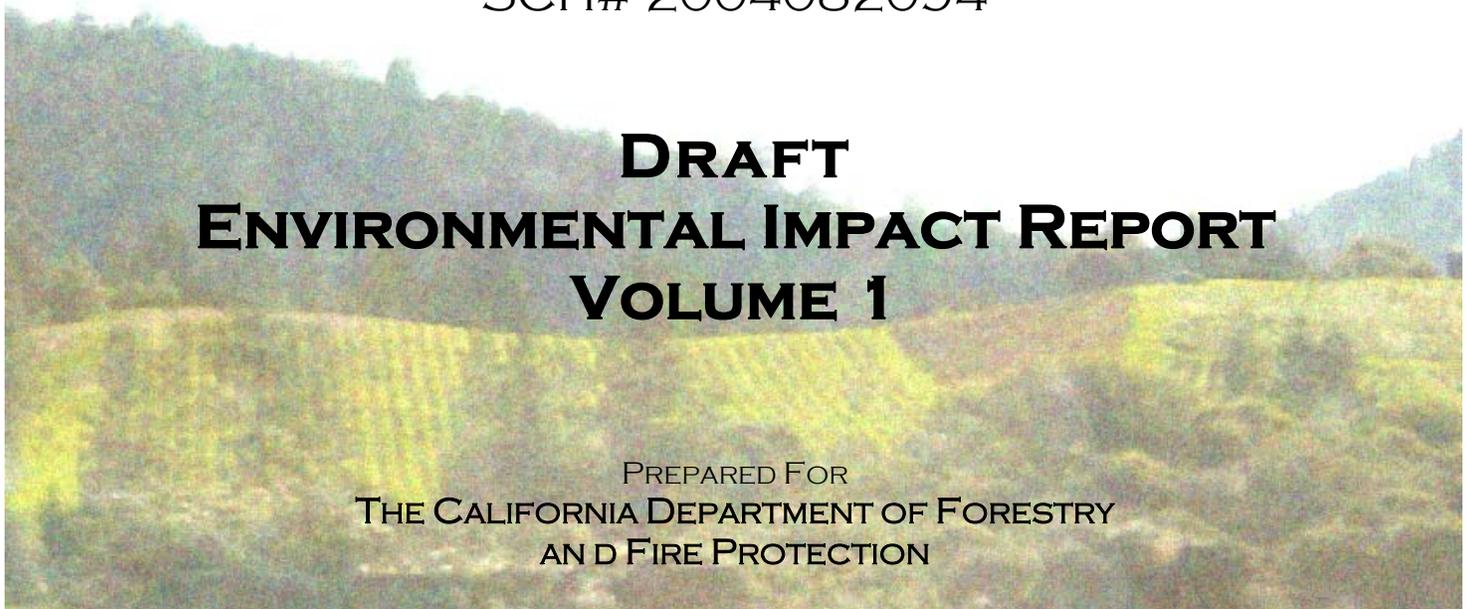


# FAIRFAX CONVERSION PROJECT

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SCH# 2004082094



## DRAFT ENVIRONMENTAL IMPACT REPORT VOLUME 1

PREPARED FOR  
THE CALIFORNIA DEPARTMENT OF FORESTRY  
AND FIRE PROTECTION

JUNE 2009

PREPARED BY  
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1501 SPORTS DRIVE, SACRAMENTO, CA 95834

**Fairfax Conversion Project  
Draft Environmental Impact Report**

SCH# 2004082094

Prepared For  
The California Department of Forestry and Fire Protection  
(CAL FIRE)

Prepared By  
Raney Planning & Management, Inc.  
Sacramento, CA

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## 1. INTRODUCTION, SCOPE, AND SUMMARY OF EIR

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# 1. INTRODUCTION, SCOPE, AND SUMMARY OF EIR

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## INTRODUCTION

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The Fairfax Conversion Project Draft Environmental Impact Report (Draft EIR) was prepared in accordance with the California Environmental Quality Act of 1970 (CEQA) as amended. The California Department of Forestry and Fire Protection is the lead agency for the environmental review of the Fairfax Conversion Project evaluated herein and has the principal responsibility for approving the project. As required by CEQA Guidelines §15121, this EIR will (a) inform public agency decision-makers, and the public generally, of the significant environmental effects of the project, (b) identify possible ways to minimize the significant adverse environmental effects, and (c) describe reasonable and feasible project alternatives which reduce environmental effects. The public agency shall consider the information in the EIR along with other information that may be presented to the agency.

## PROJECT BACKGROUND

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The California Department of Forestry and Fire Protection (CAL FIRE) is responsible for forestry management, including the administration of timber conversion projects, on non-federal lands in the State of California. Such activities are guided by the California Forest Practice Rules, as amended, which provide a regulatory framework for the specific and detailed data that informs and directs the various environmental discussions for the project.

Additionally, the County of Sonoma is responsible for planning and land use in the unincorporated areas of Sonoma County, as described in the 1989 Sonoma County General Plan and the General Plan Update EIR.

## PROJECT DESCRIPTION

---

Codorniu Napa, Inc.'s Artesa Vineyards (the applicant) plans to develop the Fairfax Conversion project site. The proposed project would result in the development of an approximately 190-acre vineyard site located in the County of Sonoma, approximately 0.5 to 0.75 miles southeast of the town of Annapolis and five miles east of the Pacific Ocean. The Fairfax Conversion Project is located on a broad, flat ridge (Beatty Ridge) between Grasshopper Creek and the Wheatfield Fork of the Gualala River. The project site currently consists of young-growth timber and agricultural land associated with past orchard and sheep grazing activities. The site is located on three parcels, identified by County of Sonoma Assessor's Parcel Numbers (APNs) 123-040-022, -024, and -027, occupying a total area of approximately 324 acres.

The applicant plans to develop the project site as follows (all acreages are approximate): the 190-acre project site would consist of a 135-acre net vineyard, 23-acres of perimeter avenues, a nine acre reservoir and sump, two acres of driveways and roads, a one acre corporation yard, and 20-acres of graded perimeter slopes. Approximately 171 acres of the 190-acre total would be converted from young-growth timber (redwood and Douglas-fir) to vineyard, under the conditions of a Timberland Conversion Permit (TCP) issued by CAL FIRE. The timber harvesting activities on the site would adhere to the California Forest Practice Rules and are described in detail in a Timber Harvest Plan (THP) prepared for the applicant by a state-licensed Registered Professional Forester (RPF). The actual logging would be performed by a state-certified Licensed Timber Operator (LTO).

The proposed project also includes the establishment of a permanent deed restriction over approximately 134 acres of land composed of the south-draining tributaries to Patchett Creek in the central portion of the site, and additional biologically rich or culturally significant areas. In addition, project implementation would require the construction of temporary tractor roads and landings used for timber harvesting activities. The project's roads and landings, as well as most of the currently existing unpaved roads on the site, would be removed upon completion of the timber harvest.

## **PURPOSE OF THE EIR**

---

As provided in the CEQA Guidelines §15021, public agencies are charged with the duty to avoid or minimize environmental damage where feasible. The public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social issues.

CEQA requires the preparation of an EIR prior to approving any project that may have a significant effect on the environment. For the purposes of CEQA, the term *project* refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines §15378[a]). With respect to the proposed Fairfax Conversion project, CAL FIRE has determined that the proposed development, having the potential for resulting in significant environmental effects, is a *project* within the definition of CEQA.

The EIR is an informational document that appries decision-makers and the general public of the potential significant environmental effects of a proposed project. An EIR must identify possible means to minimize the significant effects and describe a reasonable range of feasible alternatives to the project. The lead agency is required to consider the information in the EIR along with any other available information in deciding whether to approve the application. The basic requirements for an EIR include discussions of the environmental setting, environmental impacts, mitigation measures, alternatives, growth-inducing impacts, and cumulative impacts.

## **TYPE OF DOCUMENT**

---

The CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a *Project-level EIR* pursuant to CEQA guidelines §15161. This type of analysis examines the environmental impacts of a specific development project. A *Project-level EIR* should focus primarily on the changes in the environment that would result from the development of the project. The EIR should examine all phases of the project, including planning, construction, and operation.

## **EIR PROCESS**

---

The EIR process begins with the decision by the lead agency to prepare an EIR, either during a preliminary review of a project or at the conclusion of an Initial Study. Once the decision is made to prepare an EIR, the lead agency sends a Notice of Preparation (NOP) to appropriate government agencies, and when required, to the State Clearinghouse (SCH) in the Office of Planning and Research (OPR), which will ensure that responsible State agencies reply within the required time. The SCH assigns an identification number to the project, which then becomes the identification number for all subsequent environmental documents on the project. Applicable agencies have 30 days to respond to the NOP, indicating, at a minimum, reasonable alternatives and mitigation measures they wish to have explored in the Draft EIR and whether the agency will be a responsible agency or a trustee agency for the project.

As soon as the Draft EIR is completed, a notice of completion is filed with the OPR and public notice is published to inform interested parties that a Draft EIR is available for agency and/or public review and providing information regarding location of drafts and any public meetings or hearings that are scheduled. The Draft EIR is circulated for a minimum period of 45 days, during which time reviewers may make comments. The lead agency must evaluate and respond to comments in writing, describing the disposition of any significant environmental issues raised and explaining in detail the reasons for not accepting any specific comments concerning major environmental issues. When comments received result in the addition of significant new information to an EIR after public notice is given, the revised EIR or affected chapters must be recirculated for another public review period with related comments and responses.

Once the lead agency is satisfied that the EIR has adequately addressed the pertinent issues in compliance with CEQA, a Final EIR will be prepared, which is made available for review by the public and commenting agencies. Before approving a project, the lead agency shall certify that the Final EIR has been completed in compliance with CEQA, presented to the decision-making body of the lead agency, reviewed and considered by that body, and that the Final EIR reflects the lead agency's independent judgment and analysis.

An Initial Study was prepared to focus the scope of the Fairfax Conversion Project EIR. Notice of Preparation (NOP) for this Draft EIR (SCH# 2004082094) was released August 20, 2004 for a 30-day review. In addition, a public scoping meeting was held on

September 2, 2004. Comments provided by the public and public agencies in response to the NOP were received by CAL FIRE and are provided in Appendix B.

The Fairfax Conversion Project Draft EIR will be circulated for a 45-day public review period. Comments received during the comment period will be addressed in the Final EIR. In accordance with CEQA, CAL FIRE will review the Draft EIR and Final EIR prior to certification of the EIR (which consists of both the Draft EIR and Final EIR). Upon any project approval, written findings of fact for each significant environmental impact identified in the EIR will be prepared by the lead agency to:

- Find that the Proposed Project has been changed to avoid or substantially lessen its significant impacts;
- Determine whether any changes to the Proposed Project necessary to avoid or substantially lessen any significant impacts are within another agency's jurisdiction, and find that such changes have been or should be adopted by such other agency; and/or
- Find that specific economic, social, or other considerations make infeasible any mitigation measures or project alternatives that would avoid or substantially lessen any significant impacts.

The findings of fact prepared by the lead agency must be based on substantial evidence in the administrative record and must include an explanation that bridges the gap between evidence in the record and the conclusions required by CEQA.

## **SCOPE OF THE DRAFT EIR**

---

State CEQA Guidelines §15126.2(a) states, in pertinent part:

An EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced.

Pursuant to these guidelines, the scope of this Draft EIR includes specific issues and concerns identified as potentially significant. The Initial Study prepared for the proposed project concluded that several environmental issues would result in a *less-than-significant* impact. The complete text of the Initial Study is contained in Appendix C.

Issue areas and resources identified for study in this Draft EIR include:

- Land Use;
- Air Quality;
- Biological Resources;
- Cultural Resources;

- Hazards;
- Hydrology and Water Quality;
- Geology;
- Transportation and Circulation;
- Noise; and
- Aesthetics.

The evaluation of effects is presented on a resource-by-resource basis in Subchapters 3.2 through 3.11. Each subchapter is divided into four sections: Introduction, Environmental Setting, Regulatory Context, and Impacts and Mitigation Measures.

### **COMMENTS RECEIVED ON THE NOTICE OF PREPARATION**

---

CAL FIRE received 12 comment letters during the open comment period on the Notice of Preparation for the Fairfax Conversion Project EIR. A copy of each letter is provided in Appendix B of this EIR. The letters were authored by representatives of State and local agencies and other interested parties. The following is a list of the persons and agencies who commented on the NOP:

- California Department of Fish and Game – Robert Floerke, Regional Manager
- State Water Resources Control Board, Division of Water Rights – Ross Swenerton, Chief
- California Department of Transportation – Timothy C. Sable, District Branch Chief
- Coastal Forest Alliance – Randall Sinclair
- Starcross Community – Brother Tolbert McCarroll (x4 email and formal comment letter)
- O’Connor Environmental, Inc. – Matt O’Connor
- Annapolis Resident – Holly McCarroll
- Annapolis Resident – Ron Taeuffer and Tracey Anderson
- Santa Rosa Resident – Linda Haering (x2 email and official comment letter)
- Annapolis Resident – Peter Baye, Ph.D.
- Annapolis Resident – Jamie and Kathy Hall
- Annapolis Resident – Robin Joy Wellman

In addition, a scoping meeting was held on September 2, 2004 at Horicon Elementary School in Annapolis, California. Comments were made during the scoping meeting, which have been included in the summary table below.

### **COMMENTS RECEIVED ON THE PREVIOUSLY PREPARED MITIGATED NEGATIVE DECLARATION**

---

A mitigated negative declaration was previously prepared for development of a vineyard on the project site. Due to substantial public comment on the environmental analysis the document was withdrawn in 2003. Subsequently, the project has been revised, additional

studies have been conducted, and the Draft EIR has been prepared. The following comment letters were received on the mitigated negative declaration previously prepared for the proposed project.

- California Department of Transportation – Timothy C. Sable
- Attorney at Law – Paul V. Carroll (3)
- Sea Ranch Resident – Louise Beebe
- California Department of Fish and Game – Robert W. Floerke
- Hydrologist – Dennis Jackson
- Kamman Hydrology & Engineering, Inc. – Greg Kamman
- Consulting Fisheries Biologist – Patrick Higgins
- Coastal Forest Alliance – Chris Poehlmann and Coast Action Group – Alan Levine (2)
- Annapolis Resident – John Holland
- Annapolis Residents – Jamie and Kathy Hall
- Annapolis Resident – Robin Joy Wellman (2)
- California Department of Planning and Research – Terry Roberts
- California Department of Fish and Game – Stacy Martinelli (4)

**SUMMARY OF COMMENTS RECEIVED ON THE NOTICE OF PREPARATION AND PREVIOUSLY PREPARED MITIGATED NEGATIVE DECLARATION**

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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 comment period have been included in the below summary, and addressed in the EIR where appropriate. However, commenter’s comments are not re-stated verbatim in the below summary, and comments that appear more than once in similar forms have been condensed into a single entry.

