Letter 16

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July 27, 2009

Mr. Allen Robertson
California Department of Forestry and Fire Protection
P.O. Box 94426
Sacramento, California 94244-2460
SacramentoPublicComment@fire.ca.gov

Subject: Fairfax Conversion Project Environmental Impact Report (SCH# 2004082094)

Dear Mr. Robertson:

I am a hydrologist with over twenty years of technical and consulting experience in the fields of geology and hydrology. I have a Master's of Science degree in Geology received from Miami University (Oxford, Ohio) in 1989 and I am a California Professional Geologist and Certified Hydrogeologist. I have been providing professional hydrology services in California since 1991 and routinely manage projects in the areas of surface- and groundwater hydrology, water supply, water quality assessments, water resources management, and geomorphology. Most of my work is located in the Coast Range watersheds of California, including the Northern San Francisco Bay Counties. My areas of expertise include: characterizing and modeling watershed-scale hydrologic and geomorphic processes; evaluating surface- and ground-water resources/quality and their interaction; assessing hydrologic, geomorphic, and water quality responses to land-use changes in watersheds and causes of stream channel instability; and designing and implementing field investigations characterizing surface and subsurface hydrologic and water quality conditions. I also teach an annual course on hydrology and geomorphology through the University of California Extension (Berkeley) and provide technical presentations and lectures to public/community and non-profit groups. I co-own and manage the hydrology and engineering consulting firm Kamman Hydrology & Engineering, Inc. in San Rafael, California (established in 1997).

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I have been actively working the Gualala River watershed since 2002 for the Sotoyome RCD, the California Coastal Conservancy and local watershed groups. Projects have included:

- Lead hydrologist/geomorphologist and editor of Gualala Estuary and Lower River Enhancement Plan, 2005 on behalf of RCD and Conservancy.
- Summer baseflow monitoring (2004) on North Fork Gualala River on behalf of Conservancy.
- Comments on Artesa Vineyards THP/TCP Negative Declaration, No. 1-01-171SON (2003).
- Comments on Sleepy Hollow (Martin) THP/TCP Negative Declaration, No. 1-04-059SON and 04-531 (2004).
- Comments on Roessler/Zapar Inc. THP/TCP Negative Declaration, No. 1-04-055SON and 04-533 (2004).
- Comments on Sonoma County Gualala River Revised Mining Standards Negative Declaration, File No. UPE04-0040 (2007).

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16-2

I have reviewed the Fairfax Conversion Project Draft Environmental Impact Report and most of the supporting technical appendices (hereafter referred to in its entirety as DEIR). The focus of my review was to provide a technical assessment on the potential project-induced impacts on water resources and water quality and whether the DEIR adequately assesses potential impacts. Based on my review and technical experience within Sonoma County and the Northern San Francisco Bay area, it is my opinion that the DEIR does not fully or correctly characterize and quantify potential project-induced impacts to water resources and the project still poses potential significant impacts to these and related resources. The rationale supporting my opinions is discussed in the following sections.

1.0 Failure to Evaluate Project Water Availability and Well Pumping Impacts in Accordance with State Law and County Policy

16-3

The DEIR fails to evaluate and address potential significant (cumulative and indirect) impacts to groundwater resources. Water resource investigations for projects in Sonoma County must be performed by properly licensed professionals and must conform to requirements prepared by the California Mining and Geology Board, the California Board of Registration for Geologists and Geophysicists and Sonoma County Permit and Resource Management Department. The following documents establish the minimum requirements for water availability investigations for projects in Sonoma County.

1. Guidelines for Groundwater Investigation Reports, by the Technical Advisory Committee to the California Board of Registration for Geologists and Geophysicists, adopted April 18, 1998.

2. Procedure for Implementing General Plan Policy Rc-3h, prepared by Sonoma County (Provided as Attachment A).

3. Well Pump Test Guidelines, in Water Scarce Areas, Sonoma County Permit and Resource Management Department Policy and procedure Number 9-2-28, effective July 1, 2005 (Provided as Attachment B)

4. Sonoma County General Plan Policy WR-2e (formerly RC-3h), adopted 2009.

The DEIR and supporting technical appendices fail to follow the required investigative procedures for water availability investigations as specified in the references listed above. For example, the project site is located within a Class 3 groundwater availability classification (water scarce area) pursuant to the Sonoma County General Plan. County Policy WR-2e (formerly Policy RC-3h) states:

> *Require proof of groundwater with a sufficient yield and quality to support proposed uses in Class 3 and 4 water areas. Require test wells or the establishment of community water systems in Class 4 water areas. Test wells may be required in Class 3 areas. Deny discretionary applications in Class 3 and 4 areas unless a hydrogeologic report establishes that groundwater quality and quantity are adequate and will not be adversely impacted by the cumulative amount of development and uses allowed in the area, so that the proposed use will not cause or exacerbate an overdraft condition in a groundwater*

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basin or subbasin. Procedures for proving adequate groundwater should consider groundwater overdraft, land subsidence, saltwater intrusion, and the expense of such study in relation to the water needs of the project.

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The DEIR and technical studies fail to satisfy the hydrogeologic analysis and report requirements stipulated above and, in turn, have failed to evaluate potential significant impacts on groundwater resources. For example, reports do not document attempts to learn of well failures on unsuccessful attempt to develop water in the impact area. It does not appear that well drillers were contacted for groundwater information. Nor were local property owners asked about important well information (apart from location) such as depth, yield and water levels. A water balance is not provided pursuant to standard practice detailed in reference 1. above. The DEIR does not discuss current or projected (cumulative) quantities of groundwater pumped. No aquifer storage capacity is calculated, nor is there any discussion of aquifer tests. These documents fail to evaluate if project well pumping will interfere with surrounding wells or significantly deplete existing groundwater resources. In short, my review indicates that potential significant impacts from groundwater pumping and altered hydrology have not been evaluated in accordance with State laws, County policy or to the standards of care that govern the practice of geology and hydrogeology in State of California.

2.0 Acknowledged Failure to Evaluate Impacts within Entire Project Area

16-4

The DEIR fails to complete a sediment impact assessment or water budget assessment in project subareas that drain to Grasshopper or Little Creek. The DEIR authors assume that impacts in these areas, if any, would be insignificant. Failure to complete the analysis clearly indicates that potential significant impacts have not been evaluated and the DEIR is incomplete. It is important to also note that one of these unaddressed subareas will be where the "corporation yard" and groundwater well will be constructed – the details of which are both very sparse within the DEIR.

3.0 Project Violates Sonoma County Drainage and Stormwater Management Ordinance

16-5

As stated in the DEIR, Chapter 11 of the Sonoma County Code regulates all acts that obstruct or diminish free flow of floodwaters in channels or waterways within the county (Ordinance No. 4803 § 1 and 1994: Ord. No. 1108 § 15). A permit for any of the following acts is required: (a) Impair or impede or obstruct the natural flow of storm waters or other water running in a defined channel, natural or man-made, or cause or permit the obstruction of any such channel.

16-6

The DEIR is inaccurate in the assessment that the project will not impact Patchett Creek. The DEIR clearly states that the project will, "eliminate runoff to a 1,200-ft reach of Class III channel south of the proposed reservoir site" and "the reservoir collection system would also largely eliminate storm runoff delivered to two large gullies" (pg. 3.4-142). The potential significant impacts on existing ecological conditions in affected reaches are not addressed.

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4.0 Increases in Peak Flow Runoff Pose a Significant Threat to Downstream Channel Erosion

16-7 The presentation and discussion of estimated project-induced increases in peak flows from the site is confusing and inconsistent from chapter to chapter. In some places, increases in peak flows are characterized as ranging from 2- to 5-percent (pg. 3.4-13 and 3.4-144), but these increases are representative of two off-site locations over 4800-feet downstream of the project boundary, where the DEIR acknowledges project impacts are muted due to accretionary flow contributions from the intervening drainage area. Peak flow increases for the 2-year storm for on-site subbasins are reported to range from 0- to 32-percent (pg. 3.7-62), with an aggregate increase from 7- to 10-perent, depending on the water level in the project reservoir. The DEIR water supply analysis indicates an 11-percent annual average increase in runoff (pg. 3.7-48). The DEIR also cites peak 2-year storm runoff increases observed at the Casper Creek watershed that ranged from 9- to 27-percent during wet antecedent conditions (under 50-perent to full harvest, respectively) and from 23- to 60-percent during dry antecedent soil moisture conditions. It's clear from this wide range of values, the project proponents don't really know what to expect in terms of peak flow increases.

16-8 The conclusion that project induced increases in peak flow on the order of 10-perent won't pose a real and potential threat of increased erosion in receiving channels is reckless and irresponsible. One needs to look no farther than the "extensive gullying" on the project site that developed in low gradient conditions in response to historic land-use and hydrologic changes. As a professional and experienced hydrologist, it is my opinion that the stated potential project-induced increase in peak flows imparts a potential significant impact to downstream receiving waters. Given the wide range of estimated potential peak flow increases and inherent uncertainty in the estimate, it would be prudent to assume a conservative analysis and anticipate the maximum estimated peak flow increases will lead to a potential significant impact. Albeit there are no current regulations limiting project-induced increases in peak flow runoff, it is accepted in the scientific community that even small incremental and associated incremental increases in storm runoff have caused and will continue to exacerbate erosion and sediment production in the Gualala River watershed. Although Sonoma County and the North Coast RWCB haven't developed hydrograph modification or hydromodification management plans or policies, the current professional standards for hydromodification[1] management plans (e.g., Alameda and Santa Clara Counties) stipulate no net increase in flood flow magnitude between pre- and post-project conditions.

5.0 Incomplete Project-Induced Erosion and Sedimentation Impact Assessments

16-9 The DEIR sediment yield assessments bias upland soil loss sources and don't completely account for potential increased erosion to downstream receiving channels (i.e. sediment contributions from channel erosion) in association with the increase in peak storm runoff magnitudes discussed above. The sediment yield analysis does not incorporate increases in sediment concentration associated with increased erosion potential of channels receiving project runoff and located immediately off-site and therefore underestimates

[1] Hydromodification is a change to the storm water runoff characteristics of a watershed caused by a change in land use.

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total sediment yield delivered to downstream Class I streams. At best the DEIR assessment provides a qualitative assessment of downstream channel erosion which assumes channels will have a low to moderate sensitivity to erosion (pg. 3.7-66). However, no attempt to quantify or account for the project-induced increase in erosion or sediment yield from downstream receiving channels are captured in the sediment yield totals provided in the DEIR, which indicates a post-project decrease in sediment yield. Again, this is not a conservative assessment and provides an overly-optimistic future condition. In the absence of adequate hydrologic or geomorphic analyses, it is most responsible that findings regarding potential significant impacts be based on worst case assumptions.

16-10

Due to uncertainty in predicted channel response to increased peak flows, mitigation for potential future channel erosion impacts consists of a monitoring and adaptive management plan. Unfortunately, this plan only proposes to monitor on-site channel reaches over a limited period. The most likely places for project-induced accelerated channel erosion (significant impact) will occur to channels immediately off-site, receiving increased peak flows. Therefore, the monitoring plan needs to address these already erosion prone reaches and include mitigation measures for impacts. The plan should also stipulate and define thresholds of disturbance that will trigger erosion mitigation measures for on- and off-site reaches. If mitigation of erosion problems is precluded or not feasible due to property boundary, access and/or setback, the project is not feasible.

16-11

Post-construction monitoring is only stipulated to occur for the first year after project construction – but the DEIR fails to address how the plan will be implemented in response to project phasing. The channel monitoring plan is proposed for only three (3) years after project construction. Typically, the RWQCB requires a minimum of five (5) years of post-project geomorphic and sediment monitoring and my firm is currently involved in a project requiring twenty (20) years of monitoring. The rationale for a longer monitoring period is that significant peak flows may not occur over a 3-year period and would be missed by a 3-year monitoring program. For the Fairfax Conversion project, there is the question of how sustainable are the sediment reduction effects from the creation of on-site sediment detention basins. Once these basins are filled (a process that may require greater than 3-years), sediment will pass through them, increasing the potential for significant impacts (over time) to downstream reaches. A three year monitoring program likely won't capture these changes. This also raises the question of what is the long-term maintenance plan for sediment detention basins - will they be cleaned out on a routine basis? Who is responsible for ensuring their continued function and effectiveness? The DEIR should address these questions and should stipulate a longer, clearer and more concise monitoring and maintenance plan for on- and off-site sediment yield reduction measures.

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6.0 Lack of Water Budget Assessment in Accord with Standard Methods

The DEIR does not provide a comprehensive water budget assessment per standard methods outlined under reference 1. above. Instead, the DEIR relies on simplified assumptions and comparisons to empirical data from a stated similar watershed. As a result, the potential significant impacts to groundwater and summer baseflow have not been evaluated. The DEIR states that the Casper Creek watershed is a valid comparison to the Fairfax Conversion site due to, "similar climate, soil and geology" (pg 3.7-28). However, the O'Connor Hydrologic analysis (Appendix M) states "There are some differences in geology, soils, topography and vegetation".

Regardless of the degree of similarities in watershed characteristics, every project site is unique and warrants an independent impact assessment pursuant to the mandated water budget methods taught to licensed geologic professionals in the State of California. Although the DEIR presents a lot of data and comparison between the Casper Creek and Patchett Creek watersheds under the heading of "Water Budget Analysis", a quantified water budget assessment pursuant to state guidelines has not been completed.

16-12

A water budget is needed to evaluate potential significant impacts to groundwater recharge, aquifer storage capacity, groundwater overdraft, impacts to surrounding wells and potential changes in summer baseflows. The DEIR addresses only average water year-type conditions. A thorough and proper water budget feasibility assessment should include an evaluation of dry, average and wet year-types in order to evaluate potential long-term impacts on irrigation water availability, groundwater recharge and summer base-flows. What happens to the project if there is a prolonged drought and no water available for irrigation? What if there is a hard frost and a need for frost protection arises? A water budget is the standard approach to quantify potential significant impacts to groundwater recharge and aquifer storage. Other important variables/processes that the DEIR fails to quantitatively address (these also reflect significant differences between the Fairfax Conversion and Casper Creek water budgets) are irrigation efficiency and installation of a subsurface drainage system. The DEIR indicates a project irrigation efficiency of 95-percent, meaning 95-percent of irrigation is consumptively used leaving only 5-perent to groundwater recharge or ET. The DEIR also implies that vineyard water demand will be greatest during the first three years of vine establishment, but on page 3.7-52, the DEIR states that the short-term vine establishment demand (100-gallons/vine) is the same as the long-term, dry-farming vineyard demand. This means that irrigation demands won't be reduced with time as implied in the document.

