



Keller Yountville Vineyard LLC

Vineyard Development Erosion Control Plan

Erosion Control Plan Narrative

- 1. The nature and purpose of all/any land clearing, grading or earthmoving activity, the amount of cut & fill, the location of spoils storage and disposal areas, the total number of acres of grading involved including but not limited to roads, vineyards, avenues, trenching for irrigation or pipes, reservoirs, wells, water tanks, septic systems, etc. Indicate the acres of land clearing, grading or earthmoving activity that will occur on 30% or greater slopes. (Note: slopes shall be calculated in whole percent)*

The project site is located at 275 Long Ranch Road, approximately 7.5 aerial miles southeast of the City of St. Helena in Napa County, California. Access to the project area is via an existing paved private driveway commonly known as Long Ranch Road that provides access to several existing residential, winery and vineyard properties in the vicinity of the project area. The property is located approximately 3 road miles southeast of the intersection of Long Ranch Road and Sage Canyon Road (State Route 128).

The purpose of the proposed land clearing, grading and earthmoving is to prepare the project area for planting with new vineyard. Following is a list of planned land preparation activities:

- Clearing and grubbing of existing vegetation
- Re-contouring and land smoothing to promote sheet flow
- Ripping and rock breaking as needed to fracture subsoils and rock to a depth of approximately 36 to 48 inches to prepare soil for planting and to incorporate soil amendments within the vineyard footprint area (not avenues or roads)
- Mechanical and hand rock raking to remove loose rocks from the ground surface
- Discing and harrowing to prepare seedbed for vegetative erosion control measures
- Installation of erosion control features

Grading within the project area will be the minimum amount needed to smooth out the existing ground surface and create smooth slopes to promote sheet flow and to install the proposed runoff and erosion control measures. Cuts and fills will be moderate and are expected to average from 0 to 4 feet. The estimated quantity of grading is approximately 5,000 cubic yards of cut and 5,000 cubic yards of fill. An earthwork balance will be achieved onsite. Import and/or export of soil material is not planned. However, soil amendments will be imported and incorporated into the project area as needed to improve soil tilth and thereby support vine and cover crop growth.

All temporary debris, vegetation, soil and soil amendment stockpiles and storage areas, if needed, will be located within the proposed vineyard project area. No long-term stockpiles of rock or soil are anticipated. All temporary stockpiles will be kept within the proposed vineyard development area. It is planned that all rock will be disposed of within the proposed vineyard footprint either by being used in the new downslope vineyard avenue areas to create a level bench or by being buried. Rock may also be processed (crushed to a useable size) and used for lining the vineyard roads on the subject property.

The proposed vineyard development consists of three vineyard blocks. Portions of the proposed vineyard blocks have slopes <5% and were previously cleared and have been partially developed into vineyard already as they are exempt from the need for an Erosion Control Plan due to the slopes being <5%. This project proposes to expand the size of the vineyard beyond the areas that are <5%. The vineyard blocks will have a row spacing of 7 feet and vine spacing along the row of 4 feet for an average vine density of 1,556 vines per acre and a total of approximately 21,780 vines (subject to change based on final viticultural assessments).

The total disturbed area for the vineyard development project is 16.7 ± acres. The total disturbed area includes the area to be planted with vines and the area used for perimeter avenues and the new access road as well as incidental disturbance for installation of erosion control features. The total area to be planted with vines within the 16.7 ± acre project area is 14.0 ± acres.

Stream and drainage course setbacks have been fully evaluated and are provided in accordance with the Napa County Conservation Regulations. Stream setbacks in the vicinity of the proposed project area for all streams mapped by the project biologist are shown on the erosion control plan.

The details of the proposed vineyard development are shown on the Keller Yountville Vineyard LLC Development Erosion Control Plan prepared by Applied Civil Engineering Incorporated.

- 2. Comprehensive description of existing site conditions, including topography, vegetation (including under-story and canopy cover), and soils. Provide extent of tree canopy covered and shrub and brush without a tree canopy covered areas in acres for each parcel. Identify and indicate the project boundaries in watersheds, including municipal watersheds, and in the water deficient area. The plan preparer is required to visit the site and the narrative must include the date, purpose, and persons making each site visit. The description shall verify the source or validity of the topographic map. Wide angle or panoramic photographs documenting existing site conditions shall be provided. A photo location map indicating the date of the site visit and by whom it was made shall accompany such documentation.*

Topography:

The project area is located on moderately sloping hillside slopes in Napa County, southeast of the City of St. Helena (Latitude = 38.458552° N & Longitude = 122.340555° W). Topography on the property varies widely and is characterized by gentle to steep slopes ranging from less than 5% to in excess of 30% throughout the property with the steeper slopes generally being in the northern and southern parts of the property and flatter slopes to the central portion of the property.

