQA) applies to projects where a government agency has discretion to reject or condition a project based on environmental considerations. The County requires preparation and approval of Erosion Control Plans for earthmoving activities on slopes greater than 5%, and approval of such plans could be considered “discretionary”. Therefore, this EIR has been prepared to comply with CEQA.

#### *Preliminary Environmental Review - Project Revision and Enhancements*

After submitting the Erosion Control Plan Application to the County, the applicant – Rodgers Land and Development Company of Napa met with Napa County planners

and environmental consultants to review the initial plan. The applicant revised the plan to incorporate into the design of the Erosion Control Plan and subsequent vineyard operations, the following:

- Creating additional wildlife passages between vineyard blocks.
- Preserving areas with sensitive plant species.
- Preserving areas with cultural resources.
- Providing better traffic visibility and safety by redesigning and relocating the main access for the vineyard 300 feet south of the existing entrance.

These revisions are reflected in this EIR project description.

### **3.3 PROJECT COMPONENTS**

The proposed project includes a variety of measures and features to minimize impacts to the human and natural environment during ECPA installation and subsequent vineyard operations.

#### **3.3.1 Erosion Control Measures and Features**

An Erosion Control Plan (#02-454-ECPA) was prepared and specifically designed with measures and features to reduce potential for erosion due to excess water run off and excess sediment loss for the earthmoving activities on slopes greater than 5% associated with the installation of a new vineyard (see **Figure 3-2**, Erosion Control Plan). The following measures and features are described in the plan:

- Straw bale dikes and silt fencing would be used on the east side of Vineyard Blocks 36 and 52 during construction to protect the nearby watercourse.
- Water bars would be constructed to divert concentrated flow off of vineyard avenues.
- Straw bale dikes and silt fencing would be used on the east side of Vineyard Blocks 36 and 52 during construction to protect the nearby watercourse.
- A permanent no-till cover crop would be used on all vineyard blocks and avenues. The areas would be seeded prior to September 1st. Any areas of cover crop that have less than 80 percent cover would be seeded and mulched annually until adequate cover is reached.
- Silt fencing would be used to protect streams. Rock barriers may be substituted for silt fences.

INSERT Figure 3-2 -- ECP, Lincoln, revised 8/05/05

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- Rocks may be stacked in a row outside of setback areas to create a filter media. Rocks that are not used on site would be removed off site.

Vegetative erosion control measures would consist of seeding and management of a no-till cover crop and straw mulch, which would be used between vine rows and disturbed areas outside the vineyard blocks. The cover crop areas would be seeded with Blando Brome @ 9# / acre, Zorro Fescue @ 15# / acre, and Rose Clover @ 8# / acre. Areas over five percent slope would be straw mulched at a rate of 1.5 ton / acre. Any areas of cover crop that have less than 80 percent cover would be seeded and mulched annually until adequate cover is reached.

Cover crop would be spot treated around each vine prior to March 1st and strip sprayed with contact herbicides after March 1st. Seedbed preparation, which directly affects the germination and successful growth of the cover crop, would be accomplished by shallow tilling of a few inches or lightly dragging the soil with a harrow or other device. The cover crop would be maintained by mowing and reseeding as necessary. To reduce soil erosion, vineyard avenues would be covered with straw mulch annually. Cover crop would be maintained during the winter rainy season, but not during the dry months when it would negatively compete with vines during the growing season.

### 3.3.2 Vineyard Layout

The vineyard when completely developed at 161 acres would be comprised of 27 individual vineyard blocks ranging in size from 0.5 acres to 33.49 acres, with the vine rows planted perpendicular to the hill slopes, approximately 8 feet apart with approximately 4 feet between vines. Individual vineyard blocks would be connected by vineyard avenues ranging from 20 to 24 feet in width. For wildlife connectivity, wildlife passages ranging from 50 to 200 feet wide have been incorporated by the applicant in the vineyard design, as recommended by the EDAW biologist in conjunction with California Department of Fish and Game.

Individual vineyard blocks would be located across the 678 acres on moderately sloping ground ranging from 5 to 21 percent.

### 3.3.3 Installation of Erosion Control Measures and Subsequent Vineyard

#### *Site Preparation*

Preparing the site for ECPA installation and the subsequent vineyard would involve clearing the existing vegetation, simultaneously ripping and tilling soil amendments (compost, lime gypsum, etc) into the soil to prepare for the planting the temporary cover crop, laying out vine rows and installing the irrigation system, surface drainage system and erosion control measures. The site preparation would also include some

grading and tree removal, although the vineyard layout was designed to minimize grading and tree removal. Site preparation activity would occur during the dry season. Tilling of the soil with soil amendments can not occur if the soil is wet. This phase occurs between April 1st and September 1st of any given year. The 161-acre vineyard would be developed over a period of 5 to 10 years on a vineyard block by vineyard block basis, or multiple by blocks.