16-13

The DEIR also does not include an assessment of potential impacts from soil dewatering and reduced groundwater recharge associated with the "extensive drainage system" proposed for the project. The geotechnical investigation report (Appendix K) indicates that shallow groundwater was encountered within 2- to 3.5-feet of the ground surface in test pits and borings completed at the proposed reservoir and sump sites. The report also indicates that a subdrain system will be installed to dewater saturated soil under compacted soil or synthetic liners (i.e. area under reservoir). Designs provided in the report indicate that these drains will be installed to a minimum depth of 3-feet, and will effectively dewater the shallow groundwater system in this important aquifer recharge area. This poses a potential significant impact by reducing groundwater recharge as well as increasing surface drainage and erosion potential to receiving creeks. Again, two potential impacts the DEIR does not address.

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7.0 Unclear Use and Impacts from Groundwater Withdrawals

The DEIR is inconsistent in the stated uses of water that will be pumped from the proposed project well. On page 3.7-16 it is stated that the water will be used for drinking. On another page, the well water is stipulated for "washing and other incidental uses (pg. 3.7-48). The DEIR does not present an acceptable analysis of potential impacts from groundwater pumping on local groundwater supplies. Groundwater overdraft is a real, if not existing, concern in the Ohlson Ranch Formation Highlands Groundwater Basin. The geologic and land-use setting of the Ohlson Ranch Formation is strikingly similar to the coastal Wilson Grove Formation located further south along the Sonoma Coast. Sonoma County has completed a pilot groundwater study[2] in the 9-mile square Joy Road Study Area overlying the Wilson Grove Formation (located west of Occidental) in an effort to address severe groundwater overdraft that has occurred due to residential and vineyard growth. The Annapolis area and underlying Ohlson Ranch aquifer are currently undergoing very similar growth and increased water demands - conditions that have led to the severe groundwater overdraft in the Joy Road Study Area.

16-15

Beneficial uses of groundwater in the basin not only arise out of human uses, but there are several spring/seep outfalls along the contact between the Ohlson Ranch and Franciscan Formations that supply water to receiving channels and support riparian vegetation and wildlife. The DEIR fails to evaluate how groundwater withdrawals will impact these ecological beneficial uses of groundwater.

16-16

8.0 No Cumulative Impact Assessment to Hydrology and Water Quality

The DEIR presents no impact assessment of cumulative existing and future hydrologic changes associated with other projects within the basin. The 2020 General Plan states that new vineyard development alone will increase over 124% along the Sonoma Coast by 2020 and favorable geologic and meteorologic conditions target the Annapolis area for this development. The DEIR simply presents a computation and argument that the project-induced increase in peak flow is very small and, by itself, won't lead to a significant downstream impact. There is no effort to characterize or quantify how the project impacts will affect the basin in combination with other increases in peak flow and water demands associated with other basin projects (e.g., housing, vineyard, roads, and forestry). The DEIR does not quantify project-specific impacts related to aquifer pumping and changes in local groundwater conditions and how, if any, well pumping will impact adjacent land-owners who also rely on groundwater supplies for domestic use.

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16-18

In closing, it's my professional opinion that the potential significant impacts to water resources in association with the Fairfax Conversion Project have not been adequately or fully assessed and there is a real potential for project-induced significant impacts to water resources. One of my greatest concerns is the significant erosion potential and unquantified sediment yields from downstream channels receiving project-induced increased runoff from the site to an already sediment impaired watershed. Another concern is increased demand on a limited groundwater supply, with excessive withdrawals leading to overdraft (annual withdrawals exceeding annual supply). Until these potential impacts are assessed, I recommend that the CAL FIRE not approve the project THP or ratify the EIR as complete.

16-19

16-20

[2] Kleinfelder, 2003, Pilot study of groundwater conditions in the Joy Road, Mark West Springs, and Bennett Valley Areas of Sonoma County, California. Prepared for Sonoma County Permit Resource Management Department, September, 46p.

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If you have any questions or concerns, please call me.

Sincerely,

Greg Kamman, P.G., R.HG.
Principal Hydrologist

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PROCEDURE FOR IMPLEMENTING GENERAL PLAN POLICY RC-3h

Policy RC-3h:

Require proof of adequate groundwater in Class III and IV water areas. Require test wells or the establishment of community water systems in Class IV water areas. Test wells may be required in Class III water areas. Deny discretionary applications unless a geologic report establishes that groundwater supplies are adequate and will not be adversely impacted by the cumulative amount of additional development. (page 217, Sonoma County General Plan)

Implementation Procedure:

1. This procedure applies to **discretionary** (e.g., subdivisions, use permits) and **not to ministerial** (e.g., building permits, septic system permits) projects.

2. The official maps for determining whether a site is in a Class I, II, III, or IV groundwater availability area are those in the General Plan Resource Conservation Element.

3. The requirements of the fourth sentence in RC-3h are: 1) adequate on-site groundwater supplies must be available for a proposed use, and, 2) the current and future usage of groundwater supplies in the project area will not likely affect or be affected by the project.

4. Evidence that the requirements of #2 above have been met must be provided to the decision-making body **prior to** its discretionary decision. To meet this requirement, a geologic report (see 6c. below) shall be prepared prior to the public hearing on the project. Test wells may be a **condition** of project approval in Class III water availability areas if there are substantial questions as to the availability of groundwater by the geologist's report. Test wells are required in Zone IV water areas by Sections 7-12 and 25-179 of the Sonoma County Code.

5. The determination whether or not cumulative impacts have been adequately addressed in the geologic report will be based upon joint review by the Registered Environmental Health Specialist, (REHS) who responds to the project referral and the Planner, as part of preparing the project's Initial Study. If cumulative impacts of the mutually agreed upon impact area (see 6c.2) below) are not adequately addressed, the project would be inconsistent with the General Plan.

6. The procedure which is to be utilized for discretionary projects is similar to the Expanded Initial Study process presently in use for addressing geologic, noise, archaeology and other technical issues. This procedure is as follows:

   a. Initial Study will identify whether the project site is in a Class III or IV area;

   b. In most cases, the REHS referral will review the need for preparation of a geologic report to provide the information necessary to determine that there are adequate existing and future groundwater supplies both on-site and in the impact area. In some cases, staff may be able to make these findings using existing data on file, in which case a new geologic report will not be necessary;

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c. The geologic report will meet the following guidelines:

1) The geologic report must be prepared by a registered geologist, a certified engineering geologist, or a certified hydrogeologist with expertise in groundwater geology;
2) The geologist preparing the geologic report will identify a cumulative impact area mutually agreed upon through reliance on his or her own expertise and on consultation with the REHS and the project Planner;
3) The report must identify and assess the geologic formations within the impact area;
4) The report must discuss the known well depth and yields and discuss any history of known well failures or unsuccessful attempts to develop water in the impact area;
5) The report must thoroughly reveal the level of effort expended in identifying existing and abandoned wells within the impact area. This may include review of records, interviews with well drillers and interviews with impact area property owners;
6) The report must discuss and project the continued availability of groundwater, including comments on recharge balance/rate and storage capacity within the impact area during drought conditions;
7) The report must come to a conclusion that is clearly stated in the report as to the on-site water availability and the effects of drawdown on surrounding water availability.

d. If a geologic report is also required to address other issues (e.g., soil stability and stability of septic system areas), the applicant may wish to combine the studies into a single report.

e. In general, the type of development which will be considered in the cumulative scenario will be residential, commercial, industrial and similar development. The Planner will provide the likely future development scenario within the impact area, based upon General Plan residential densities, zoning designations, existing uses and reasonably foreseeable projects. Agricultural water needs would also be considered where agricultural uses are present in the subject area. Water needs for fishery and wildlife habitat are generally not relevant to this portion of the Initial Study. The latter are instead addressed under plant and/or animal impacts rather than under water supply impacts.

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Permit and Resource Management Department
POLICY AND PROCEDURE **Number 9-2-28**

Well Pump Test Guidelines in Water Scarce Areas

PURPOSE

These Guidelines will apply to well pump tests performed for the purpose of demonstrating compliance with minimum water quantity requirements of the Sonoma County Code for residential construction in water scarce areas or second dwelling units in marginal water availability areas of Sonoma County.

GENERAL

Pump tests conducted on or after the effective date of this policy will remain valid for a period of 3 years or as long as aquifer conditions remain substantially the same as established by a Registered Geologist or Registered Civil Engineer. [Grandfather clause: Pump tests accepted by the County prior to this Policy's initial implementation date of 06-08-04 will remain valid for 3 years from the date of the test.]

AUTHORITY

Sections 7-12, 25-17, 25-56 and 26-88-060H of the Sonoma County Code.

DEFINITIONS

"Discharge rate" means the rate at which the well discharges water (usually expressed in gallons per minute).
"Draw down" means the difference measured in feet between the static and dynamic water levels.
"Dynamic water level or stabilized pumping level" means the level of water in the well during the pump test.
"Post-test static water level" means the level of water seventy-two hours after the pump test.
"Recovery" means the difference in feet between the post test static water level and the pumping level (dynamic water level)
"Specific capacity" means the discharge rate divided by the draw down (usually expressed as gallons per minute per foot of draw down).
"Static water level" means the level of water in the well before the pump test.

PROCEDURE

A. Pump Test Requirements

1. General Conditions

   The Sonoma County Code requires demonstration of at least one gallon per minute per dwelling unit for new or replacement dwellings located in water scarce areas and for second dwelling units in marginal water availability areas. The code specifies a sustained

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yield, metered pump test from a well or wells for a specified time period of 8-12 hours for water systems with 1-2 connections, 16-24 hours for water systems with 3-4 connections and 72 hours for systems with 5 or more connections. The 72 hour test may be modified by the administrative authority but in no case shall be less than 48 hours. Note: Also refer to Section 64563 of the California Code of Regulations for systems with 5 or more connections.

Testing to meet the above yield requirements shall be conducted from July 15 to October 1 each year or as extended by the Project Review and Advisory Committee. This time period is referred to as the dry weather pump test period. The Permit and Resource Management Department shall be notified 24 hours in advance of any testing. Pump tests may be performed by or under the direction of a licensed drilling contractor (C57), pumping contractor (C61/D21), a Registered Civil Engineer or a Registered Geologist.

2. A copy of the previously completed State of California Department of Water Resources Well Completion Report, if available, shall be submitted with the completed Permit and Resource Management Department's form, Certification of Water Yield in Water Scarce Areas - WLS-010.

3. If multiple wells are being used to meet the minimum water production requirements, then all wells must be pumped simultaneously.

B. Pre-Test Requirements

1. Identify the location of the well, by either the NAD83 California State Plane II or WGS 84 lat./long. or by the measured distance reference to a fixed landmark. Record this information on the WLS-010 form. Include the estimated elevation of the well head.

2. Measure and record the static (non-pumping) water level in the well. If well is operational, so note on the WLS-010 form. Provide information on measuring points (top of casing, surface seal, access port, etc.) Measurements should be taken relative to ground level. The measuring point above ground level should be measured and noted on the WLS-010 form. In order to establish the static level, the well must not be pumped for at least 12 hours prior to measurement of the static water level.

3. Record the type of discharge measurement method. Indicate the type and model of flow meter or provide an accurate description of weir or orifice plate set up.

C. Twelve-Hour Pump Test Method

1. Record the static level.

2. Calculate the volume of water stored in the well.

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3. Remove a volume of water equivalent to the calculated volume stored in the well.

4. Select a dynamic water level for the test. Lower the water level to the selected dynamic water level as quickly as possible. Maintain the dynamic water level for the duration of the test by adjusting the discharge rate. Pump at a rate of no less than one gallon per minute and continue pumping for twelve hours.

5. If it is not feasible to use a water level sensing device (probe), a stable pumping rate must be maintained for a period of 3 hours prior to the start of the sustained yield test. This condition may require pulling the pump to determine the static water level prior to conducting the test, reinstalling the pump to conduct the test, and pulling the pump again to read the 72 hour recovery.

6. If a low water yield pump protector device is used and the dynamic water level is not established above the pump setting, the dynamic water level will be assumed to be at the pump.

7. Record the dynamic water level and discharge rate according to the following schedule:

Time since pumping began (including pumping to remove stored volume)	**Time Interval**
0-5 minutes	1 minute
5-60 minutes	5 minutes
60-100 minutes	20 minutes
100 minutes to establish the dynamic water level	30 minutes

Once the stabilized dynamic water level has been reached for a minimum period of 3 hours, the water level must be read a minimum of every 12 hours to the end of the test.

8. At the end of the pumping test, measure, and record the final discharge rate and dynamic water level.

D. Alternative Eight-Hour Pump Test Method

1. An alternative eight-hour pump test method can be used instead of the twelve-hour pump test method for systems of 1 or 2 connections if, after 4 hours of pumping, the specific capacity is greater than 0.05. While conducting the alternative eight-hour pump test the dynamic water level and discharge rate are to be recorded in accordance with the time intervals specified in Section C above.

E. Alternative Sixteen-Hour Pump Test Method

1. An alternative sixteen-hour pump test method can be used instead of the twenty-four hour

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pump test method for systems of 3 or 4 connections if, after 4 hours of pumping, the specific capacity is greater than 0.05. While conducting the alternative sixteen-hour pump test the dynamic water level and discharge rate are to be recorded in accordance with the time intervals specified in Section C above.

F. Post Test Measurement

1. Measure and record the static level in the well seventy-two (72) hours after the final dynamic water level measurement.

G. Calculate the Well Recovery

1. Determine the water level draw down by subtracting the initial static water level measurement from the stabilized dynamic pumping level. Record this result as the well draw down.

2. Next determine the water level recovery by subtracting the post test (72 hour) static water level from the stabilized dynamic pumping level. Record this result as the well recovery.

3. Next determine the percent recovery of the well. Divide the water level recovery by the water level draw down and multiply by 100. Record this result as the percent well recovery.

   Example:

   a. Initial static water level:_____(Measured value)

   b. *Post test static water level:_____(Measured value)

   c. **Stabilized Pumping level:_____(Measured value)

   d. Draw down:_____(Calculate by subtracting A from C)

   e. Recovery:_____(Calculate by subtracting B from C)

   f. Percent recovery:_____(Calculate by dividing E by D and multiplying the results by 100)

   Well percent recovery (F) must be 90% or greater within a 72 hour period.

* The static water level after 72 hours or less post pump test.
** Kleinfelder refers to this as the dynamic pumping level.

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Permit and Resource Management Department
POLICY AND PROCEDURE **Number 9-2-28**

ATTACHMENTS

None

Approved by:

/s/ Pete Parkinson

Pete Parkinson, Director

Lead Author: Kleinfelder Associates

Revisions:
06-08-04 03/25/05
07-13-04
09-02-04

☐ Intranet ☒ Intranet and Internet

LETTER 16: GREG KAMMAN – KAMMAN HYDROLOGY

Response to Comment 16-1

The commenter lists his qualifications and does not address the adequacy of the DEIR.

Response to Comment 16-2

The comment is an introductory paragraph and does not specifically address the adequacy of the DEIR. See the below responses to specific comments.

Response to Comment 16-3

Please see Response to Comment 10-45.