Average slopes within the proposed vineyard development area are gentle to moderate and range from 4% to 26% within the proposed vineyard block areas with an overall average slope of 16%. Slopes were determined using topographic data obtained from the Napa County Geographic Information System database and the slope transect method in several representative locations in the proposed development area. Isolated areas within the project area, totaling approximately 0.8 acres, have slopes slightly more than 30%.

Vegetation:

The Calveg designations for the subject parcel were obtained from the Napa County GIS database and are as follows:

- AG - Agriculture
- CQ - Northern Mixed Chaparral
- NX - Mixed Hardwoods

Our visual observation of onsite vegetation in the vicinity of the project area is consistent with the Calveg designations. A detailed assessment of vegetation within the parcels and subject project areas was prepared by WRA Environmental Consultants. According to the report by WRA Environmental Consultants, there are several sensitive plant species located on the subject property. The project has been revised on several occasions with the input of WRA Environmental Consultants to avoid and minimize removal and impacts to the sensitive plants. This includes removal of areas from the project that were originally planned for development in order to preserve sensitive plants in accordance with Napa County General Plan Policies. Please refer to the report prepared by WRA Environmental Consultants for additional information.

Using aerial photographs of the subject project area, obtained from the Napa County Geographic Information System database and using the parcel lines as they existed in 1993, we have estimated the following land use / coverage statistics for each of the 1993 parcels that comprise the project area within the Lake Hennessey and Rector Watershed areas:

**LAKE HENNESSEY
VEGETATION RETENTION ANALYSIS
APN 032-030-003**

	1993 CONDITIONS	REMOVED SINCE 1993 FOR OTHER DEVELOPMENT	TO BE REMOVED WITHIN PROPOSED PROJECT AREA	PROPOSED FOR RETENTION	PERCENT RETAINED
TREES	0	0	0	0	0
BRUSH / GRASS	12.8 ± ACRES	6.3 ± ACRES	0	6.5 ± ACRES	51%
IMPROVEMENTS	0.4 ± ACRES	-	-	-	-
TOTALS	13.2 ± ACRES	6.3 ± ACRES	0	-	-

**LAKE HENNESSEY
VEGETATION RETENTION ANALYSIS
APN 032-030-004**

	1993 CONDITIONS	REMOVED SINCE 1993 FOR OTHER DEVELOPMENT	TO BE REMOVED WITHIN PROPOSED PROJECT AREA	PROPOSED FOR RETENTION	PERCENT RETAINED
TREES	0	0	0	0	0
BRUSH / GRASS	35.6 ± ACRES	15.1 ± ACRES	0	20.5 ± ACRES	58%
IMPROVEMENTS	1.1 ± ACRES	-	-	-	-
TOTALS	36.7 ± ACRES	15.1 ± ACRES	0	-	-

**RECTOR RESERVOIR
VEGETATION RETENTION ANALYSIS
APN 032-030-004**

	1993 CONDITIONS	REMOVED SINCE 1993 FOR OTHER DEVELOPMENT	TO BE REMOVED WITHIN PROPOSED PROJECT AREA	PROPOSED FOR RETENTION	PERCENT RETAINED
TREES	0	0	0	0	0
BRUSH / GRASS	32.6 ± ACRES	9.9 ± ACRES	0.3 ± ACRES	22.4 ± ACRES	69%
IMPROVEMENTS	0.7 ± ACRES	-	-	-	-
TOTALS	33.3 ± ACRES	9.9 ± ACRES	0.3 ± ACRES	-	-

As shown in the table above and illustrated on the attached Vegetation Retention Analysis, the calculated tree canopy cover and brush / grass cover retention percentages are above the 70% and 40% levels in accordance with Chapter 18.108 of the Napa County Code.

Watershed:

The project site is located on a northwest / southeast trending range on the east side of the Napa Valley. The northernmost portion of the property is in the Lake Hennessey Watershed and the northeastern portion of the property is in the Rector Reservoir Watershed. A majority of the central and southeast part of the property and a majority of the project area is located within the Vine Hill Creek Watershed with a small portion of Vineyard Block C located within the Rector Reservoir Watershed. No portion of the project area is within the Lake Hennessey Watershed. Vine Hill Creek, Lake Hennessey and Rector Reservoir all overflow into the Napa River which is ultimately tributary to San Pablo Bay.

