INITIAL STUDY

GENERAL WASTE DISCHARGE REQUIREMENTS FOR VINEYARD DISCHARGES IN THE NAPA RIVER AND SONOMA CREEK WATERSHEDS

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1. PROJECT BACKGROUND AND HISTORY

San Francisco Bay Regional Water Quality Control Board (Water Board) staff intends to recommend that the Water Board adopt General Waste Discharge Requirements (General WDRs) for vineyard discharges located in the Napa River and Sonoma Creek watersheds (Figure 1). These watersheds contain an estimated 141,400 acres of vineyard properties, with greater than 69,000 acres planted in grapes, from which there are or may be discharges of sediment and concentrated storm runoff that affect water quality.

The General WDRs would regulate discharges from vineyard properties in order to achieve the vineyard discharge performance standards for sediment and storm runoff set forth in the sediment total maximum daily loads (TMDLs) in the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). Achieving these performance standards would ultimately meet the numeric targets and load allocations identified in the *Sonoma Creek Sediment TMDL* and the *Napa River Sediment TMDL*, adopted by the Water Board on September 8, 2010 and September 9, 2009, respectively. The U.S. Environmental Protection Agency (EPA) subsequently approved these TMDLs on December 10, 2010, and January 21, 2011, respectively.

The sediment TMDLs address water quality objectives for sediment, settleable materials, and population and community ecology that have been impaired due to elevated concentrations of fine sediment in the bed of the Napa River, Sonoma Creek, and their tributaries. The Water Board found that greater than half of all sediment delivered to streams in these watersheds comes from several land use categories, including:

a) Vineyard operations (erosion from vineyard surface, private roads, gullies and shallow landslides and concentrated storm runoff)
b) Grazing operations (erosion from pasture lands, private roads, and gullies and landslides)
c) Rural lands (erosion from private roads and gullies and shallow landslides)
d) Parks, open space, and municipal public works, which include public roads and related infrastructure (erosion from public trails and roads and gullies and shallow landslides).

The TMDLs contain implementation plans that provide a framework for actions needed to restore beneficial uses and to achieve an approximate 50 percent reduction in human-caused sediment inputs, across both watersheds, from the four major sediment source categories identified above. The proposed General WDRs are part of implementing the TMDLs.

2. INTRODUCTION

This Initial Study (IS) has been prepared pursuant to the California Environmental Quality Act of 1970 (CEQA), and State CEQA Guidelines (California Code of Regulations CCR, Title 14, Div. 6, Chap. 3) and the State Water Resources Control Board's CEQA regulations (CCR, Title 23, Section 3720 -3782). The Lead Agency for the project, as defined by CEQA, is the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board).

Improperly managed vineyard operations can pose threats to surface and groundwater and stormwater runoff may result in soil erosion and contribute excess sediment to nearby streams. Runoff may also exhibit the potential to carry additional pollutants adhered to soil particles, such as agricultural pesticides and fertilizers to receiving waters.

The proposed project consists of establishing a regulatory mechanism, in the form of General WDRs, to regulate sediment discharges and to effectively attenuate significant increases in storm runoff from existing, replanted, and future vineyard properties in the Napa River and Sonoma Creek watersheds that meet certain criteria (Table 1).

The project is consistent with the State Water Resources Control Board's 2004 Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program (NPS Policy), which requires that all sources of nonpoint source pollution be regulated through waste discharge requirements (WDRs), waivers of WDRs, and/or prohibitions. The proposed project is also consistent with requirements contained in the Basin Plan, including the TMDLs completed for sediment in the Napa River and Sonoma Creek.

This IS analysis considers the potential environmental impacts of the General WDRs including:

- Implementation of best management practices (BMPs) and changes in vineyard operations that may be employed by landowners/operators to comply with the General WDRs.
- Environmental changes resulting from long-term compliance with the General WDRs.

All potential impacts of the General WDRs are evaluated relative to the existing physical conditions (i.e. "baseline conditions") described in the Existing Setting section below. The types of on-the-ground actions that would be undertaken by landowners/operators subject to the General WDRs would be consistent with commonly used and effective vineyard BMPs that have already been employed in both watersheds. The potential environmental impacts of discharges from vineyard properties that are not eligible for coverage under the General WDRs are not evaluated in this IS because they are not part of the project. Vineyard dischargers who are not eligible for coverage under the General WDRs and who must apply for individual WDRs would be subject to CEQA.

For the purpose of this IS and the proposed General WDRs, the term “vineyard property” includes the vineyard facility as well as all roads on the property. The “vineyard facility” includes the permanent, semi-permanent, or temporary physical features of a vineyard, such as land, crops, drainage systems, roads, reservoirs, diversion structures/equipment, etc., that are established or maintained for the purpose of growing grapes. The vineyard facility does not include winery facilities subject to an industrial stormwater permit or other WDRs or conditional waivers of WDRs.

For the purpose of this IS and the proposed General WDRs, a “landowner/operator” is defined as a landowner and/or operator of a vineyard property meeting the size and slope thresholds (defined in Table 1) in the proposed General WDRs in the Napa River or Sonoma Creek watersheds.

Table 1. Summary of General WDRs Eligibility, Exclusion, and Exemption Criteria

Site Type	General WDRs Definition	Covered by General WDRs	Not covered by General WDRs	Exempted from General WDRs	Excluded from General WDRs[1]
		Requirement	***Requirement***	***Requirement***	***Requirement***
		Submit a Notice of Intent to seek coverage under the General WDRs and comply with requirements of the General WDRs	*Not required to seek coverage under the General WDRs*	*Submit a Notice of Non-Applicability and provide stream setback documentation*	*Submit a Report of Waste Discharge to seek coverage under individual WDRs*
Small Vineyard	Vineyard < 5 planted acres		**X**[2]		
New and Existing Vineyards	Vineyards ≥ 5 planted acres	**X**[3]			
Flat Land with Stream Setbacks and No Erosion	Vineyards with slopes of ≤ 5 percent with established stream setbacks and no evidence of erosion at points of facility discharge as described in the Notice of Preparation			**X**	
Forest to Vineyard Conversions	Any proposed vineyard that requires a Timber Conversion Plan/Permit				**X**
New Steep Slope Vineyards	Proposed vineyards on slopes > 30				**X**
New Ridgetop Vineyards	Any proposed vineyard developed on a flat topographic divide above divergent and descending slopes where one or more of the descending slopes has a natural slope steeper than 50 percent for more than 50 feet in slope length				**X**

[1] Any vineyard, regardless of site type, that cannot or fails to meet the requirements of the General WDRs would be excluded from the General WDRs and would be required to submit a report of waste discharge to seek coverage under individual WDRs.

[2] Any vineyard, regardless of size, that is deemed by Water Board staff to discharge wastes that could affect water quality may be regulated through the proposed General WDRs, or, depending on site conditions, may be required to submit a report of waste discharge to seek coverage under individual WDRs.

[3] With the exception of those vineyards that meet the definition for forest to vineyard conversions, new steep slope vineyards, or new ridgetop vineyards.

3. SUMMARY

Project Summary

The proposed General WDRs would implement the Napa River and Sonoma Creek sediment TMDLs with the overarching goals of reducing sediment and other nonpoint source pollutant discharges from vineyard properties and protecting and enhancing beneficial uses of these waterways, including the protection of anadromous fish habitat.