|                             |  |
|-----------------------------|--|
| <b><u>Miscellaneous</u></b> | <p>Commenters requested that the following areas be addressed:</p> <ul style="list-style-type: none"> <li>• Issues related to cumulative impacts, specifically the increase in vineyard development in the project area. Cumulative impacts were raised both generally and in relation to specific impact areas.</li> <li>• Detrimental effects on the timber industry by deforestation and additional development pressures.</li> <li>• Clarification of how the project is considered to be in the public interest pursuant to Forest Practice Rules (1109.2).</li> <li>• Long-term feasibility of land use conversion to intensive</li> </ul> |
|-----------------------------|--|

|   |  |
|---|--|
|   | <p>agriculture. 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.</p> <ul style="list-style-type: none"> <li>• Concerns related to the EIR process and noticing.</li> <li>• Credentials of people used to prepare studies.</li> <li>• Incorporation of the studies of Dr. Luke George of Humboldt State University on predation risks and habitat disruptions in coast redwood forest.</li> <li>• EIR should establish a monitoring system whereby a stated maximum number of gallons of water will be drawn from the aquifer.</li> <li>• Clarification of the status and location of the Wellman access easement.</li> <li>• Location of wells, noticing of placement of well, conflicts in documents regarding use of water from well.</li> <li>• Poor map quality of previous environmental documents; request for recent stereo aerial photographs/maps.</li> <li>• Discrepancy between temporary vs. permanent roads on maps.</li> <li>• Evidence has not been produced that high-quality pinot grapes can be feasibly grown in this location.</li> <li>• Include complete scientific literature citations.</li> </ul> |
| <p><b><u>Land Use:</u></b><br/>(See Chapter 3.2)</p>    | <p>Consideration of the following issues:</p> <ul style="list-style-type: none"> <li>• Adequate description of surrounding land uses and environmental conditions.</li> <li>• Land use impacts to adjacent uses due to the vineyard conversion.</li> <li>• Coordination with Sonoma County Board of Supervisors.</li> <li>• Detailed history of land use.</li> <li>• Analysis of consistency with the Sonoma County General Plan grading ordinance and regulation on commercial wells.</li> <li>• Analysis of consistency with the Sonoma County General Plan regarding timber conversion to vineyard under RRD zone.</li> <li>• Cumulative land use effects of proposed project plus all other vineyard conversions in the area.</li> <li>• Maintenance of public access to conversion area via two existing driveways.</li> <li>• Proposed project could attract pests like glassy-winged sharpshooter, forcing currently organic vineyards in area to use pesticides.</li> </ul>  |
| <p><b><u>Air Quality:</u></b><br/>(See Chapter 3.3)</p> | <p>Issues concerning the following needs:</p> <ul style="list-style-type: none"> <li>• Potential impacts of pesticide use and dust on adjacent</li> </ul>  |

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|  | <p>properties.</p> <ul style="list-style-type: none"> <li>• Effect of burning and pesticide use on air quality.</li> </ul>  |
| <p><b><u>Biological Resources:</u></b><br/>(See Chapter 3.4)</p> | <p>Concerns related to:</p> <ul style="list-style-type: none"> <li>• The environmental impacts of a large clear cut.</li> <li>• The loss of forest habitat for macroinvertebrate populations that are a food source for downstream threatened fish and amphibians.</li> <li>• Conservation easements should be included in the project as mitigation for impacts to biological resources.</li> <li>• Surveys for special-status species within the entire property boundary and analysis of potential impacts of the project on such species, including potential downstream impacts.</li> <li>• Cumulative impact analysis of loss of forestland in Grasshopper Creek watershed and Wheatfield Fork Gualala watershed and microclimate impacts.</li> <li>• Analysis of significant cumulative impacts of increased forestland conversion on wildlife habitat, wildlife movement, plant communities, biological diversity, wetlands, and water quality in the assessment area.</li> <li>• Effects of the project on common wildlife such as local birds, deer, and squirrels.</li> <li>• Potential impacts to fisheries and need for an analysis by a qualified fisheries biologist. Impact of pesticide use on steelhead.</li> <li>• Cumulative long-term impacts of agricultural water demand on steelhead populations.</li> <li>• Potential impacts on foothill yellow-legged frog, pond turtle, California red-legged frog and wetlands.</li> <li>• Cumulative impacts relating to forest fragmentation.</li> <li>• Impacts of use of bird mesh on vineyard rows and potential to trap migratory songbirds and protected raptor species.</li> <li>• Potential impacts to thin-lobed horkelia (<i>Horkelia tenuiloba</i>) and Annapolis manzanita.</li> <li>• Effects of fencing on local wildlife and wildlife movement/corridors.</li> <li>• Concerns relating to sudden oak death (SOD).</li> <li>• Potential impacts to non-listed but sensitive bird species such as Swainson's thrush and brown creeper.</li> <li>• Potential impacts to the spotted towhee.</li> <li>• Explanation of Biological Assessment Area(s).</li> <li>• List of recent local THPs in present THP should also include NTMPs.</li> <li>• Effects of illegal logging.</li> <li>• Effects of hardwood removal on wildlife.</li> </ul> |

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|   | <ul style="list-style-type: none"> <li>• Effect of vineyard rodent suppression on raptor populations.</li> <li>• Potential impact to bat populations, which provide natural pest control.</li> </ul>   |
| <p><b><u>Cultural Resources:</u></b><br/>(See Chapter 3.5)</p>          | <p>Concerns relating to:</p> <ul style="list-style-type: none"> <li>• Potential intrusion into Native Village site.</li> <li>• Potential for disturbance of currently unknown cultural resources throughout project site.</li> <li>• Potential for disturbance of paleontological resources.</li> </ul>  |
| <p><b><u>Geology:</u></b><br/>(See Chapter 3.6)</p>                     | <p>Concerns regarding public safety:</p> <ul style="list-style-type: none"> <li>• Engineered plans for the reservoir design.</li> <li>• The ability of the erosion control plan to avoid sediment delivery into the Class II watercourse and its tributaries.</li> <li>• The risk of severe erosion during land clearing, planting, and early vineyard establishment.</li> <li>• Transformation of forest soils such that they would be incapable of sustaining natural plant communities in the future.</li> </ul>  |
| <p><b><u>Hydrology and Water Quality:</u></b><br/>(See Chapter 3.7)</p> | <p>Issues concerning the following needs:</p> <ul style="list-style-type: none"> <li>• Request for a review of a water availability analysis.</li> <li>• An analysis of the cumulative effects of any water withdrawals into the watershed and the effect on downstream resources.</li> <li>• Sources of water to be used for this project including amounts used and seasons of diversion and use.</li> <li>• An analysis of increased peak flows and summer stream flows following canopy removal on the channel morphology and biological communities in channels receiving overland flow from the conversion area.</li> <li>• Impacts to Patchett Creek downstream of the project site from increased peak flows.</li> <li>• Impact of improved subsurface drainage on peak flows.</li> <li>• Analysis of the differences between the project site and the Casper Creek studies referenced in the O'Connor studies.</li> <li>• Estimation of short- and long-term irrigation water demand.</li> <li>• Estimation of the short- and long-term vineyard frost protection or heat control water demand.</li> <li>• Disclosure of all drainages, seasonal wetlands, wetland swales, groundwater seeps, man-made reservoirs and other sensitive habitats located on the entire project site.</li> <li>• Disclosure of chemical fertilizers, herbicides, and pesticides used.</li> <li>• Sediment budget addressing estimated input of sediment into watercourses following forest removal.</li> <li>• Characterization of existing sediment-related impacts in the</li> </ul> |

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Grasshopper Creek and Wheatfield Fork watersheds.

- Potential impacts related to diversion and use of water on downstream water rights and instream public trust resources.
  - Description of water distribution system and water use, including the season of diversion and a detailed description of the water diversion and storage facilities.
  - Affect of project on local wells regarding water quality and quantity.
  - Identification of the site of the Artesa well, and potential water uses.
  - Cumulative long-term impacts of agricultural water demand on groundwater and streamflows.
  - Analysis of groundwater dynamics.
  - Well pump tests for effects of groundwater pumping on instream flows in streams potentially affected by groundwater pumping.
  - Well pump tests to determine proper well placement.
  - Potential for proposed well to be used for irrigation.
  - Changes to drainage patterns affecting adjacent properties.
  - Potential impact of transport of nutrients to groundwater and streams.
  - Analysis of precipitation and runoff data for the Annapolis area.
  - Role of fog-drip and the short and long term hydrologic impact of the loss of trees.
  - Feasibility of dry-farming in the Annapolis area taking into account historical experience in Annapolis area.
  - Consideration of TMDLs (i.e. Threatened and Impaired Watershed [303d] status) in Gualala River watershed.
  - History of, and proposed future uses of, Class IV pond on site.
  - Conformance of THP WLPZs and ELZs with FPR Coho Considerations and CWA Sec. 303(d) provisions.
  - Integrity of Class III streams feeding Grasshopper Creek.
  - Long-term plan for monitoring of stream sedimentation and flow should be included.
  - Discussion of vernal pools and springs on property, and their potential for restoration.
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| <p><b><u>Hazards:</u></b><br/>(See Chapter 3.8)</p>                        | <p>Concerns related to:</p> <ul style="list-style-type: none"> <li>• Potential of the Old Mill Site to contain hazardous materials, including “leachate,” which may flow from the site into Patchett Creek.</li> <li>• Identification of chemicals to be used on vineyard.</li> <li>• Drift of chemicals onto adjacent properties with organic trees</li> <li>• Cumulative impacts of pesticide use.</li> <li>• Potential fire risks due to ignition from agricultural equipment.</li> </ul>   |
| <p><b><u>Transportation and Circulation:</u></b><br/>(See Chapter 3.9)</p> | <p>Concerns related to:</p> <ul style="list-style-type: none"> <li>• Analysis of cumulative impacts of timberland conversions on traffic conditions on the mainline State Route 1 (SR 1) and at the intersection of SR 1 with Annapolis Road and increase in traffic from Stewarts Point/Skaggs Springs Road due to vineyard labor commute.</li> <li>• Location and removal of driveway of the Taeuffer and Anderson property.</li> <li>• Driveway’s ability to convey emergency vehicles per Sonoma County fire requirements.</li> <li>• Increased safety risks to local traffic from project-associated trucks on Skaggs Springs and Annapolis Roads.</li> <li>• Impacts due to expansion of residential development in Annapolis or increase in traffic from Stewarts Point/Skaggs Springs Road leading to increased pressure to pave Kelley Road.</li> <li>• Traffic impacts of vineyard workers commuting to the site.</li> </ul> |
| <p><b><u>Noise:</u></b><br/>(See Chapter 3.10)</p>                         | <p>Concerns related to:</p> <ul style="list-style-type: none"> <li>• Impact of noise on adjacent community.</li> <li>• Duration and intensity of noise associated with timber harvest, land clearing, and land leveling.</li> </ul>  |
| <p><b><u>Aesthetics:</u></b><br/>(See Chapter 3.11)</p>                    | <p>Concerns related to:</p> <ul style="list-style-type: none"> <li>• View from adjacent Starcross Community.</li> <li>• Aesthetic impacts of conversion of timberland to vineyard.</li> <li>• Use of night lighting during harvesting.</li> </ul>  |
| <p><b><u>Alternatives</u></b><br/>(See Chapter 5)</p>                      | <p>Consider:</p> <ul style="list-style-type: none"> <li>• An alternative that does not require timberland conversion.</li> <li>• Alternative project locations in non-forested lands.</li> <li>• Alternative excluding portion of the site near the Wellman property.</li> <li>• An alternative reducing project size.</li> <li>• An alternative that establishes conservation easements over the historical resources.</li> </ul>   |

## **ORGANIZATION OF THE DRAFT EIR**

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The Fairfax Conversion Project Draft EIR is organized into the following sections:

### **Chapter 1 – Introduction, Scope, and Summary of EIR**

Provides an introduction and overview describing the intended use of the EIR and the review and certification process, as well as summaries of the chapters included in the EIR and summaries of the environmental resources that would be impacted by the proposed project.

### **Chapter 2 – Project Description**

Provides a detailed description of the proposed project, including its location, background information, major objectives, and technical characteristics.

### **Chapter 3 – Environmental Setting, Impacts and Mitigation**

Contains a project-level analysis of environmental issue areas. The subsection for each environmental issue contains an introduction and description of the setting of the project site, identifies impacts, recommends appropriate mitigation measures, and determines the significance of the potential impact following mitigation.

### **Chapter 4 – Statutorily Required Sections**

Provides discussions required by CEQA regarding impacts that would result from the proposed project, including a summary of cumulative impacts, potential growth-inducing impacts, significant and unavoidable impacts, and significant irreversible changes to the environment.

### **Chapter 5 – Alternatives Analysis**

Describes the alternatives to the proposed project, their respective environmental effects, and a determination of the environmentally superior alternative.

### **Chapter 6 – EIR Authors / Persons Consulted**

Lists report authors who provided technical assistance in the preparation and review of the EIR.

### **Chapter 7 – References**

Provides bibliographic information for all references and resources cited.

### **Appendices**

Includes the NOP, responses to the NOP, the Initial Study and additional technical information.

## **SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION**

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Under CEQA, a significant effect on the environment is defined as a substantial or potentially substantial adverse change in any of the physical conditions within the areas affected by the project, including land, air, water, minerals, flora, fauna, ambient noise,

and objects of historic or aesthetic significance. For these areas, this Draft EIR outlines thresholds of significance; impacts that result in a substantial adverse change that exceeds the standards of significance are determined to result in a *potentially significant* impact in that area. For these impacts, the Draft EIR discusses the mitigation measures that could be implemented by CAL FIRE to reduce potential adverse impacts to a level that is considered *less-than-significant*. An impact that remains significant after mitigation is considered a *significant and unavoidable* adverse impact of the proposed project. The mitigation measures presented in the Draft EIR will form the basis of the Mitigation Monitoring Program. The following technical environmental issues are addressed in this EIR.

### **Land Use**

In the Land Use subchapter, this EIR evaluates the consistency of the proposed project with the adopted plans and policies of CAL FIRE and the County of Sonoma, including the 1989 Sonoma County General Plan, and the County Zoning Ordinance as amended. The analysis includes a review of the State Board of Forestry and Fire Protection's regulations and policies and the County's General Plan and Zoning Ordinance, as well as any other appropriate documents to address consistency issues. In addition, the Land Use analysis assesses the compatibility of the proposed project with the surrounding land uses, both existing and proposed.

The analysis includes an evaluation of the loss of timberland, locally and regionally. The impacts are measured against the thresholds of significance, and appropriate mitigation measures and monitoring strategies, which are consistent with the policies of CAL FIRE and Sonoma County, are identified.

The Draft EIR finds that the land use impacts from the vineyard operations on the project site would be less-than-significant, and that the project would not be incompatible with surrounding land uses. In addition, the proposed project would be consistent with applicable State Board of Forestry and Fire Protection regulations and policies, as well as the land use designation and the zoning for the site, and the General Plan goals and policies.

### **Air Quality**

The Air Quality analysis includes qualitative discussion of expected emissions generated from sources such as timber harvesting, log hauling, slash treatment, construction activities, including burn pile operations, and grading and trenching activities. The analysis also includes calculations of operational emissions from project initiation to buildout of the proposed project. In addition, the project's contribution to global climate change is assessed. Impacts associated with the project are identified and mitigation is recommended as needed. Cumulative impacts to air quality are evaluated based on guidance provided by the Northern Sonoma County Air Pollution Control District. The content of this subchapter is derived from an Air Quality Assessment prepared by Donald Ballanti, Certified Consulting Meteorologist.

The Draft EIR finds that a potentially significant air quality impact would result from site preparation activities such as logging, grading, and excavation. However, implementation of mitigation measures described in the Air Quality chapter would mitigate potential impacts to a less-than-significant level. All other impacts identified in the Air Quality chapter are found to be less-than-significant.

### **Biological Resources**

The Biological Resources analysis includes a discussion regarding the proposed project's potential effects to plant communities, wildlife, and wetlands, including potential adverse effects to rare, endangered, candidate, sensitive, and special-status species. The analysis also includes a description of the existing setting, identification of the thresholds of significance, identification of impacts, and the development of mitigation measures and monitoring strategies. This subchapter is based in part on consultations with agencies such as the California Department of Fish and Game, the U.S. Fish and Wildlife Service, NOAA Fisheries (formerly the National Marine Fisheries Service), and the U.S. Army Corps of Engineers, as well as the Biological Resources Analysis conducted by Monk & Associates and a Fisheries Assessment conducted by Inland Ecosystems.

The Draft EIR finds that the proposed project would result in potentially significant impacts to thin-lobed horkelia, Annapolis manzanita complex, nesting migratory birds, Northern spotted owl, Foothill yellow-legged frog, red-legged frog, salmonids, Waters of the United States, and streamside conservation areas. However, implementation of mitigation measures required in the Biological Resources chapter would ensure that "take" of protected species would be avoided; thus, all potential impacts would be reduced to a less-than-significant level. All other impacts identified in the Biological Resources chapter are found to be less-than-significant.

### **Cultural Resources**

The Cultural Resources subchapter describes the potential project-related adverse effects to historical, archaeological, and paleontological resources. In addition, the analysis also includes identification of the thresholds of significance, identification of impacts, and the development of mitigation measures and monitoring strategies. The analysis is based on the paleontological, cultural, and historical reports conducted by James R. Allen, Maximillian Neri of NCRM, and Thomas M. Origer of Thomas Origer & Associates.