Response to Comment 16-4

The commenter asserts that potential sediment and hydrologic impacts have not been fully evaluated for portions of the project area lying outside the Patchett Creek drainage. These portions of the project area are fully analyzed at the site scale as described in the hydrologic assessment (DEIR Appendix M) and the erosion assessment (DEIR Appendix N). In Appendix M of the DEIR, these areas are shown in Figure 6 (p.25). The hydrologic evaluation for these areas is summarized in Appendix M, Table 6 (p.30). These areas are referred to as sub-basins N1 (comprising 23 acres draining to an unnamed tributary of the Wheatfield Fork lying to the west of Patchett Creek), N7 and N62 (comprising 41.9 acres and 9.5 acres, respectively, and draining to Grasshopper Creek to the north of Patchett Creek). These areas are also separated and analyzed in the erosion analysis (Appendix N, Tables 2, 4 and 5, p. 6-10). These analyses show that potential project impacts on the portions of the project area lying within the Grasshopper Creek watershed and the unnamed Wheatfield Fork tributary are comparable to those expected in the Patchett Creek drainage.

Watershed-scale effects of the project were evaluated for Patchett Creek because almost all of the project area is located in that watershed -- 124 acres of the approximate 160 gross vineyard acres are located in Patchett Creek. This represents 11 percent of the 1,124-acre Patchett Creek watershed. In contrast, project gross vineyard acres in the unnamed tributary of the Wheatfield Fork and Grasshopper Creek are 14 and 22 acres, respectively. The unnamed tributary has an area of 525 acres, while Grasshopper Creek has a drainage area of 1,952 acres. Proposed project vineyard acreage represents 2.7 and 1.1 percent of these drainages, respectively. The analysis of potential project impacts at the watershed scale in Patchett Creek, where 11 percent of the drainage area is to be developed, concluded that impacts would be less than significant. Potential watershed-scale project impacts on the unnamed tributary of the Wheatfield Fork and Grasshopper Creek are mitigated by the same vineyard erosion control measures, including sedimentation basins. Three sedimentation basins are proposed in the Grasshopper Creek drainage and two are proposed in the unnamed tributary of the Wheatfield Fork.

Based on the small proportion of project vineyard acreage contributing to these two watersheds (2.7% in the unnamed Wheatfield Fork tributary and 1.1% in Grasshopper Creek), the low level of watershed scale impacts in Patchett Creek, where 11% of the watershed area would be project vineyard, and the application of the same erosion control measures proposed for the project (DEIR p. 1-50 to 1-66), it was concluded that watershed scale impacts in the other two watersheds would not be significant. Furthermore, post-project monitoring for hydrologic and erosion effects include one channel in the Grasshopper Creek watershed as well as monitoring of 25% of the sedimentation basins.

The portion of the project area that will be utilized as the "corporation yard" is located in the Patchett Creek drainage, and therefore does not contribute any additional level of uncertainty on potential project impacts on Grasshopper Creek or the unnamed tributary.

Response to Comment 16-5

Please see Response to Comment 10-56.

Response to Comment 16-6

The proposed reservoir on the project site is designed to capture stormwater runoff from the surrounding watershed in the winter. The affected watershed consists of 39 acres, or 12 percent of the 324-acre project site. The remaining 88 percent of the project site would continue to drain to Patchett Creek without a storage element. The reservoir would fill during storm events collecting water at a time when storm water is abundant and flows in local creeks and downstream rivers are at their highest. Once the reservoir is filled, water would overtop the spillway into the Class III tributary and then into Patchett Creek. The reservoir is expected to fill and spill between January and March, depending on rainfall. The reservoir would reduce downstream flows during typically high flow periods and would not eliminate flows along the Class III channel, nor significantly dewater Patchett Creek. In addition, as further discussed in Chapter 3.7 of the DEIR, the change in land use is anticipated to result in an increase in runoff as compared to existing conditions. Therefore, runoff captured by the reservoir would be offset by increased runoff resulting from development of the proposed vineyard.

Response to Comment 16-7

The comment cites various specific estimates of peak flow change representing potential project effects at different locations and under different conditions. However, the comment mistakenly concludes that the DEIR analysis is inconsistent regarding the expected magnitude of peak flow change. The commenter appears to have misread or misinterpreted the comprehensive analysis of potential changes in peak runoff, conducted using multiple methods and models as appropriate to evaluate potential changes at different watershed scales. The DEIR presents a detailed analysis of expected peak flow change, and provides estimated magnitude of change for a 15-minute duration, two year recurrence interval storm event for all channels draining from the project area (summarized in Table 6, DEIR Appendix M). Appendix M provides a review of relevant watershed research as Caspar Creek, cited by the comment. In addition, the DEIR includes an

analysis of potential peak flow impacts for larger watershed areas as summarized in Figure 3.7-8 and detailed in Appendix O.

Response to Comment 16-8

The commenter advocates that management of hydrologic changes should stipulate no net increase in flood flow magnitude between pre- and post-project conditions, while acknowledging that neither the County of Sonoma nor the North Coast Regional Water Quality Control Board require this in drainage management plans. The expected changes in peak flows and the hydrologic processes involved were evaluated and disclosed in the DEIR. The commenter's concern about potential peak flow increases is motivated by potential erosion in channels that could occur. The DEIR has quantified potential peak flow changes and evaluated resulting erosion potential, including a monitoring plan addressing potential channel erosion at the Project site as described below.

As stated on page 4-22 of Chapter 4, *Cumulative Impacts,* of the DEIR, as revised in this Final EIR (see Section 4, *Cumulative Impacts*, of Chapter 2, *Revisions to the DEIR Text*, of this Final EIR for the revisions made to this section of the DEIR and the reasons describing the need for such revisions), the proposed project is estimated to decrease sedimentation by 24 to 39 tons/yr.

> The project's long-term sediment contribution is projected to be less than existing levels. Specifically, as discussed in Chapter 3.7, Hydrology and Water Quality, upon implementation of the project sedimentation is estimated to decrease by 24 to 39 tons/yr. Other projects would also be required to implement BMPs; however, the efficacy of the measures implemented on other projects cannot be assured. Furthermore, additional sedimentation from construction is likely to occur. The effects of the proposed project, in combination with similar effects generated by other timber conversion and/or vineyard projects in the area, would be considered significant. However, as the proposed project would result in an estimated net decrease in sedimentation over time, the proposed project's incremental contribution to the significant cumulative impact would not be cumulatively considerable. As a result, with the project's BMPs and implementation of Mitigation Measures 3.7-2 (a-i) and 3.7-3 (a, b) required in the Hydrology and Water Quality chapter of the DEIR, the proposed project would have a ***less-than-significant*** cumulative impact.

The proposed project has been designed with state of the art Best Management Practices (BMPs) that will significantly control both project erosion and mobile sediment contribution to downstream environments. For example, project sedimentation basins as designed are predicted to reduce sediment yield by 50 percent, primarily by capturing sand and fine gravel greater than 0.1 mm diameter. Finer suspended sediment that passes through the sediment basins is relatively mobile in energetic stream systems such as Patchett Creek. Most of the sediment from the project site, following treatment in sedimentation basins, is expected to remain in the water column as the sediment is transported through Patchett Creek with relatively little deposition. As shown in Table 3.7-20 of the DEIR, the sedimentation basins (and the reservoir collection system) reduce the predicted increase in sediment yield of about 5 to 7 t/yr to a net decrease of about 8 to 13 t/yr. There is an estimated net decrease at the project area boundary draining to Patchett Creek of approximately 10 to 13 percent. Additional reductions in sediment yield by erosion mitigation

designed to repair and control gully erosion at five sites in the project area is expected to reduce erosion rates by at least 16 t/yr (low range estimates) to 27 t/yr (high range estimates). These estimated sediment savings result in net decreases in sediment yield under project conditions of 24 to 39 t/yr.

The DEIR identifies specific mitigation measures to avoid and/or minimize impacts to water quality and quantity. For example, in addition to the requirement for all timber harvesting activities on the project site, including harvest-associated road construction and maintenance, to comply with California Forest Practice Rules water quality protection measures, as described in the Timber Harvest Plan prepared for the proposed project and approved by the Department of Forestry and Fire Protection (cf. MM 3.7-2(a)), the DEIR requires the project applicant to implement a detailed Post-construction Monitoring Plan that is intended to supplement the project ECP and SWPPP for the first winter season after project construction (cf. MM 3.7-2(i)). This monitoring plan shall be implemented for areas where site preparation has occurred in the prior construction season, including soil preparation, grading and drainage installation. The first-year post-construction monitoring requirement is fulfilled if the monitoring period follows all grading and drainage work, regardless of whether vineyard planting and cover crops have been established. If site preparation work is conducted, but final grading and drainage installation is not complete, this monitoring plan will extend to the subsequent winter until final grading and drainage work is complete. In addition, per Mitigation Measure 3.7-3(b), the DEIR requires a detailed Channel Erosion and Sedimentation Basin Monitoring Plan to be implemented by the project applicant. As stated in Mitigation Measure 3.7-3(b), there is no substantial evidence that hydrologic change will cause significant erosion in Class III channels draining the project area. Channel response to peak flows is controlled by the size of channels, channel substrate, and the proximity of bedrock and boulder controlled channels downstream. Grant et al. (2008) state that peak flow effects on channel morphology should be confined to stream reaches where channel gradients are less than approximately 0.02 (2 percent) and the streambeds are composed of gravel and finer material.[38] Potential erosion of channels draining the project area is limited to varying degrees by these factors. Furthermore, peak discharge for high-magnitude, low-frequency flows (> 5 yr recurrence interval events) under current conditions indicate that the largest increases in peak flows (2 yr recurrence interval events) predicted under project conditions would be well within the range of flows transmitted by the existing channels in most locations. Hence, the potential for significant channel erosion related to peak flow change is limited by several factors.

Given the relatively high variability and complexity of hydrologic and geomorphic processes, channel response to identified potential peak flow increases is somewhat uncertain. While the predictable potential effects of the project with mitigation are not significant, unpredictable events or unexpected responses could have substantial impacts. Consequently, a monitoring program is presented in this mitigation measure. The objective of the monitoring plan is to observe and document erosion response, if any, of Class III channels draining the project area and verify that the magnitude of response does not rise to a significant level. No net increase in

[38] Grant, G.E., S.L. Lewis, F.J. Swanson, J.H. Cissel, J.J. McDonnell. 2008. *Effects of forest practices on peak flows and consequent channel response: a state-of-science report for western Oregon and Washington*. Gen. Tech. Rep. PNW-GTR-760. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 76 p.

sediment yield from the project area is an environmental objective of the project. Central to the monitoring plan is the concept of adaptive management (See more discussion on this in the "Adaptive Management" section below). If monitoring data indicate that sediment yields from the project area are greater than predicted in the pre-project analyses, either from unexpected erosion of Class III channels or higher-than expected delivery rates of sediment eroded from vineyard fields, appropriate on- and off-site erosion mitigation will be developed with oversight by CAL FIRE or an alternative regulatory authority designated by CAL FIRE.

As explained above, the Erosion Analysis concluded that the project (with BMPs) is expected to reduce sediment yields by 24 to 39 t/yr. The specific objective of this monitoring plan is to determine whether potential increases in sediment yield associated with accelerated channel erosion are less than 24 to 39 t/yr. In addition, the performance of sedimentation basins will be monitored to provide measurements of vineyard field erosion and sedimentation basin trapping efficiency. These measurements are warranted because they could lead to revisions of predicted vineyard field erosion, which could either increase or decrease the threshold of significance of channel erosion. The monitoring plan has three components:

7. Detailed topographic surveys of selected channels;
8. Annual survey of erosion of "sensitive" channels; and
9. Survey of selected sedimentation basins.

Topographic Surveys of Selected Class III Channel Reaches

This element of the monitoring plan would include detailed topographic surveys using a total survey station to measure changes in channel elevation for sample sections of selected Class III stream channels. This study approach has been previously implemented by O'Connor Environmental for Class III streams in Humboldt County to fulfill monitoring requirements of the Pacific Lumber Company Habitat Conservation Plan. The strength of this approach is that it develops accurate, objective quantitative data documenting the dimensions and elevation of channels before the project and three years after project completion. This will provide statistical measures (using parametric techniques), of channel erosion rates that can be extrapolated to assess the magnitude of channel erosion in the project area. The study will be designed so that a range of hydrologic change is observed that will indicate whether peak flow change is correlated with channel erosion rate. Specifically, six channels (2, 20, 31, 40, 45B and 60A; see Hydrologic Analysis, Figure 6, for locations of these channels, and Table 6 for the magnitude of expected peak flow change) would be monitored to determine erosion rates over a 3-year period.

Annual Surveys of Class III Channels

This annual survey would be conducted for the 18 channels considered to be moderately sensitive to peak flow (Hydrologic Analysis, Table 12). The survey technique to be employed would systematically observe and measure the surface area and depth of fresh channel and bank erosion features as a measure of annual erosion rates. This technique, while objective, requires field estimates that have only moderate levels of precision. The advantage of this approach is that it allows for broad coverage of the monitoring sites and is likely to detect significant changes in the rates of channel and bank erosion. Statistical tests for change would most likely utilize

techniques for non-parametric data. These surveys would be conducted four times: once prior to project implementation to document baseline conditions, and then annually in late winter/early spring when annual erosion features are relatively easy to detect and measure. These annual surveys developed over a broad project area are also important in that they would likely detect unexpected rates of change in a time frame that would allow for timely response, if necessary.

Annual Surveys of Selected Sedimentation Basins

This annual survey would measure the volume of accumulated sediment and the grain size distribution of accumulated sediment in a sample of about 25% of the sedimentation basins in the project. By comparison to grain size distribution of the vineyard soils, the deposited sediment size distribution and volume can be used to estimate the erosion rate of the vineyard fields and the sedimentation basin trapping efficiency (see Reid and Dunne, 1996, Rapid Evaluation of Sediment Budgets, p. 49). The monitoring would be comprised of annual measurements of depth of accumulated sediment in selected basins and collection and laboratory analysis of samples of accumulated sediment. The selection of basins for monitoring would include a range of sediment basin sizes. Data analysis would include comparison of pre-project estimates of vineyard erosion rates and sediment trapping efficiency to measured rates and efficiency.

Adaptive Management

If monitoring data indicate that sediment yields from the project area are greater than predicted in the pre-project analyses, either from unexpected erosion of Class III channels or higher-than expected delivery rates of sediment eroded from vineyard fields, additional on- and off-site erosion mitigation will be developed with oversight by CAL FIRE or an alternative regulatory authority designated by CAL FIRE to ensure compliance with the DEIR's identified performance standards.