The proposed General WDRs would regulate discharges from the following types of vineyard properties within the project area shown on Figure 1:

- All existing vineyard properties (including replants) where 5 acres or more are planted in vineyard, except for "low sediment delivery" properties that meet the exemption criteria (as described below);
- All proposed vineyards of 5 acres-or-more, developed on slopes ≤ 30 percent, except for "low sediment delivery" properties or "high potential sediment delivery" properties (as defined below);
- Any vineyard property, regardless of planted acreage, that is deemed by Water Board staff to discharge waste that could affect water quality and could be adequately regulated through the proposed General WDRs.

The proposed General WDRs would require controls for discharges from the vineyard facility and the roads located throughout the vineyard property. A vineyard facility includes all permanent, semi-permanent, or temporary physical features of a vineyard such as land, crops, drainage systems, roads, reservoirs, diversion structures/equipment, etc., that are established or maintained for the purpose of growing grapes. Discharges from on-site winery production facilities are not included in this permit.

The following "high potential sediment delivery" vineyard properties would not qualify for coverage under the proposed General WDRs, given their higher potential impact on the existing habitat and increased potential for soil erosion. These properties would instead be required to submit applications (i.e., reports of waste discharge or ROWDs) for individual WDRs:

- Any proposed vineyards that require a Timber Conversion Plan or Permit;
- Vineyards proposed on ridgetop[1] areas; and
- New vineyards on slopes of more than 30 percent.

"Low sediment delivery" vineyard properties are those that are not expected to contribute

[1] Ridgetop is defined as a relatively flat topographic divide above divergent and descending slopes where one or more of the descending slopes has a natural slope steeper than 50 percent for more than 50 feet in slope length.

a significant amount of sediment. These properties would be exempt from the requirement to be permitted under proposed General WDRs by filing a notice of non-applicability, if they meet all of the following criteria:

- The vineyard is developed on a slope ≤ 5 percent; and
- A stream setback in the form of a vegetated buffer is in-place (established) that is at least 35 feet wide, measured from top-of-bank, along the entire length of the Class I, II, III, or Class IV watercourse (as defined by California Forest Practice Rules) located on or adjacent to the vineyard property, and the vegetated buffer is effective with regard to removal of sediment and other pollutants from surface runoff; and
- There are no visible signs of erosion at any points of direct discharge (i.e. pipe outlets, ditch outlets, etc.) into waterways located on or adjacent to the vineyard property.

The General WDRs would require the landowners/operators of eligible vineyard properties to:

- Seek coverage under the General WDRs by submitting a Notice of Intent (NOI) to comply to the Water Board
- Develop a Farm Water Quality Plan
- Implement and maintain BMPs and other improvements as specified in the Farm Water Quality Plan to meet the requirements of the General WDRs
- Conduct vineyard property site inspections and compliance monitoring
- Submit an Annual Compliance Form to the Water Board

This IS evaluates the environmental impacts of physical changes resulting from likely actions to comply with the proposed General WDRs that, over time, would result in reduction in erosion, sedimentation, and storm runoff from vineyard properties. These changes will occur gradually as landowners/operators continue to implement BMPs, in increasing numbers and on a more watershed-wide basis. The likely compliance actions and possible associated changes to the physical environment are summarized in Table 2.

As more fully discussed in the response to the IS checklist questions, adoption of the General WDRs are intended to result in:

- Improvements to the environment including reductions in fine sediment input to channels and enhancement of fish habitat conditions
- Implementation of some BMPs that may have the potential for associated short-term physical changes to the environment during their construction phases, but no long-term, permanent changes in land use, community structure, pollution, or public services

- No increases in stormwater runoff rates above existing conditions, or any other long term adverse environmental impacts

Summary of Impacts and Mitigation Measures

The proposed General WDRs would result in increases in the use of BMPs and construction of structural controls (such as cover crops, drainage facilities, erosion control facilities, and stormwater runoff controls) to meet water quality requirements. Implementation of BMPs could result in short-term impacts related to construction activities (grading, vegetation removal, stockpiling soils, and mobilizing heavy equipment).

Based on existing available information and evidence provided in this IS, compliance with the proposed General WDRs would result in "Less Than Significant" or "No Impact" in the following CEQA topic areas:

- Aesthetics
- Agriculture and Forest Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities and Service Systems

Based on this IS, the EIR for the proposed General WDRs will cover the following CEQA topic areas due to the potential for significant environmental impacts:

- Air Quality
- Biological Resources
- Cultural Resources
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Mandatory Findings

4. PROJECT OBJECTIVES AND DESCRIPTION

The project is the proposed adoption of the General WDRs for discharges from vineyard properties that meet the eligibility requirements in Table 1 in the Napa River and Sonoma Creek watersheds (Figure 1). The fundamental objective of the General WDRs is as follows:

- To implement the Napa River and Sonoma Creek sediment TMDLs to achieve their vineyard discharge performance standards for sediment and storm runoff and to ultimately meet the TMDLs' sediment allocations and targets and restore properly functioning substrate conditions in channel reaches that provide habitat for anadromous salmonids.

Other objectives include the following:

1) To control discharges of sediment and/or storm runoff from vineyards into channel reaches that provide habitat for other native fishes;
2) To promote stream-riparian habitat protection and restoration;
3) To promote actions to restore fish passage at road crossings and streamflow diversions;
4) To promote management decisions and actions to maintain adequate in-stream temperature; and
5) To encourage voluntary conservation programs to assist vineyard owners/operators in meeting the requirements and objective of the proposed General WDRs.

The proposed performance standards for the General WDRs are summarized below.

Vineyard Performance Standards

Vineyard owners/operators would be required to complete a Farm Water Quality Plan that describes existing conditions and management practices on their vineyard property, including documentation of nutrient and pest management practices as well as a summary of all existing or potential erosional features that may be contributing sediment into on-site or adjacent waterways.

Surface Erosion Performance Standard

Based on the above assessment, the vineyard owner/operator would be required to implement a suite of appropriate BMPs to protect soil from erosion, prevent excessive rates of sediment delivery from surface erosion of vineyards and associated road networks, and effectively attenuate storm runoff (described below). Rates of sediment delivery are excessive when the predicted soil loss rate exceeds the tolerable soil loss rate (T), as defined in the Universal Soil Loss Equation or Revised Universal Soil Loss

Equation (USDA-ARS, http://www.ars.usda.gov/Research/docs.htm?docid=6010). The effectiveness of these actions would be required to be evaluated by field inspection, regular visual observation, and photo documentation. Annual compliance would be required to document annual actions taken to address potential sediment losses from the vineyard.

Road Performance Standard

The TMDLs require control of road-related sediment delivery to receiving waters. The proposed General WDRs would require a property-wide road network assessment to identify points of discharge from roads and to assess road conditions. The survey would identify all locations where roadways have a potential to discharge sediment directly into a waterway (or a ditch that conveys water to a waterway) and locations of any on-site culverts and stream crossings. Following the survey, the vineyard owner/operator would be required to develop and implement a prioritization scheme to reduce or eliminate direct discharges from roads using best management practices so that no more than 25 percent[2] of on-site roads are directly connected to a waterway. In addition, in the vicinity of culverts, critical dips and trash racks would be required to be installed, where appropriate, in order to avoid potential culvert failure due to debris clogging and/or stream diversion. Annual compliance would be required to document annual actions taken to address road-related sediment delivery.