No changes in runoff patterns are proposed as part of this project. All existing drainage patterns will be maintained.

Both Lake Hennessey and Rector Reservoir are municipal drinking water supply watersheds.

The subject parcel is not located within the Milliken-Sarco-Tulocay groundwater deficient area.

Site Visits & Photograph Documentation:

Representatives from Applied Civil Engineering Incorporated have visited the site several times from the Spring of 2023 through February 2025. The purpose of the site visits was to review existing site conditions and to verify the general validity of the topographic mapping for this project that was obtained from the Napa County GIS database. Given the density of vegetative cover onsite in some areas, photographs were difficult, so we have presented recent 3D isometric images obtained from Google Earth in the Photographic Documentation of Existing Site Conditions for the Keller Yountville Vineyard LLC Vineyard Development Erosion Control Plan.

- 3. All natural and man-made features on-site including but not limited to, streams, watercourses (drainage, channels, etc.), wetlands, riparian habitat, lakes, reservoirs, roads, water tanks, septic systems, reservoirs, ponds, etc. Indicate which ones may be affected by the proposed activity. For blue line and County-definitional streams indicate top, toe, and slope of bank, channel depth, and existing and proposed setback conditions. The entire length of blue line streams & 41 County-named streams on the parcel(s) shall be included in photo documentation (a recent aerial may be included). Provide the name and distance of the nearest blue line and/or County-definitional stream(s) to the project site.*

Existing manmade improvements on the subject parcels include paved, gravel and dirt roads, two groundwater wells, concrete water tanks, and the related water and power utility infrastructure serving the existing uses.

None of the existing manmade improvements will be affected by the proposed project with the exception that existing utility lines may be relocated as needed to facilitate development of the proposed vineyard. Any such relocations would be within the proposed project area shown on the ECP.

There is one unnamed blue-line stream that crosses through the northern portion of the property. The stream flows northwesterly to Lake Hennessey. A second blue line stream is located in the southern portion of the property. The stream flows westerly to the Napa River. There is also a third unnamed blue-line stream located just to the east of the subject property. This stream flows southwestly to Rector Reservoir. All proposed development will be located outside of the required stream setbacks as shown on the Erosion Control Plan. At the closest point, the development area is setback approximately 600 feet from the northern blue-line stream, 900 feet from the southern blue-line stream and 700 feet from the eastern blue-line stream.

There are also several smaller watercourses that have been identified as ephemeral streams or County Definition Streams on the property. The ephemeral streams have been provided with a minimum 35' setback as is required. The watercourses that meet the County definition of a stream have been provided with a slope-based setback and have been identified as such. These watercourses and setbacks are illustrated on the Erosion Control Plan.

No wetlands were identified within or near the project area by WRA Environmental Consultants.

4. Location and source of water for irrigation or other uses. Provide copies of all necessary permits.

The irrigation source for the proposed vineyard development will be from an existing groundwater well located in the northern portion of the property. This well is labeled as the "Project Well" on the Erosion Control Plans. No new wells or other water sources are planned at this time.

Please refer to the Water Availability Analysis prepared by Richard Slade & Associates for additional information regarding estimated water use and estimated aquifer recharge rates.

5. *Soil types/soil series identified in the Soil Conservation Service (SCS) Napa County Soil Survey, or, if prepared, a site-specific soils report.*

The United States Department of Agriculture Soil Conservation Service Soils Map for Napa County shows one soil type mapped on the subject property:

109	Boomer gravelly loam, volcanic bedrock, 14 to 60 percent slopes
176	Rock outcrop-Hambright complex, 50 to 75 percent slopes

The approximate soil type boundaries based on data obtained from the Napa County Geographic Information System database are illustrated on Sheet C1, C4 & C5 of the Keller Yountville Vineyard LLC Vineyard Development Erosion Control Plan.

6. *Critical areas of erosion and slope instability such as gullies, landslides, etc. within or potentially affecting the “development site” (i.e., the area disturbed by the project) or potentially affected by the work to be undertaken within the development site. In the case of landslides a report indicating the probable effects of the planned work on slope stability and erosion levels shall be prepared and submitted by a registered geologist.*

According to the Napa County Geographic Information System there are potential landslides located in the vicinity of the property. However, according to the California Geologic Survey Landslide Inventory (<https://www.conservation.ca.gov/cgs/landslides>) it appears that there are no landslides in the vicinity of the proposed project area.