The Draft EIR finds that the proposed project would result in potentially significant impacts to paleontological resources, cultural resources, and historic resources; however, implementation of the mitigation measures described in the Cultural Resources chapter would reduce the impacts to a less-than-significant level. All other impacts identified in the Cultural Resources chapter are found to be less-than-significant.

## **Geology**

The Geology analysis includes a description of the potential effects from earthquakes, landslides, and liquefaction, as well as identification of any unique geological features within the project site. In addition, the Geology chapter includes an analysis of potential sedimentation and erosion impacts based upon the Erosion Control Plan prepared for the proposed project by Erickson Engineering, Inc. The analysis contains a description of the existing setting, identification of the thresholds of significance, identification of impacts, and the development of mitigation measures and monitoring strategies.

The Draft EIR finds that seismic activity would result in a potentially significant impact to the proposed reservoir. However, this impact would be reduced to a less-than-significant level through proper geotechnical design reviewed and approved by the Sonoma County Permit and Resource Development Department. The EIR also found that increased soil erosion during and after construction from conversion and grading activities would result in potentially significant impacts. Through mitigation measures, these impacts would also be reduced to a less-than-significant level. All other impacts identified in the Geology chapter were found to be less-than-significant.

## **Hydrology and Water Quality**

The Hydrology and Water Quality analysis identifies potential impacts pertaining to stormwater drainage, flooding, groundwater, and water quality. Consideration includes on-site, as well as off-site, infrastructure facilities. The analysis also includes a description of the existing setting, identification of the thresholds of significance, identification of impacts, and the development of mitigation measures and monitoring strategies. The Hydrology and Water Quality chapter is based on technical analyses completed by O'Connor Environmental and West Yost & Associates.

The EIR finds that the proposed project would have potentially significant impacts related to the availability of irrigation water, vineyard operation sedimentation, and cumulative sedimentation. However, mitigation measures provided in the Draft EIR would reduce the impacts to a less-than-significant level. Impacts to surface water quality from short-term timber harvest-related erosion and sedimentation were found to be potentially significant, but would be reduced to less-than-significant with implementation of the mitigation measures identified in the Draft EIR. All other impacts related to Hydrology and Water Quality identified in the Draft EIR were found to be less-than-significant.

## **Hazards**

The Hazards analysis summarizes the setting and describes the potential for existing or possible hazardous materials on-site, such as old sawmill site and the presence of agricultural or other chemicals, as well as any impacts that could result from implementation of the proposed project. This analysis includes identification of the

thresholds of significance, identification of impacts, and the development of mitigation measures and monitoring strategies.

The Draft EIR finds that presence of hazardous chemicals associated with the old sawmill site, chemicals associated with past illegal activities, past and future use of agricultural chemicals on the project site, as well as the potential for wildland fires would generate potentially significant impacts. However, the mitigation measures identified in the Hazards chapter would reduce these impacts to a less-than-significant level. All other hazards impacts from the proposed project are found to be less-than-significant.

### **Transportation and Circulation**

The Traffic and Circulation subchapter describes existing traffic conditions, existing plus project traffic conditions, and cumulative traffic conditions. The report also includes standards of significance and methods of analysis, and describes the impacts associated with the traffic, in addition to proposing mitigation to reduce the level of impacts. The traffic analysis summarizes the existing and planned regional and local transportation network, as well as existing and future traffic conditions. In addition, the analysis identifies traffic loads and capacity of street systems, including level of service standards for critical street segments and intersections. Potential traffic effects associated with increases in volumes and changes in the nature of traffic and circulation patterns are discussed, as well as traffic hazards due to design features. The Traffic and Circulation analysis is based on the traffic study prepared by TJKM Transportation Consultants.

The Draft EIR finds that short-term traffic related to the timber harvesting and vineyard establishment activities would have a potentially significant impact. However, mitigation measures identified in the Transportation and Circulation chapter would reduce the impact to a less-than-significant level. All other transportation and circulation impacts from the proposed project are found to be less-than-significant.

### **Noise**

The Noise analysis includes a discussion of the existing setting, identification of thresholds of significance, identification of impacts, and the development of mitigation measures and monitoring strategies. The analysis identifies relevant regulatory setting information and identifies changes in ambient noise characteristics, especially with respect to increased truck and worker traffic during harvest and the heavy farming machinery. The analysis evaluates the effects on sensitive receptors and potential effect of existing noise source generators. The noise analysis is based on an Environmental Noise Analysis prepared by Bollard & Brennan, Inc.

The Draft EIR finds that construction and operational noise impacts resulting from the proposed project would be potentially significant. However, the Draft EIR identifies appropriate mitigation measures which would reduce the noise impacts to a less-than-significant level. All other noise impacts identified in the Draft EIR are found to be less-than-significant.

## **Aesthetics**

The Aesthetics analysis summarizes existing regional and project area aesthetics and visual setting. In addition, the analysis describes project-specific aesthetics issues regarding development of the proposed project, such as scenic vistas, trees, historic buildings, scenic highways, existing visual character or quality of the site and its surrounding areas, and light and glare. The analysis also includes the identification of the thresholds of significance, identification of impacts, and the development of mitigation measures and monitoring strategies.

The Draft EIR finds that the proposed project would result in less-than-significant impacts on scenic resources and residences due to the change in scenery, and would not create a significant new source of light and glare.

## **Cumulative Impacts**

The Cumulative Impacts analysis summarizes the regional and project area cumulative setting. In addition, the analysis identifies impacts, and the development of mitigation measures and monitoring strategies as necessary.

The Draft EIR finds that the proposed project would result in less-than-significant cumulative impacts in all areas evaluated.

## **SUMMARY OF THE PROJECT ALTERNATIVES**

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CEQA Guidelines §15126.6 directs that an EIR shall describe a range of reasonable alternatives to the proposed project, or to the location of the proposed project, which would feasibly attain most of the basic objectives of the project while avoiding or substantially reducing any of the significant effects of the project. This analysis must also evaluate the comparative merits of the alternatives. The following summarizes the alternatives which are evaluated in this EIR. A complete analysis of alternatives is provided in Chapter 5.

### **No Project/No Development Alternative**

CEQA requires analysis of a No Project Alternative. The No Project Alternative would allow the continued existence of the project site in its current state, and would therefore not include timberland conversion, planting of vineyards, construction of buildings, or any associated infrastructure. Because this alternative would not result in any changes to the site, implementation of the No Project Alternative would not achieve the project objectives. Furthermore, the No Project Alternative would not result in the long-term reduction of sedimentation from the project site, as would occur with the proposed project.

### **Offsite Alternative**

One of the requirements of CEQA is the assessment of the comparative environmental impacts of alternative locations for the “project.” Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR. The Offsite Alternative would result in the development of the project at a location other than the site proposed. The identification of a specific Offsite Alternative is complicated by the specific soil, elevations, slopes, and aspects required for a high-quality vineyard site. A qualitative assessment of the Offsite Alternative found that the Alternative would potentially reduce impacts to biological resources, cultural resources, hazards, and noise. However, site-specific surveys of an alternate site would be required to definitively state that impacts associated with the Offsite Alternative would be substantively less than the proposed project.

### **Reduced Acreage Alternative**

Similar to the proposed project, the Reduced Acreage Alternative would include the conversion of timberland to vineyards. However, the Reduced Acreage Alternative would strategically reduce project acreages in three areas to reduce impacts to adjoining properties and biological resources. The Reduced Acreage Alternative would increase the size of the reserves, as compared to the proposed project, for the identified on-site cultural and biological resources. The Reduced Acreage Alternative would reduce the overall vineyard area by 33.2 acres (24.6 percent) by eliminating Unit Areas 1a-d, 3, and 4. Units 1a-d form the northwest corner of the proposed project, Unit 3 forms the northeast corner of the project site, and Unit 4 is located in close proximity to the archaeological sites and manzanita preserves. Transportation and Circulation impacts would be reduced because fewer workers and trucks would be required to harvest the grapes. Therefore, fewer vehicle trips would be made, which would reduce traffic, air quality, and noise impacts. In addition, the reduction in acreage would reduce the total area disturbed, thereby reducing impacts to aesthetics, hazards, biological resources, and cultural resources. Conversely, impacts similar to the proposed project would still occur related to hydrology and water quality, and geology.

### **Environmentally Superior Alternative**

Pursuant to CEQA Guidelines §15126.6(e)(2), the No Project Alternative may not be selected as the environmentally superior alternative. Therefore, for this project, the environmentally superior alternative would result in development of the site under the Reduced Acreage Alternative.

## **SUMMARY OF IMPACTS AND MITIGATION MEASURES**

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The following Table (Table 1-1) summarizes the impacts identified in the environmental section of this Draft EIR. The proposed project impacts are identified for each environmental analysis section (3.1 – 3.11) in the Draft EIR in Table 1-1 below. The level of significance of each impact, any mitigation measures required for each impact, and the resultant level of significance after mitigation are also given below.

**TABLE 1-1  
 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact   | Level of Significance Prior to Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|--|---|--|--|
| <b>3.2 Land Use</b>  |   |  |  |
| 3.2-1 Compatibility with surrounding land uses.  | LS  | 3.2-1 None required.   | N/A                                    |
| 3.2-2 Consistency of the Proposed Timber Conversion with Applicable Policies.                              | LS  | 3.2-2 None required.   | N/A                                    |
| 3.2-3 Consistency with the project site's General Plan land use designation.                               | LS  | 3.2-3 None required.   | N/A                                    |
| 3.2-4 Consistency with County Ordinances.  | LS  | 3.2-4 None required.   | NI                                     |
| 3.2-5 Consistency with applicable General Plan goals and policies.   | LS  | 3.2-5 None required.   | N/A                                    |
| <b>3.3 Air Quality</b>   |   |  |  |
| 3.3-1 Air quality impacts related to site preparation activities such as logging, grading, and excavation. | PS  | 3.3-1 Prior to the issuance of a grading permit, the project contractor shall prepare an Erosion Prevention and Dust Control Plan. The plan shall be followed by the project's grading contractor and submitted for review and approval by the County Permit and Resource Management Department, which will be responsible for field verification of the plan during construction. The plan shall include the following control measures necessary for the proposed project: | LS                                     |

N/A = Not Applicable; NI = No Impact; LS = Less-than-Significant; PS = Potentially Significant; SU = Significant and Unavoidable

**TABLE 1-1  
 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact  | Level of Significance Prior to Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|---|---|--|--|
|   |   | <ul style="list-style-type: none"> <li>• <i>Water all active and disturbed areas at least twice daily and more often during windy periods. Active areas adjacent to existing land uses shall be kept damp at all times, or shall be treated with non-toxic stabilizers or dust palliatives.</i></li> <li>• <i>Apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas.</i></li> <li>• <i>Limit traffic speeds on unpaved areas and roads to 15 mph.</i></li> <li>• <i>Burning of cleared vegetation shall be conducted according to Regulation II – Open Burning, of the Northern Sonoma County APCD.</i></li> </ul> |  |
| <b>3.3-2 Air quality impacts associated with additional vehicles and agricultural activities on the project site.</b> | LS  | 3.3-2 <i>None required.</i>  | N/A                                    |

N/A = Not Applicable; NI = No Impact; LS = Less-than-Significant; PS = Potentially Significant; SU = Significant and Unavoidable

**TABLE 1-1  
 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact  | Level of Significance Prior to Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|---|---|--|--|
| <b>3.3-3 Impacts related to an increase in traffic volumes and congestion levels, resulting in a change of carbon monoxide (CO) concentrations.</b> | LS  | 3.3-3 <i>None required.</i>  | N/A                                    |
| <b>3.4 Biological Resources</b>   |   |  |  |
| <b>3.4-1 Impacts to thin-lobed horkelia (<i>Horkelia tenuiloba</i>).</b>  | PS  | 3.4-1 <i>Prior to the issuance of a grading permit, the applicant shall establish a 15.65-acre preserve on lands that have been designated on the west side of the project site that will protect the largest population of thin-lobed horkelia from the proposed project impacts (Figure 3.4-4). This preserve will be dedicated in a permanent deed restriction recorded on the title of the property that shall run with the land in perpetuity. A wetland mitigation plan proposes the creation of wetlands in the thin-lobed horkelia preserve and in an Annapolis manzanita preserve (see below). Wetland creation will occur in portions of the preserve that do not currently support thin-lobed horkelia. Regardless, a very small number of these plants could be impacted within the preserve from implementation of a wetland mitigation compensation plan. This plan shall be subject to the review and approval of the CAL FIRE and the Sonoma County Permit and Resource Management Department. In addition, the vineyard has been designed to ensure that agricultural runoff does not enter the preserve. Following completion of</i> | LS                                     |

N/A = Not Applicable; NI = No Impact; LS = Less-than-Significant; PS = Potentially Significant; SU = Significant and Unavoidable

**TABLE 1-1  
 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact  | Level of Significance Prior to Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|---|---|--|--|
|   |   | <p><i>vineyard development activities, the applicant shall ensure that any herbicide applications which may take place in the nearby vineyard unit(s) do not affect or enter the thin-lobed horkelia reserve. The plan shall be subject to the review and approval of the Department of Forestry and the Sonoma County Permit and Resource Management Department.</i></p>  |  |
| <p><b>3.4-2 Impacts to Annapolis manzanita (<i>Arctostaphylos Manzanita x A. stanfordiana</i>).</b></p> | <p>PS</p>                                 | <p>3.4-2 <i>Prior to issuance of a grading permit, the applicant shall set aside an area totaling approximately 4.4 acres on the east side of the project site (see Figure 3.4-4) for the preservation of Annapolis manzanita identified on the Artesa property. The reserve shall be dedicated in perpetuity through a permanent deed restriction recorded on the title of the property. The reserve area shall not be developed. Timber operations in the areas adjacent to the preserve shall use directional falling so that timber marked for removal falls away from the reserve area. Heavy equipment and vehicles shall be excluded from the reserve area during project development and operations. The manzanitas within these preserves will be protected by fencing that will be maintained by the owner also in perpetuity. Fencing specifications shall be as recommended by CDFG, but at a minimum would include a metal post and wire fence that would allow wildlife access to the preserves. The vineyard has been designed to ensure that agricultural runoff does not enter the preserve. Following completion of vineyard development activities, the applicant shall ensure that any herbicide applications which may take place in the nearby</i></p> | <p>LS</p>                              |

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|--|---|---|--|
|  |   | <i>vineyard unit(s) do not affect or enter the Annapolis manzanita reserve. The plan shall be subject to the review and approval of the Department of Forestry and the Sonoma County Permit and Resource Management Department.</i>   |  |
| <b>3.4-3 Impacts pertaining to loss of wildlife corridors.</b>                       | LS  | 3.4-3 <i>None required.</i>   | N/A                                    |
| <b>3.4-4 Impact to the northern spotted owl (<i>Strix occidentalis caurina</i>).</b> | PS  | 3.4-4(a) <i>While a single year of survey can be conducted pursuant to the USFWS's survey protocol, the USFWS encourages completion of a two-year survey "to provide a higher likelihood of accurately determining presence or absence of spotted owls." No northern spotted owls were detected during the two-year survey. Pursuant to the USFWS' survey protocol (USFWS 1992a), completion of a two-year survey with negative results indicates that the project site does not have to be surveyed again for two more years. Thus, if timber harvesting begins prior to 2010, no further surveys are necessary pursuant to the protocol. However, as the northern spotted owl is a mobile species, out of an abundance of precaution, if timber harvesting or site grading commences before 2010, a pre-disturbance northern spotted owl survey shall be completed in the 30 day period prior to site disturbance. If timber harvesting commences in 2010 or in later years, a second set of full protocol-level surveys shall be required prior to the commencement of site disturbance.</i> | LS                                     |

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|        |   | <p>3.4-4(b) <i>Current survey information indicates that at this time there are no impacts that are expected to occur to the northern spotted owl. Regardless, as required to comply with the Forest Practices Act as detailed at 14 CCR § 919.9, the following habitat protection measures shall be established to protect the northern spotted owl if any northern spotted owl is detected during subsequent surveys.</i></p> <p><b>Habitat Protection Measures</b></p> <p><i>The following definitions shall be used when evaluating impacts to the northern spotted owl:</i></p> <p>1. <i>Definitions of nesting-roosting and foraging habitat.</i></p> <p>a. <i>Nesting-Roosting Habitat includes the following:</i></p> <p>A. <i>≥60% canopy cover of trees ≥11 inches diameter at breast height (dbh).</i></p> <p>b. <i>Foraging Habitat includes the following:</i></p> <p>A. <i>≥40% canopy cover of trees 11 inches dbh.</i></p> <p>B. <i>Basal area = ≥75 ft<sup>2</sup>/acre of trees ≥11 inches dbh.</i></p> |  |