Unstable Areas and Stormwater Runoff Performance Standards

Vineyard owners/operators would be required to assess their property and on-site or adjacent streams to identify unstable areas such as gullies, mass wasting (e.g., landslides, rock fall, mud flows, etc.), and bank erosion that have resulted from past or current roads or vineyard facility operations. The owners/operators would then be required to implement BMPs to accelerate natural recovery and prevent human-caused increases in sediment delivery from unstable areas.

In addition to controlling surface erosion, vineyard owners/operators would be required to effectively attenuate significant increases storm runoff, so that the runoff from vineyards shall not cause or contribute to downstream increases in rates of bank or bed erosion. Evidence of active down-cutting or head-cutting, and/or anomalous patterns or intensity of bank erosion (e.g., extensive bank erosion along one or both banks), at or near the point of discharge or in the first downstream response reach will be interpreted to indicate that the upstream vineyard may be contributing to damaging increases in bed

[2] Road assessments previously performed in the Napa River and Sonoma Creek watersheds indicate that approximately 50 percent of roads are directly connected to waterways. Reducing the length of connected roads by half (to 25 percent) is expected to meet the sediment TMDL reduction goal and numeric performance standard of 500 cubic yards per mile of road over the 20-year implementation period (i.e. by 2028 and 2029 for Sonoma Creek and Napa River, respectively).

and/or bank erosion.

Nutrient and Pesticide Stormwater Runoff Performance Standard

The proposed General WDRs would require an assessment of pesticide and nutrient storage, mixing, and application practices and require actions to minimize potential discharges of pesticides and nutrients to receiving waters from vineyards as described in Table 2 of the IS.

Farm Water Quality Plans may be developed and implemented in cooperation with technical assistance groups such as the Resource Conservation Districts (RCDs), Natural Resources Conservation Service (NRCS), U.C. Cooperative Extension as well as Fish Friendly Farming or other Water Board approved third-party groups.

Actions to Comply with General WDRs

Many vineyard properties in the Napa River and Sonoma Creek watersheds are already implementing a variety of erosion control BMPs in accordance with local regulations and with assistance provided by established technical assistance groups and voluntary conservation programs. Compliance with the General WDRs is expected to result in an increase in the implementation of many commonly used, effective, and conventional agricultural BMPs to control and reduce erosion and other discharges from vineyards properties and their associated road networks.

Measures that have proved problematic, such as intensive engineered drainages that concentrate flow and increase storm runoff, would not continue because they would violate the runoff control requirements identified in the proposed General WDRs. The objective of runoff controls is to sink, slow, and spread or capture runoff instead of concentrating flow or increasing storm flow velocities.

Although it is impossible to predict the exact locations or nature of actual BMPs that will be implemented as a result of the General WDRs, the types of on-the-ground actions that may occur would be consistent with those commonly used at existing vineyards within the Napa River and Sonoma Creek watersheds that are effective in reducing erosion and runoff.

This IS considers the potential environmental impacts associated with two categories of possible actions that include:

1. **Implementation of BMPs**. The General WDRs would result in implementation of numerous vineyard and road BMPs that will, over time, result in reduction in erosion, sedimentation, and storm runoff from vineyard properties. These changes will occur gradually as landowners/operators continue to implement BMPs, in increasing numbers and on a more watershed-wide basis. Table 2

includes likely compliance actions that consist of the most common and effective BMPs for minimizing and controlling the delivery of sediment and storm runoff (including roads and points of discharges to streams), nutrients, and pesticides to receiving waters. Site-specific BMPs would take into account existing farm operations, farm layout, identified sediment sources and their proximity and connection to water bodies, and the effectiveness of currently deployed BMPs.

2. **Control of Discharges from New Vineyards**. If approved by a local land use agency, future new vineyards meeting General WDRs eligibility criteria would need to be constructed and operated in compliance with the General WDRs requirements. All proposed vineyard development projects would need to demonstrate that the vineyard development would not result in increases in sediment delivery or runoff above existing conditions. It is important to note that the General WDRs does not authorize or permit new vineyards, vineyard expansions, or vineyard replants. Local land use agencies are the entities with authority to process applications for and authorize new vineyards, vineyard expansions, and vineyard replanting under their local regulations (general plan goals and policies, municipal codes and ordinances). These local regulations may require implementation of BMPs, issuance of permits (e.g. grading permits, erosion control permits, or use permits) or other approvals determined by the city or county. The local decision-making body would serve as lead agency under CEQA in connection with authorizing any new vineyard land uses.

A summary of the likely General WDRs implementation actions and the associated physical changes to the environment that may occur are listed in Table 2 at the end of this section, and are discussed in greater detail in the IS checklist and responses.

Implementation Phasing

The timing of implementation of BMPs will vary depending on the level of farm planning and water quality management at each property at the time that the General WDRs would be adopted. As discussed in the Baseline Conditions section below, a significant number of landowners/operators have completed farm plans and have already implemented effective BMPs that comply with the General WDRs. For those facilities, no additional BMPs will be needed beyond regular maintenance, effectiveness monitoring, and reporting.

For landowner/operators who have not initiated farm planning at adoption, the General WDRs would specify the timeline for completion of the Farm Water Quality Plan and its implementation.

Table 2. Likely Compliance Actions and Types of Physical Environmental Changes

Pollutant Category	Water Quality Objective or Sediment TMDL Performance Standard	Likely Compliance Actions	Possible Physical Environmental Changes
Surface Erosion from Vineyards	Control excessive rates[1] of sediment delivery to channels resulting from vineyard surface erosion	• Planting cover crops, conservation tillage, and applying composted mulch, straw, etc.	• Increase in the use of ground cover (annual/perennial cover crop, straw, mulch, etc.) between vineyard rows and potential reduction in tillage. Light discing, soil tillage, grading, and rolling to prepare seedbed. Cover crop maintenance may require mowing, discing, or crimping into soil with roller.
		• Repairing and installing engineered drainage facilities such as drop inlet and storm runoff diversion structures.	• Excavation to access pipes and inlets and installation of pipe, inlets, rock or other energy dissipating materials. Backfill, stabilize, and revegetate (using seeding or planting) disturbed area(s) after completion of earth-disturbing activity.
		• Inspecting and maintaining drainage facilities, inlets, storm runoff diversion structures, and storm runoff detention. basins	• Inspection may not result in physical changes to the environment but may result in disposal of accumulated debris.
		• Installing vegetated buffer strips.	• Minor grading to alter ground contours and to loosen and/or amend soil and the planting (via seed or established plants) of buffers.
		• Terracing of an existing or replanted hillside.	• Grading to alter ground contours, installation of pipe, drain inlets, trash racks, and rock or other energy dissipating materials at pipe outlets. Backfilling, stabilizing, and revegetating (using seeding or planting) disturbed area(s) after completion of earth-disturbing activity.
		• Locating staging areas for vineyard maintenance, harvest, and pruning away from streams.	• Adjustment in the location of routine vineyard staging areas and winterization of staging areas through revegetation, mulch, straw, etc.