Furthermore, representatives from Applied Civil Engineering Incorporated have visited the site several times to review the project area and have not observed any signs of gullies, active landslides or large-scale slope instability within or near the project area that will affect or will be affected by the proposed project.

7. *Any erosion calculations prepared.*

The Universal Soil Loss Equation (USLE) was used to model pre-project and post-project conditions and estimate soil loss rates from the project area due to sheet erosion. The Soil Loss Analysis prepared by Dave Steiner, CPESC, CPSWC is included as an attachment to this document. The USLE calculations predict that net soil loss rates will decrease slightly relative to existing conditions after implementation of the proposed vineyard erosion control plan.

8. *Any/all proposed erosion control methods including, but not limited to:*
 - a. *All drainage systems and facilities, walls, cribbing or other erosion protection devices to be constructed with, or as a part of the proposed work.*

The following measures will be implemented to minimize the potential for erosion on the project site during development and following completion of the vineyard development program:

- **Sediment Barriers** – Temporary silt fence and straw wattle-type sediment barriers will be installed throughout the development area. The planned locations and installation details are provided on the erosion control plan. Additional sediment barriers will be installed as deemed necessary throughout the course of construction. The sediment barriers are intended to provide temporary sediment control during development and until the cover crop is established.

- Erosion Control Blankets – Erosion control blankets will be installed over seed on all cut and fill slopes that are steeper than 4:1 (Horizontal : Vertical). Erosion control blankets will provide additional protection from rainfall impact on exposed soils while the cover crop is getting established. The erosion control blanket locations, specifications and installation details are provided on the erosion control plan.
- Water Bars – Temporary water bars will be installed on vineyard avenues to divert runoff from the avenues to prevent rutting. Water bar locations and installation details are shown on the erosion control plan. Water bar locations will be field verified and adjusted by the Engineer based on field conditions.
- Energy Dissipators – Rock rip-rap energy dissipators will be constructed at the outlet of all water bars and rolling dips that direct flow outside of the vineyard area to dissipate runoff energy and minimize the potential for erosion.
- Rock Filled Vineyard Avenues – At key locations at the downslope edge of the development area rock filled vineyard avenues have been designed to provide level tractor turnaround areas and to also effectively retain runoff from the upslope vineyard areas. The rock filled vineyard avenues are designed to be on contour so that as they fill and spill water is dispersed downslope over a broad area to prevent concentration of flow.

b. *Proposed vegetative erosion control measures including maintenance of plant material and slopes until a specified percentage of plant coverage is uniformly established.*

Establishing an effective vegetative cover crop will be the primary method of preventing erosion from the vineyard development area. After the land preparation activities are complete, a temporary cover crop will be planted and straw mulch will be spread throughout the cleared area to stabilize the project area through the winter. Minimum coverage has been calculated for each block in order to maintain soil loss rates at or below existing conditions. Minimum coverage rates for each development area are as follows:

VINEYARD BLOCK COVER CROP SPECIFICATION TABLE	
Block ID	Required Cover %
A	75%
B	80%
C	80%

The seed, fertilizer and mulch specifications are provided on the erosion control plan.

This temporary cover crop will be cultivated in the spring and replanted in the fall for the first three years of the vineyard establishment period. Straw mulch will also be applied each fall during the vineyard established period. In the fall, following the vineyard establishment period all vineyard blocks will be planted with a permanent cover crop seed mix and farming practices will transition to a permanent cover, no-till, farming regime. The permanent cover crop will be mowed in the spring. Spring mowing will be timed to allow maturation of seeds and promote natural stand regeneration. All permanent cover crop areas will be reseeded every two to three years or more frequently as needed to maintain the required cover percentage. Straw mulching and/or compost will also be applied each fall as needed to achieve the required coverage level.

Weed control under the vine rows will be primarily via mechanical means such as string trimmers and minimal herbicide usage. Herbicide used to control weeds within the vineyard block will be limited to spraying of post-emergent herbicide in a narrow 18-inch maximum width strip spray, if necessary to control weeds at the bases of the vines. The post emergent herbicide will be applied in the late winter or early spring to ensure that the spray area has vegetative protection through the rainy season. If the spray areas are not achieving adequate cover, they must be mulched with straw or compost and reseeded each year to provide the required cover.

The cover crop should be irrigated prior to the onset of the rainy season for at least the first fall, following development to establish a dense cover prior to the onset of heavy winter rains.