On- and off-site erosion mitigation, if deemed necessary and appropriate, may include identification of additional and presently unidentified erosion sites on the project site or on other property in the Patchett Creek watershed. Potential erosion sites could include road-related erosion sites, gullies, eroding stream banks, eroding landslide deposits, or other erosion sites delivering or potentially delivering substantial quantities of sediment to the stream channel network. Off-site projects should be developed in cooperation with any property owner involved, and should include an appropriate level of contribution from each property owner. Disused or informally abandoned logging roads and skid trails are probably the most appropriate type of erosion site to target for off-site mitigation, however, other types of sites should be considered if identified. If suitable or practical sites cannot be located in the Patchett Creek watershed, then sites in the Wheatfield Fork Gualala River watershed should be considered.

Response to Comment 16-9

The comment observes that potential stream channel erosion associated with predicted peak flow increases are not quantified and included in the sediment yield analysis, and asserts that the DEIR underestimates total sediment yield to Class I streams. The comment is correct that an intensive field assessment of geomorphic sensitivity to peak flow increase for each stream

leaving the project site is provided in the DEIR (Appendix M). The comment, however, does not acknowledge the quantitative evaluation of the potential magnitude of channel erosion (Appendix M, pages 55-56, and Appendix N, page 23). The potential rate of channel erosion was estimated to be about 20 t/yr, equivalent to 2.5 percent to 3.7 percent of predicted future sediment yield for Patchett Creek (Appendix N, Table 9). Contrary to the comment, the DEIR analysis considers the most vulnerable portions of the headwater channels whether they are on-site or off-site. Vulnerability of the channels to erosion diminishes with distance from the project site because stream channel typically steepen and enlarge, and become more resistant to erosion owing to higher peak flow capacity that produces channels that are armored by bedrock, boulders and cobbles.

The potential quantity of erosion is not directly included in the sediment yield analysis because of the uncertainty regarding whether erosion would occur. Potential channel erosion is addressed through an intensive monitoring program described in Section 3.7-3 of the DEIR, summarized in Table 1-1 (pages 1-60 through 1-67), and discussed in detail in DEIR Appendix N, pages 22-29.

Response to Comment 16-10

Please see Responses to Comments 16-8 and 16-9.

Response to Comment 16-11

The comment suggests that the duration of the monitoring period for potential channel response to peak flow change is too short to detect potential channel changes. The three year duration of the proposed monitoring program coincides with the Timber Harvest Plan monitoring period administered by CAL FIRE and is believed to be sufficient to evaluate typical potential downstream response to peak flow change. The hydrologist determined that any extension or revision of the monitoring plan would be best considered at the conclusion of the three year period. Should further monitoring work prove warranted, the monitoring plan might be modified and/or refocused at that time based on monitoring findings.

The comment questions whether the proposed sedimentation basins would be maintained. Engineering specifications for the sedimentation basins are as follows:

> Observe regularly and maintain as required to retain initial volumetric and surface area capacities and to ensure satisfactory operation. (Erickson Engineering, Inc., Fairfax Vineyard, Sheet C8)

The post-construction monitoring plan includes annual surveys of 25% of the sedimentation basins at the project site over a three year period for purposes of documenting sedimentation rates as well as efficacy and proper maintenance. Beyond the monitoring period, it would be incumbent on the vineyard managers to maintain sediment basin capacity and function consistent with requirements for all other erosion control measures and Best Management Practices.

Response to Comment 16-12

Please see Responses to Comments 12-5 and 16-3.

Response to Comment 16-13

The comment suggests that the DEIR fails to quantitatively address hydrologic variables or processes such as irrigation efficiency and installation of a subsurface drainage system. The drainage system collects only surface runoff from vineyard fields and does not collect subsurface drainage. Water infiltrating the soil in vineyard fields is anticipated to be more abundant, due to reduced interception losses and evapotranspiration (described in DEIR Section 3.7-6, pages 3.7-81 through 3.7-85, and Appendix M). Consumptive use of irrigation water by grape vines is estimated at 95 percent, reflecting highly efficient water use; such consumptive use of water from the soil occurs under natural forest during the summer drought period. The comment suggests that because of the 95 percent efficiency of irrigation, five percent of the applied water is available for groundwater recharge or evapotranspiration. However, groundwater recharge does not occur during the growing season when irrigation occurs. Irrigation rates under drought conditions would be limited by water availability from the reservoir and are discussed in DEIR Section 3.7-1, pages 3.7-50 through 3.7-53. The comment mistakenly interprets the discussion on page 3.7-52 as an indication that long-term irrigation rates would be the same as irrigation rates during the period of vine establishment.

Response to Comment 16-14

The comment asserts that limited dewatering operations at the reservoir site could significantly reduce groundwater recharge and increase surface water runoff and erosion potential. See Response to Comment 10-50, which includes a supplemental water budget addressing potential groundwater impacts of the project runoff collection system. Dewatering at the reservoir and sump site is irrelevant because the reservoir and sump would intercept precipitation and would be lined to prevent seepage. Areas where recharge would likely be reduced substantially (the reservoir and sump footprint of nine acres, two acres of driveway and roads and one acre of corporation yard) total about 12 acres of the 324-acre site. The 12 acres represents 3.7 percent of the project site and approximately 12 percent of the area underlain by the Ohlson Ranch Formation aquifer. Expected increases in water available for infiltration due to forest conversion may compensate for this reduction in potential groundwater recharge area. As discussed in the DEIR and in the preceding responses, the aquifer areas are down-gradient from existing wells and adjacent properties, and are not expected to have a measureable impact on groundwater availability.

Dewatering at reservoir and construction sites would add surface flow to the streams channels where relatively large reductions in flow are expected to occur, and would therefore not likely result in a significant net increase in surface flow. Likewise, erosion potential associated with any increased surface flow will likely remain less than pre-project flow; hence, no increase in erosion could be expected.

Response to Comment 16-15

The comment reiterates concerns regarding potential excessive groundwater demand associated with the project, including potential increase in demand associated with housing. Housing is not proposed at the project site, and the proposed project reduces potential future domestic use by committing the site to agricultural use and woodland and wetland preserves. See Response to Comment 10-50.

Response to Comment 16-16

The comment asserts concerns that groundwater withdrawals for project use could affect flow from springs and seeps and associated use by riparian vegetation and wildlife. Groundwater use at the project site is minimal, hence no widespread or significant effect on spring and seep flow is anticipated. See Responses to Comments 10-50 and 12-5.

Response to Comment 16-17

Please see Response to Comment 16-8.

Response to Comment 16-18

Please see Responses to Comments 10-50 and 12-5.

Response to Comment 16-19

The comment offers a professional opinion that all potential hydrologic impacts of the project have not been adequately addressed and that there are potentially significant impacts that could result from the project. The foregoing responses to specific comments demonstrate that potentially significant impacts have been addressed in the EIR. The comment further suggests concerns regarding erosion potential in channels downstream from the project that may receive increased runoff. CAL FIRE recognized concerns regarding potential erosion and required extensive and detailed assessment, analysis, and consideration of this issue, including an intensive monitoring plan focused on downstream channel erosion. Further analysis or mitigation is not required.

Response to Comment 16-20

Please see Responses to Comments 16-3 and 10-50.

Letter 17

STARCROSS community
34500 Annapolis Road
Annapolis, California 95412
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community@starcross.org

July 2, 2009

Mr. Allen Robertson, Deputy Chief
California Department of Forestry and Fire Protection
P. O. Box 944246
Sacramento, Ca. 94244-2460

COMMENTS OF ADJOINING PROPERTY OWNER, STARCROSS MONASTIC COMMUNITY, CONCERNING DRAFT EIR TIMBERLAND CONVERSION PERMIT (SCH #2004082094) AND TIMBER HARVESTING PLAN (THP #1-09-058-SON) FOR LAND OWNED BY CODORNIU, AKA "*CODORNIU NAPA*", AKA "*ARTESA*", AKA "*FAIRFAX*", LOCATED IN ANNAPOLIS, COMPRISING APPROXIMATELY 324 ACRES

Dear Mr. Robertson,

It is necessary to challenge your finding that all impacts of this project have been reduced to less-than-significant levels.

17-1 I draw your attention to my letter of September 6, 2004, a copy of which is attached hereto for your convenience. None of the issues presented there were specifically addressed in the DEIR. It would be more accurate to state they were specifically ignored. At no time did any consultants preparing the EIR or representatives of your office set foot on our land or accept the invitation extended on page 2 of the enclosed document in the ensuing 5 years since you were in receipt of my letter.

17-2 At the present time our chief concerns have to do with noise and water. In addition, there have been local changes which elevate the issue of traffic. As the massive project of clear-cutting and stripping the land, earth removal and the like, have been explained to us, we are increasingly concerned about pollutants and other impacts upon the peaceful enjoyment of our property, and the health and well-being of the people living and visiting here.

BACKGROUND

17-3 CODORNIU, the applicant, is one of the largest multi-national wine producers in the world. Their activities began in the 16th century. They have no connection to the Annapolis area, except to make profit from the land in question.

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Cont'd**

PAGE 2 - CODORNIU

Codorniu has vast resources to promote their agribusiness. In contrast, most of our neighbors have, like Starcross Monastic Community (SMC), come here to live out their dreams. A respect for the land has been a part of that process. However, neither we nor our neighbors have the resources to individually protect ourselves against Codorniu's venture. For this we need to look to the government supposedly representing the common good.

And here arises a disturbing situation. The County of Sonoma, since at least 1989, has increasingly become aware of the many local issues arising from timber land use. Timber conversions have generated great public response in the recent Sonoma County General Plan process, prompting new policies, adopted in 2008. But even before that, in 2006, regulations were put down to address the local issues. I do not believe there is any doubt that the plans of Codorniu would receive much more scrutiny if the Permit and Resource Management Department (PRMD) of Sonoma County were the lead agency. The attitude of the California Department of Forestry and Fire Protection (CDF) toward Codorniu lacks the scrutiny provided by PRMD in regard to other large conversion projects being considered at the present time. I am advised that the Codorniu project is among the last conversion projects in Sonoma County to escape the scrutiny of PRMD by being under the umbrella of CDF.

17-3 Cont'd

I have been disappointed by the attitude of your department toward this particular project. I had naively assumed that you would be energetic in your scrutiny of the DEIR. I hear the report referred to as "deeply flawed" and "disingenuous". I can understand how people use such language. For example, one of the experts paid by Codorniu went so far as to point to the vineyards at SMC as evidence that the Codorniu project would fit in to the Annapolis milieu. Starcross has NO vineyards. I would question whether the "expert" or anyone from your office who approved this statement had ever visited here.

In the 2004 scoping meeting, and in the attached letter, SMC raised issues about noise and echoes in this area which can amplify the sound. There was verbal assurance that tests would be conducted to see how various levels of noise would impact our land. The expert of that section (approved by your office) lays out a lot of, what I assume to be, textbook "copy-and-paste" data about defining "noise". Three tests were conducted. The test sites were all curiously far removed from our land. No sound technician ever asked to come on SMC land.

17-4

STARCROSS MONASTIC COMMUNITY has been on our land for 33 years. We are an autonomous monastic community and a place of solace for those seeking healing in body or soul. During this time we have been privileged to assist the larger Northern California community and many individuals, beginning with our response to the AIDS pandemic in 1986. There are specific sacred spaces, such as our chapel and the cemetery, but individuals have made many parts of this peaceful setting a place where they have come to surmount various pains and challenges associated with living in these

Letter 17
Cont'd

PAGE 3 – CODORNIU

17-4 Cont'd

difficult times. At any given moment the spiritual texture of life here will be different. At present it includes 2 members of the community living with cancer, one of our children who was diagnosed HIV+ at birth but escaped that dreadful issue, but who is nonetheless battling related concerns. There are people with asthma and weakened immune systems. But in addition this is a place of pilgrimage for those who are dying and those who care for them. It is also a place of healing for those who have lost loved ones or who are suffering from other losses. Lately this has included families struggling with the loss of young adult children who have died from traumatic causes. We are also a place where the relationship of music to healing is explored. Last year young professionals gathered here in a chamber music retreat. One of our adult children recently participated in the Harvard Medical Community's *Healing Art of Music* program. More information about life on our land can be obtained from our website: *www.starcross.org.*

The PRMD is requesting that SMC be assessed as a sensitive receptor and specifically addressed in the EIR. I have no way of knowing if you will honor this request, but nonetheless put forth some specific concerns.

NOISE

17-5

The present location proposed for the 9 acre pond, corporate yard, equipment storage, pumping activities, and well for staff personal use, would have a detrimental impact on the continued use of our land as outlined above. When representatives of Codorniu visited us before the permit process began in 2004, they indicated that the pond, corporate yard, and well would be on the eastern side of their property, adjacent to Annapolis Road and facing another vineyard. I believe the area they pointed out was close to the noise measurement site number 3. This would greatly reduce the impact on the use of our property. Currently the pond is set on the precise boundary property line between Codorniu and SMC, immediately below the fields we know as St. Benedict Field and St. Melania Field. There would be substantial noise coming from the corporate yard and its equipment for this gigantic project, especially, as we have been advised, in the next 3 to 5 years. This happens to be an area where, as we pointed out earlier, there are peculiar echoes, and normal voices sometimes travel quite clearly across the county road and up to our chapel.

A few days ago, one person, standing on the site of the proposed corporate yard was able to be heard indistinctly at the principal residence on our property. Then one of us on hearing this, went up to our chapel, which is a bit higher, and was able to overhear quite clearly a conversation between 2 people on the proposed corporate yard site. Multiply this by a number of workers, equipment going in and out, pumps being operated, and other noises associated with vineyard operation, and there would be a cacophony of sound assaulting those attempting to find peaceful solace. As I explained to you in my letter of September 6, 2004, there are local conditions which we have experienced, which cause reverberation, echo and amplification of sound in this area.

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PAGE 4- CODORNIU

17-5 Cont'd

We request active scrutiny of this issue of the location of the pond, corporate yard, well, etc. Alternative sites are available on Codorniu's land. There is no need for them to build on our property line and near it, the greatest noise-generating facility and activities.

WATER

17-6

There is considerable skepticism about Codorniu being able to irrigate its gigantic vineyard in this water-scarce area. The existing vineyard nearest to us irrigates exclusively with a spring piped in from high in the hills. The next closest one trucks in water. At the Codorniu pond proposed location near the border of Codorniu's land and SMC land, we have some concern about the future. Our well is 120 feet deep and produces approximately 8 gallons a minute. That is normal for wells in this area. The aquifer is Ohlson Ranch Formation and very thin, that is, not very deep. Should Codorniu be unsuccessful in filling their pond by capturing run-off sheetflow, the temptation would be great to use their resources to drill more wells. It is not clear that there is anything to prevent them from doing so, in which case there would be a grave danger of depleting the thin aquifer serving nearby wells, such as ours.

I think there is not a clear enough awareness in the DEIR you have approved as to how "water-scarce" this area actually is. Prudently we must also be prepared for this condition to worsen because of the worsening local drought conditions, and the general negative impact of global warming.