[1] Rates of sediment delivery are "excessive" when the predicted soil loss rate exceeds the tolerable soil loss rate (T); calculations as described in the "Universal Soil Loss Equation" or Revised Universal Soil Loss Equation (RUSLE2) (refer to http://fargo.nserl.purdue.edu/rusle2_dataweb/RUSLE2_Index.htm for USLE and RUSLE2 methodology).

Pollutant Category	Water Quality Objective or Sediment TMDL Performance Standard	Likely Compliance Actions	Possible Physical Environmental Changes
Road-related sediment delivery	**Road**-related sediment delivery to channels less than or equal to 500 cubic yards per mile of **Road**[2] over the sediment TMDL implementation period	• Road segment relocation, construction, replacement, and/or retrofit road cut and fill slopes and road crossings, grading of roads and road crossings to install water bars, rolling dips, and critical dips.	• Mobilization of equipment (trucks and heavy equipment) to alter road drainage via out-sloping of road, modification of cut and fill of road banks, grading of road bed, and fill slope. Placement of native fill or imported fill to construct water bars, critical dips, rolling dips, and stable cut and fill slopes. Installation of trash racks to protect culvert inlets from blockage. Backfill, stabilize, and revegetate (using seeding or planting) disturbed area(s) after completion of earth-disturbing activity.
		• Repairing, replacing, or retrofit of undersized or improperly functioning culverts and installing ditch relief culverts.	• Use of hand-tools and trucks and heavy equipment to move soil to repair or replace culverts (metal or concrete pipe segments); construction of new, or the repair of existing stream crossings at fords or bridges. Installation of culvert in let trash racks. Grading, backfill, and stabilization of disturbed area(s) through the installation of stream bank protection materials such as willow wads, geo-textiles, and or rock.
		• Re-surfacing road prism to minimize soil loss and reduce peak and concentrated flows. Reduce the number (via road removal or decommissioning) of roads, and minimize the length of all-weather roads on the vineyard property.	• Mobilization of trucks and heavy equipment to stabilize the road surface via resurfacing with gravel, asphalt, etc. Winterization of road surfaces through soil amendment, seeding for grass cover or by installing gravel, etc. Decommissioning may involve the mobilization and use of trucks and heavy equipment to remove culverts, rip the road surface, remove unstable fills, and configure for long-term drainage via outsloping, installing water bars, ditch removal, etc. Backfill, stabilize, and revegetate (using seeding or planting) disturbed area(s) after completion of earth-disturbing activity.
		• Maintaining roads that service the vineyard facility (for example, vegetated avenues and equipment turn-arounds).	• Winterization of avenues and equipment turnarounds through soil amendment, seeding for grass cover, or planting.

[2] Reducing the length of **Hydrologically Connected Roads** by half will meet Napa River and Sonoma Creek sediment TMDL sediment reduction goals and numeric performance standard.

Pollutant Category	Water Quality Objective or Sediment TMDL Performance Standard	Likely Compliance Actions	Possible Physical Environmental Changes
Stormwater Runoff and Peak Flow Attenuation	Effectively attenuate significant increases in storm runoff, so that runoff from vineyards shall not cause or contribute to downstream increases in rates of bank or bed erosion	• Dispersal of surface runoff through the installation of energy dissipater facilities, rock level spreaders, pipe T-spreaders, and benches.	• Use of on-site materials or importation of rock and T-spreaders to construct features to disperse storm runoff. May involve minor excavation and fill in upland areas.
		• Installing sedimentation/detention basins.	• Mobilization and use of trucks and heavy equipment to remove vegetation and to excavate the area planned for the detention basin. Installation of pipes, valves, and inlet/outlet structures at detention basin. Backfill, stabilize, and revegetate (using seeding or planting) disturbed area(s) after completion of earth-disturbing activity.
		• Terracing, installing alternative vineyard design and/or drainage system at the time of replanting. Reducing the number of, or disconnecting, engineered drainages.	• Excavation and fill in upland areas using a range of equipment. May require installation of new pipe and removal of pipes and other drainage features that concentrate runoff. Backfilling, stabilizing, and revegetating (using seeding or planting) disturbed area(s) after completion of earth-disturbing activity. May reduce the footprint of area planted as vineyard.
		• Installation of cover crops and/or mulch	• Increase in the use of ground cover (annual/perennial cover crop, straw, mulch, etc.) at or near points of storm discharge to slow and spread runoff. Ground may require mobilization and use of farm equipment for light discing, soil tillage, grading, and rolling to prepare seedbed for grass cover. Cover crop maintenance may require mowing, discing, or crimping into soil with roller.
		• Re-establishing forest cover	• Mobilization and use of equipment to prepare the area for re-planting including raising and/or reducing grade (ground level) to achieve proper elevation. May involve invasive plant removal, earthmoving, discing, and amending soils in area of tree replanting and the installation of temporary fencing to protect the trees from foragers and installation of irrigation (for example drip irrigation) to provide water for trees until they are established. Disturbed areas between trees may require stabilization via application of mulch, straw, and/or planting with ground cover.

Pollutant Category	Water Quality Objective or Sediment TMDL Performance Standard	Likely Compliance Actions	Possible Physical Environmental Changes
Gullies and Shallow Landslides (unstable areas)	Accelerate natural recovery and prevent human-caused increases in sediment delivery from unstable areas	• Stabilizing unstable areas (i.e. headwater channels, gullies, and shallow landslides) by installing drainage improvements, re-contouring, or re-vegetating unstable areas through bio-technical methods, such as installing large woody debris, hard engineering via placement of boulders, and planting appropriate vegetation.	• Use of hand-tools and/or heavy equipment to excavate and repair unstable land masses. Grading to re-direct storm runoff. Installation of soil protection materials such as willow wads, geo-textiles, and or rock. Backfilling, stabilizing, and revegetation (using seeding or planting) of disturbed area(s) after completion of earth-disturbing activity.
		• Dispersal of runoff	• Excavation and fill in upland areas using a range of equipment. May require installation of new pipe and removal of pipes and other drainage features that concentrate runoff. Backfilling, stabilizing, and revegetating (using seeding or planting) disturbed area(s) after completion of earth-disturbing activity.
		• Re-vegetation	• Mobilization and use of equipment to prepare the area for re-planting including earthmoving, contouring, amending soils, planting of trees, shrubs, grass, and the installation of temporary fencing to protect the vegetation from foragers and installation of irrigation (for example drip irrigation) to provide water until vegetation is re-established. Disturbed areas between trees and/or shrubs may require stabilization via application of mulch, straw, and/or planting with ground cover.
Nutrients	Waters shall not contain bio-stimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.	• Avoiding fertilizer application methods that could result in over-application and nutrients in runoff.	• Reduced fertilizer use, targeted fertilizer use, alterations to drip irrigation systems, changes in cover crop management, or increased use of organic fertilizers.
		• Avoiding mixing, storing, or applying fertilizers in a manner that could result in excess nutrients being delivered to surface or groundwater.	• Construction of small structures such as mixing pads, berms, sheds, and small roofed structures to store, cover, and contain fertilizer.
		• Managing onsite irrigation systems to prevent fertilizers from entering surface and groundwater.	• Minor alteration of valves and pipes of the drip irrigation systems to prevent backflows of irrigation water.