- c. *Proposed erosion control measures for vineyard avenues to accommodate farm or vineyard equipment and materials storage locations*

A permanent cover crop will be planted in the vineyard avenues the first all following land preparation activities and it will be maintained as permanent cover throughout the life of the vineyard. No tilling will occur in the vineyard avenues. The permanent cover crop will be mowed in the spring. Mowing will be timed to allow maturation of seeds and promote natural cover crop regeneration. All permanent cover crop areas will be reseeded every two to three years or more frequently as needed to maintain at least coverage level specified for each vineyard block. Straw mulching and/or pre-irrigation of the cover crop will also be implemented as needed to achieve the required coverage. No herbicides will be used in the vineyard avenues.

Alternatively, vineyard avenues may be lined with crushed rock to limit their susceptibility to erosion and provide all-weather access around the perimeter of the vineyard project area.

Water bars, rolling dips and/or straw wattles will be installed across the sloping vineyard avenues to force runoff off the avenue and onto adjacent stable areas so that runoff does not concentrate on the vineyard avenues and cause erosion.

9. Storm water stabilization measures to handle any increased peak rates of runoff from the development of the site that would result in flooding or channel degradation downstream. Include calculations of estimated increased runoff and/or an explanation of why an increase is/is not expected.

Detailed calculations of predicted runoff rates within the project area for both pre- and post-project conditions utilizing the United States Department of Agriculture Technical Release 55 (USDA TR-55) methodologies are presented in the Hydrologic Analysis prepared by David Steiner, CPESC, CPSWQ. These calculations indicate that post-project conditions will result in runoff rates that are not greater than current conditions for the 2, 10, 50 and 100 year design storm events.

Since the project has been designed to maintain existing drainage patterns and since there will be no increase in peak runoff rates, the proposed project will not result in any significant change to local or regional hydrology / runoff patterns that could result in downstream flooding or channel degradation.

10. An implementation schedule indicating:

- a. The proposed vegetation clearing, earth moving/grading, and construction/planting schedule.
- b. The proposed schedule for winterizing the site (by October 15th of each year the permit is in effect except in a municipal watershed where it is by September 1st).
- c. The proposed schedule for installation of all interim erosion and sediment control measures (including vegetative measures) and the state of completion of such devices/measures at the end of the grading season (i.e., on October 15th [except in 5 designated municipal watersheds where it is September 1st] of each year the permit will be in effect).
- d. The proposed schedule for installation of any permanent erosion and sediment control devices required.

Vineyard Development Schedule

The schedule below is an estimate and is subject to change. Implementation of winterization and erosion control measures must be adjusted to accommodate any changes in development and planning under consultation with the Engineer. All land preparation, planting and erosion control work is to be performed by the property owner or by their contractor / vineyard manager. The vineyard development program will be completed in multiple phases. The schedule below is for Phase I and will be repeated as needed for future phases which may or may not overlap with Phase I.

April 2026

Commence Vineyard Development Program

Begin clearing and grubbing of existing vegetation. Complete land preparation for vineyard planting including: ripping, discing, rock removal and processing, recontouring and incorporation of soil amendments.

Install drainage improvements, waterbars and rock energy dissipators.

Install trellis and irrigation systems.

Plant vines.

Prior to September 1, 2026

Complete all earth disturbing activities & drainage improvements installation.

Prior to September 15, 2026

Winterize Site

Seed vineyard with temporary cover crop seed mix

Seed vineyard avenues with permanent cover crop seed mix

Place fertilizer, straw mulch and erosion control blankets

Install sediment barriers

Install water bars

Pre-irrigate cover crop to establish cover prior to rainy season.

Establish reserve of erosion control measures to be maintained onsite throughout the rainy season to facilitate rapid deployment. Materials shall include silt fence, straw wattle, straw, erosion control seed mix, erosion control blanket and plastic sheeting.

September 15, 2026 - April 2027

Inspect and maintain vegetative cover and erosion control devices at least once per week, prior to each anticipated rainfall event, at least once every 24 hours during extended rainfall events and following each rainfall event. Reseed and mulch any erosion-damaged areas or areas with less than the specified cover percentage and repair or replace erosion control devices as necessary.

Spring 2027

Cultivate temporary cover crop within vineyard block footprint area and perform fine site grading to repair any storm-damaged areas. No tilling of vineyard avenues is to be performed.

Install irrigation and trellis systems. Plant rootstock.

Prior to September 1, 2027

Complete all earth disturbing activities & drainage improvements installation.