TRAFFIC

17-7

The DEIR and your approval of it are flawed in regard to traffic. The roads in this part of the county are fragile and difficult to maintain. The study upon which you rely was taken in early December when there was no vineyard or harvest use. Vineyard workers who normally travel to and from Healdsburg each day were on vacation. More significantly however, Sonoma County is facing disastrous consequences resulting from the irresponsibility and greed of the corporate financial world meltdown and the resulting recession. Supervisor Efren Carrillo recently hosted an Annapolis town meeting in response to Phillip Demery's (Sonoma County's Director of Transportation and Public works) decision to close the Annapolis Yard, which is central to the maintenance of roads in this area, including the Skaggs Springs Road, which connects Annapolis to Highway 101. The DEIR approves a massive 171 acre clear-cut logging operation, huge land moving and related activities, and resulting agribusiness activity on these roads. It is understandable that the California Department of Forestry in Sacramento or Codorniu in Barcelona would not know of this situation, but the activities you have approved in the DEIR would majorly and negatively impact both the people and the government of this county.

Letter 17
Cont'd

PAGE 5 - CODORNIU

Mr. Robertson, this is a remarkable and unique area. In the years to come it will be difficult to justify how its essential character was lost to future generations. I hope and have some trust that the story will be documented to help prevent such matters in the future.

17-8

There are always going to be differences of opinion concerning where to draw the line in land use, but I have trust in my neighbors, who make their decisions around their kitchen tables, and I have considerable apprehension about the decisions made in board rooms in Spain. It is regrettable that the California Department of Forestry and Fire Protection does not have and evidence a philosophy which is in closer harmony with that worked out by the government of this county.

Yours very truly,

Brother Tolbert McCarroll

Cc: Senator Pat Wiggins
Assemblymember Wesley Chesbro
Supervisor Efren Carrillo

STARCROSS
community
34500 Annapolis Road
Annapolis, California 95412
(707) 886-1919 • Fax (707) 886-1921
community@starcross.org

Letter 17 Cont'd

September 6, 2004

Mr. Allen Robertson, Deputy Chief
California Department of Forestry and Fire Protection
P. O. Box 944246
Sacramento, Ca. 94244-2460

COMMENTS OF ADJOINING PROPERTY OWNER STARCROSS MONASTIC COMMUNITY CONCERNING SCOPING OF CODORNIU NAPA, DBA "ARTESA" (AKA "FAIRFAX") TIMBERLAND CONVERSION PROJECT EIR

Dear Mr. Robertson,

Our address is 34500 Annapolis Road, Annapolis, Ca. 95412. This communication is in response to the call for comments on the above project. The persons directly involved in this matter are: Brother Tolbert McCarroll, Sister Mary Martha Aggeler, and Sister Julian DeRossi.

1. General Position

We have long supported attempts at agriculture in this area on land that was traditionally used for agriculture and also support the maintenance of forest land. We believe that this is a unique area combining both mixed conifer forest and agricultural land, which will become increasingly rare as the years go on, and, as a result, increasingly valuable to future generations, not only those living in this area, but those who might wish to experience this phenomenon. Therefore, consistent with this long-standing position, we must oppose the foregoing conversion project.

As to more specific comments concerning the scope of the EIR, we will proceed for convenience sake using the outline distributed by Mr. Tim Raney.

We leave to our neighbors the comments on the more technical and scientific matters and concentrate at this point on those issues which are, perhaps, more uniquely our concern.

2. Aesthetics

Unfortunately, the Artesa project would have a devastating impact on maintaining the sense of this area as mixed agricultural and forest land. It has to do with its location for the public traveling on Annapolis Road, and for our community it would forever change one of the

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reasons we chose to live here.

We urge the appropriate consultants preparing the EIR to visit us, by pre-arranged appointment, and stand on the steps of our chapel where hundreds of people have stood, and look out at the view and imagine what it will become. We extend this invitation to representatives of Artesa as well, since we are aware that Artesa's parent company, Codorniu, has been sensitive to the significance of spiritual space, especially as maintained by Catalan monastic communities of the past and present.

We have had people who were terminally ill who were inspired and strengthened by this view. We have had religious, political and cultural leaders enthralled by the experience. We ourselves are ever struck by the unique beauty as we come from our chapel three times a day. We strongly urge that this aspect be considered.

It is possible that if the proposed conservation easement were modified that the devastating effect of this aspect of the conversion could be lessened. If the line of the proposed conservation easement running parallel to the common border between our property and Artesa (south of our property and south of the Artesa reservoir) could be extended to the south so as to protect a greater number of trees visible from the road and our property the impact would be lessened. In other words, to widen the conservation easement at that point on either side of the water courses being protected so as to protect and maintain enough trees to provide a visual buffer.

3. Air Quality

a. We have people living here who have respiratory difficulties. When there is burning, even as far away as the coast (8 miles) the results have been serious at times, and occasionally have necessitated the evacuation of some individuals. Although adjoining neighbors have been very careful about spraying, if a mistake has been made about the prevailing wind, this has also occasionally caused difficulties.

b. As Mr. Raney's outline includes at this point, "timber harvesting, log hauling, slash treatment, burn operations, as well as grading and trenching", we will list here some specific concerns in those areas.

As will be stated under the section on noise, the fundamental contemplative atmosphere of our land-use can be greatly harmed by noisy operations because, especially at certain times of year, the sound travels and reverberates in this area in a significant way. Log hauling is a very serious matter to us, as we must use the very marginal Skaggs Springs and Annapolis Roads for the transportation of children several times a week. Log trucks, especially those moving at high speed, frequently are not able to stay on their side of the road. In a logging operation as large as the one proposed, we would urge that an alternative be found to hauling logs on Annapolis Road. The possibility of serious accident is very high. Accidents in the past have been avoided, largely

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because of drivers who are very familiar with the area. We would suggest either going down the coast, which is what larger vehicles often choose to do, or making arrangements to use the Kelly Road, which was designed for this purpose.

c. In regard to the preparation of the fields, we would urge that everything possible be done to minimize the clouds of dust normally associated with these projects.

4. Biological Resources

Again, we rely on our neighbors for the technical and scientific reactions to this project. As an immediately adjoining property owner we have a very special concern for the effect on bird life. Over the years we have noted that a number of beautiful birds have made their home in the area that would be converted. We have no knowledge if any of these species are endangered, but their disappearance would be very sad. We have done what we can to protect the future of some of these shy and migrating birds by maintaining approximately half of our property as "forever wild." We also have discovered that birds are at home with our olive trees. But some birds, such as the marvelous white hovering kite, home in the area that would be converted. Birds add a great deal to the ambience of monastic communities such as ours.

5. Geology (and Hydrology)

We do not have the expertise of some of our neighbors to address this issue, except to state our long established position that we are not opposed to the proposed reservoir. Should there be drilling for wells in the future we would like there to be a very adequate setback to insure that there would be no impact on our existing wells at that time. In that regard, we would ask that the proposed limited-use well mentioned by Artesa not be on any underground water course which would negatively impact our existing wells.

6. Hazzards

a. Our olive fields are organic and will one day include fields only a few feet from Artesa. For the above reason and for general health reasons we are concerned about any drift of chemicals used on Artesa's land.

b. We have 2 wells near (50' to 100') from Artesa's property and are concerned about any practice which would have an adverse impact upon our water.

7. Land Use and Agricultural Resources

a. At the scoping meeting, some of us were quite surprised at the apparent reluctance to consider the attitudes of the Sonoma County Board of Supervisors and the Planning Department. For over 30 years there has been a very active concern about land use on the part of the county, and we would urge that they be involved in the process, even though this does not

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appear to be traditionally done. Mr. Raney admitted to a lack of specific knowledge about this area, which is understandable, and Artesa has candidly admitted the same thing. It would seem very important to involve the county, as they have had a long-term concern.

b. In the same light, we would support the comments made at the scoping meeting that this area has cyclical changes which affect land use. The above influences us in supporting the various comments at the scoping meeting from people both opposed to and supporting the conversion project, that a detailed study be included in the draft EIR, giving a detailed history of land use. The project description states that the conversion area was "historically used for agriculture." This is incorrect. The pioneering caucasian family (the Patchets) clearly defined the area that was used for agriculture and that which was retained for forestry. The experience on our land would indicate that most of the land that they used for agriculture, which included pastures, apple orchards, and later sheep grazing, was primarily land that was never heavily forested. In fact, it would appear that one of our fields, and I think also one of Artesa's fields not requiring conversion, were used by Native Americans as a place for drying fish and bartering in the summer months. Obviously, no forest would have existed in those areas selected for agriculture.

There were stories told to us by old-timers, now lamentably deceased, that there was a time when the redwood forests were so well established in this area that you could drive a buckboard on the forest floor. The disasterous clear-cutting (mentioned in the scoping meeting) during the 1960's destroyed this environment. The same old-timers would tell stories of decreased rainfall and other climactic changes which they related to the destruction of that unique forest.

For a number of reasons it would seem important to have an accurate picture of the historical land use.

c. As far as comments concerning "regional and local impacts related to loss of timberland" please refer to our comments under "Aesthetics".

8. Noise

Noise is a big concern for us, given the contemplative nature of our land-use. This is made even more serious for us, due to local conditions which cause reverberation and even amplification of sound. There are areas, separated by considerable distances, in which it is possible to hear clearly every word being spoken. We would hope that the noise consultants will include any sounds which will be heard outside of Artesa's land. We are especially concerned with any sounds which destroy the peacefulness of our environment on a regular basis, and we hope that particular care will be given to times of spiritual significance, including Sundays, Holy Week and Good Friday, and during the evening hours (known to us under the monastic rule as "The Great Silence.")

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9. Transportation and Circulation

Please refer to our comments on "log hauling" under "Air Quality." As much as is feasible, we would ask that alternatives to Skaggs Springs and Annapolis Roads be found for all heavy periods of transportation. We are further concerned about the increased speed encountered by vineyard workers who are unfamiliar with the hazards of Skaggs Springs/Annapolis Roads, and would urge that schedules be set and corporate regulations be put in effect which would promote safe driving conditions.

10. Cumulative Impacts

a. Please see "1. General Position" above.

b. We share the concern of our neighbors that this conversion project be evaluated in relation to the over-all future of the area, and that other conversions (both approved and contemplated) be considered in the EIR process.

11. Discussion of Alternatives

Please again refer to "1. General Position" above. We would prefer that Artesa return to the position that was originally presented to us of planting the vineyards only on the land that did not require timber conversion. We were told this made the project economically viable for them. Their project had our support at that time, and we would continue to be supportive of such an alternative.

Yours very truly,

Brother Tolbert McCarroll

cc: Supervisor Mike Reilly
575 Administration Drive
Santa Rosa, Ca. 95404

Tim Raney
Raney Planning & Management, Inc.
1401 Halyard Drive, Suite 120
West Sacramento, Ca. 95691

David Gilbreth
Attorney-at-Law
% Codorniu Napa
1345 Henry Road
Napa, Ca. 94559

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Cont'd

bcc: Tim Tesconi
The Press Democrat
427 Mendocino Avenue
Santa Rosa, Ca. 95404

David McCarroll
New England Conservatory
33 Gainsborough Street, Rm. 211A
Boston, Ma. 02115

LETTER 17: BROTHER TOLBERT MCCARROLL – STARCROSS COMMUNITY

Response to Comment 17-1

Comment Letters found in Appendix B of the DEIR have been addressed throughout the DEIR as follows:

Aesthetics

Impacts to aesthetics have been addressed in Chapter 3.11, *Aesthetics*, of the DEIR. The DEIR concluded that all aesthetic impacts addressed in the chapter would result in a less-than-significant impact. Response to Comment 10-68 of this Final EIR is also reproduced here for a convenient summary of the issues:

> As noted on page 3.11-9, extensive vineyard areas are located northeast and east of the project site along Annapolis Road. Several residential properties surround the project site as well, including the Starcross Monastic Community (34500 Annapolis Road) located north of the project site, and six rural residences located immediately northwest, west, and south of the project site. As noted previously, the project site is currently devoid of development, and views of the site from nearby residences consist of forest and grassland scenery.
>
> It is important to note that Starcross owns approximately 16 acres maintained as a grassed unused pasture just south of Annapolis Road. The parcel runs east-west for about 1800' (0.34 mi.) along the road on the north central boundary of the vineyard work area. It ranges from 230' - 500' in depth and is situated on a north-facing slope rising to a gentle ridge crest to the south that parallels the road. The combination of rising grassed terrain and distance from the road will effectively screen the major portion of the heart of the vineyard from observation by incidental traffic on Annapolis Road. Residents and guests of Starcross will have a similar view.
>
> Rather than being able to see all of the proposed vineyard blocks, these individuals would continue to have views of the grassy knoll along Annapolis Road. It is important to note that the 1-acre corporation yard will not be visible from Annapolis Road or from any point on the Starcross Monastery, including the Chapel on the hill. Furthermore, the approximately 1-acre corporation yard has been relocated from vineyard Unit 1c to Unit 6, just south of the proposed irrigation reservoir, in order to address aesthetics and noise concerns expressed by the public in the comments on the DEIR.
>
> Proposed vineyard blocks would be more readily visible along the western portion of the project site. As stated in the DEIR on page 3.11-9, the proposed project would not involve the construction of numerous buildings or result in urbanization, so implementation of the project would result in a change from one rural setting (timberland) to another (vineyard), thereby preserving the "openness" of the project site. Furthermore, because Annapolis Road is not included among the scenic corridors listed by the General Plan (See Figure 3.11-1), the conversion of second-growth timberland to

vineyard would result in ***less-than-significant*** impacts to views of the project site from Annapolis Road.

The project has sought to accommodate neighbor concerns about selected aspects of the viewshed. In deference to Starcross, a cluster of tall, partially-visible redwood trees immediately south of their buildings and some 900'-1500' distant in the lower central portion of Unit 2 was voluntarily excluded from the timber harvest work area. Similarly, three tall many-stemmed second-growth redwood clusters located near the vineyard sump were excluded from development by increasing channel offsets and adjusting the sump location. Preservation of these redwood clusters and others within riparian preserve areas will serve to enhance the inherently pleasing visual complexity at the vineyard - forest interface.

It is also important to consider that while the proposed project would alter the existing views of timberlands, a substantial number of trees would remain on the project site as the total conversion area is 154 acres (see Appendix C to this Final EIR for the latest version of the THP for the project) and the total property acreage is 324.

As noted above, the project site is not a continuous forest, rather it occurs in an existing mosaic of habitats including annual grassland, a former orchard that is now annual grassland, and forest/woodland that is primarily dominated by tan oak, with smaller remnant stands of Douglas fir and redwoods. The project site forest is already significantly disturbed by past activities of man, and does not constitute a contiguous forest, unless micro habitats are a consideration. An important consideration is that the forested habitat that occurs on the project site was clear cut approximately 50 to 60 years ago. The north end of the project site was planted to apples in the late 1800s and was tended as an apple orchard until the 1950s or 1960s. Also, there are residences located on all sides of the project site, except to the south, where existing second growth and cut forested habitats remain. There is also an existing olive orchard immediately north and an existing vineyard immediately east of the project site. Finally, the community of Annapolis occurs immediately west of the project site. Thus, the project site is not in a pristine or undisturbed setting and it should not be characterized as such.