Pollutant Category	Water Quality Objective or Sediment TMDL Performance Standard	Likely Compliance Actions	Possible Physical Environmental Changes
Pesticides	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms	• Implementing Integrated Pest Management (IPM) practices including minimizing the application of pesticides when possible and only using approved products in accordance with applicable regulations and directions. • Avoiding mixing, storing or applying pesticides near groundwater wells, surface waters or in ways that could cause or contribute to receiving water toxicity.	• Reduced pesticide use and conversion to less toxic pest control methods. • Construction of small structures such as pads, sheds, berms, and roofed areas to store, cover, and contain pesticides.

5. EXISTING CONDITIONS

Environmental Setting

The Napa River watershed, which drains about 425 square miles, is located in the northern portion of the San Francisco Bay area and drains into San Pablo Bay. The 170 square mile Sonoma Creek watershed is located immediately west of the Napa River watershed and also drains into San Pablo Bay. The Napa River and Sonoma Creek watersheds are designated as impaired for excess sediment, nutrients and pathogens. The sediment TMDLs for these watersheds document the presence of excess fine sediment (sand, silt, and clay particles), incised stream channels, and diminished fisheries, specifically for anadromous steelhead and Chinook salmon.

Both TMDLs indicate that viticulture is the predominant land use in both valleys and is one of several major sources of fine sediment in the two watersheds. Vineyards make up most land cover in the valleys and are becoming more extensive on hillsides in some tributary watersheds. Vineyards may yield fine sediment and other pollutants through surface erosion, road runoff, unstable areas (such as gullies and landslides), and from excessive storm runoff.

Roadway networks, including both paved roads and unpaved roads, contribute fine sediment via direct erosion of the roadbed surface and inboard ditches. Surface erosion of the roadbed, caused by wind erosion, or formation of rills and gullies on the surface is common in these watersheds. Roads are either impervious (paved) or highly compact (unpaved) and they tend to generate large volumes of runoff. This runoff can cause erosion of the roadway's inboard ditch, hillslopes, and channels that receive this runoff. Bridges and culverts can also be a source of sediment. In locations were culverts are undersized or become blocked with sediment and debris, bank erosion may occur.

Historical and ongoing reduction in coarse sediment inputs (from hydrologic changes including large dams) plus the overall increase in runoff and peak annual flows from developments in the valleys have caused Napa River and Sonoma Creek and many of their tributaries to erode their bed and banks. These adjustments result in headcutting, gully and landslide formation, and channel incision (SFEI, 2012).

A description of existing conditions relative to each CEQA topic area is provided in the initial study checklist in the "background" discussion at the beginning of each environmental topic within Section 5, Environmental Impact Analysis, below.

Baseline Conditions

This environmental analysis considers potential environmental impacts of adoption of the proposed General WDRs. It considers actions that may be taken to comply with the General WDRs, beyond those actions that have already been implemented voluntarily or under existing local regulations.

The baseline conditions for the purpose of this environmental analysis include:

- Discharges from all existing vineyards in the Napa River and Sonoma Creek watersheds;
- Existing physical conditions, including BMPs that have already been implemented on the ground, as a result of policies, laws, and regulations of local cities and counties pertaining to vineyards, roads, vegetation removal, and stream setbacks; and
- Existing physical conditions as a result of existing permits, WDRs, and waivers of WDRs issued by the Water Board or the State Water Board (e.g. State Water Board Order 2009-0009-DWQ for Stormwater Discharges associated with Construction and other Land Use Activities).

Based on the sediment TMDL, an estimated 159,000 metric tonnes of fine sediment is delivered to the Napa River annually (Table 3). The smaller Sonoma Creek watershed produces an estimated 63,000 tons of fine sediment each year (Table 4). The estimated amount of fine sediment that is currently delivered to the Napa River and Sonoma Creek best represent baseline water quality and habitat conditions in the watersheds as it relates to adoption of the proposed General WDRs.

Table 3. Existing Sediment Inputs to Channels in the Napa River Watershed Downstream of Major Dams

Sediment Source	Mean Annual Sediment Delivery(metric tonnes[1]/year)
Surface erosion from Vineyards[2]	37,000
Roadway-related processes	55,000
Gullies and landslides	30,000
Channel Incision and bank erosion	37,000
TOTALS	**159,000**

[1]A metric tonne equals 1,000 kilograms and about 2,205 pounds
[2]Includes some grazing land (estimated to be a small fraction, less than 10 percent, of the total)

Table 4. Existing Sediment Inputs to Channels in the Sonoma Creek Watershed

Sediment Source	Mean Annual Sediment Delivery (tons[1]/year)
Surface erosion from Vineyards	7,600
Roadway-related processes	11,200

Landslides	900
Channel Incision and gullies	43,300
TOTALS	**63,000**

[1]A ton equals 2,000 pounds.

Physical conditions in portions of the watersheds have improved since adoption of the TMDLs as a result of early and ongoing voluntary farm water quality planning and implementation (Trso, 2011). The proposed General WDRs build upon these successful efforts. As of 2012, an estimated 25 percent of vineyards have already completed comprehensive farm plans (Table 5) through collaboration with local governments, RCDs/NRCS, the Farm Bureau, and other grower groups in the valleys. The Sonoma County Agricultural Commissioner, Napa County Planning Department, and the RCDs indicate that there are over 131,500 acres of productive vineyards in the Napa River and Sonoma Creek watersheds. Of these, a significant number (25,600 acres in Napa Valley and 2,900 in Sonoma Valley) are certified by Fish Friendly Farming (FFF) and Napa Green (in Napa County only). These estimates do not account for vineyard properties that are enrolled in FFF and not yet certified or properties that have implemented vineyard and road BMPs through other technical assistance programs, such as Napa and Sonoma RCDs. Therefore, the acreages and percentages of vineyards that have completed farm plans and have implemented management actions to reduced non-point source pollutants (Table 6), represent watershed minimums.

Table 5. Acreage of Vineyard Parcels in the Napa River and Sonoma Creek Watersheds and Percentage Certified under Fish Friendly Farming (Napa Green) Program

	Vineyard Parcels (acres)	**Area Planted in Vineyard (acres)**	**Total acres/ % Parcels FFF Certified**	**Total acres/ % Planted Vineyard FFF Certified**
Napa River Watershed	96,300	44,000	25,600 / 27 %	13,400 / 30 %
Sonoma Creek Watershed	35,200	15,300	2,900 / 8 %	1,500 / 10 %
TOTALS (both watersheds)	**131,500**	**59,300**	**28,500 / 22 %** average	**14,900 / 25 %** average

Note: All acreage is estimated based on a minimum vineyard size of five acres and totals are rounded to the nearest hundred acres.

Under Fish Friendly Farming, potential water quality impacts from vineyard property operations are evaluated through a site inspection and the preparation of comprehensive

farm plan that chronicles the inspection findings. Potential issues of concern to water quality are identified in the farm plan and are corrected through the implementation of proper, site-specific BMPs. These BMPs are comparable to those actions that will occur through landowner/operator compliance with the proposed General WDRs. To the extent that BMPs were implemented on vineyard properties prior to development of the General WDRs, these features and facilities are considered to be part of the baseline physical conditions.