Prior to September 15, 2027	<p>Winterize Site</p> <ul style="list-style-type: none"> Seed vineyard with <u>temporary cover crop</u> seed mix Seed vineyard avenues with <u>permanent cover crop</u> seed mix Place fertilizer, straw mulch and erosion control blankets Install sediment barriers Install water bars Pre-irrigate cover crop to establish cover prior to rainy season. <p>Establish reserve of erosion control measures to be maintained onsite throughout the rainy season to facilitate rapid deployment. Materials shall include silt fence, straw wattle, straw, erosion control seed mix, erosion control blanket and plastic sheeting.</p>
September 15, 2027 - April 2028	<p>Inspect and maintain vegetative cover and erosion control devices at least once per week, prior to each anticipated rainfall event, at least once every 24 hours during extended rainfall events and following each rainfall event. Reseed and mulch any erosion-damaged areas or areas with less than the specified cover percentage and repair or replace erosion control devices as necessary.</p>
Spring 2028	<p>Cultivate temporary cover crop and perform fine site grading to repair any storm-damaged areas.</p>
Prior to September 1, 2028	<p>Complete all earth disturbing activities & drainage improvements installation.</p>
Prior to September 15, 2028	<p>Winterize Site</p> <ul style="list-style-type: none"> Seed vineyard with <u>temporary cover crop</u> seed mix Seed vineyard avenues with <u>permanent cover crop</u> seed mix Place fertilizer, straw mulch and erosion control blankets Install sediment barriers Install water bars Pre-irrigate cover crop to establish cover prior to rainy season. <p>Establish reserve of erosion control measures to be maintained onsite throughout the rainy season to facilitate rapid deployment. Materials shall include silt fence, straw wattle, straw, erosion control seed mix, erosion control blanket and plastic sheeting.</p>

September 15, 2028 - April 2029

Inspect and maintain vegetative cover and erosion control devices at least once per week, prior to each anticipated rainfall event, at least once every 24 hours during extended rainfall events and following each rainfall event. Reseed and mulch any erosion-damaged areas or areas with less than the specified cover percentage and repair or replace erosion control devices as necessary.

Spring 2029

Cultivate temporary cover crop and perform fine site grading to repair any storm-damaged areas.

Prior to September 1, 2029

Complete all earth disturbing activities & drainage improvements installation.

Prior to September 15, 2029

Winterize Site

Seed vineyard with permanent cover crop seed mix
Seed vineyard avenues with permanent cover crop seed mix

Place fertilizer, straw mulch and erosion control blankets

Install sediment barriers

Install water bars

Pre-irrigate cover crop to establish cover prior to rainy season.

Establish reserve of erosion control measures to be maintained onsite throughout the rainy season to facilitate rapid deployment. Materials shall include silt fence, straw wattle, straw, erosion control seed mix, erosion control blanket and plastic sheeting.

September 15, 2029 - April 2030

Inspect and maintain vegetative cover and erosion control devices at least once per week, prior to each anticipated rainfall event, at least once every 24 hours during extended rainfall events and following each rainfall event. Reseed and mulch any erosion-damaged areas or areas with less than the specified cover percentage and repair or replace erosion control devices as necessary.

Spring 2030 & Beyond

See Annual Maintenance Schedule

Annual Maintenance Schedule

Spring	Mow permanent cover crop in vineyard and vineyard avenues and perform fine site grading to repair any storm-damaged areas.
Prior to September 15	Winterize Site Repair any damage to vineyard and vineyard avenues that has occurred during the farming season. Place seed and straw on all vineyard avenues as needed to achieve the specified cover percentage. Install water bars. Place erosion control seed, fertilizer, straw mulch, erosion control blankets and sediment barriers as necessary to stabilize any erosion-prone areas outside and adjacent to the vineyard areas.
September 15 - April 1	Inspect and maintain vegetative cover and erosion control devices at least once per week, prior to each anticipated rainfall event, at least once every 24 hours during extended rainfall events and following each rainfall event. Reseed and mulch any erosion-damaged areas or areas with less than the specified percentage cover and repair or replace erosion control devices as necessary.

11. The estimated cost of implementation of the erosion and sediment control measures.

Implementation of erosion and sediment control measures for this project is anticipated to cost approximately \$5,000 to \$10,000 per acre for installation and maintenance. This estimate includes only the erosion and sediment control portions of the project, not the entire cost of permitting, engineering, land preparation, development, irrigation systems, trellis systems, and plants.