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|--------|---|--|--|
|        |   | <p><i>2. Priority Ranking of Habitat Retention Areas.</i></p> <p><i>a. Tree Species Composition. Mixed conifer stands should be selected over pine-dominated stands.</i></p> <p><i>A. Abiotic Considerations include the following:</i></p> <p><i>i. Distance to Nest.</i></p> <p><i>I. Nesting-roosting and foraging habitat should be located closest to identified nest tree(s), or closest to roosting tree(s), if no nesting trees are identified.</i></p> <p><i>ii. Contiguity.</i></p> <p><i>I. Nesting-roosting habitat within the 0.5-radius circle around an activity center must be as contiguous as possible.</i></p> <p><i>II. Fragmentation of foraging habitat must be minimized as much as possible.</i></p> <p><i>iii. Slope Position.</i></p> <p><i>I. Habitats located on the lower one-third of slopes provide optimal</i></p> |  |

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|--------|---|--|--|
|        |   | <p><i>microclimatological conditions and an increased potential for the presence of intermittent or year-round water resources.</i></p> <p><i>iv. Aspect.</i></p> <p><i>I. Habitats located on northern aspects provide optimal vegetation composition and cooler site conditions.</i></p> <p><i>v. Elevation.</i></p> <p><i>I. Habitat should be located at elevations of less than 6000 feet, although the elevation of some activity centers (primarily east of Interstate 5) may necessitate inclusion of habitat at elevations greater than 6000 feet.</i></p> <p><i>3. Habitat Quantities.</i></p> <ul style="list-style-type: none"> <li><i>• Within 1000 feet of each activity center:</i> <ul style="list-style-type: none"> <li><i>A. Outside of the breeding season (August 1 through January 31), no timber operations shall occur within 1000 feet of an activity center other</i></li> </ul> </li> </ul> |  |

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|        |   | <p><i>than use of existing roads.</i></p> <p><i>B. During the breeding season (February 1 through July 30), no timber operations shall occur within 1000 feet of an activity center other than use of existing, permanent, year-round roads.</i></p> <ul style="list-style-type: none"> <li>• <i>Within 0.7-mile radius (1000 acres) of, and centered on, each activity center:</i> <ul style="list-style-type: none"> <li><i>A. Habitat shall be retained to maximize attributes desirable for NSOs described in (2) above.</i></li> <li><i>B. At least 500 acres of suitable habitat must be present, as follows:</i> <ul style="list-style-type: none"> <li><i>i. 200 acres of nesting-roosting habitat.</i></li> <li><i>I. No timber harvest shall occur within the 100 acres of nesting-roosting habitat immediately surrounding each activity center.</i></li> <li><i>II. If the remaining 100 acres of nesting-roosting habitat is contiguous with the activity center or is located within the same drainage, harvest shall not reduce</i></li> </ul> </li> </ul> </li> </ul> |  |

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|--------|---|---|--|
|        |   | <p><i>the pre-harvest basal area of these acres by more than 33%.</i></p> <p><i>III. If the remaining 100 acres of nesting-roosting habitat is not contiguous with the activity center or is not located within the same drainage, ≥60% canopy cover of trees ≥11 inches dbh shall be retained.</i></p> <p><i>ii. ≥300 acres of foraging habitat.</i></p> <p><i>C. No more than 1/3 of the remaining suitable habitat shall be harvested during the life of the plan.</i></p> <ul style="list-style-type: none"> <li><i>• Between the 0.7-mile and 1.3-mile radius circles centered on each activity center:</i> <ul style="list-style-type: none"> <li><i>A. Retention of habitat should follow the ranking guidelines contained in (2) above.</i></li> <li><i>B. ≥836 acres of suitable habitat must be present.</i></li> <li><i>C. No more than 1/3 of the remaining suitable habitat shall be harvested during the life of the plan.</i></li> </ul> </li> </ul> |  |

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|--------|---|--|--|
|        |   | <p><i>If there is a deficit of any habitat quantities pre harvest, operations within that habitat type shall not reduce or degrade the amount or quality of that habitat.</i></p> <p><b>Operational Protection Measures</b></p> <ul style="list-style-type: none"> <li>• <i>Helicopter yarding within 0.5 miles of an NSO activity center is prohibited between February 1<sup>st</sup> and August 31<sup>st</sup>.</i></li> <li>• <i>No timber harvest operations shall occur until such time as CAL FIRE has reviewed all survey and habitat information required by 919.9(g) (provided in Section V of the THP) and has determined pursuant to 14 CCR 919.10 that take of an NSO will not occur. Any change in timber operations that results from a change in location, or the discovery, of an NSO after plan approval will have to be incorporated into the plan through the amendment process per 14 CCR §§ 1039, 1040, 1090.24, 1090.25 and 1092.27. CAL FIRE will treat such a change in timber operations as a minor or substantial amendment, depending on the extent of the change.</i></li> </ul> <p><i>If in subsequent years surveys are again completed and northern spotted owls are found nesting in the trees on or</i></p> |  |

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|---|---|--|--|
|   |   | <p><i>immediately adjacent to the project site, or subsequent credible information becomes available that demonstrates that the northern spotted owl could be affected by the proposed project pursuant to the Forest Practices Act, the mitigation measures above shall be implemented. In addition, the applicant will consult with USFWS and any additional restrictions or mitigation measures imposed by this agency will become conditions of project approval.</i></p>  |  |
| <p><b>3.4-5 Impacts to nesting raptors.</b></p> | <p>PS</p>                                 | <p>3.4-5<br/> <i>Nesting surveys shall be conducted 30 days prior to commencing with any tree/brush removal or any earth-moving activity if this work would commence between February 1st and September 1st. The raptor nesting surveys shall include examination of all trees on the project site and within 500 feet of the entire project site, if possible, and not just trees slated for removal. All stick nests and all tree cavities shall be examined for evidence of nesting raptors.</i></p> <p><i>If nesting raptors are identified during the surveys a 300-foot radius around the nest tree must be demarcated with a double stand of bright orange flagging tape tied 5 to 8 feet above the ground. If the tree is adjacent to the project site then the buffer shall be demarcated per above where the buffer occurs on the project site. The size of the buffer may be altered if a qualified raptor biologist conducts behavioral observations and determines the nesting raptors are well acclimated to disturbance. If this occurs, the raptor biologist shall prescribe a modified buffer that allows sufficient room</i></p> | <p>LS</p>                              |

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|---|---|--|--|
|   |   | <p><i>to prevent undue disturbance/harassment to the nesting raptors. Any buffer that is established that is less than 150 feet shall require behavioral monitoring by a qualified raptor biologist until such time that the young fledge. In the event the smaller buffer is not sufficient to protect the nesting birds the monitoring biologist shall have the right to re-establish a larger buffer up to a 300 foot buffer. No tree or brush removal, earth-moving activities, or human intrusion (except by biologists or individuals accompanied by a qualified raptor biologist) shall occur within the established buffer until it is determined by a qualified raptor biologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by August 1. This date may be earlier than August 1, or later, and would have to be determined by a qualified raptor biologist.</i></p> |  |
| <p><b>3.4-6 Impacts to nesting birds (general).</b></p> | <p>PS</p>                                 | <p>3.4-6 <i>The Migratory Bird Treaty Act and California Fish and Game Code Sections 3503, 3513, and 3800 prohibit the direct take of birds and their eggs and/or young. While birds in general can fly out of harm's way, bird's nests are vulnerable to destruction and disturbance that causes nest abandonment and concomitant loss of eggs and/or young. The project shall not impact nesting birds. Accordingly, if harvesting/conversion/land clearing and/or grading would occur between February 1<sup>st</sup> and September 1<sup>st</sup>, qualified biologists shall be required to conduct systematic, intensive preconstruction nesting bird surveys to ensure that there is</i></p>  | <p>LS</p>                              |

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|---|---|--|--|
|   |   | <p><i>no direct take of nesting birds, their eggs or young. Surveys should be in focused areas that consist of 100'x 100' plots of land and shall commence no sooner than two weeks in advance of timber harvesting/land conversion.</i></p> <p><i>The buffer of any nest identified would have to be demarcated with a double stand of bright orange flagging tape tied 5 to 8 feet above the ground, and would have to be of sufficient size to protect the nest until such time that young fledge and reach independence of the nest. The size of the nesting buffer would need to be determined in the field by a qualified ornithologist, but should be, at a minimum, no less than 50 feet in diameter measured from the drip line of the nesting tree/bush. While labor intensive, such nesting bird surveys would best protect nesting birds and would otherwise ensure the project remains in compliance with the Migratory Bird Treaty Act and Fish and Game Codes that protect nesting birds.</i></p> |  |
| <p><b>3.4-7 Impacts to nesting yellow warblers.</b></p> | <p>PS</p>                                 | <p>3.4-7<br/> <i>To ensure that no construction-related impacts occur to nesting yellow warblers on the project site, preconstruction surveys for yellow warblers should be conducted no more than two weeks (14 days) prior to ground disturbance and/or clearing of brush and/or timber. If nesting yellow warblers are identified nesting on or adjacent to the project site, a suitable temporary buffer area should be fenced around the nest tree. The size of the nesting buffer would need to be determined in the field by a qualified ornithologist, but should</i></p>  | <p>LS</p>                              |

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|---|---|--|--|
|   |   | <p><i>be, at a minimum, no less than 100 feet between the nest site and the construction area.</i></p> <p><i>The dripline of the nest tree should be fenced with orange construction fencing (provided the tree is on the project site), and a 100-foot radius around the nest tree should be demarcated with a double stand of bright orange flagging tape tied 5 to 8 feet above the ground. If the tree is adjacent to the project site then the buffer shall be demarcated per above where the buffer occurs on the project site. The size of the buffer may be altered if a qualified ornithologist conducts behavioral observations and determines the warblers are well acclimated to disturbance. If this occurs, the ornithologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to the nesting birds. No disturbances shall be allowed within the established buffer until it is determined by a qualified ornithologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by August 1. This date may be earlier than August 1, or later, and would have to be determined by a qualified ornithologist.</i></p> |  |
| <p><b>3.4-8 Impacts pertaining to the potential for project-related introduction or spread of tree-afflicting diseases.</b></p> | <p>LS</p>                                 | <p>3.4-8 None required.</p>  | <p>N/A</p>                             |

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|---|---|--|--|
| <p><b>3.4-9 Impacts to the foothill yellow-legged frog.</b></p> | <p>PS</p>                                 | <p>3.4-9 <i>In order to avoid impacting Patchett Creek and the foothill yellow-legged frogs that reside in this creek, a minimum 100-foot protective buffer will be maintained between Patchett Creek top-of-banks and project site development (Figure 3.4-4). This buffer will ensure that the existing shade and sunlight regimes present today in Patchett Creek are maintained except as modified by natural succession. In addition, a project site preconstruction SWPPP will be implemented prior to implementation of grading activities to ensure that Patchett Creek, and indeed most tributaries on the project site (with rare exception), are protected from siltation and/or other project-related downstream impacts. Similarly, a post-project BMPs plan will also be implemented to ensure that there are no impacts to the water quality in Patchett Creek or other downstream receiving waters after implementation of the project. In addition, there is no significant potential for contamination of Patchett Creek by the use of fertilizer, herbicide, insecticide, or other agricultural chemicals in the proposed vineyard. Qualified, properly certified vineyard managers will use only State-approved fertilizers, herbicides, insecticides or other agricultural chemicals in accordance with the label instructions and any applicable usage guidelines in the event that any of these are determined necessary. Implementation of the SWPPP and the post project BMPs plan, and the establishment of protective buffers along Patchett Creek will ensure that impacts to the foothill</i></p> | <p>LS</p>                              |

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|---|---|--|--|
|   |   | <i>yellow-legged frog are avoided. These measures are refined in Mitigation Measure(s) 3.7-2(a-h), 3.7-3(a and b) and 3.7-4.</i>   |  |
| <b>3.4-10 Impacts to the red-legged frog (Northern and California red-legged frog).</b> | PS  | 3.4-10(a) <i>A qualified 10(a)(1)(A) biologist authorized to work with the California red-legged frog shall conduct protocol-level surveys for California red-legged frog based on the field methods presented in the U.S. Fish and Wildlife Service's (USFWS) Revised Guidance on site assessment and field surveys for California red-legged frogs (dated August 2005). The USFWS Guidance recommends a total of eight (8) surveys to determine the presence of California red-legged frog at or near a project site. Two (2) day surveys and four (4) night surveys are recommended during the breeding season (January 1 to June 30); one (1) day and one (1) night survey are recommended during the non-breeding season (July 1 and September 30). Each survey must take place at least seven (7) days apart, although you can pair a diurnal and a nocturnal survey during a 24 hour period. At least one diurnal and one nocturnal survey must be conducted after July 1<sup>st</sup> and before August 15th. The survey period must be over a minimum period of 6 weeks (i.e., the time between the first and last survey must be at least 6 weeks). If no California red-legged frogs are found within the project area during these surveys, no further regard for the California red-legged frog would be necessary. No additional mitigation measures would be required and impacts would be regarded as less than significant pursuant</i> | LS                                     |

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|        |   | <p><i>to the CEQA. If red-legged frogs are identified at any time during the course of surveys, no additional surveys will be conducted in the area, unless the surveying effort is part of a Service-approved project to determine the distribution of frogs at a site.</i></p> <p>3.4-10(b) <i>Permission will be obtained from the USFWS for genetic testing to determine what species of red-legged frog occurs on the project site. If the species is the northern red-legged frog, mitigation compensation shall consist of dedicating Patchett Creek in a permanently preserved corridor and compensating for impacts to waters of the U.S. at a 2:1 ratio (replacement to impacts) consistent with other mitigation measures detailed herein that project wetlands and creek corridors.</i></p> <p>3.4-10(c) <i>If genetic testing confirms the presence of the California red-legged frog the following additional mitigation measures shall be required. An incidental take permit shall be acquired from USFWS for the proposed project prior to implementing the project. In addition, the applicant shall purchase mitigation credits at a USFWS-approved mitigation bank with a Service Area that covers the project site or as otherwise approved by the USFWS. Mitigation credits that are purchased shall be based upon a minimum of a 1:1 compensation to impacts ratio for impacts to 191.6 acres of upland dispersal habitat. The total credits</i></p> |  |

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|--|--|---|---|
|  |  | <p><i>purchased by the applicant shall ultimately be consistent with USFWS requirements for this project.</i></p> <p>3.4-10(d) <i>In lieu of purchase of mitigation credits from an approved CRLF mitigation bank, the applicant may secure and preserve in perpetuity habitat that is known to support the CRLF.</i></p>                 |   |
| <b>3.4-11 Sedimentation impacts to special-status salmonids.</b>   | PS   | 3.4-11 <i>Implement Mitigation Measure 3.7-3.</i>   | LS  |
| <b>3.4-12 Water temperature impacts to special-status salmonids.</b>                                     | LS   | 3.4-12 <i>None required.</i>  | N/A   |
| <b>3.4-13 Impacts to special-status salmonids from project-related increases in peak flows.</b>          | LS   | 3.4-13 <i>None required.</i>  | N/A   |
| <b>3.4-14 Impacts to special-status salmonids from project-related decreases in instream base flows.</b> | LS   | 3.4-14 <i>None required.</i>  | N/A   |
| <b>3.4-15 Impacts to waters of the United States and State.</b>  | PS   | 3.4-15(a) <i>Prior to the issuance of grading permits, the project applicant shall obtain a 404 permit (CWA) from the Corps. If a 404 permit is obtained, the applicant must also obtain a water quality certification from RWQCB under Section 401 of the CWA, an NOI from the SWRCB and a Streambed Alteration Agreement from CDFG.</i> | LS  |