In addition, several significant reach-wide river and riparian restoration projects, undertaken as a result of the sediment TMDLs, have led to improvements in channel condition and riparian habitat in the Napa River and Sonoma Creek watersheds. These include the voluntary collaborative restoration of the Napa River of the Rutherford reach (4.5 miles), the Oakville to Oak Knoll reach (9 miles), and Carriger and Nathanson creeks in Sonoma Valley. Furthermore, a fish passage barrier removal project at the Zinfandel Lane Bridge in Napa has increased habitat for anadromous fish.

Despite these improvements, the Napa River and Sonoma Creek remain impaired by excess fine sediment. The proposed General WDRs require implementation of vineyard operation and road BMPs that are intended to correct, over time, sediment and associated water quality impairments. Vineyards are not identified as a source of pathogens in the Napa River and Sonoma Creek Pathogen TMDLs (Water Board, 2006 a, 2006b).

6. ENVIRONMENTAL IMPACT ANAYLSIS

Initial Study
pursuant to the California Environmental Quality Act

A. *PROJECT DESCRIPTION*

1. Project title	**General WDRs for Vineyard Discharges in the Napa River and Sonoma Creek Watersheds**
2. Lead agency name and address	California Regional Water Quality Control Board, San Francisco Bay Region 1515 Clay Street, Suite 1400 Oakland, CA 94612
3. Contact person and phone number	Anya Starovoytov, Environmental Scientist (510) 622-2506 astarovoytov@waterboards.ca.gov
4. Project location	Napa River and Sonoma Creek watersheds, San Francisco Bay Region
5. Project sponsor's name and address	California Regional Water Quality Control Board, San Francisco Bay Region 1515 Clay Street, Suite 1400 Oakland, CA 94612
6. General plan designation	Not applicable
7. Zoning	Not applicable

8. Summary Description of Project:
The project is the proposed adoption of the General WDRs for vineyard discharges in the Napa River and Sonoma Creek watersheds to control discharges and comply with the implementation plans for the Napa River and Sonoma Creek Sediment TMDLs. The proposed General WDRs would specify requirements necessary to protect and restore beneficial uses in the Napa River and Sonoma Creek watersheds. These actions are consistent with the requirements of the NPS Policy. The General WDRs would require implementation of vineyard operation and road BMPs which are expected to result in water quality improvements.

The General WDRs would apply to discharges from vineyard properties in Napa River and Sonoma Creek watersheds that meet the proposed General WDRs eligibility criteria described in Table 1, above. They would require the landowners/operators of eligible vineyard properties to:

- Seek coverage under the General WDRs by submitting a Notice of Intent (NOI) to comply with the permit to the Water Board
- Develop a Farm Water Quality Plan
- Implement and maintain BMPs and other improvement projects as specified in the Farm Water Quality Plan to meet the General WDR requirements
- Conduct vineyard property site inspections and compliance monitoring
- Submit an Annual Compliance Form to the Water Board

9. Setting and surrounding land uses:

The proposed General WDRs would regulate discharges from certain vineyard properties throughout the Napa River watershed in Napa County, and throughout the Sonoma Creek watershed in Sonoma County.

Napa River Watershed. The Napa River watershed is located in the California Coast Ranges north of San Pablo Bay, covering an area of about 425 square miles (Figure 1). The main stem of the Napa River flows approximately 55 miles in a southeasterly direction though the Napa Valley before discharging to San Pablo Bay. Numerous tributaries enter the main stem from the mountains that rise abruptly on both sides of the valley.

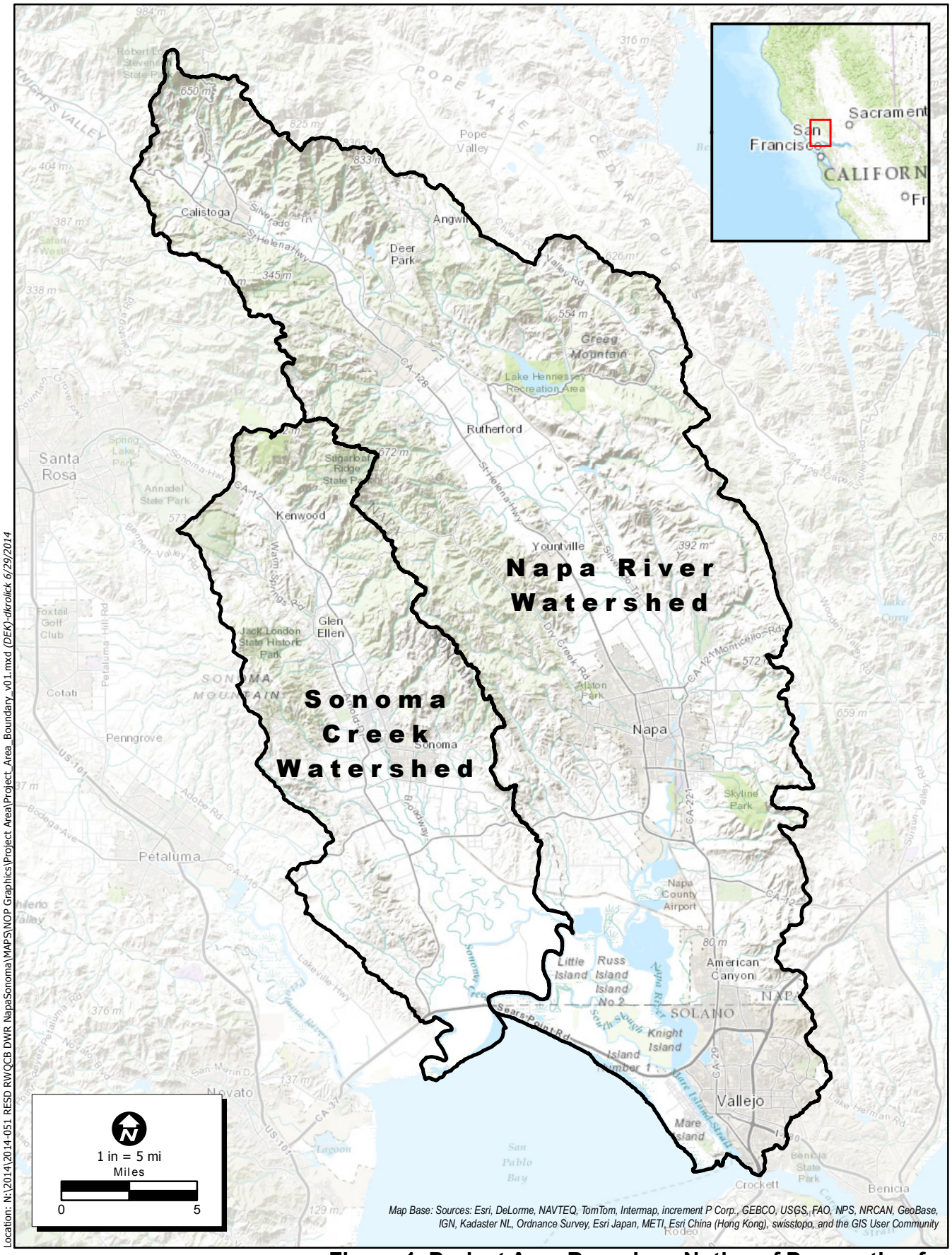
Major land cover types in the Napa River watershed are forest (approximately 35 percent), grassland/rangeland (23 percent), agriculture (19 percent), and developed land, including residential, industrial, or commercial uses (8 percent). Beneficial Uses, as defined by the Basin Plan include: agricultural supply; cold freshwater habitat; warm freshwater habitat; water contact recreation; non-contact water recreation; fish migration; municipal and domestic supply; preservation of rare and endangered species; fish spawning; warm freshwater habitat; and wildlife habitat. The Napa River watershed provides habitat for several aquatic species of concern, including steelhead trout and Chinook salmon.

