PRESERVATION RANCH
P. O. Box 3989
Napa, California 94558
Telephone (707) 224-6565 - Fax (707) 254-9398

MEMORANDUM

TO: **David Schiltgen, Sonoma County PRMD**
FROM: **Tom Adams**
DATE: **August 25, 2009**

RE: **File Number PLP06-0107**
Preservation Ranch Project Description Revisions: Vineyard Class III Watercourses / Grading & Farmworker Housing

This memorandum further revises the Preservation Ranch Project Description, Revised Submittal, dated April 30, 2008 (Project Description). These revisions are primarily based the following: (1) comments received during the Initial Study Notice of Preparation comment period regarding filling and farming over of Class III watercourses within the proposed Timber Conversion / Vineyard footprint; and (2) septic capacity and domestic groundwater constraints for farmworker housing. Both revisions to the Project Description reduce the scale of the previously proposed Project components by decreasing the number of vineyard acres and reducing the number of farmworker housing units, respectively.

Vineyard Class III Watercourses / Grading

Discussion

The Project Description proposed to seek permits/approvals for the filling and farming over of Class III watercourses from the U.S. Army Corps of Engineers (Section 404), California Dept. of Fish and Game (Section 1602), CalFIRE (Alternative Watercourse and Lake Protection), and County (Request for Relief from Standards). Based on the applicable Federal, State, and Local regulations/ordinances the filling and farming over of Class III watercourses is permissible via discretionary approvals from the applicable agencies. Regardless, based on comments received during the NOP scoping process, Preservation Ranch is revising the Project Description to avoid the filling and farming over of Class III watercourses. This Project Description revision is consistent with the County's Grading, Drainage, and Vineyard and Orchard Site Development Ordinance (adopted subsequent to the Project application submittal) standard setback requirements for "undesignated"[1] streams but does propose relief from the County requirement that all existing vegetation be retained and proposes alternative measures to maintain and/or enhance filtration / water quality (see Project Revision discussion below).

[1] The Class III watercourses located within the proposed timber conversion and vineyard areas are not designated in the general plan, local coastal plan program, and/or zoning code (See Section 11.16.120, Table 11-5, Stream Setback Requirements.)

Revising the Project Description to avoid the filling and farming over of Class III watercourses reduces the vineyard footprint and proposed timber conversion due to certain vineyard areas no longer being feasible due to avoiding the filling and farming over of Class III watercourses. The result is that in certain areas the vineyards have become smaller in size or have been removed from the Project Description but, in no circumstance have any new/additional vineyard areas been proposed or added to the Project Description. Accordingly, all studies submitted to date and those being submitted in response to the County and Entrix's July 2009 Draft Environmental Impact Report (DEIR) scope of work additional information requests include complete coverage of the resulting revised vineyard footprint and other project components.

Project Restatement / Revisions

The following restatements (provided for context purposes only) and revisions are referencing the Preservation Ranch Project Description, Revised Submittal, dated April 30, 2008 (Project Description):

Watercourse Protection

Class I Watercourses (restatement / no change)

Class I Watercourses are defined as domestic supplies, including springs on site and/or within 100 feet downstream of the operations area, and/or fish always or seasonally present onsite, includes habitat to sustain fish migration and spawning, 14 CCR 916.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures. No vineyards are within 200 feet of a Class I Watercourse.

No timber harvesting, clearing, burning, or equipment operations shall occur within this extended WLPZ for the life of the Project with the exception that equipment may utilize existing truck roads.

Class II Watercourses (restatement / no change)

Class II Watercourses are defined as with fish always or seasonally present offsite within 1000 feet downstream, and/or aquatic habitats for non-fish aquatic species; excludes Class III waters that are tributary to Class I waters, 14 CCR 916.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures.