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|        |   | <p>3.4-15(b) <i>Prior to the issuance of grading permits, the project applicant shall compensate for the loss of wetland habitat to ensure no net loss of habitat functions and values. To mitigate for the direct loss of 0.414 acres of jurisdictional wetlands, the applicant shall create/restore wetlands at a ratio of 2:1 (2 acres created/restored for every acre lost) on the project site. Created features shall generally be in-kind for seasonal wetlands lost.</i></p> <p><i>A detailed wetland mitigation plan shall be required that includes a five-year monitoring program and reporting requirements, responsibilities, performance success criteria, and contingency requirements. At the end of each monitoring year, an annual report shall be submitted to the Corps, RWQCB and Sonoma County. The report shall document the hydrological and vegetative conditions of the mitigation wetlands, and shall recommend remedial measures as necessary to correct deficiencies. Mitigation lands would be subject to a conservation easement and an agency approved long-term management plan. The conservation easement would ensure that the wetlands are protected in perpetuity. The wetland mitigation plan would require approval by the Corps and the RWQCB.</i></p> <p>3.4-15(c) <i>In lieu of creating compensation wetlands, as approved by the Corps and RWQCB, the applicant may purchase mitigation credits from an approved mitigation bank at a 2:1</i></p> |  |

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| 3.4-16 Impacts to streamside conservation areas. | PS  | <p>ratio or as otherwise specified by the Corps and RWQCB.</p> <p>3.4-16(a) <i>A habitat management plan shall be prepared and implemented for all streamside conservation areas and designated preserves. Maintenance as required to restore drainages would be one of the only allowable uses. The following uses and practices may be permitted in the streamside conservation areas:</i></p> <ul style="list-style-type: none"> <li>• <i>Access to the streamside conservation areas shall be limited to occasional activities for management, restoration and maintenance of the site's natural vegetation and drainageways; or for scientific study purposes.</i></li> <li>• <i>State and federal resource agencies shall have access with adequate (24 hours) notice to the applicant for the purpose of inspecting the site's natural resources and monitoring the status and effectiveness of management practices.</i></li> <li>• <i>Any existing pipelines and easements may continue to be maintained.</i></li> <li>• <i>Existing roads, structures, fences, ditches, pumps, and other improvements may be maintained and repaired.</i></li> </ul> | LS                                     |

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|--------|---|--|--|
|        |   | <ul style="list-style-type: none"> <li>• <i>The streamside conservation areas shall be used for the conservation of wildlife or plant habitat including the development or maintenance of wetland areas.</i></li> </ul> <p><i>The following activities and uses shall be prohibited in the streamside conservation areas:</i></p> <ul style="list-style-type: none"> <li>• <i>The legal or de facto subdivision or use of the streamside conservation areas including, but not limited to, any such subdivisions or establishment of separate legal parcels by (i) certificates of compliance or (ii) lot line adjustments.</i></li> <li>• <i>The construction of deer fencing or other exclusionary fencing. Such fencing shall be allowed at the edge of vineyards constructed parallel and on the outside edge of the buffers.</i></li> <li>• <i>The placement or construction of any buildings, structures, or other improvements of any kind, (including, without limitation, pipelines, fences, roads, parking lots, mobile homes, wind turbines, antennas, maintenance or other buildings).</i></li> <li>• <i>Any agricultural, commercial, residential or industrial use or activity.</i></li> </ul> |  |

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**TABLE 1-1  
 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|--------|---|--|--|
|        |   | <ul style="list-style-type: none"> <li>• Any recreational use or activity.</li> <li>• Any use of chemicals including insecticides, rodenticides, and fertilizers. The applicant may, with approval from the Department of Fish and Game, use herbicides to control noxious weeds to benefit native California flora/fauna.</li> <li>• The installation of new, or the extension of existing utilities including, without limitation, water, sewer, power, fuel, and communication lines and related facilities.</li> <li>• The operation of any motorized vehicle for any purpose, except for emergency use, fire control, or for maintenance, repair and restoration of the streamside conservation areas.</li> <li>• The pruning, felling, or other destruction or removal of dead or living native trees and shrubs or other native vegetation, except as necessary to control or prevent hazards, disease, or fire.</li> <li>• Any alteration of the surface of the land, including, without limitation, the excavation or removal of soil, sand, gravel, rock, peat, or sod.</li> </ul> |  |

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| Impact   | Level of Significance Prior to Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|--|---|--|--|
|  |   | <ul style="list-style-type: none"> <li>• Mining, drilling, exploration for, or extraction of minerals, hydrocarbons, steam, soils, or other materials on or below the surface.</li> <li>• Any use or activity that causes or is likely to cause soil degradation or erosion, or pollution of any surface or subsurface waters.</li> <li>• The storage of any materials, vehicles, and/or supplies.</li> <li>• The dumping or other disposal of wastes, refuse, and/or debris.</li> </ul> <p><i>These or similar measures, when implemented, would reduce project impacts to streamside conservation areas to a level considered less than significant.</i></p> |  |
| <b>3.5 Cultural Resources</b>                      |   |  |  |
| <b>3.5-1 Impacts to paleontological resources.</b> | PS  | 3.5-1 <i>The applicant shall arrange for a qualified paleontologist to be on-site for two to three full days during the initiation of earthmoving activities on the project site. Following the two to three days of paleontological monitoring, the paleontologist shall meet with the earthmoving equipment operators and the project archaeologist, in order to train them in the identification of fossils potentially existing on the site.</i>   | LS                                     |

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| Impact | Level of Significance Prior to Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|--------|---|--|--|
|        |   | <p><i>In the event that any paleontological resources are discovered during vineyard development activities, the qualified paleontologist shall be immediately notified by the foreman supervising the excavation activities. The applicant shall provide the foreman with the paleontological contact information prior to initiation of construction activities. If loose, the fossils shall be set aside in a safe location for evaluation of significance by the paleontologist. If discovered within immovable bedrock, all work shall be halted in the vicinity of the find to the extent feasible, and the paleontologist shall be consulted in order to determine whether the find is an isolated example or part of a more complex resource. Upon determining the significance of the resource, the consulting paleontologist, in coordination with the Director of the County Permit and Resource Management Department, shall determine the appropriate actions to be taken. The appropriate measures may include as little as recording the resource with a recognized paleontological authority such as the University of California, Berkeley, Museum of Paleontology (UCMP), or as much as excavation, recording, and preservation of the resources that have outstanding paleontological significance. A note requiring compliance with this measure shall be indicated on construction drawings and in construction contracts for the review and approval of the County Permit &amp; Resource Management Department prior to issuance of grading permits.</i></p> |  |

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| <b>Impact</b>  | <b>Level of Significance Prior to Mitigation</b> | <b>Mitigation Measures</b>  | <b>Level of Significance After Mitigation</b> |
|--|--|---|---|
| <p><b>3.5-2 Impacts to prehistoric cultural resources.</b></p> | <p>PS</p>  | <p>3.5-2(a) <i>In the event that any buried cultural resources (including, but not limited to: chipped chert and obsidian stone tools and tool manufacture waste flakes; grinding and hammering implements that look like fist-sized river tumbled stones; and/or locally darkened soil with artifacts, deposits of marine shell, dietary bone) are discovered during vineyard development activities, all work shall be halted within 50 feet of the find and a qualified consulting archaeologist, the Department of Forestry and Fire Protection Northern Region Headquarters Archaeologist and the Stewarts Point Tribal Historic Preservation Officer (THPO) shall be consulted in order to evaluate the materials and offer recommendations for their treatment. The decision about how to proceed shall be made through consultation among the consulting archaeologist, the Department of Forestry and Fire Protection Northern Region Headquarters Archaeologist and the Stewarts Point Rancheria THPO (or his designee) in coordination with the appropriate County representative. Appropriate treatment measures may include recording the resource with the Northwest Information Center of the California Historical Resources Inventory System database, data recovery excavation, analysis and reporting, and/or complete avoidance of the sites that have outstanding cultural or historic significance. A note requiring compliance with this measure shall be indicated on construction drawings and in construction contracts for the review and approval of the County Permit &amp; Resource</i></p> | <p>LS</p>                                     |

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| Impact | Level of Significance Prior to Mitigation | Mitigation Measures   | Level of Significance After Mitigation |
|--------|---|---|--|
|        |   | <p><i>Management Department prior to issuance of grading permits.</i></p> <p>3.5-2(b) <i>In the event that human remains are found during vineyard development activities, the steps required by 14 CCR Section 15064.5(e) of the CEQA Guidelines shall be carried out. All excavation or disturbance of the location and any nearby area reasonably suspected to overlie adjacent human remains shall cease. The Sonoma County Coroner shall be immediately contacted. If the coroner determines the remains to be Native American the coroner is then required to contact the Native American Heritage Commission within 24 hours. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. The most likely descendant may then make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98. A note requiring compliance with this measure shall be indicated on construction drawings and in construction contracts for the review and approval of the County Permit &amp; Resource Management Department prior to issuance of grading permits.</i></p> |  |

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| Impact | Level of Significance Prior to Mitigation | Mitigation Measures   | Level of Significance After Mitigation |
|--------|---|---|--|
|        |   | <p>3.5-2(c) <i>As recommended in the NCRM Cultural Resources Assessment, during project development and operation, the applicant shall restrict use of the seasonal road located to the immediate northwest of Artesa Site-01 to ingress and egress. Mechanical grading or widening of the road, parking, and turning around in this area shall not be permitted. Segments of the seasonal roadway within 100 feet of the site shall be fenced with highly visible and/or other appropriate measure(s). Measures shall be implemented prior to the beginning of logging operations. A note requiring compliance with this measure shall be indicated on construction drawings and in construction contracts for the review and approval of the County Permit &amp; Resource Management Department prior to issuance of grading permits.</i></p> <p>3.5-2(d) <i>In consultation with the Department of Forestry and Fire Protection Northern Region Headquarters Archaeologist and the Stewarts Point Rancheria THPO (or his designee) the applicant shall establish a conservation easement protecting Artesa Site(s) -01, -02, -04, and -05 prior to timber harvesting. Measures shall be taken by the project foreman throughout the process to ensure that construction and vineyard operation activities do not degrade the cultural significance of the site(s). Measures to be taken include: the placement of protective fencing prior to any activity within 100 feet of an archaeological site, and the education of all</i></p> |  |

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                      | Level of Significance Prior to Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|---|---|--|--|
|   |   | <i>on-site workers. Preservation plans shall be submitted to the County Permit &amp; Resource Management Department prior to issuance of grading permits.</i>  |  |
| <b>3.5-3 Impacts to historic resources.</b> | PS  | <p>3.5-3(a) <i>Prior to the issuance of grading permits, the applicant shall hire a qualified archeologist to prepare an archaeological monitoring plan for the review and approval of the County Permit and Resource Management Department. At a minimum the plan shall cover the Neri "Noted Find" locations and all areas within 100 feet of previously identified archaeological sites. The plan shall include but not be limited to the following measures:</i></p> <ul style="list-style-type: none"> <li><i>• Any location with prehistoric Native American material shall require both a Native American monitor (representing the tribe) and an archaeological monitor.</i></li> <li><i>• Historical features shall be considered historically significant if the feature is a discrete deposit identifiable to the period of significance for the two mills, or if the deposit relates to substantially earlier occupation and the agricultural activities on the project site.</i></li> <li><i>• Prehistoric Native American deposits shall be considered an archaeological site if three or more cultural items are found within an area measuring roughly ten feet on a side.</i></li> <li><i>• Archaeological deposits that retain a strong focus, that is the ability to clearly represent the activities that created the deposit, shall be considered to have sufficient</i></li> </ul> | LS                                     |

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| Impact | Level of Significance Prior to Mitigation | Mitigation Measures   | Level of Significance After Mitigation |
|--------|---|---|--|
|        |   | <p><i>integrity to meet the criteria for listing on the National Register.</i></p> <ul style="list-style-type: none"> <li>• <i>Identified sites shall be avoided by establishing construction fencing around the perimeter of the site to prevent damage from vineyard development activities. Vineyard workers shall be trained regarding the importance of cultural materials.</i></li> <li>• <i>If the resources cannot remain in situ, a program of investigation appropriate to the resource shall be developed. To the extent feasible, exiting research designs shall be incorporated into investigation programs.</i></li> </ul> <p><i>The Tribal Historic Preservation Officer for the Kashia Band of Pomo Indians has provided general information regarding the Kashia needs for monitoring and treatment of human remains. It is recommended that the project applicant enter into an agreed treatment plan with the tribe prior to beginning any ground disturbing activities in the project area.</i></p> <p>3.5-3(b) <i>Prior to the issuance of grading permits, an archeological monitor shall be hired by the applicant and approved by the County Permit &amp; Resource Management Department to train the construction grading crew prior to commencement logging and grading activity in regard to the types of artifacts that they are likely to find (including, but not</i></p> |  |

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| Impact   | Level of Significance Prior to Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|--|---|--|--|
|  |   | <p><i>limited to, ceramics/pottery, glass and/or metal artifacts and fragments, building foundations, linear features such as railroad grades, wells, privies, trash pits). In the event that a artifact is discovered, all work shall cease within 50 feet of the discovery until the archaeological monitor has evaluated the find. The archaeological monitor shall promptly consult with the Department of Forestry and Fire Protection Northern Region Headquarters Archaeologist. Work shall not occur within 50 feet of the find until a decision about how to proceed has been made through consultation among the consulting archaeologist and the Department of Forestry and Fire Protection Northern Region Headquarters Archaeologist, in coordination with the appropriate County representative. Appropriate treatment measures may include recording the resource with the Northwest Information Center of the California Historical Resources Inventory System database, and/or complete avoidance of the sites that have outstanding cultural or historic significance. A note requiring compliance with this measure shall be indicated on construction drawings and in construction contracts for the review and approval of the County Permit &amp; Resource Management Department prior to issuance of grading permits.</i></p> |  |
| <b>3.6 Geology</b>   |   |  |  |
| <b>3.6-1 Impact of seismic activity on proposed vineyard</b> | LS  | 3.6-1 None required.   | N/A                                    |

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|---|--|--|---|
| blocks.   |  |  |   |
| <b>3.6-2 Impact of seismic activity on proposed reservoir.</b>  | PS   | 3.6-2 <i>Prior to the issuance of grading permits, the applicant shall provide a final geotechnical report to the Sonoma County Permit and Resource Development Department. All of the recommendations in the final geotechnical report shall be incorporated into the construction plans for the reservoir.</i> | LS  |
| <b>3.6-3 Impacts caused by road-related landslides.</b>   | LS   | 3.6-3 <i>None required.</i>  | N/A   |
| <b>3.6-4 Increased soil erosion during and after construction from conversion and grading activities.</b>     | PS   | 3.6-4 <i>Implement Mitigation Measures 3.7-2(a) to 3.7-2(h) and 3.7-3(a) and (b).</i>  | LS  |
| <b>3.6-5 Impacts to slope stability during and after construction from conversion and grading activities.</b> | LS   | 3.6-5 <i>None required.</i>  | N/A   |
| <b>3.7 Hydrology and Water Quality</b>  |  |  |   |
| <b>3.7-1 Impacts relating to irrigation water availability.</b>   | LS   | 3.7-1 <i>None required.</i>  | N/A   |
| <b>3.7-2 Impacts to surface water quality from timber harvest and vineyard construction-related</b>           | PS   | 3.7-2(a) <i>All timber harvesting activities on the project site, including harvest-associated road construction and maintenance, shall comply with California Forest Practice Rules water quality protection measures, as described in the Timber Harvest</i>   | LS  |

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                     | Level of Significance Prior to Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|----------------------------|---|--|--|
| erosion and sedimentation. |   | <p><i>Plan prepared for the proposed project and approved by the Department of Forestry. These measures include, but are not limited to, the following:</i></p> <ul style="list-style-type: none"> <li>• <i>Timber harvesting or timber operations shall not take place within the WLPZ adjacent to the conversion THP area;</i></li> <li>• <i>The Licensed Timber Operator (LTO) shall utilize directional felling of timber adjacent to the WLPZ away from the zone, in order to protect the integrity of the zone;</i></li> <li>• <i>The LTO shall not pile dirt and debris within or adjacent to the edge of the WLPZs;</i></li> <li>• <i>Branches and tops of conifers, root wads, and hardwoods shall not be piled up for burning adjacent to WLPZs;</i></li> <li>• <i>Timberland conversion operations (i.e., non-merchantable vegetation removal and stump removal) shall be immediately followed by initial vineyard development operations. Where this is not possible, skid trails and areas of exposed mineral soil created by commercial timber harvest operations shall be grass-seeded and mulched at 90 percent cover prior to November 15 of the timber harvesting season;</i></li> <li>• <i>Operations between October 15 and November 15</i></li> </ul> |  |