Sonoma Creek Watershed. The Sonoma Creek watershed is located in the California Coast Ranges north of San Pablo Bay, covering an area of about 165 square miles (Figure 1). The mainstem of Sonoma Creek flows in a southeasterly direction from headwaters on Sugarloaf Ridge though the Sonoma Valley before discharging to San Pablo Bay. Numerous tributaries enter the main stem from the mountains that rise on both sides of the valley.

Major land cover types in the Sonoma Creek watershed are forest (approximately 30 percent), grassland/rangeland (20 percent), agriculture (30 percent), wetlands and sparsely vegetated-land (5 percent), and developed land, including residential, industrial, or commercial uses (15 percent). Beneficial Uses, as defined by the Basin Plan include: cold freshwater habitat; warm freshwater habitat; water contact recreation; noncontact water recreation; fish migration; preservation of rare and endangered species; fish spawning; warm freshwater habitat; and wildlife habitat. The Sonoma Creek watershed provides habitat for several aquatic special status species of concern, including steelhead trout and Chinook salmon.

10. Other public agencies whose approval is required:

No other public agency approvals are required for the proposed General WDRs.



Location: N:\2014\2014-051 RESD RWQCB DWR NapaSonoma\MAPS\NOP Graphics\Project Area\Project_Area_Boundary_v01.mxd *(DEK)-dkrolick 6/29/2014*

Figure 1. Project Area Boundary, Notice of Preparation for Environmental Impact Report, General WDRs for Vineyards in Napa River and Sonoma Creek Watersheds

2014-051 WRD for Napa River and Sonoma Creek

B. ***ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED***

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Less Than Significant With Mitigation" as indicated by the checklist on the following pages.

[ ] Aesthetics	[ ] Agriculture and Forest Resources	[X] Air Quality
[X] Biological Resources	[X] Cultural Resources	[ ] Geology/Soils
[X] Greenhouse Gas Emissions	[ ] Hazards/Hazardous Materials	[X] Hydrology/Water Quality
[ ] Land Use/Planning	[ ] Mineral Resources	[ ] Noise
[ ] Population/Housing	[ ] Public Services	[ ] Recreation
[ ] Transportation/Traffic	[ ] Utilities/Service Systems	[X] Mandatory Findings of Significance

C. ***LEAD AGENCY DETERMINATION***

On the basis of this initial evaluation:

[ ] I find that the proposed project COULD NOT have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

[ ] I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

[X] I find that the proposed project MAY have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

[ ] I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

[ ] I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an **earlier EIR or NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____

Signature Date

Bruce H. Wolfe

Executive Officer

D. EVALUATION OF ENVIRONMENTAL EFFECTS

The Environmental Checklist and discussion that follows is based on sample questions provided in the CEQA Guidelines (Appendix G) which focus on various individual concerns within 17 different broad environmental categories, such as air quality, cultural resources, land use, and traffic (and arranged in alphabetical order). The Guidelines also provide specific direction and guidance for preparing responses to the Environmental Checklist. Each question in the Checklist essentially requires a "yes" or "no" reply as to whether or not the project will have a potentially significant environmental impact of a certain type, and, following a Checklist table with all of the questions in each major environmental heading, citations, information and/or discussion that supports that determination. The Checklist table provides, in addition to a clear "yes" reply and a clear "no" reply, two possible "in-between" replies, including one that is equivalent to "yes, but with changes to the project that the Lead Agency has made to, no", and another "no" reply that requires a greater degree of discussion, supported by citations and analysis of existing conditions, threshold(s) of significance used and project effects than required for a simple "no" reply. Each possible answer to the questions in the Checklist, and the different types of discussion required, are discussed below:

Potentially Significant Impact. Checked if a discussion of the existing setting (including relevant regulations or policies pertaining to the subject) and project characteristics with regard to the environmental topic demonstrates, based on substantial evidence, supporting information, previously prepared and adopted environmental documents, and specific criteria or thresholds used to assess significance, that the project will have a potentially significant impact of the type described in the question.

Less Than Significant With Mitigation. Checked if the discussion of existing conditions and specific project characteristics, also adequately supported with citations of relevant research or documents, determine that the project clearly will or is likely to have particular physical impacts that will exceed the given threshold or criteria by which significance is determined, but that with the incorporation of clearly defined mitigation measures into the project such impacts will be avoided or reduced to less-than-significant levels.

Less Than Significant Impact. Checked if a more detailed discussion of existing conditions and specific project features, also citing relevant information, reports or studies, demonstrates that, while some effects may be discernible with regard to the individual environmental topic of the question, the effect would not exceed a threshold of significance which has been established by the Lead or a Responsible Agency. The discussion may note that due to the evidence that a given impact would not occur or would be less than significant, no mitigation measures are required.

No Impact. Checked if brief statements (one or two sentences) or cited reference materials (maps, reports or studies) clearly show that the type of impact could not be reasonably expected to occur due to the specific characteristics of the project or its location (e.g. the project falls outside the nearest fault rupture zone, or is several hundred feet from a 100-year flood zone, and relevant citations are provided). The referenced sources or information may also show that the impact simply does not apply to projects like the one involved. A response to the question may also be "No Impact" with a brief explanation that the basis of adequately supported project-specific factors or general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a basic screening of the specific project).

Impact Evaluation

This Initial Study considers the environmental impacts of physical changes to the environmental over existing conditions (i.e., baseline conditions) as described in the Project Description, above. Potential environmental impacts resulting from the proposed adoption of the General WDRs are discussed below and evaluated in the Initial Study checklist and responses. Long term, the goal of the proposed General WDRs is to achieve reductions in nonpoint source pollution, specifically fine sediment, to the Napa River and Sonoma Creek watersheds. Short term incremental physical changes to the environment may include:

- Increases in the implementation of non-point source pollution control BMPs
- Expansion of vegetated stream setbacks
- Permitting of discharges from future new vineyards approved by local land use authorities

Adoption of the General WDRs would result in the implementation of BMPs on existing vineyards, vineyard replants, and new vineyards. Although an estimated 25 percent of planted vineyards are already operating under BMPs that reduce pollutants in discharges from vineyards and roads (Table 6), some landowners/operators of vineyards that do not currently meet all of the proposed General WDRs requirements will need to take actions to reduce pollutant sources in order to obtain coverage under the General WDRs. Given that landowners/operators can choose which management measures are best suited given the physical condition of their property, a wide range of BMPs may therefore be applicable at each vineyard.