In the absence of specific standards within planning documents impacts to viewsheds are highly subjective. Vineyards are considered to be a highly valued landscape within Sonoma County. The 2020 General Plan Open Space Element defines vineyards as a scenic resource of special importance to the County:

> Coastal bluffs, vineyards, San Pablo Bay, the Laguna de Santa Rosa and other landscapes are of special importance to Sonoma County. Preservation of these scenic resources is important to the quality of life of County residents and the tourists and agricultural economy. Other features such as the Mayacamas and Sonoma Mountains provide scenic backdrops to communities. As the County urbanizes, maintenance of the openness of these areas provides important visual relief from urban densities. These landscapes have little capacity to absorb very much development without significant visual impact.

(General Plan 2020, Open Space Element, § 2.2; see also Draft EIR, p. 3.11-9 ["[V]ineyards are considered to be a highly valued landscape in Sonoma County"].)

Therefore, while the existing views would be altered, the proposed project would have a ***less-than-significant*** impact to views from adjacent residences.

Air Quality

Impacts to air quality have been adequately addressed in Chapter 3.3, *Air Quality*, of the DEIR. All air quality impacts addressed in the DEIR would be less-than-significant outright or with the implementation of mitigation measures would ultimately result in a less-than-significant impact. The air quality impacts related to site preparation activities such as logging, grading, and excavation were found to be potentially significant with the potential to generate dust. Impact Statement 3.3-1 provides a mitigation measure that would reduce project-generated dust impacts to a less-than-significant level. In addition, as stated on pages 2-18 through 2-19 in Chapter 2, *Project Description*, of the DEIR, "The majority of the slash will be chipped onsite for erosion control purpose. Some piles will be left in place to provide wildlife habitat. Burning of slash would not occur."

The DEIR includes a detailed analysis of the traffic impacts related to harvesting and vineyard development, including the transportation of log hauling. In addition, Mitigation Measure 3.9-2 requires the project applicant to prepare a Construction Traffic Management Plan prior to any logging taking place on-site, which would include plans for temporary traffic control, signage and striping, location points for ingress and egress of logging vehicles, staging areas, and timing of logging activity which appropriately limits hours during which large construction equipment may be brought on or off the site.

Biological Resources

All protected bird species that could be found on-site would be protected by the detailed mitigation measures required in the DEIR, as revised in this Final EIR. Please refer to Responses to Comments 1-15 through 1-17 for a detailed discussion of the special-status birds that could occur on-site and the mitigation measures required for the project that would reduce impacts to a less-than-significant level.

Geology and Hydrology and Water Quality

Impacts to geology and hydrology are addressed in Chapter 3.6, *Geology*, and Chapter 3.7, *Hydrology and Water Quality*, of the DEIR. The DEIR determined that with mitigation, all geology, hydrology, and water quality impacts would be less-than-significant. As clearly stated in the DEIR, the project does not include drilling of wells for irrigation purposes. The proposed reservoir has been adequately designed to provide adequate irrigation water during both normal and dry-year conditions. See Responses to Comments 10-50 and 12-5.

Hazards

Hazardous impacts are addressed in Chapter 3.8, *Hazards*, of the DEIR. Impact 3.8-4 addresses impacts relating to the potential use of agricultural chemicals during project operations. The DEIR includes an analysis of the potential use of agricultural chemicals on-site, with the

important caveat, as noted on page 2-22 of the DEIR, that the applicant intends to use integrated pest management (IPM) in the maintenance of the vineyard. IPM focuses on long-term prevention or suppression of pest problems with minimal impacts to human health, the environment, and non-target organisms by emphasizing the use of non-chemical pest control methods. As a part of the proposed vineyard development and maintenance, chemicals would only be used when feasible alternatives do not exist. Non-chemical methods of pest control may include, but are not limited to, selection of disease-resistant planting stock; timing of activities to avoid peak infestation periods; proper organic waste disposal and irrigation practices; use of traps; use of fencing; enhancement of predator habitat, such as installation of nest boxes for raptors or bats; and importation of beneficial insects and/or bacteria.

As noted on page 3.8-16 of the DEIR, agricultural chemicals may be used when needed to avoid sustained economic damage. As a result, the applicant has prepared a Pesticide Management Plan (PMP) requiring CALFIRE approval prior to project implementation. A detailed outline of the PMP is included on pages 3.8-16 to 3.8-27 of Chapter 3.8, *Hazards*, of the DEIR. The potential for drift of any agricultural chemicals applied on-site is specifically addressed, starting on page 3.8-22 of the DEIR, which is further addressed quantitatively in Response to Comment 7-9 of this Final EIR.

Land Use and Agricultural Resources
Land use and agricultural resources are addressed in Chapter 3.2, *Land Use*, of the DEIR. See also responses provided to Sonoma County's comment letter on the DEIR – Letter 4 in this Final EIR.

Noise
Noise impacts are addressed in Chapter 3.10, *Noise*, of the DEIR. Please see Response to Comment 17-5 below regarding noise.

Transportation and Circulation
Transportation and circulation impacts are addressed in Chapter 3.9, *Transportation and Circulation*, of the DEIR. See Response to Comment 17-7 below regarding traffic concerns.

Cumulative Impacts
The DEIR addresses cumulative impacts in Chapter 4, *Cumulative Impacts*. See Response to Comment 4-24.

Response to Comment 17-2

The comment is an introductory paragraph and does not address the adequacy of the DEIR. Please refer to the following response to more specific comments.

Response to Comment 17-3

The DEIR does not state that vineyards are located on the SMC property; however, as seen in Figure 3.2-1 located on page 3.2-3 of the DEIR, the DEIR rightly notes that existing olive orchards are located near the SMC. Raney, who prepared the EIR for CAL FIRE, as well as the

other technical experts who prepared the various technical reports for the EIR analysis, have visited the project site more than once, and in some cases, numerous times. As a result, the EIR preparers are familiar with the project site as well as surrounding uses.

Regarding the commenter's concerns as to the lead agency for the project, CAL FIRE and Sonoma County are still making the lead agency determination on a case-by-case basis. In some other projects (i.e., Preservation Ranch), the County is lead because of zoning changes, subdivision and parcel merger, use permit, etc. A MOU was drafted so that both agencies could have input in the review of administrative drafts of documents, not just during public comment.

CAL FIRE also has a couple of conversion projects in Napa County where the County has become lead because they have greater permitting authorities (only a portion of the project area is timberland). For the Fairfax Conversion project, CAL FIRE is the proper lead agency and would likely still be the lead even if the project was just being submitted. Furthermore, CAL FIRE disagrees that a greater level of scrutiny over the project would be employed if Sonoma County were the lead agency. CAL FIRE has extensively reviewed the DEIR and this Final EIR to ensure that all potentially significant physical environmental impacts would be reduced to a less-than-significant level with implementation of rigorous project mitigation measures. Extensive technical studies have been performed for the project site by experts in their respective fields, and these technical studies have been reviewed by CAL FIRE's expert resource staff. In response to public comments on the DEIR, CAL FIRE has worked with the EIR consultant to revise the DEIR as necessary to ensure that all public concerns are addressed to the maximum extent feasible. This includes addressing Starcross's concerns as evidenced in the responses to comments in this letter.

Response to Comment 17-4

The comment summarized the important role that Starcross Monastery plays in the local and greater community. Specific concerns about the project are provided in the following comments – accordingly, see the below responses.

Response to Comment 17-5

This comment suggests the DEIR evaluate specific noise-sensitivity of the Starcross Monastic community. Page 3.10-3 of the DEIR, first paragraph under the heading, "Existing Land Uses in the Project Vicinity", acknowledges the presence of the Starcross Monastic Community to the immediate north of the project site on the opposite side of Annapolis Road.

Section 3.1 of the Sonoma County Noise Element states the following with respect to the County's noise level performance standards of Table NE-2:

> "Noise level performance standards in Table NE-2 below are to be applied as performance standards for noise producing uses which may affect noise sensitive land uses and vice versa."

Policy NE-1c of the Sonoma County Noise Element states the following with respect to the County's noise level performance standards of Table NE-2:

> "The total noise level resulting from new sources and ambient noise shall not exceed the standards in Table NE-2 as measured at the exterior property line of any affected residential land use."

The two sections of the Noise Element indicate that noise-sensitive land uses and residential land uses are subject to the noise standards of Table NE-2. The County Noise Element does not contain separate noise level standards which are specific to monastic communities. The DEIR noise impact assessment assumed that the Noise Element standards applicable to noise-sensitive land uses (the Table NE-2 standards), would apply to the Starcross Monastic Community. Because the assessment of potential project noise impacts considered the proximity of all neighboring noise-sensitive land uses, the Starcross Monastic Community was included in the DEIR assessment.

The DEIR determined, in Impact 3.10-2, that because the decibel scale is logarithmic, a doubling of traffic on local roadways (i.e., a 100 percent increase in volume) would correspond to a 3 dB increase in ambient noise levels. However, as noted in the traffic study, the proposed project would be expected to result in a maximum traffic volume increase of 30 to 32 percent on local roadways during the harvest season, resulting in a maximum predicted traffic noise level increase of only 1.5 dB over existing baseline levels. This level of increase is well below the 5 dB traffic noise significance threshold used for the analysis. Therefore, the impact would be considered ***less-than-significant***. While the traffic associated with the project would not create adverse noise impacts to surrounding receptors, the DEIR did determine, in Impact 3.10-3, that the mechanical harvesting activities associated with the project could have potentially significant noise impacts to nearby receptors. However, the DEIR included Mitigation Measure 3.10-3 to reduce the temporary operational noise impact to a less-than-significant level.

In addition, Impact 3.10-3 of the project DEIR discusses the potential noise impacts associated with mechanical harvesting operations during nighttime operations, and concludes that the impact could be potentially significant. As a result, Mitigation Measure 3.10-3 was required to reduce this potential impact to a less-than-significant level, as follows:

3.10-3 *In order to minimize noise impacts to residences surrounding the project site during grape harvest season, mechanical harvesting operations shall be limited as follows:*

- *Daytime mechanical harvesting operations shall be limited to areas at least 280 feet from residences in existence at the time of EIR certification; and*
- *Nighttime mechanical harvesting operations shall be limited to areas at least 500 feet from residences in existence at the time of EIR certification.*

These criteria shall be included in the improvement plans submitted to the Sonoma County Permit and Resource Management Department prior to initiation of construction. These criteria shall be implemented unless it

> *can be demonstrated through noise level measurements conducted by a qualified environmental noise consultant that such activities do not result in exceedance of the Sonoma County interior noise level standards.*

With respect to the portion of the comment pertaining to reassessment of operational noise in terms of the County's Noise Element Table NE-2 standards, the commenter is referred to the Response to Comment 10-63 which pertains to the Noise Element standards.

It is also important to note that since the release of the DEIR the applicant has personally worked with Starcross Monastery and property owner Wellman to address their concerns regarding the proposed location of the corporation yard for the project. In response, as illustrated in Figure 1-1 of this Final EIR, the corporation yard has been reduced in size and relocated to the satisfaction of both Starcross and Wellman. In its newly proposed location, the corporation yard will not be visible to Wellman or Starcross, and because it is out of the direct line-of-sight of both property owners, noise impacts would be greatly minimized, so as not to cause adverse impacts.

Response to Comment 17-6

Please see Response to Comment 10-50 for a detailed discussion of the commenter's water concern.

Response to Comment 17-7

The level of traffic being added to the surrounding roadways as a result of project traffic would not be expected to degrade roadway surfaces requiring substantial repairs. As stated on page 3.9-15 of the *Transportation and Circulation* Chapter of the DEIR,

> Due to the short duration of pruning and harvesting operations and the limited number of vehicles required to transport project personnel, this traffic would not significantly change current traffic patterns along the local roadways. Nor would the addition of a maximum of three commercial truck trips per day, for a maximum of one month per year, be expected to result in a significant adverse impact on current traffic patterns along the project haul routes.

Response to Comment 17-8

The comment is a concluding statement and does not address the adequacy of the DEIR, but will be considered by CAL FIRE.

Letter 18

From: Chris Poehlmann [poehlman@mcn.org]
Posted At: Tuesday, July 14, 2009 6:39 PM
Conversation: Fairfax Timberland Conversion DEIR comments
Posted To: Sacramento Public Comment

Subject: Fairfax Timberland Conversion DEIR comments

Letter 18 Cont'd

Friends of the Gualala River

PO Box 1543, Gualala, CA 95445 (707) 886-5355 GualalaRiver.org

Sonoma County Permit and Resource Management Department
Attn: David Schiltgen
2550 Ventura Avenue,
Santa Rosa, CA 95403
Via e-mail

July14, 2009

SUBJECT: Fairfax Timberland Conversion DEIR

Dear Mr. Schiltgen:

18-1 Friends of the Gualala River requests that the County of Sonoma, as a responsible agency, will provide comments regarding compliance to County ordinances and their required mitigations for the Fairfax Timberland Conversion Project under the county Code, specifically (Ord. No. 4985 § 1(g), 1996.), Sec. 26-88-160. – "Major Timberland Conversions". Information on the existence of County plans to review the new THP for 169.5 acres of timberland conversion associated with the DEIR of this project is requested. The County's role as a responsible agency is noted in the DEIR under the Land Use section of Chapter 3, 3.2-1.

Sincerely,

Chris Poehlmann
Friends of the Gualala River

LETTER 18: CHRIS POEHLMANN – 7-14

Response to Comment 18-1

The comment does not address the adequacy of the DEIR. Sonoma County submitted a comment letter on the Fairfax Conversion DEIR, which is included as Letter 4 of this Final EIR. Please see the responses to this letter.

Letter 19

From: Chris Poehlmann [poehlman@mcn.org]
Posted At: Tuesday, July 28, 2009 11:40 AM
Conversation: Revision version: Comments for Fairfax Timberland Conversion
Posted To: Sacramento Public Comment

Subject: Revision version: Comments for Fairfax Timberland Conversion
Dear Allen Robertson and CalFire personnel,

Please add the attached comment letter in PDF format to the DEIR file for the Fairfax/Artesa Timberland Conversion. **(SCH# 2004082094)**
Please discard the previous version sent in Word format.