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|--------|---|---|--|
|        |   | <p><i>shall cease when three (3) inches of rainfall has been recorded on-site;</i></p> <ul style="list-style-type: none"> <li>• <i>The LTO shall not place, discharge, or dispose of or deposit in such a manner as to permit to pass into the waters of the state, any substance or materials, including, but not limited to, soil, silt, bark, slash, sawdust, or petroleum, in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water; and</i></li> <li>• <i>The LTO shall not remove water, trees, or large woody debris from a watercourse or lake, the adjacent riparian area, or the adjacent flood plain in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water.</i></li> </ul> <p>3.7-2(b) <i>All temporary roads located within the project area and used to remove timber from the site shall be located away from streambeds, on slopes that are less than 15 percent and in areas that are currently stable. With the exception of the two permanent roads, all existing seasonal roads, tractor roads, and landings shall be abandoned and planted with vines and/or groundcovers following completion of timber harvesting operations. In the event that timber harvesting operations cannot be immediately followed by vineyard development, tractor roads shall have drainage and/or drainage collection and storage facilities installed as soon</i></p> |  |

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|--------|---|---|--|
|        |   | <p><i>as practicable, but prior to October 15.</i></p> <p>3.7-2(c) <i>Fill material for the two temporary truck crossings shall be removed from the watercourse channel to form channels that are as close to the natural grade and orientation as possible. The constructed channels shall be wider than the existing channels. The excavated material and any resulting cut banks shall be sloped back from the channel and stabilized to prevent slumping and to minimize soil erosion. The two temporary truck crossings shall be removed subsequent to the completion of timber operations. The disturbed soil on the approaches to the crossings shall be seeded and mulched prior to October 15 of the first timber harvesting season.</i></p> <p>3.7-2(d) <i>Existing permanent roads on the project site shall be improved (and in some cases reconstructed) in conjunction with development of this project, reducing the sediment loadings from existing road gullies.</i></p> <p>3.7-2(e) <i>Road construction on the project site shall be carried out utilizing the following criteria identified in the ECP as being in conformance with the Technical Support Document (TSD) for the Gualala River Watershed Water Quality Attainment Action Plan for Sediment (CWRCB, 2001):</i></p> <ul style="list-style-type: none"> <li>• <i>Roads shall be outsloped and graded to prevent flow in wheel tracks;</i></li> </ul> |  |

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|--------|---|---|--|
|        |   | <ul style="list-style-type: none"> <li>• <i>Water bars shall be placed at a maximum of 100 feet off center where slopes are greater than 15 percent;</i></li> <li>• <i>Rocked fords shall be installed through seasonal swales or runoff areas;</i></li> <li>• <i>Roadside ditches shall be graded and shaped;</i></li> <li>• <i>Cut and fill slopes shall be consistent with slope stability and available access corridors; and</i></li> <li>• <i>Side cast materials shall be stabilized by slope limits, compaction, mulching, and seeding.</i></li> </ul> <p>3.7-2(f) <i>Skid trails associated with the project shall not be used during the winter (November 15<sup>th</sup> through April 1<sup>st</sup>), and shall be abandoned upon completion of harvesting activities. In the event that timber harvesting operations cannot be immediately followed by vineyard development, skid trails shall be grass seeded and mulched as specified above.</i></p> <p>3.7-2(g) <i>The applicant shall provide for annual inspection of project-associated decommissioned logging roads, to assure gullying and erosion is not occurring.</i></p> <p><i>Please refer to the Timber Harvest Plan (Draft EIR Appendix E) for further information.</i></p> <p>3.7-2(h) <i>Prior to issuance of grading permits, the applicant shall obtain applicable NPDES permits from the North Coast Regional Water Quality Control Board and comply with all</i></p> |  |

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|--------|---|--|--|
|        |   | <p><i>applicable programs. Compliance with the Permit requires the project applicant to file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) and prepare a Storm Water Pollution Prevention Plan (SWPPP) prior to construction. The SWPPP would incorporate Best Management Practices (BMPs) in order to prevent, or reduce to the greatest extent feasible, adverse impacts to water quality from erosion and sedimentation: the SWPPP shall be provided for the review and approval of the SWRCB.</i></p> <p><u>Post-Construction Monitoring</u></p> <p>3.7-2(i) <i>The following Post-Construction Monitoring Plan shall be implemented by the project applicant for the review and approval of the California Department of Forestry and Fire Protection and the Sonoma County Permit and Resources Management Department. This post-construction monitoring plan is intended to supplement the project ECP and SWPPP for the first winter season after project construction. The monitoring plan may apply to specific sub-areas of the project, and could extend for more than one year, depending on the ultimate construction schedule. 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</i></p> |  |

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|--------|---|--|--|
|        |   | <p><i>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. This monitoring plan may be combined with provisions of the ECP or SWPPP as appropriate subject to governing regulations.</i></p> <p><i>The post-construction monitoring plan has three components:</i></p> <ol style="list-style-type: none"> <li><i>1. Review of ECP and SWPPP provisions and implementation.</i></li> <li><i>2. Field inspections triggered by rainfall events.</i></li> <li><i>3. Response and reporting.</i></li> </ol> <p><u><i>ECP and SWPPP Review</i></u></p> <p><i>These erosion and drainage control plans are prepared by professional engineers, and are reviewed and enforced under local and State regulatory authority. The monitoring plan will use these plans, consisting of maps with specific installations and Best Management Practices (BMP's), to define specific objectives of field inspections. The ECP and SWPPP will define anticipated erosion locations and</i></p> |  |

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|--------|---|---|--|
|        |   | <p><i>processes. The monitoring plan will consist of a checklist and maps derived from the ECP and SWPPP that guide field inspection of project work areas, particularly the perimeters where eroded sediment and runoff would be delivered from source areas.</i></p> <p><i><u>Field Inspections</u></i></p> <p><i>On-site inspections of portions of the project area subject to monitoring will occur in response to rainfall events as specified here. ECP and SWPPP requirements typically include complete installation of winter erosion control measures between October 1 and October 15. Rainfall reported for the Venado gage site located in the Coast Range in northwest Sonoma County will be used to determine the timing of field inspections. Real time data from this rain gage can be accessed via the internet from either of the following URLs:</i></p> <ul style="list-style-type: none"> <li><i>• <a href="http://cdec.water.ca.gov/">http://cdec.water.ca.gov/</a></i></li> <li><i>• <a href="http://www.cnrfc.noaa.gov/precipMaps.php?group=rn&amp;hour=24&amp;synoptic=0">http://www.cnrfc.noaa.gov/precipMaps.php?group=rn&amp;hour=24&amp;synoptic=0</a></i></li> </ul> <p><i>The first field inspection will occur within two days following the first rainfall exceeding 1-inch in a 24 hour</i></p> |  |

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|--------|---|---|--|
|        |   | <p><i>period beginning October 1. The second field inspection will occur when one of the two following conditions are met: 1-inch of rainfall in a 24 hour period after cumulative seasonal rainfall of 6 inches has occurred, or 2 inches of rainfall in a 24 hour period. A third inspection would occur after 1-inch of rainfall in a 24 hour period following seasonal accumulation of 12 inches of rainfall. Thereafter, inspections would occur following 2 inches of rainfall in 24 hours or within four weeks of the previous inspection, whichever occurs first.</i></p> <p><i>It is expected that any significant erosion problems will have developed and been addressed within the first few substantial rainstorms, and that there would be a diminishing likelihood of identification of new problems after the first few inspections. After a total of six inspections have been performed according to the protocol above, subsequent inspections are optional and may be performed at the discretion of the project proponent. Inspections are not required within 7 days of any prior inspection, regardless of rainfall.</i></p> <p><i>Field inspectors will survey the portions of the site subject to monitoring and complete a visual inspection of the site guided by the checklist and maps developed during the ECP and SWPPP review. Supplemental documentation of conditions using photography is encouraged, but is not</i></p> |  |

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| <b>Impact</b> | <b>Level of Significance Prior to Mitigation</b> | <b>Mitigation Measures</b>   | <b>Level of Significance After Mitigation</b> |
|---------------|--|--|---|
|               |  | <p><i>required. The checklist developed will be the primary reporting document and will include the following elements:</i></p> <ul style="list-style-type: none"> <li>• <i>Observation date, time, weather conditions, precipitation event or other circumstances requiring inspection, observers name and contact information, name and contact information for project personnel responsible for maintenance and repair of erosion control measures.</i></li> <li>• <i>A map developed for the monitoring program with cross-references between areas identified on ECP and SWPPP maps and checklist items.</i></li> <li>• <i>Field assessment of erosion control measures as adequate or requiring immediate additional controls or repairs.</i></li> <li>• <i>Measurements or quantitative estimates of volume of eroded and deposited material, referenced to a location, and assessment of whether sediment was delivered to a watercourse.</i></li> </ul> <p><u><i>Response and Reporting</i></u></p> <p><i>The field inspector will provide advance notice of inspections, to the extent possible, to responsible project personnel to facilitate immediate response should it be necessary. If the field inspection identified any locations requiring immediate attention to repair or expand erosion</i></p> |   |

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**TABLE 1-1  
 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact  | Level of Significance Prior to Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|---|---|--|--|
|   |   | <p><i>control measures, the inspector shall contact responsible project personnel as soon as possible. A copy of the inspection checklist will be provided to responsible project personnel via facsimile or e-mail for review within 24 hours of the inspection. Project personnel will provide a written summary of any erosion control measures implemented in response to the field inspection within 5 calendar days of receipt of the inspection report. A summary report for each winter monitoring season will be submitted not later than June 15 to the regulatory authorities responsible for review and implementation of the ECP (County of Sonoma) and SWPPP (NCRWQCB).</i></p>  |  |
| <p><b>3.7-3 Impacts to surface water quality from vineyard-related erosion and sedimentation.</b></p> | <p>PS</p>                                 | <p>3.7-3(a) <i>Prior to the issuance of grading permits, the applicant shall provide proof to the Department of Forestry and the Sonoma County Permit and Resource Management Department that the erosion and sediment control recommendations in the project Erosion Control Plan and the O'Connor Hydrologic Analysis have been incorporated in the construction plans. These measures shall include, but are not limited to, the following:</i></p> <ul style="list-style-type: none"> <li><i>• Establishment of a permanent hillside cover crop in the first year growing season;</i></li> <li><i>• Provision of contour planting, terracing, grading, or v-ditches in all vineyard block areas;</i></li> <li><i>• Inspection of all features for winter preparedness, and maintenance and repair of all hydraulic features</i></li> </ul> | <p>LS</p>                              |

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**TABLE 1-1  
 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures   | Level of Significance After Mitigation |
|--------|---|---|--|
|        |   | <p><i>and storm water control facilities as necessary prior and during to the winter season;</i></p> <ul style="list-style-type: none"> <li>• <i>Provision of straw mulching at an application rate of two (2) tons per acre in areas where cover cropping does not meet 90 percent coverage;</i></li> <li>• <i>Monitoring of major drainages before and after major winter storms; and</i></li> <li>• <i>Performance of any additional actions as necessary to ensure function of the drainage system facilities.</i></li> </ul> <p>3.7-3(b) <i>The following Channel Erosion and Sedimentation Basin Monitoring Plan shall be implemented by the project applicant for the review and approval of the California Department of Forestry and Fire Protection and the Sonoma County Permit and Resource Management Department.</i></p> <p><u><i>Monitoring Plan - Class III Channel Response to Potential Peak Flow Increases, Artesa Fairfax THP &amp; Conversion</i></u></p> <p><u><i>Motivation</i></u></p> <p><i>This monitoring plan is motivated by findings of the O'Connor Hydrologic Analysis indicating the potential magnitude (Table 6, p. 29) and potential significance (Table 12, p.52) of expected peak flow increases. Erosion rates in existing stream channels could be accelerated by increased runoff and peak flow expected to result from the project.</i></p> |  |

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**TABLE 1-1  
 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures   | Level of Significance After Mitigation |
|--------|---|---|--|
|        |   | <p><i>There is no compelling 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. 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 (&gt; 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.</i></p> <p><i>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 below at a conceptual level including substantial detail.</i></p> <p><u>Objective</u></p> |  |

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**TABLE 1-1  
 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|--------|---|--|--|
|        |   | <p><i>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 sediment yield from the project area is an environmental objective of the project.</i></p> <p><i>The Erosion Analysis concluded that the project (with mitigation) is expected to reduce sediment yields by 10 to 21 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 10 to 21 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.</i></p> <p><u>Monitoring Plan</u></p> <p><i>The monitoring plan has three components:</i></p> <ol style="list-style-type: none"> <li><i>1. Detailed topographic surveys of selected channels;</i></li> <li><i>2. Annual survey of erosion of “sensitive” channels;</i></li> </ol> <p><i>and</i></p> |  |

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**TABLE 1-1  
 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures   | Level of Significance After Mitigation |
|--------|---|---|--|
|        |   | <p>3. <i>Survey of selected sedimentation basins.</i></p> <p><u><i>Topographic Surveys of Selected Class III Channel Reaches</i></u></p> <p><i>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 three year period.</i></p> |  |

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures   | Level of Significance After Mitigation |
|--------|---|---|--|
|        |   | <p><u>Annual Surveys of Class III Channels</u></p> <p><i>This annual survey would be conducted for the 21 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.</i></p> <p><u>Annual Surveys of Selected Sedimentation Basins</u></p> <p><i>This annual survey would measure the volume of accumulated sediment and the grain size distribution of</i></p> |  |

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**TABLE 1-1  
 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|--------|---|--|--|
|        |   | <p><i>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.</i></p> <p><u><i>Adaptive Management</i></u></p> <p><i>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 the lead CEQA agency or an alternative regulatory authority designated by lead CEQA agency.</i></p> |  |

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| Impact  | Level of Significance Prior to Mitigation | Mitigation Measures   | Level of Significance After Mitigation |
|---|---|---|--|
|   |   | <p><i>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.</i></p> |  |
| <p><b>3.7-4 Water quality impacts pertaining to chemical contamination from timber harvest and vineyard operations.</b></p> | <p>PS</p>                                 | <p>3.7-4 <i>Prior to the issuance of grading permits, the applicant shall provide the Department of Forestry and the Sonoma County Permit and Resource Management Department with an Agricultural Chemical Use and Storage Contingency Plan. The Plan shall include the measures that will be taken in the occasion that a spill occurs. Potential measures include: the deployment of straw wattles or other barriers stored on-site, instructions for diverting any overland flow away from onsite drainages, the on-site storage of absorbent materials</i></p>  | <p>LS</p>                              |

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**TABLE 1-1  
 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact  | Level of Significance Prior to Mitigation | Mitigation Measures   | Level of Significance After Mitigation |
|---|---|---|--|
|   |   | <i>to clean up any spills, and a prominent listing of accident and hazard responding agencies, including: the Sonoma County Department of Emergency Services and the Sonoma County Hazardous Materials Response Team. The Plan shall be mad available to all workers handling pesticides and shall be posted on the corporation yard building.</i>  |  |
| <b>3.7-5 Water quality impacts pertaining to organic debris during project timber harvest activities.</b>                   | LS  | 3.7-5 <i>None required.</i>   | N/A                                    |
| <b>3.7-6 Project-related impacts to groundwater storage and recharge.</b>   | LS  | 3.7-6 <i>None required.</i>   | N/A                                    |
| <b>3.7-7 Impacts pertaining to peak runoff flows and exposure of people or structures to flood hazard.</b>                  | LS  | 3.7-7 <i>None required.</i>   | N/A                                    |
| <b>3.7-8 Impacts related to fog drip.</b>   | LS  | 3.7-8 <i>None required.</i>   | N/A                                    |
| <b>3.8 Hazards</b>  |   |   |  |
| <b>3.8-1 Safety-related impacts pertaining to the presence of hazardous chemicals associated with the old sawmill site.</b> | PS  | 3.8-1(a) <i>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, the application shall include an asbestos abatement plan and the contractor shall take</i> | LS                                     |