A number of Class II watercourses are adjacent to the conversion areas. These Class II watercourses shall have a flagged 100 foot Watercourse and Lake Protection Zone

(WLPZ) regardless of side-slope steepness. This is an extended WLPZ in most locations, as the standard FPR zone width is 50 feet for slopes <30%, is 75 feet for slopes 30-50%, and is 100 feet for slopes >50% (14 CCR, 916.5). Conversion area maximum slope is 38% and most locations where a Class II watercourse is present have slopes less than 50% upslope of the watercourse and lake transition line. No timber harvesting, clearing, burning, or equipment operations shall occur within this 100 foot WLPZ area immediately adjacent to conversion areas for the life of the Project, with the exception that equipment may utilize existing truck roads.

Table __. Class I and Class II Watercourse Protection Measures and Zones

Watercourse	Description	Zone	Protected Width	Erosion Control Best Management Practices *
Class II	Standard	WLPZ-extended for <50% slopes	100' minimum regardless of slope	No timber harvesting, no vegetation removal , and no equipment operations in the zone
Class I	Standard	Extended WLPZ	200' minimum regardless of slope	No timber harvesting, no vegetation removal, and no equipment operations in the zone

Class III Watercourses (REVISED)

Class III watercourses are defined as having no aquatic life present, watercourses showing evidence of being capable of sediment transport to Class I and II waters under normal high water flow conditions after completion of timber operations (see 14 CCR 916.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures).

To ensure protection of beneficial uses of water on all Class III watercourses within the conversion area, 75 percent surface cover shall be required within the Equipment Limitation Zone (ELZ) for raindrop energy dissipation and to filter suspended sediment as well as increase infiltration rates of overland flow prior to it reaching the watercourse (see 14 CCR 916.4(6) Watercourse and Lake Protection). The requirement for maintaining 75 percent surface cover is a condition normally required for Class II watercourse protection, but is being utilized on Class III watercourses for added protection. "Surface cover" shall consist of understory vegetation and leaf litter, lopped slash (18" maximum height from ground level), or chipped wood fiber spread over the soil. Grass seeding and other sediment control requirements are outlined in the Preservation Ranch Vineyard Development & Erosion Control plans.

Some ELZ's on edges of vineyards or where steep slopes are present will have standard protection, but most ELZ's will have the in lieu practices as described below. There are four treatments depending on the condition of the channel and side slopes. Treatment A is standard protection and applies to watercourses where shade affecting the vineyards is not an issue, or where sensitive conditions exist requiring minimum disturbance of the ELZ. Treatments B, C, and D are in lieu practices that

vary from the standard protections but provide the equivalent or better water quality protection.

Standard Class III Protection (T&I proposed – July 24, 2009)

Treatment A

(1) Establish a 30foot wide ELZ on both sides of the watercourse for slopes less than 30% and an additional 20 foot ELZ where sideslopes are >30%. The ELZ is measured from the Watercourse Transition Line (WTL). Within the ELZ:

(A) No new construction of tractor roads permitted

(B) No ground based equipment on slopes >50%

(C) Ground-based operations are limited to existing stable tractor roads that show no visible evidence of sediment deposition being transported into the adjacent watercourse or to the use of feller-bunchers or shovel yarding.

(2) Retain all pre-existing large wood on the ground within the ELZ that is stabilizing sediment and is necessary to prevent potential discharge into the watercourse.

(3) Retain all pre-existing down wood and debris in the channel zone.

(4) Retain hardwoods, where feasible, within the ELZ for 25 feet measured from the WTL.

(5) Retain all snags (except as required for safety) within the ELZ

(6) Retain all non-merchantable conifers within the ELZ except as necessary for cable corridors, crossing construction and safety reasons.

(7) Retain all trees in the ELZ and channel zone which show visible indicators of providing bank or bed stability, excluding sprouting conifers that do not have boles overlapping the channel zone. Visible indicators of stability include roots that permeate the bank or provide channel grade control.