Thank you.
Chris Poehlmann
Friends of the Gualala River

Letter 19
Cont'd

Friends of the Gualala River

PO Box 1543, Gualala, CA 95445 (707) 886-5355 GualalaRiver.org

Mr. Allen Robertson
California Department of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460
(916) 657-0300
SacramentoPublicComment@fire.ca.gov
Via e-mail

July 26, 2009

SUBJECT: Fairfax Timberland Conversion DEIR comments

Dear Mr. Robertson:

19-1 Friends of the Gualala River (FOGR) is submitting these written comments to add to your files on this project and to add to those oral comments from our members at the DEIR scoping sessions. FOGR is a non-profit, volunteer, citizens organization concerned with the protection and enhancement of the Gualala River and its watershed. More broadly we are concerned about the health and wellbeing of northcoast rivers and the coastal ecosystem.

19-2 We have recently become aware of new cultural resources and archeological field work being done on the project site. How does this affect the already released Cultural Resources section of the DEIR?

19-3 The following are portions of the DEIR noted by page location with comments following in bold.

Page 1-6 of Vol. 1 of the DEIR Comments:
"Summary of Comments Received on the Notice of Preparation
and Previously Prepared Mitigated Negative Declaration
The following list is a summary of concerns taken from comments made at the scoping meeting, comment letters received prior to the close of the 30-day comment period, and comment letters received on the previous negative declaration. Many of the comments received on the previous negative declaration addressed the need to prepare an EIR, such comments are not included in the below summary as they are not relevant to this document. All of the environmental issues raised by the commenters on the previous MND as well as the more recent comments submitted during the NOP commend period

**Letter 19
Cont'd**

19-3 Cont'd

have been included in the below summary, **and addressed in the EIR where appropriate**." (emphasis added)
Comment: Contrary to the above assertion, very few of the 120 specific substantive concerns outlined in the comment letters starting on page 1-6 were directly addressed in the DEIR. In addition, next to none were addressed using supporting data or scientific studies. If mentioned, most were dismissed offhand as insignificant potential impacts. The following are examples of the few mentions of these specific concerns and their non-substantial dismissals.

19-4

For example:
Page 3.8-23
"Summary: Residences are located in close proximity to the site, and residents expressed substantial concerns related to the use of pesticides. However, due to the local topography, vegetative patterns, and controls on the timing, type, and climate under which pesticides may be applied adverse affects are not anticipated."
Comment: Even with all the in-place regulations as to pesticide application, storage and use, numerous instances of exposure and harm are registered yearly in California. Use of IPM is proposed. A definition of the limits of pesticide use allowed within an IPM approach is not given. Is there a certification for IPM? Why is an organic management plan and State Organic certification not proposed as a mitigation for potential environmental and health affects from pesticide use? This type of certification is common in the present vineyard industry. Is there not data showing the increased health safety of nearby residents of commercial agriculture when it employs organic methods? EIR is missing an analysis of pesticide loads (types and amounts, seasonality) typical of Sonoma County viticulture.

19-5

For example:
Page 3.7-15
In addition, concerns have been raised regarding the potential for water contamination emanating from the old sawmill site and/or the vehicles and garbage illegally dumped nearby.
The project forester, project engineer, and Raney staff visually inspected that portion of the site, and a nearby segment of Patchett Creek, in wet conditions on March 31, 2005. Evidence of hazardous materials in or entering Patchett Creek, which was flowing strongly at the time, was not observed.
Comment: A mere one time visual inspection by non-experts to verify the potential presence of chemical contamination is insufficient to address the issue.

19-6

Page 3.4-108
Policy OSRC-12e: Revise the zoning districts which implement the Resources and Rural Development land use category to prohibit agricultural production and other uses which would result in the conversion of timberlands unless the uses qualify for a timber conversion exemption pursuant to the Forest Practice Rules, they provide an overriding benefit, or they result in no net loss of timberland. The districts shall also provide that

Letter 19 Cont'd

19-6 Cont'd

these exceptions are not allowed if they result in habitat fragmentation.
Comment: How can the conversion and fencing of nearly 200 acres of forestland not result in habitat fragmentation? What mitigation is proposed for the permanent loss of 190 acres of natural forest habitat? What are the mitigations for lack of wildlife corridors through the central large fenced units spanning east to west from Patchet Creek? What is the overriding public benefit of this forestland conversion?

19-7

Vol. II, Page 3.
In describing the 73 acre foot reservoir to be constructed it is mentioned that the vineyard will be dry farmed. "(although once the vines are established, the vineyard would be dry-farmed during some years)."
Comment: Where is the locally based data that would verify that dry farming is possible? Where is the data to prove that there will be enough precipitation for the project's needs with mounting evidence that the frequency of critically drought years are expected to increase significantly in this region, and past rainfall averages cannot be used for forecasting?

19-8

Page 3.7-18
The West Yost Hydrologic Evaluation estimates average annual precipitation in the Annapolis area at 60 to 70 inches, ….

Page 3.7-47
The National Oceanic and Atmospheric Administration (NOAA) has also developed a rainfall isohyetal graph for the area that shows the annual average rainfall for the Annapolis area of approximately 58 inches. This information was developed based on a period of record from 1931 to 1970 (39 years).

Typically, the longer period of record would likely be considered more reliable for longterm planning. However, both of these isohyetal graphs were developed using data from the Fort Ross rain gauge, which is the closest long-term rain gauge near the site.
Comment: The rainfall figures are based on insufficiently accurate data and no locally collected data. Local coastal rainfall can vary significantly over short distances. Numerous neighbors to the plan collect data and any DEIR analysis and assumptions regarding rainfall would be more reliable and accurate if they included this more accurate data and recent annual rainfall totals.

19-9

Page 3.7-19
The proposed vineyard project has been planned with irrigation applications of about 0.3 ft, equivalent to 3.5 inches or about 90 mm (Erickson Engineering, 2002). Given the likely soil moisture available and the findings regarding vineyard irrigation by Williams (2001), the proposed vineyards would likely use substantially less water than the existing vegetation.

Letter 19
Cont'd

Consequently, based on likely water use by native vegetation and vineyards, the proposed project would tend to increase soil moisture and ground water percolation.
Summary
Comparisons between existing forest vegetation and anticipated vineyards with respect to hydrologic effects of vegetation indicate decreased evapotranspiration is likely under project conditions, both in the growing season and the rainy season. During the rainy season, reduced interception losses are expected to be about 10% to 20%, which represents a net gain to water delivered to the soil surface for infiltration and percolation.
Comment: No scientific studies or data are presented that analyze the impact on ground water recharge from long term commercial viticulture as compared to that of natural forest. Nor is there data to back up the claim of long term net gain to recharge from vineyard planting.

19-9 Cont'd

Page 3.7-82
Effects of Timber Harvesting
As noted previously in the Environmental Setting, studies of the Caspar Creek Experimental Watersheds show that removal of forest vegetation may affect groundwater recharge of small drainages. The information developed in conjunction with these watershed studies can be used to estimate the likely impacts to downstream summer flows associated with the proposed timber harvesting project; however, it should be noted that these studies do not demonstrate the potential hydrologic impacts associated with vineyard development.
Comment: If "these studies do not demonstrate the potential hydrologic impacts associated with vineyard development", then how can they be used to make an assessment of project impacts under CEQA? Why have no such studies, or modeling, been included in this DEIR? How can the applicability of studies such as the Caspar Creek Study be evaluated if there is no data for comparison on the resulting expected affects of this proposed land use change?

19-10

Page 3.7-26
An evaluation of peak flows on tributaries to Grasshopper Creek or Little Creek were not developed because impacts to these watersheds associated with the proposed project would be significantly less than the impacts anticipated on Patchett Creek.

(re. Summer flows) As with the peak runoff analysis above, tributaries to Grasshopper and Little Creeks were not evaluated.

Comments: On what scientific basis was the decision made to exclude impact analysis to Grasshopper and Little Creeks? There is a creek diversion noted for Grasshopper Creek near the project site, without data on that diversion, how can the affects of the project on flows for this creek be evaluated?

19-11

**Letter 19
Cont'd**

19-12

Page 3.7-30
Climate Change has the potential to alter the existing hydrological environment in a number of ways. Increased temperatures have the potential to increase evapotranspiration, alter rainfall patterns, as wells as alter the habitat for existing native habitats leading to changes in ground cover and forestation. Currently, Climate Change models are primarily focused on global changes, and potential changes to specific locations are speculative. California is primarily concerned with the potential for reductions in snowfall (with the moisture coming down as winter rain), which would lead to flooding and water shortages; and rising sea levels. As the project site is fed by rainwater, the increase in rains, and corresponding decrease in snowfall, would not be expected to adversely impact available water supply for the proposed project.
Comment: Recently released reports have pointed to the possibility that climate change affects might not necessarily mean increased rain for coastal Northern California. See: "How will changes in global climate influence California?", Bryan C. Weare, UC Davis, California Agriculture 63(2):59-66. DOI: 10.3733/ca.v063n02p59. April-June 2009.

19-13

The EIR should state whether the vineyard conversion would be economically feasible if only grape varieties other than those suited to "ultra-premium Pinot Noir" were feasible in the future due to climate change. Where is the scientific data to back up the claim of no expected adverse impacts on water supply for the project? If increased rains are expected by the preparer, why has this fact not been addressed in potential hydrologically related impacts in the DEIR?

19-14

Page 4-11 DEIR
CAL FIRE (2003) has estimated that approximately 800 acres of Goldridge soils remain available for development of high-quality pinot noir grape vineyards in the Annapolis area (including the Artesa property); however, this figure may not reflect more recent developments. Review of the site soils map (Figure 3.6-1) indicates that the proposed project could utilize on the order of 120 to 130 acres of these soils. The remaining Goldridge soils in the area may be unavailable for vineyard development for a variety of reasons, including unwillingness of current landowners to develop or sell their land. Additionally, although the wine market has been experiencing strong growth for the past few years, the market may become saturated, leading to reduced incentive to pursue new vineyard development.

Comment: A large area of the proposed vineyard is slated to be installed in the Hugo loam soil type. Therefore it is inappropriate to base any analysis of potential growth inducing impacts on just the availability of Goldridge soils. If close to 50% of the proposed vineyards are feasible in these types of soils, the development of just the remaining stock of Goldridge soils is not a limitation to growth inducing impacts, cumulative impacts or threats to remaining county timberland of this project.

Letter 19
Cont'd

Other Comments and Questions:

19-15 • What would prevent the present owner or future owners from establishing future housing, winery facilities, tasting rooms or other facilities that would generate need for more water? What enforceable mitigations are proposed to prevent this foreseeable, potential future impact?

19-16 • What provisions and mitigations are proposed if the water needs of the project are not met by the proposed development of water sources?

19-17 • Recirculation of the EIR is necessary due to the significant impacts posed by the project to underestimated cultural resources on site and due to the need to propose adequate mitigations to protect those resources.

19-18 • The alternatives analysis should be completely re-evaluated based on a new comprehensive inventory of archeological resources associated with the prehistoric village site and the consideration of reclassifying the resources as an archeological district. See the Holman expert comment letter identifying the site as a potential archaeological district.

19-19 • The alternatives analysis uses what appears to be circular logic to dismiss the possibility of an off-site alternative.

The DEIR points out that "large acreages" with "...soils, elevations, and slopes similar to the project site..." are "rare," and several are already "...either currently in vineyard production, proposed for vineyard production, approved for vineyard production or identified as managed timberland..."

It continues, "...as there are lands with similar characteristics that as yet have not been developed with a vineyard, the possibility of locating the proposed project at another location exists..."

"...Because the Offsite Alternative would include the conversion of timberland to vineyards, and would differ only from the proposed project in the location of the conversion area, the Alternative would result in similar land use impacts to the project site."

In other words, if the applicant only considers very similar forestland for siting this conversion, then the impacts would be very similar. A true alternative is therefore not considered.

The project is defined as a conversion, rather than as a vineyard. If the off-site alternative of buying an existing vineyard or existing converted agricultural land is considered, the applicant could achieve their desired result (a vineyard) with significantly less environmental impact. Costs might differ - it might cost more to make the owner of an existing vineyard a "willing seller."

**Letter 19
Cont'd**

19-19 Cont'd

If the real issue is then cost, the EIR should have to consider cost versus environmental impact directly. Is it worthwhile to the people of the State of California to allow environmental degradation in order to save the applicant some amount of money?

Approval of this vineyard conversion is contrary to the public interest due in part to:

19-20

- The project adds cumulative impacts on creek and river flows, fish and habitat loss and habitat fragmentation. A determination of the project's cumulative impacts is reinforced in view of the nearby 20k acre Preservation Ranch proposal, which was not proposed officially at the time of the NOP for Fairfax/Artesa.

19-21

- The loss of aesthetic resources due to the loss of traditional forest and introduction of commercial agriculture and support infrastructure.

19-22

- The project requires the loss of forestland when alternate, when less environmentally impacting lands are available in the area for siting.

19-23

- Cumulative impacts to limited emergency services and social services infrastructure.

19-24

- Cumulative impacts to road infrastructure and traffic.

19-25

- Failure to analyze or mitigate substantively cumulative agricultural pesticide impacts to wildlife and human health. Gualala and Sea Ranch domestic water intakes are drawn directly from the river.

We look forward to response as to these concerns and their addition to the comment letters for the DEIR.

Sincerely,

Chris Poehlmann

LETTER 19: CHRIS POEHLMANN – 7-28

Response to Comment 19-1

The comment is an introductory paragraph and does not address the adequacy of the DEIR.

Response to Comment 19-2

Please see Response to Comment 13-5.

Response to Comment 19-3

The comment communicates general concerns regarding the previously submitted comments on the project. Specific concerns follow in the commenter's letter, which are responded to below.

Response to Comment 19-4

Please see Response to Comment 7-9.

Response to Comment 19-5

Based upon the investigation performed in the DEIR, it was determined that a potentially significant impact could occur should construction workers encounter hazardous materials in the vicinity of the old sawmill. Accordingly, the DEIR includes a detailed mitigation measure with specific performance standards in accordance with standard practice requiring the applicant to provide a detailed site assessment that determines whether the old sawmill foundation to be demolished contains asbestos and/or other hazardous substances. If such items are found on-site, the site assessment shall set forth a specific abatement/remediation plan to be implemented on-site by the applicant for review and approval by applicable State and local agencies.

3.8-1(a) *Prior to issuance of a demolition permit by the County for any on-site structures, the applicant shall provide a site assessment that determines whether the old sawmill foundation to be demolished contains asbestos and/or other hazardous substances. If asbestos and/or other hazardous substances are found at levels above the applicable fiber count (asbestos) or TTLC (other substances) set by DTSC, the application shall include an asbestos abatement plan and/or hazardous substance remediation plan and the contractor shall take appropriate precautions to protect his/her workers, the surrounding residences, and to dispose of any hazardous construction waste in a manner consistent with local, State, and federal standards, subject to approval by the County Building Official and DTSC.*

3.8-1(b) *Prior to issuance of grading and/or demolition permits, multiple soil samples shall be taken from the abandoned mill site and the samples shall be analyzed by a licensed toxic substances specialist. If hazardous chemicals are detected at levels in the soil samples above the applicable*

TTLC set by the DTSC, the applicant shall retain a licensed and certified hazardous waste removal contractor to prepare a remediation plan for the contaminated areas in accordance with local, State, and federal regulations and to the satisfaction of Sonoma County Environmental Health Department and the DTSC.