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact  | Level of Significance Prior to Mitigation | Mitigation Measures   | Level of Significance After Mitigation |
|---|---|---|--|
|   |   | <p><i>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.</i></p> <p>3.8-1(b) <i>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 abnormal levels in the soil samples, the applicant shall retain the toxic substances specialist to conduct additional soils analysis for the presence of hazardous chemicals in exceedance of local, State, or federal standards. If hazardous chemicals are found to exist in the sampled soil in exceedance of applicable local, State, or federal standards, 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.</i></p> |  |
| <p><b>3.8-2 Safety-related impacts pertaining to the presence of hazardous chemicals associated with past illegal activities on the site.</b></p> | <p>PS</p>                                 | <p>3.8-2 <i>Prior to issuance of grading and/or demolition permits, multiple soil samples shall be taken from the eastern portion of the project site in the vicinity of the dumped vehicles, and the samples shall be analyzed by a licensed toxic substances specialist. If hazardous chemicals are detected at abnormal levels in the soil samples, the applicant shall retain the toxic</i></p>   | <p>LS</p>                              |

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact   | Level of Significance Prior to Mitigation | Mitigation Measures   | Level of Significance After Mitigation |
|--|---|---|--|
|  |   | <i>substances specialist to conduct additional soils analysis for the presence of hazardous chemicals in exceedance of county, State, or federal standards. If hazardous chemicals are found to exist in the sampled soil in exceedance of applicable local, State, or federal standards, 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.</i>   |  |
| <b>3.8-3 Impacts relating to the past use of agricultural chemicals on the project site.</b>             | PS  | 3.8-3 <i>Prior to the initiation of any ground disturbance activities, the project applicant shall provide to the Department of Forestry a detailed environmental assessment pertaining to the on-site soils. If pollutants of concern are not detected, further mitigation is not necessary. If the assessment finds concentrations of any agricultural chemical residue that creates an unacceptable risk to workers on the project site, prior to issuance of a grading permit, the Department of Forestry shall require the applicant to remediate the pesticide to the satisfaction of Sonoma County Environmental Health Department and the DTSC.</i> | LS                                     |
| <b>3.8-4 Impacts relating to the potential future use of agricultural chemicals on the project site.</b> | PS  | 3.8-4 <i>Implement Mitigation Measure 3.7-4.</i>  | LS                                     |
| <b>3.8-5 Impacts from wildfire hazards.</b>  | PS  | 3.8-5 <i>A fire hazard reduction zone shall be observed along those portions of the timberland conversion area that are adjacent</i>  | LS                                     |

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**TABLE 1-1  
 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact  | Level of Significance Prior to Mitigation | Mitigation Measures   | Level of Significance After Mitigation |
|---|---|---|--|
|   |   | <p><i>to Annapolis Road, a county maintained public road. The fire hazard reduction zone shall extend 100 feet from the edge of Annapolis Road. Within this zone, slash created and trees knocked down by road construction or timber operations shall be treated for fire hazard reduction by lopping, piling and burning or removal from the zone. Lopping used within a fire hazard reduction zone shall consist of severing and spreading slash so that no part of it remains more than 30 inches above the ground.</i></p> |  |
| <b>3.9 Transportation and Circulation</b>   |   |   |  |
| <b>3.9-1 Operational traffic impacts to study intersections and roadway segments/links.</b> | LS  | 3.9-1 <i>None required.</i>   | N/A                                    |
| <b>3.9-2 Short-term traffic impacts due to timber harvesting and vineyard development.</b>  | PS  | 3.9-2 <i>Prior to any logging taking place on the site, the project applicant shall prepare a Construction Traffic Management Plan for review and approval by CAL FIRE. The plan should include all plans for temporary traffic control, temporary 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.</i>                            | LS                                     |
| <b>3.9-3 On-going traffic impacts to due to vineyard management operations.</b>             | LS  | 3.9-3 <i>None required.</i>   | N/A                                    |

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| Impact   | Level of Significance Prior to Mitigation | Mitigation Measures         | Level of Significance After Mitigation |
|--|---|-----------------------------|--|
| <b>3.9-4 Impacts to alternative transportation services.</b> | LS  | 3.9-4 <i>None required.</i> | N/A                                    |

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**TABLE 1-1  
 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact   | Level of Significance Prior to Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|--|---|--|--|
| <b>3.10 Noise</b>  |   |  |  |
| <b>3.10-1 Short-term construction noise impacts.</b>               | PS  | <i>3.10-1 Timber harvest and vineyard construction activities shall be restricted to the hours of 7:00 am to 4:00 pm Monday through Saturday. Construction shall be prohibited on Sundays. In addition, all heavy construction equipment and all stationary noise sources (such as diesel generators) shall be fitted with factory-specified mufflers; and equipment warm up areas, water tanks, and equipment storage areas shall be located in an area as far away from residences in existence at the time of EIR certification as is feasible. These criteria shall be included in the improvement plans submitted to the Sonoma County Permit and Resource Management Department prior to initiation of construction.</i> | LS                                     |
| <b>3.10-2 Long-term increase in existing traffic noise levels.</b> | LS  | <i>3.10-2 None required.</i>   | N/A                                    |

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| Impact  | Level of Significance Prior to Mitigation | Mitigation Measures  | Level of Significance After Mitigation |
|---|---|--|--|
| <b>3.10-3 Noise impacts related to operation of the vineyard.</b>                       | PS  | <p>3.10-3. <i>In order to minimize noise impacts to residences surrounding the project site during grape harvest season, mechanical harvesting operations shall be limited as follows:</i></p> <ul style="list-style-type: none"> <li>• <i>Daytime mechanical harvesting operations shall be limited to areas at least 280 feet from existing residences in existence at the time of EIR certification; and</i></li> <li>• <i>Nighttime mechanical harvesting operations shall be limited to areas at least 500 feet from existing residences.</i></li> </ul> <p><i>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.</i></p> | LS                                     |
| <b>3.11 Aesthetics</b>  |   |  |  |
| <b>3.11-1 Impacts to scenic resources as defined in the Sonoma County General Plan.</b> | LS  | 3.11-1 <i>None required.</i>   | N/A                                    |

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**TABLE 1-1  
 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| <b>Impact</b>  | <b>Level of Significance Prior to Mitigation</b> | <b>Mitigation Measures</b> |                       | <b>Level of Significance After Mitigation</b> |
|--|--|----------------------------|-----------------------|---|
| <b>3.11-2 Impacts to existing scenic views visible from Annapolis Road.</b>  | LS   | 3.11-2                     | <i>None required.</i> | N/A   |
| <b>3.11-3 Impacts to views from adjacent residences.</b>   | LS   | 3.11-3                     | <i>None required.</i> | N/A   |
| <b>3.11-4 Impacts associated with light and glare from the proposed project.</b>   | LS   | 3.11-4                     | <i>None required.</i> | N/A   |
| <b>3.11-5 Consistency of the proposed project's appearance with the surrounding scenery.</b>                                     | LS   | 3.11-5                     | <i>None required.</i> | N/A   |
| <b>4.0 Cumulative Impacts</b>  |  |                            |                       |   |
| <b>4.0-1 Cumulative impacts pertaining to land use issues, and particularly, loss of timberland due to vineyard development.</b> | LS   | 4.0-1                      | <i>None required.</i> | N/A   |
| <b>4.0-2 Cumulative impacts to regional air quality.</b>   | LS   | 4.0-2                      | <i>None required.</i> | N/A   |
| <b>4.0-3 Cumulative contribution to Global Climate Change.</b>   | LS   | 4.0-3                      | <i>None required.</i> | N/A   |
| <b>4.0-4 Cumulative impacts to special status plants and wildlife.</b>   | LS   | 4.0-4                      | <i>None required.</i> | N/A   |
| <b>4.0-5 Cumulative impacts to</b>   | LS   | 4.0-5                      | <i>None required.</i> | N/A   |

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 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact  | Level of Significance Prior to Mitigation | Mitigation Measures   | Level of Significance After Mitigation |
|---|---|-----------------------|--|
| fisheries within the Gualala River watershed.   |   |                       |  |
| 4.0-6 Cumulative impacts to cultural and paleontological resources.   | LS  | 4.0-6 None required.  | N/A                                    |
| 4.0-7 Cumulative geologic and seismic impacts.  | LS  | 4.0-7 None required.  | N/A                                    |
| 4.0-8 Cumulative impacts relating to water yield, peak flows, and sedimentation.  | LS  | 4.0-8 None required.  | N/A                                    |
| 4.0-9 Cumulative impacts related to hazards.  | LS  | 4.0-9 None required.  | N/A                                    |
| 4.0-10 Cumulative (Year 2025) traffic impacts to the study intersections and roadway segments from vineyard operations. | LS  | 4.0-10 None required. | N/A                                    |
| 4.0-11 Cumulative impacts from project-generated traffic noise.   | LS  | 4.0-11 None required. | N/A                                    |
| 4.0-12 Cumulative operational noise impacts.  | LS  | 4.0-12 None required. | N/A                                    |
| 4.0-13 Cumulative impacts to the visual character of the region from the conversion of timberland to vineyard           | LS  | 4.0-13 None required. | N/A                                    |

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**TABLE 1-1  
 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|--------|---|---------------------|--|
| rows.  |   |                     |  |

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## 2. PROJECT DESCRIPTION

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## 2. PROJECT DESCRIPTION

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### INTRODUCTION

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This section describes the components of the proposed Fairfax Conversion Project, as well as the background, location, project objectives, and required public approvals.

### REGIONAL AND LOCAL SETTING

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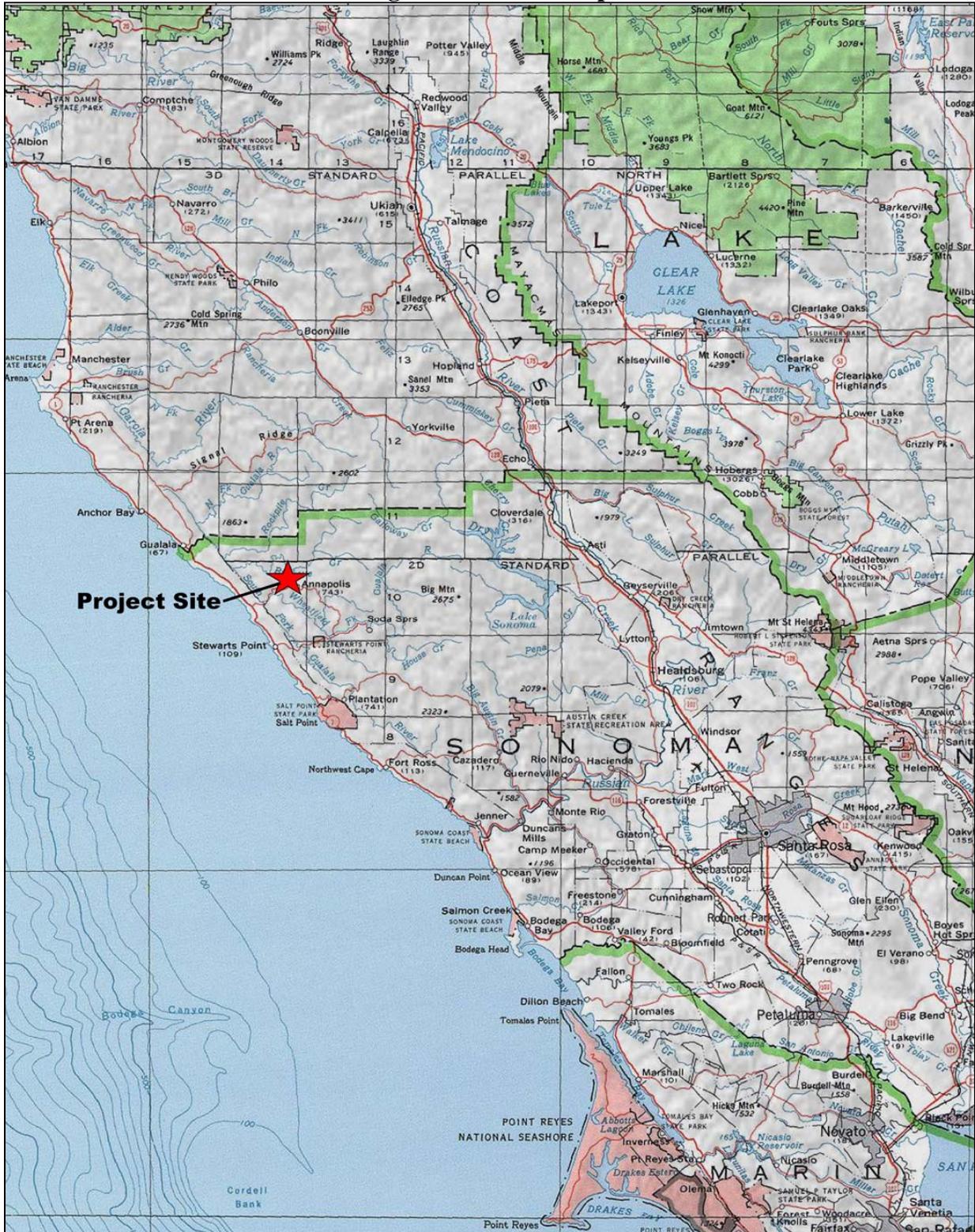
The proposed project is located in northern Sonoma County, within the community of Annapolis (See Figure 2-1, Regional Location Map and Figure 2-2, Project Location Map). Historically the region has been involved in the timber industry. Northern Sonoma County is predominately forested, and remains a source of high quality lumber. Within the Annapolis area, conversions of timberland to vineyard uses have occurred; and additional conversions are proposed.

The project area is located within the Gualala River watershed. The Gualala River drains approximately 300 square miles, or 191,145 acres, of mostly mountainous and rugged terrain in Sonoma and Mendocino Counties. The land use within the watershed is predominantly timber production, and also includes grazing, orchards and vineyards, and rural residential development. Unstable geology and high precipitation rates, typical of the Mendocino coast, make the region susceptible to high natural erosion and erosion caused by different land use practices. The Gualala River is currently on the federal Clean Water Act (CWA) Section 303(d) list due to impairment and/or threat of impairment to water quality by sediment.

The areas surrounding the project site include similar stands of timber with grass- and chaparral-covered openings. The areas south and southwest of the site are currently being used for timber production. Existing vineyards are located northeast of the property boundary, and the general vicinity surrounding the project site also includes other areas that are in the process of conversion to vineyards. Residences surrounding the project site include the Starcross Monastic Community (34500 Annapolis Road) located north of the project site, as well as six rural residences located immediately northwest, west, and south of the project site (See Figure 2-3). A Sonoma County waste transfer station is located southeast of the property boundary.

Additional information related to the existing regional setting is contained in each of the analytical chapters as the setting relates to the particular topic addressed.