In Lieu Practices for Specific Mapped Class III Watercourses

Treatment B, C, D, In lieu of (1): The outer five feet of the ELZ shall allow tractor harvesting and will be cleared of vegetation and stumps to allow vineyard tractors to turn in this area at the end or on the edge of vine rows. Install six inches of wood chips on the cleared ground in the outer five feet of the ELZ to act as a filter and sediment trap. Wood chips will be generated by chipping of slash on conversion units. Alternatively an erosion control cover crop (filter strip) will be established in this five foot zone.

Explanation and Justification: The outer five feet of the ELZ can be more effectively buffered from sediment effects caused by overland flow by placing a mulch of six inches deep by five feet wide of wood chips, or an erosion control cover crop (filter strip) on the ground in this strip. This practice will achieve greater protection of water quality than the standard rule, as this sediment trap will more effectively catch sediment than forest ground cover.

Watercourse Crossings, In lieu of (1)(A): New tractor trails may be constructed on slopes <50% where a crossing is needed to access a vineyard with no other access, and to install underground storm water drainage pipe pipes. These crossings shall be shown on THP maps.

Explanation and Justification: For vineyard tractor crossings, a permanent rock ford sized to handle 100 year flows will be installed and approaches within the 25' area from the WTL will be stabilized by installing 1 ½ inch + sized gravel, 6 inches deep. Less potential impact to water quality is anticipated than the use of a typical temporary crossing. A stabilized crossing will have the same effect as the standard rule. Where underground storm water drainage pipes cross a watercourse, the channel and banks will be returned to a stabilized condition using rock and slash packing where necessary.

Treatment C, and D, In lieu of (4), (5), and (6): On side slopes of 20% and greater, conifers and hardwoods may be removed from the ELZ or topped if they cast shade into the conversion area as long as a minimum retention of 50% of vegetative cover from a combination of understory and/or overstory vegetation is maintained in wooded areas, excluding grasslands. Retain hardwoods where feasible within the ELZ. Where 50% vegetative cover over the ground does not currently exist, no hardwoods will be cut and native shrubs or hardwood trees will be planted in the ELZ to reach this level.

Explanation and Justification: The narrow strip of vegetation retained in the ELZ within the vineyard will expose conifers to windthrow which has the potential to increase soil disturbance when root masses are pulled out of the ground during a strong wind event. Allowing removal of conifers outside the channel zone will reduce potential damage to soils and vineyards from windthrow events. Trees may be topped or removed as long as vegetative cover over the ground does not fall below 50%. When there is not 50% vegetation present over the ground, or removal of conifers brings existing vegetation level below this standard, then additional native hardwood and shrub will be planted to reach this minimum cover level. This practice will have the same effect as the standard rule.

Treatment B, **In Lieu of (4), (5), (6), and (7)**. On side slopes less than or equal to 20% where the watercourse channel is relatively shallow (less than 12 inches deep), and stream gradient is less than 15%, the overstory conifers and hardwoods, snags, and channel trees will be harvested to reduce impacts of shading on the vineyards. Understory vegetation will be retained. The area within 25 feet of the channel will be replanted with native grass mix, or slash packed, to reach 75% surface coverage. An

excavator will be used to punch slash into the ground and will be sitting outside the 25 feet area from the channel. No stumps shall be removed within the area that is 25 feet from the channel, and no equipment shall enter this area, except at pre-flagged crossings.

> **Explanation and Justification:** These watercourses have gentle side slopes and the channels tend to be shallow and relatively undefined except during surface flow events. These shallow, low flow watercourses have the least potential to be impacted by the adjacent vineyard operations due to the gentle side slopes. They also have the least topographic relief and highest potential for trees to shade the vineyards. The intent is to retain a 25 foot buffer zone with high sediment filtration capabilities. Where overstory tanoak, live oak, madrone, bay, and redwood are cut, the stumps are expected to sprout back retaining root strength, and these sprouts will be managed by manual pruning and topping in the future. The slash packing method will encourage seeding of natural vegetation into this area such as coyote brush and Manzanita. No farming equipment will enter this zone. Flows in these channels are relatively light, and the cutting of channel trees is not anticipated to destabilize these channels, as no stumps will be removed within the channel or within 25 feet of the channel. This practice will have the same effect or greater protection as the standard rule, as all areas within the 25 foot buffer zone will be stabilized to filter sediment from overland flow prior to flow entering the channel.