The above mitigation measures would reduce the impact to a less-than-significant level by ensuring that all necessary investigation occurs prior to any on-site demolition work being allowable.

Response to Comment 19-6

Please see Response to Comment 15-12 regarding habitat fragmentation concerns. See also Response to Comment 22-11 regarding wildlife corridor concerns.

Response to Comment 19-7

Please see Responses to Comments 10-50 and 12-5.

Response to Comment 19-8

The commenter suggests that rainfall data used for analysis of project hydrologic impacts are not sufficiently accurate or current, and that locally collected data, if utilized, might by more accurate. The DEIR utilized rainfall data available from publicly available government agency sources (County of Sonoma and NOAA), and the preparers of the DEIR considered the data to be of sufficient accuracy for the purposes of hydrologic impact analysis. Annual rainfall totals vary much less than storm-by-storm totals. Data from local sources, such as neighboring property owners, may also be subject to inconsistencies and technical questions that could prove difficult to resolve. In any event, water supply for the project is evaluated based on assumed annual average rainfall of 58 inches as described in DEIR, Appendix P. For design of project drainage facilities, including pipe sizing, annual average runoff is assumed to be 70 inches. Please also see Response to Comment 12-5.

Response to Comment 19-9

The commenter disputes the DEIR conclusions regarding the likely effect of forest to vineyard conversion on groundwater recharge, and asserts that scientific studies or data are not presented to analyze the potential project impact. The commenter is directed to scientific literature review and water balance calculations in DEIR, Appendix M, where the basis for the DEIR conclusions is documented in detail. Please also see Response to Comment 12-5.

Response to Comment 19-10

The commenter appears to not acknowledge the additional analysis of the issue in DEIR, Appendix M, and summarized in the DEIR immediately following the above referenced

quotation (pages 3.7-82 through 3.7-84). The DEIR uses the Caspar Creek study to evaluate the result of forest canopy removal, and assesses potential vineyard impacts by other means.

Response to Comment 19-11

Please see Response to Comment 16-4.

Response to Comment 19-12

The commenter states "might not necessarily mean increased rain for coastal Northern California." Climate change science is still producing varied results, depending upon the scientific body conducting such investigations and the model inputs being utilized. Many studies have produced competing results which emphasizes the need to employ great caution when carrying out an objective analysis of climate change. The DEIR performs a conservative analysis of this issue. See also Response to Comment 12-5, further explaining the adequacy of the proposed irrigation reservoir to provide the needed irrigation water in years of normal precipitation as well as dry years.

Response to Comment 19-13

Please see Response to Comment 19-12.

Response to Comment 19-14

The DEIR evaluates a reasonable range of alternatives to the proposed project in Chapter 6, *Alternatives Analysis*, including alternative locations. The DEIR on pages 6-2 through 6-3 explains how the alternatives were selected to inform the decision-making process.

The type of evaluation that the commenter requests was conducted by reviewing maps of Sonoma County displaying soils, elevations, and slopes similar to the project site. As discussed in the DEIR, very specific criteria pertaining to soil type and microclimate must be met to satisfy the proposed project's basic objectives. In addition, the potential site must be of comparable size to attain most of the proposed project objectives. Based on extensive evaluation, the DEIR determined that sites of appropriate acreage that include most of the necessary site characteristics are quite rare. Nevertheless, the DEIR considered offsite alternatives, as well as a reduced acreage alternative and two "no project" alternative scenarios.

Contrary to the commenter's implications, soil type is only one factor to be considered when addressing the potential for growth inducing or cumulative impacts associated with potential timber conversion.

Moreover, although the comment is generally correct in its assertion that a portion of the proposed project will be located on soils classified in the Hugo loam soils type, the relative proportion of the site within the Hugo soils classification is actually only approximately thirty-five (35) percent of the project site.

In terms of specific acreage breakdowns, the soil types within the proposed developed area of the project site are as follows:

Soils type	Acreage
Hugo	66± Acres
Goldridge	124± Acres

Of the sixty-six (66) acres of the site that fall within the Hugo classification, only approximately forty-seven (47) acres are proposed for cultivation. Therefore, on a percentage basis, contrary to the commenter's claim, only approximately twenty-five (25) percent of the project's proposed cultivation activities will occur on Hugo soils.

Response to Comment 19-15

Under CEQA, a lead agency shall mitigate or avoid the significant effects on the environment of projects that it approves whenever feasible (Public Resources Code, § 21002.1(b)). The proposed project as analyzed in the DEIR, does not involve permits or other land use entitlements for any of the facilities that the commenter suggests might be proposed at some future point. The applicant has not proposed for the project to be expanded to include these facilities in the future. Under CEQA, the lead agency cannot require mitigation measures to be implemented for a speculative or nonexistent project component (See CEQA Guidelines, § 15378(c) ["Project" refers to the activity which is being approved], § 15144 [analysis and mitigation for speculative impacts not required]). The applicant or a future owner could not pursue any of the future activities suggested by the commenter without further land use entitlements (i.e., subsequent discretionary approvals). Any such subsequent discretionary approvals would be subject to CEQA (See, e.g., Public Resources Code, § 21166; CEQA Guidelines, § 15162).

In addition, as discussed in the *Introduction* Chapter of this Final EIR, the Fairfax Conversion project includes the permanent preservation of approximately 151 forested acres, part of which would preserve a wildlife corridor running the length of Patchett Creek on the property. In summary, approximately 46 percent or nearly one-half of the project site will be preserved permanently to protect biological resources.

Response to Comment 19-16

Please see Responses to Comments 10-50 and 12-5.

Response to Comment 19-17

Please see Response to Comment 13-5.

Response to Comment 19-18

Please see Response to Comment 13-13.

Response to Comment 19-19

CEQA requires that an EIR identify a range of project alternatives; discussion of an off-site location is not required (Public Resources Code, §§ 21001(g), 21002.1(a), 21061; *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477). The CEQA Guidelines confirm the point, stating that an EIR must include a reasonable range of alternatives to the project, or to the project location (CEQA Guidelines, § 15126.6(a), (b)).

The lead agency need not consider every conceivable alternative, and need not consider alternative locations when the proposed project is consistent with the applicable land use plan (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 573). According to pages 3.2-22 through 3.2-26 of the Draft EIR, the proposed project is consistent with County General Plan and Zoning Ordinance land use designations for the site. In addition, the proposed project is consistent with goals and policies contained in the General Plan Land Use and Resource Conservation Elements. Accordingly, the DEIR provides detailed consideration of potential alternative locations well beyond that which CEQA requires.

Furthermore, the scope of alternatives to be included in an EIR depends on the objectives of the underlying project (*In re Bay-Delta etc.* (2008) 43 Cal.4th 1143, 1166). A lead agency should study alternatives that feasibly attain most of the basic objectives of the proposed project (CEQA Guidelines, § 15126.6, subd. (f)). According to page 2-6 of the DEIR, a basic objective of the proposed project is the production of premium quality grapes for the Sonoma Coast Chardonnay and Pinot Noir wines. Accordingly, the DEIR's analysis of potential off-site alternatives focused on potential sites that could accomplish the objective. The DEIR explains that pinot noir grapes can be successfully grown only on land meeting certain characteristics, including: (1) soil type (i.e., Goldridge and Hugo loam soils); (2) elevation (i.e., 495'-892'); (3) slope degree (i.e., less than 23 degrees); and (4) solar exposure (i.e., northeast to southeast solar aspect) (See page 6-12 of the DEIR). The lead agency may structure the EIR alternative analysis around a reasonable definition of underlying purpose and does not need to study alternatives that cannot achieve that basic goal.

As described in detail in the DEIR, the proposed project's potentially significant impacts would be avoided or reduced to less-than-significant levels through implementation of mitigation measures. Under such circumstances, consideration of a broader range of alternatives is not warranted (CEQA Guidelines, § 15126.6).

Response to Comment 19-20

Please see Response to Comment 10-72 regarding the inclusion of the appropriate portion of the Preservation Ranch project in the cumulative analyses of the Fairfax Conversion DEIR.

See also Response to Comment 10-26 regarding cumulative impacts to hydrology and biological resources.

Response to Comment 19-21

Please see Response to Comment 10-68.

Response to Comment 19-22

Please see Response to Comment 19-19.

Response to Comment 19-23

Please see Response to Comment 11-2.

Response to Comment 19-24

Please see Response to Comment 11-2.

Response to Comment 19-25

Please see Response to Comment 7-9.

Letter 20

UNIT, FG, WQ, ER, LM, RPF

1-09-058 Som

SantaRosa Publiccomment

From: Chris Poehlmann [poehlman@mcn.org]
Posted At: Tuesday, July 28, 2009 3:47 PM
Conversation: Item for Fairfax conversion file
Posted To: Santa Rosa Public Comment
Subject: Item for Fairfax conversion file

Allen Robertson and CalFire,

Please place the following article in the Fairfax file as it regards the economic viability of the project.

Thank you,
Chris Poehlmann
Friends of the Gualala River

The New York Times

20-1

July 29, 2009

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COAST AREA OFFICE
RESOURCE MANAGEMENT

THE POUR

Where Anxiety Is All That's Flowing

By ERIC ASIMOV

THE California wine industry encompasses many with little in common. It includes small grape growers and brokers, family producers, négociants, big corporations, major distributors and many different types of retail outlets.

Still, as diverse as this group is, one word seems to sum up the effect of the recession on their businesses: brutal.

The reason is simple. Wine is a cash-flow business, and all along the pipeline, from farm to production to sales, cash is not flowing. Growers are behind on sales of grapes, which are fetching much lower prices than last year. Sales are sluggish for wines retailing at $15 a bottle and higher. Meanwhile, distributors, restaurants and retail shops are reluctant to buy more wine, preferring to sell through what they already have.

7/29/2009

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Cont'd

Cash may be trickling, but anxiety is gushing forth.

"People are drinking out of their cellars, the big distributors are throwing their weight around, and you add these things up, and from the winery perspective, the cash flow is brutal," said Steve Matthiason, a vineyard consultant who also grows grapes and makes small quantities of wine. "Everybody figures this is kind of a temporary thing, that when restaurants burn through their inventory they're going to have to start buying again, and distributors, too. But everybody is wondering when the levee is going to break, and you have harvest coming up."

The harvest is what makes selling wine so different from, say, selling computer chips. When production of chips outpaces sales, executives adjust production. But nature is relentless in its annual rhythm. The grapes must be harvested each fall, whatever the need. If grapes are scarce, it may take 10 years from the time a new vineyard is planted to when wines from its grapes can be enjoyed. In a glut, the spigot can't be switched off immediately.

Consumer preference, though, can turn on a whim. Even in the recession, people continue to buy wine. Consumption and sales are actually up, industry analysts agree. But people have turned away from expensive wines, buying two $8 bottles instead of one $20 bottle. As a result, growers in high-status areas who don't already have contracts for their grapes are having trouble selling them, and prices are way down.

Russian River pinot noir grapes, for example, which sold in 2008 for $2,800 to $4,500 a ton, are now going for $1,800 to $2,800 a ton, said Bill Turrentine, president of Turrentine Brokerage, a leading California broker of wine grapes. Napa Valley cabernet sauvignon is selling for $2,000 to $3,000 a ton, he said, down from $3,500 to $5,500 in 2008.

Times are barely easier for wineries that rely on purchased grapes. At Siduri, which specializes in making pinot noirs from top vineyards up and down the West Coast, sales are down 11 percent from last year, "not great, but I don't think it's awful, either," said Adam Lee, the proprietor with his wife, Dianna.

"We are certainly seeing a real slowdown in single-vineyard pinots," Mr. Lee said, "but our appellation series, at $30 or less on the shelf, are flying."

Such a diversity of offerings is crucial as even those consumers who continue to

Letter 20
Cont'd

want top wines have nonetheless traded down. When times were good a few years ago, Brewer-Clifton, which makes small amounts of pinot noir and chardonnay in the Santa Rita Hills of Santa Barbara County, began planting vineyards so it could farm its own grapes.

As it waited for these vineyards to become productive, Brewer-Clifton shifted its own sales focus. Instead of selling only wines from single vineyards for $60 to $80 a bottle, it started to offer wines with a regional appellation, for about $40 a bottle. These wines now make up half its production, which Greg Brewer, the proprietor with Steve Clifton, says is a lucky thing.

"Brewer-Clifton may have lost some people at $60 to $80, but we'll catch them at $40," Mr. Brewer said.

Some top wineries, while acknowledging a wholesale slump through distributors to retail shops and restaurants, say their direct sales, either at the winery or through the Internet, are still strong. At Cain Vineyard and Winery in Napa Valley, retail sales of Cain Five, for $125 a bottle, is down the most, while Cain Cuvée, for $34 a bottle, is selling well. But sales at the winery are up, even for Cain Five, said Christopher Howell, the general manager and winemaker. Hanzell Vineyards in Sonoma County reports similar strength in direct sales.

"It is a Catch-22 in some ways," said Jean Arnold Sessions, president of Hanzell. "Distributors say the high end is not selling well, so they don't present the wines."

So what's the good news?

The wine industry can take some comfort, no matter how small, in knowing that the situation could be a lot worse. Ten years or so ago, California was making too much wine, and so began paring production and trimming back on new vineyards.

"If this had hit a few years ago, when there was a basic structural excess, this would have been catastrophic," Mr. Turrentine said.

The industry is also seeing some small acts of preemptive kindness. Peter Cargasacchi, a grower in the Santa Rita Hills who sells pinot noir grapes to Brewer-Clifton and Siduri, among others, recently cut his price by 10 percent.

Letter 20
Cont'd

even though he already had contracts with producers.

"It just seemed like the right thing to do given the economy and the sluggish premium wine market," he said. "Part of the concession also is motivated by the recognition that this symbiosis between vineyard and winery really is a team effort."

Consumers still interested in high-end wines may find great discounts now as everyone is trying to move inventory. Those who don't want to spend a lot on wine may also be drinking better in the near future. Premium producers who need to make room for the new vintage may sell their wines on the bulk market, even at a loss. These premium wines in turn will be repackaged and sold inexpensively, though it will be difficult for consumers to identify which bottles benefit from a premium wine infusion.

Meanwhile, people in the industry wait, and hope, especially those who expanded or invested in new vineyards before the downturn.

"People who made smart, conscientious decisions three years ago I think will be glad they did when the market stabilizes in 2012 or 2013," Mr. Brewer said. "I think we have to be positive. God help us if it's still like this in 2012."

7/29/2009

LETTER 20: CHRIS POEHLMANN – 7/28/2009

Response to Comment 20-1

The comment does not address the adequacy of the DEIR; the article has become part of the public record for the project and will be considered by the lead agency.