Figure 2-1  
Regional Location Map



**Figure 2-2  
Project Location Map**

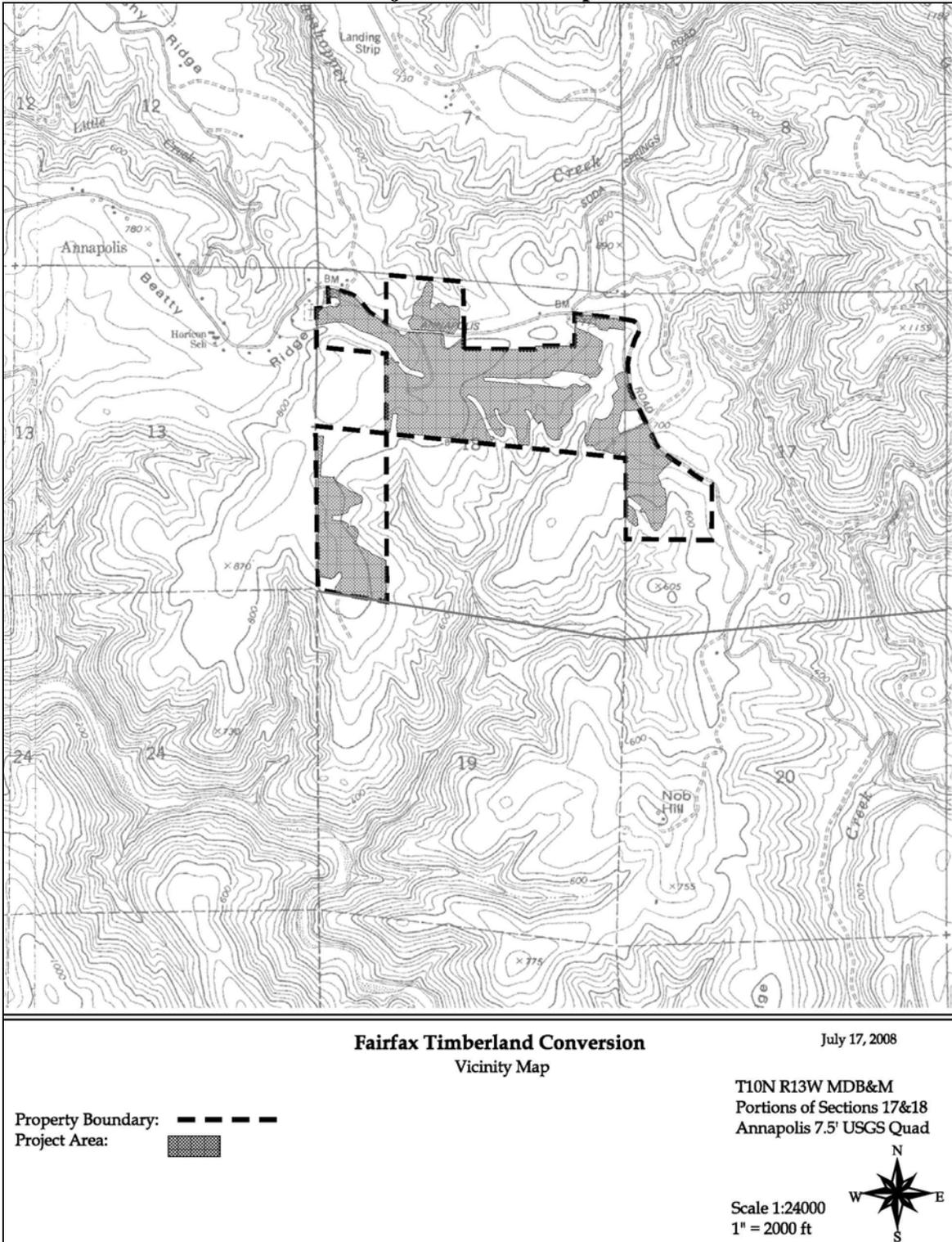
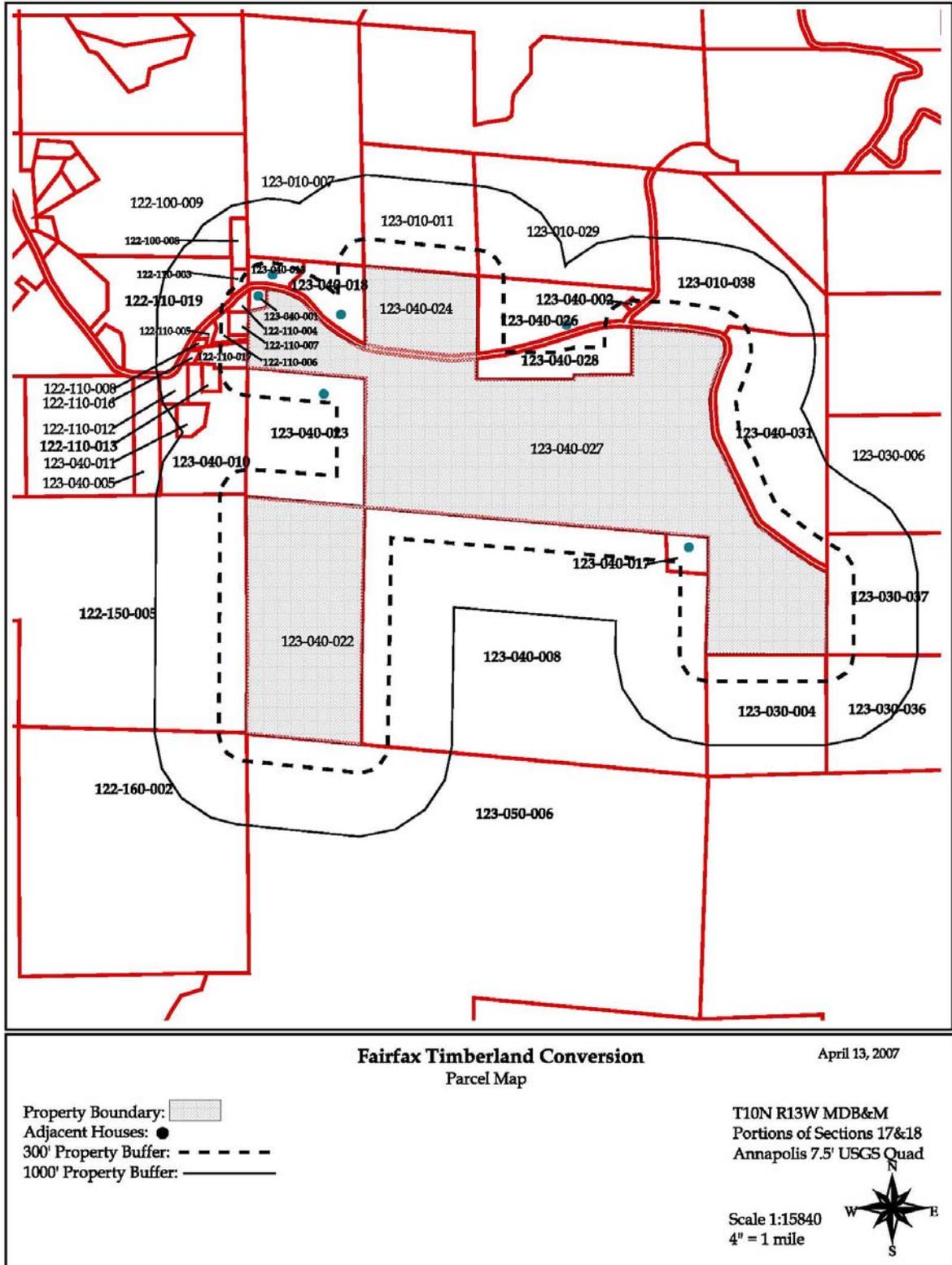


Figure 2-3  
Project Area Parcel Map Indicating Surrounding Residences



## PROJECT LOCATION

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Located on the Pacific coastline, Sonoma County is bordered by Mendocino County to the north, Lake and Napa Counties to the east, and Marin County to the south. The project site is located on a broad, flat ridge (Beatty Ridge) between Grasshopper Creek and the Wheatfield Fork of the Gualala River, approximately 0.5 to 0.75 miles southeast of the town of Annapolis and five miles east of the Pacific Ocean. The site is located within Sections 17 and 18, T10N, R13W, MDB&M, and is found on the U.S. Geological Survey 7.5 minute *Annapolis* quadrangle. The project site consists of Sonoma County Assessor's Parcel Numbers (APNs) 123-040-022, -024, and -027.

## ENVIRONMENTAL SETTING / EXISTING CONDITIONS

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Vegetative cover on the timberland conversion portion of the site consists of young-growth coast redwood and Douglas-fir intermixed with madrone, tanoak, coast live oak, California bay, and bigleaf maple. The project area does not contain late seral (i.e., "old growth") habitat or timber stands with multistory canopy (See Figures 2-4 and 2-5 for existing conditions). Timber on the project site is located in even aged stands that are approximately 50 to 75 years old. The stands regenerated following the previous harvesting, burning and partial conversion of the project site to grazing and orchard uses. Currently, there is approximately 80 square feet of Douglas fir basal area per acre and 70 square feet of coast redwood basal area per acre (onsite vegetation is discussed in depth in Chapter 3.4, Biological Resources). Site productivity in the timber conversion area is moderate, and the project site is classified as Site III timberland by the State Board of Equalization. The site is not classified as a Timberland Production Zone (TPZ).

The project site is accessible from seasonal roads, as well as Annapolis Road (a county road) via two private permanent gravel roads. Access to neighboring residences via the driveways crossing the Artesa property would be maintained, although the driveway on the west side of the site is proposed for realignment. The existing on-site roads are located on stable slopes of less than 15 percent. Historically, a large portion of the site was utilized as an apple orchard and for sheep farming. Early ranchers logged and repeatedly burned the project area and surrounding vicinity in order to clear land for livestock grazing. Currently, the project site contains the remnants of an old sawmill, as well as a smaller collapsed structure that may have been a garage. The site has remained fallow since approximately 1964.

The project site elevation ranges from 660 feet to 860 feet above sea level. Slopes in the timberland conversion area generally have east-facing and south-facing aspects, and range from two to 35 percent, with an average slope of 11.7 percent. Various watercourses are present on or near the property. Under the California Forest Practice Rules,<sup>1</sup> watercourses are classified into stream designations as follows:

- Class I: (1) Domestic supplies, including springs, on-site and/or within 100 feet downstream of the operations area and/or (2) Fish always or seasonally present on-site; includes habitat to sustain fish migration and spawning.

- Class II: (1) Fish always or seasonally present off-site within 1,000 feet downstream and/or (2) Aquatic habitat for nonfish aquatic species; excludes Class III waters that are tributary to Class I waters.
- Class III: No aquatic life present; watercourse showing evidence of being capable of sediment transport to Class I and II waters under normal high water flow conditions after completion of timber operations.
- Class IV: Man-made watercourses, usually downstream, established domestic, agricultural, hydroelectric supply, or other beneficial use.

Watercourses do not exist within the proposed 171-acre timber conversion area, but do exist within the project site outside the boundaries of the timber conversion area. The northern portion of the conversion area drains via Class III (ephemeral) watercourses into Grasshopper Creek, then into Buckeye Creek, and finally into the South Fork of the Gualala River, all three of which are off-site. These three waterways are designated Class I. The southern portion of the timberland conversion area drains into Patchett Creek on-site; Patchett Creek contains both Class I and Class II stretches and is a tributary to the off-site Wheatfield Fork of the Gualala River. The western portion of the site drains into the Wheatfield Fork via the Class III “Redfern Creek,” and contains a Class IV seasonal pool. Additionally, a small seasonal wetland is located directly north of the driveway on the eastern portion of the project site.

### **Existing Land Use and Zoning Designations**

The Sonoma County General Plan designates the site Resources and Rural Development. The project site is zoned Resources and Rural Development (RRD-40).

### **PROJECT OBJECTIVES**

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The applicant proposes the following objectives for the Fairfax Conversion Project:

- To take the fullest advantage of the site’s unique topography, soils, and microclimate to produce premium quality grapes for Artesa’s “Sonoma Coast Estate Chardonnay and Pinot Noir” wine program. Artesa expects to utilize the entire production from this project.
- To control quality of grapes through the production process.
- To establish and maintain an aesthetically pleasing vineyard with minimal impact on watersheds and wildlife.
- To provide greater opportunities for vineyard employment and economic development in the Sonoma region.
- To repair the existing site conditions which are resulting in erosion and contributing to the sedimentation of receiving waters.
- To develop a project which furthers Sonoma County’s conservation regulations.

**Figure 2-4**  
**View Southeast from Open Area to Forested Areas**



**Figure 2-5**  
**View Northeast across Open Area of Project Site**



## PROJECT COMPONENTS

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### Project Description

The project, as currently proposed, includes the issuance of a Timberland Conversion Permit (TCP), which would exempt 171 acres of a 324-acre property from Forest Practice Act tree stocking (tree planting) requirements, in order to facilitate the development of a 170-acre vineyard site (See Figure 2-6, Project Site Plan. Please note that due to the size of the proposed project the details of Figure 2-6 are somewhat difficult to read; Figure 2-6 has been provided to show the entire project. Details may be more easily read and identified in Figures 2-7 through 2-11.) In addition, as part of the vineyard development, 19 acres would be converted from meadow/orchard to vineyard uses; the rest of the project site is existing timberland. The total developed area would be 190 acres.

The 135 net acres of vineyard would be composed of eight units, which are composed of up to four sub-units (See Table 2-1 and Figures 2-6 through 2-11). In addition, five protected areas that would be protected from conversion activities are located within the project boundaries. The protected areas include: the 15.6-acre Horkelia Reserve; the 2.8-acre Manzanita – Wetland Reserve; and the 1.6-acre Manzanita Reserve; as well as protected archaeological sites. As indicated by the names, the various sites are intended to protect sensitive archeological, wetland, and biological resources sites.

The proposed project also includes a Timber Harvest Plan (THP). Documentation for the THP is incorporated into the conversion application by reference. The permittee would comply with all applicable County, State, and federal codes, ordinances, and other regulations, and would obtain all necessary approvals. The site would remain zoned Resources and Rural Development following the timber conversion.

In addition to compliance with Forest Practice Rules water quality protection guidelines, the applicant would utilize an extensive drainage system and cover cropping to provide soil stabilization and protect the area from surface soil erosion during vineyard development and operations. A detailed explanation of erosion control measures planned as a part of the timberland conversion and vineyard development project can be found in the Hydrology and Water Quality Section (Chapter 3.7) of this EIR, as well as in the Erosion Control and Mitigation Plan (ECP) prepared for the project by Erickson Engineering, Inc. (included as EIR Appendix D).

The proposed project would mitigate seven existing sedimentation sites that have been identified on the project site. The sediment yield under project conditions would be reduced owing to design mitigations and other mitigations to repair and prevent gully erosion on the project site. The erosion control measures incorporated into the proposed project include:

1. Elimination of a degraded ATV trail under power lines caused by unauthorized site users. The trail would be redeveloped as vineyard and drainage within Unit 1.

2. Installation of a rock armored outfall on an Annapolis Road culvert outside the vineyard. Hand placed rock armor will mitigate and prevent further enlargement of a small channel scour area in an area with negligible tributary area from roadside drainage.
3. Seepage control in abandoned skid road that has eroded and formed a semi-naturalized channel. A subsurface intercept drain will be placed in or near the perimeter vineyard avenue to minimize saturation-based gully enlargement below the reservoir site.
4. Groundwater and seepage control in an existing gully. A subsurface intercept drain will be placed in or near the perimeter vineyard avenue to minimize saturation-based gully enlargement downslope in a normally dry Ordinary Water reach below Unit 2.
5. Groundwater and seepage control in a second existing gully. A subsurface intercept drain will be placed in or near the perimeter vineyard avenue to minimize saturation-based gully enlargement downslope in a normally dry Ordinary Water reach below Unit 2.
6. An abandoned skid trail would be repaired below Unit 5. An overgrown and gullied skid trail would be shaped and outsloped. Surface water would be diverted from entering the site by shaping and periodic rolling dips or water bars installed to prevent accumulation of surface runoff on the trail.
7. Roadside ditch dewatering and armoring. Surface runoff from the southeast corner of Unit 8 would be routed through detention basins to a more appropriate swale location. An existing roadside ditch would be armored.

The proposed project would require construction of a 73 acre-foot reservoir and sump occupying approximately nine acres to supply the proposed vineyard with water. During the vine establishment phase (typically, the first three years), the vineyard units would be drip-irrigated by using captured surface runoff retained in the reservoir. The applicant has stated that once the vines are established, the vineyard would be primarily dry-farmed (i.e. vines would not be irrigated, except as required to maintain plant health during dry weather conditions). The runoff capture system supplying the proposed reservoir would capture only overland sheet flow (or “diffused surface flows”), and would not draw water from any channel on the project site. Under the California Water Code, the collection of sheet flow or diffused surface flow does not require an appropriate permit from the State Water Resources Control Board. Because the proposed reservoir would be located off-channel and would be used for agricultural purposes, the reservoir would be exempt from regulation and permitting pursuant to California Water Code §6004(a). However, the applicant would still be required to obtain an official exemption from the State Division of Dam Safety.

The proposed project would also result in the construction of a small corporation yard on one acre, west of the irrigation reservoir. A small, low-yield potable water well would be drilled in the vicinity of the corporation yard on the north side of Annapolis Road to provide water for washing and other incidental needs of vineyard workers. The well is anticipated to yield less-than 10 gallons per minute, and would be drilled to a depth of approximately 200 feet. The applicant would install a 1,000- to 5,000-gallon water tank,