Pursuant to 14 CCR 916.4 (c)(1) and (c)(3) Watercourse and Lake Protection rules, and proposed T&I Rules (14 CCR 916.9 (h)) for Class III watercourses, these in lieu practices provide for erosion control, soil stabilization, and channel zone protection, and are designed in these locations to be sufficient to protect water quality and will provide at least equal protection as the standard rule requiring an equipment limitation zone and requiring retention of filter strip properties to maintain soil stability of the zone.

The boundaries of the no equipment zone shall be flagged by the RPF prior to the start of operations, with flagging or wooden stakes placed at 25 feet from the WTL for Treatment Codes B and C, 45 feet from the WTL for Treatment Code D, and either 30 feet or 50 feet from the WTL depending on slope for Treatment Code A. Refer to Table 6 Class III Protection Treatments and Codes for a matrix description of treatments.

No timber operations shall occur within 50 feet of Class III watercourses after October 1 and prior to May 1, unless the area has been completed and temporary or permanent erosions control has been installed by the Vineyard Engineer and Contractor according to the Vineyard Erosion Control Plan. Refer to Tractor Operations seasonal restrictions above regarding timing of operations within the ELZ.

Equipment used in timber operations shall not be serviced in locations where servicing will allow grease, oil or fuel to pass into lakes or watercourses(see 14 CCR 914.5 (a)).

Table__. Class III Protection Treatments and Codes

Treatment Code	In Lieu Practice	Channel Gradient	Side Slope Gradient	Retention	No Equipment Operations Buffer Zone	Added Protection	Outer 5' of 30' or 50' ELZ
A	Standard ELZ	Na	All slopes	Standard retention	30' slopes <30% 50' slopes 30%+	na	na
B	(1), (4), (5), (6), (7)	15% or less	20% or less	All Understory in 25' from WTL area	25'	Slash pack or plant native grass to reach 75% surface coverage	6" deep wood mulch or engineered grass filter
C	(1), (4), (5), (6)	na	Less than 30%	50% cover from a combination of overstory and understory if a non-grass area	25'	Plant native shrubs to meet the 50% cover; add packed slash, wood chips or native grass to reach 75% surface coverage	6" deep wood mulch or engineered grass filter
D	(1), (4), (5), (6)	na	30% +	50% cover-combination of overstory and understory if non-grass	45'	Plant native shrubs to meet the 50% cover; add packed slash, wood chips or native grass to reach 75% surface coverage	6" wood deep mulch or engineered grass filter

Farmworker Housing

Discussion

Evaluation of access, power, water, and septic issues have resulted in the need to decrease the number of farm worker housing units proposed at Preservation Ranch. Accordingly, the Preservation Ranch Project Description, Revised Submittal, dated April 30, 2008, as subsequently revised by the Preservation Ranch Project Description: Farm Worker Housing and Stream Restoration Clarifications Memorandum, dated November 26, 2008 (Project Description) are revised as follows:

Project Revisions

Farm Worker Housing and Labor Requirements

Year-Round Farm Workers and Agricultural Employee Housing

As part of the agricultural operation, the Project seeks to provide agricultural employee housing as follows:

- Supervisor Housing: four, two-bedroom conventionally built units.
- Year-Round Farmworker Bunks: one or two bunkhouse(s) with no more than sixteen bunks total.

Both the supervisor housing and bunkhouses will be located at Evans Ridge in compliance with the standards found in County Code Section 26-88-010(o) and Section 26-10-010(m)(2) as applicable. Year-round farm worker housing will be bunkhouses for workers only and therefore, not include housing for spouses or children. Supervisor housing will not be limited to workers only so may include spouses and/or children.