The first step in the ECPA installation process would remove trees and shrub vegetation from only the vineyard block areas (i.e., approximately 161 acres, which is about 24 percent of the properties). The existing vegetation of non-native grasses and smaller shrubs would be ripped and soil amendments tilled in simultaneously. The tree removal process would require a crew of two to four workers and a crawler tractor (D-8 or larger). The removed trees and shrubs would be disposed of by burning or salvaging them for firewood. Proper protocols for handling and disposal of oak trees would be followed to prevent the spread of Sudden Oak Death Syndrome. This would be done as a precaution, although no Sudden Oak Death Syndrome infestations have been identified on the site.

Following the removal of existing trees and shrub vegetation, the field would be ripped and soil amendments would be tilled in slowly (usually less than 1 mile per hour) to ensure that soil amendments and the resident soil are blended thoroughly and uniformly, using a tractor (D-8 or larger) pulling a large metal shank through the soil at a depth of 1.5 to 3 feet. This would take approximately 4 to 8 weeks to complete. Then the field would be raked and rocks larger than approximately 4 inches in diameter would be removed. Raking would involve a crew of up to 10 workers and would require approximately 2 to 6 weeks. During the raking process larger rocks would be pushed out of the field using a tractor, and smaller rocks would be picked up by the loader of the tractor or by hand and removed from the field via trailer. Rocks removed during raking would be stockpiled and possibly be reused at the site or they may be disposed of to an off-site location.

The field would then be smoothed, which involves “floating” the soil with a blade to create relatively smooth fields suitable for planting. Smoothing would take approximately 2 to 3 weeks requiring a crew of up to two people and the use of a crawler tractor (D-8 or larger).

### ***Installation of Irrigation and Trellis Systems***

Also occurring during site preparation is the installation of mainlines of the vineyard drip irrigation system and trellis system. Installation would require a crew of 4 to 10 workers using post pounding tractors, trenchers, and backhoes. Posts for vineyard

trellises would be driven into the ground using a post-pounding tractor, and trenches for installing irrigation pipelines would be excavated using a trencher and backhoe. Trenches would typically be approximately 1 foot wide and 3 feet deep. Irrigation pipelines would be installed in trenches, and trenches would be backfilled. Installation of the irrigation system would require approximately 4 to 10 weeks.

#### ***Planting Cover Crop***

After smoothing of the field, the temporary cover crop would be seeded and straw mulch applied. The temporary cover crop must be in place by the first rains.

#### ***Planting Grapevines***

Grapevines are also planted during the dry season, would be planted over an approximately four week period. For this project site, the rootstock would be drought tolerant, providing a deeper root pattern. Planting would involve a crew of 8 to 16 workers and the use of a 60 horse power tractor. Vineyard blocks would be pre-irrigated using the installed drip irrigation system, and then holes would be dug to accommodate roots and soils. The soils around the roots would be lightly compacted by hand to support the vines.

### **3.3.4 Subsequent Vineyard Operation and Maintenance Activities**

Planting would involve a crew of 8 to 16 workers over a four week period. Vehicular and truck traffic generated by vineyard operations would generally be low and occur outside of peak travel periods. Vineyard operation and maintenance includes pruning, pest and disease control, mowing, weed control, vine management, irrigation, fertilization, and harvesting activities. Other activities consist of maintenance of the irrigation system, soil and plant resting, fruit testing, and inspection and maintenance of the erosion control measures. Sustainable integrated pest management practices would be used for pest, disease, and weed control, including the use of biological, cultural, and traditional methods and the use of softer pesticides as needed. To prevent powdery mildew, sulfur dust or synthetic fungicides would be applied to vines. The selection of materials would be dependent upon the temperature, time of year, and degree of mildew pressure to avoid the development of resistance to these materials. The cover crop would be mowed, except for every few years, when some tillage could be needed before reseeding. Pest and disease control activities would take place generally between April and July, depending on the type of grapes and weather conditions. **Table 3-1** provides a representative month-by-month schedule of vineyard operation and maintenance. Depending on the grape varietal, temperatures, amount and timing of rainfall, individual tasks may shift into preceding or succeeding months.

**Table 3-1  
Representative Vineyard Harvest & Maintenance Schedule**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Cultural</b>												
Spray 2 ft. strip (e.g. Roundup)	X						X					
Mow Middles			X		X							
Erosion Control-Materials/Labor										X		
Frost Protection				X								
Fertilizer through drip					X				X			
Irrigation					X	X	X	X	X	X		
Disease: Mildew (Wettable Sulfur)				X	X							
Disease: Mildew (Sulfur Dust)					X	X						
Disease: Mildew (Flint)							X					
Prune		X										
Tying			X									
Trunk/Cordon Suckering				X								
Sucker/Shoot Thin/Shoot Position					X							
Leaf & Lateral Removal/Wire Lift						X	X					
Thin Crop							X					
Vine/Cane Trim							X					
Pickup Truck Use	X	X	X	X	X	X	X	X	X	X	X	X
ATV	X	X	X	X	X	X	X	X	X	X	X	X
<b>Harvest</b>												
Harvest-Hand Labor									X			
Harvest-Bin Handling									X			
Haul									X			

Source: Bettinelli Management Co., 2005.

During vineyard operations, vineyard workers would typically work on the site at off peak hours, during nighttime and early morning hours. Most vehicle traffic generated by the project would occur outside of typical peak travel periods (7-9 AM and 4-6 PM). Vineyard operation typically includes activities such as pruning, pest and disease control, mowing, weed control, vine management, irrigation, fertilization, and harvest activities. Pruning would occur during the winter, generally between January and March. Up to 24 workers would be on site, typically arriving prior to 6:00 AM and departing around 2:00 PM.

Pest and disease control activities typically take place generally between March and July depending on the type of grapes and weather conditions. Materials would be applied approximately every 7 to 14 days throughout this period for a total of 7 to 9 applications. An estimated 1 to 2 workers would be needed for pest and disease control activities. Because these types of material are typically applied at night between 10 PM and 5 AM, no peak hour vehicle trips are anticipated during pest and disease control.

Weed control application between vine rows typically occur approximately two or three times between May and November. Approximately 3 to 4 workers would be needed for weed control. Some of these worker trips could occur during peak hours, though weed control would only occur two to three times annually.

Upon installation of the vineyard, the number of cattle grazing on the properties between March and September would be reduced from approximately 50 to 20-30. This would correspond with a reduction in the number of existing cattle transport trips to and from the project site. Currently, cattle are transported to and from the site by one cattle truck carrying 6 to 12 cattle at a time over a period of two to three weeks. For safety consideration, cattle deliveries to and from the site are only done at off peak periods.

### **3.3.5 Site Access and Transportation**

Trucks and employee cars would arrive and depart via an access point on Silverado Trail, approximately 375 feet south of the existing site access point (the access is proposed to be relocated because of the poor line of sight visibility of southbound vehicles on Silverado Trail). Most of the vineyard blocks would be accessed from the internal road network that is connected to the entrance off of Silverado Trail (see previous Figure 2-1). Access to Vineyard Block 10 (the northern-most block on Silverado Trail) would be through the existing adjacent vineyard entrance on Silverado Trail, about 100 yards north of Vineyard Block 10.

#### ***ECPA Installation***

Work crews would vary in size from two to 16 workers depending on the installation activity. The soil preparation, grading and tree removal process would require a crew of two to four workers and a crawler tractor (D-8 or larger). Field raking would involve a crew of up to 10 workers and would require approximately two to six weeks, while field smoothing would require a smaller crew over two to three weeks. Installation would require a crew of four to ten workers using post pounding tractors, trenchers, and backhoes.

### *Harvest Period*

The greatest number of workers would be onsite during the harvest period, which occurs over two to three weeks in the fall, typically occurring during the months of September, October and November. Up to 40 workers are needed during this period. Grapes are harvested during early morning or late evening hours when it is cool; therefore, workers would arrive on the site around 3 AM and depart before 2 PM, thus avoiding the peak travel periods. During the harvest, one truck would haul four loads of grapes per day for processing at wineries located north of the project site. The hauling of grapes would also primarily occur outside the peak traffic periods (generally early morning or evening hours when temperatures are cool). It is possible that one truck arrival and departure (equivalent to two truck trips) would occur during the AM peak hour.

Vineyard worker parking would be fully contained on the project site. No parking would occur on Silverado Trail. Parking would generally occur along the internal vineyard avenues or in a staging area adjacent to planted areas. Vineyard workers would park in the vineyard avenues during routine vineyard operation and during harvest.

## **3.4 SCHEDULE**

The proposed project in its entirety (reasonably foreseeable) is a phased vineyard development anticipated to be completed over the course of five to 10 years. The vineyard development would be market dependent, with the first phase involving marking the various individual vineyard blocks and vineyard access, and installing major irrigation lines. The vineyard blocks bordering Silverado Trail would be developed first, followed by other blocks. This initial development would begin upon the approval of this erosion control plan. Erosion control features and measures, and planting of grapes are installed in the spring to early fall, during the dry season.