To date, some landowners/operators have completed farm planning and have implemented BMPs to a sufficient degree so as to prevent excessive soil loss or excessive storm runoff from their vineyard properties and otherwise comply with the General WDRs. In these cases, where work required by the General WDRs is essentially complete, no environmental impacts would result from the adoption of the General WDRs.

Where owners/operators are implementing some but not all of the required management actions (as identified in their Farm Water Quality Plan), remaining actions may involve minor grading or construction and could therefore result in less than significant impacts.

For vineyards with uncontrolled sediment and runoff sources for which no management actions have been undertaken to date, extensive water quality protection controls may be needed. Installation of such controls could involve substantial road rehabilitation or construction of detention basins, resulting in potentially significant environmental impacts.

Although the General WDRs would result in the Water Board permitting discharges from eligible new vineyards, the General WDRs would not grant approval for new vineyard land uses. It would only approve discharges from a property after local approval is granted for all aspects of new vineyard's construction. Current regulations for the development of new vineyards are more stringent than those for existing older vineyards and therefore, new vineyards are likely to require fewer new BMPs to abate pollutant sources. To be covered under the General WDRs, new vineyards would be required to meet all water quality requirements and be designed so that there are no increases in storm runoff rates over existing conditions. Therefore, the incremental water quality impact of additional discharges from these future facilities would be minimal.

Likely physical changes to the environment associated with possible General WDRs implementation actions are listed in Table 2 above. Categories of likely actions and their likely environmental impacts are discussed in the Initial Study checklist and responses and can be summarized as follows:

1. **Inspection and Routine Maintenance of Existing Facilities.** Inspection and routine maintenance of existing facilities (inlets, diversion structures, ditches, and small sediment basins) could result in collection and disposal of small amounts of sediment and debris. This is an existing practice that is likely to increase in frequency as a consequence of the proposed General WDRs. Disposal of small amounts of debris from inspection and routine maintenance at vineyard properties does not result in adverse impacts to the environment and is not evaluated further in the IS.
2. **Changes in the Use of Agricultural Chemicals.** The General WDRs are likely to result in modifications in the use of fertilizers and pesticides in a manner that prevents excessive amounts of these chemicals from entering streams. Possible actions to comply with this requirement may include improved timing of nutrient application, reduction in the amount of fertilizer applied, or changes in the type of fertilizer used.

   Vineyard landowners/operators may elect to use integrated pest management (IPM) practices as alternatives to the use of traditional pesticides and herbicides. IPM techniques may involve physical, biological, or mechanical methods that reduce the presence of pests. Examples include removing weeds by hand, introducing insects or host plants that provide pest management without the use of chemicals, or construction of perches or nesting boxes to encourage raptors that prey on rodents. Management actions would be identified and developed through the farm planning process and would include less-toxic pest control methods recommended by UC Cooperative Extension or similar guidance (UC Davis, NCCE). Reduction in the use of agricultural chemicals would result in beneficial impacts to water quality and are not further evaluated in the IS.
3. **Modification of Vineyard Floor Cover and Tillage Practices.** The General WDRs would require implementation of BMPs to protect soil from erosion, to promote onsite stormwater runoff dispersal, slowing, infiltration, or capture, and to prevent excessive rates of sediment delivery. Many landowners/operators will meet this requirement by limiting tillage and planting cover crops such as grasses, legumes, and native ground covers. These modifications would result in beneficial impacts to water quality and are not further evaluated in the IS.
4. **Construction of Small Structures.** Actions to comply with the General WDRs may include construction of small structures or facilities (sheds, pipes, energy dissipaters, trash racks, culverts, etc.). This type of construction could result in minor, temporary impacts during earth moving; however, these structures will typically be located in upland areas that have already been disturbed by vineyard cultivation. Impacts from dust, noise, and traffic are considered less than significant as discussed in the IS.
5. **Road Modification.** The General WDRs may result in actions to reduce sediment delivery from roads by reducing hydrological connections (direct connections such as culverts and stream crossings) between roads and streams. Techniques to achieve this may include resurfacing or regrading roads, and installing rolling dips or water bars. These actions may result in impacts from the operation of heavy equipment, earthmoving, and vegetation removal.

   Road repair could also generate minor amounts of dust, noise, and traffic during construction, which could result in less than significant impacts as discussed in the IS. Construction activities have the potential to generate air emissions and pollutants that will be evaluated in the EIR. The most common activities include earthmoving, grading, trenching and cut and fill operations. In cases where road repair occurs near streams, the construction could result in potentially significant impacts to biological resources if not properly planned, permitted and

executed. Road work that occurs near streams and that requires deep excavation (greater than six inches) could encounter archeological artifacts and could result in potentially significant impacts to cultural resources.

Road repair projects would be developed through the farm planning process and be planned and conducted in accordance with Water Quality and Stream Habitat Protection Manual for County Road Maintenance in Northwestern California Watersheds (Five Counties, 2002) approved by National Oceanic and Atmospheric Administration as protective of water quality and anadromous fish habitat.

6. **Repairs to Gullies and Landslides; Channel Erosion.** Activities to stabilize gullies, shallow landslides and channel banks may require operation of heavy equipment, earthmoving, and vegetation removal. Most of these repairs will occur on land that has already been disturbed by vineyard agricultural land uses. In cases where work occurs near streams, it could result in potentially significant impacts to biological resources if not properly planned, permitted and executed. The level of impact will depend on the scale of the project, the proximity of the project to water bodies, and specific methods used, in most cases unstable areas are expected to be small in size (i.e., small gullies, rills, eroded banks, and small shallow landslides).

   Minor, short-term impacts could result from earthmoving and from importing construction materials, such as large rocks and woody debris (logs). If repair of unstable areas requires construction in stream channels, these actions could result in impacts to wetlands and other sensitive habitats and mitigation measures may be required, as described below. Management actions will be developed and implemented through the farm planning process and will include appropriate gully stabilization and channel and culvert repair methods that follow current practice standards and guidance from local technical groups such as the Natural Resource Conservation Service, local Resource Conservation Districts, and the U.C. Cooperative Extension.

7. **Construction of Detention Basins and Engineered Drainage Facilities.** Since the Water Board cannot dictate the manner of compliance with its requirements, landowners/operators, through the farm planning process, will have the flexibility to select BMPs needed to meet General WDRs water quality requirements. One option for controlling stormwater runoff from vineyards is through the construction of stormwater detention or retention basins to slow the velocity and rate of peak stormwater flow originating from a vineyard property. Based on extensive experience by the resource conservation districts, Fish Friendly Farming, and other groups, existing vineyards can usually meet the proposed General WDRs water quality requirements for stormwater runoff and surface erosion without building large new detention basins. Detention basins that are likely to be built will typically be small and constructed on already disturbed soils.

   Occasionally, however, a new large detention basin may be proposed for construction. According to the Napa County Resource Conservation District (Steiner, 2012), detention basins may exceed 4,000 square feet in area and may be as deep as 6 feet. Construction may involve vegetation removal, grading, and alteration of hydrology that could result in temporary, less-than-significant construction-related dust, noise and traffic impacts. Deep excavation near or adjacent to water may encounter archeological artifacts, resulting in potentially significant impacts and the requirement for mitigation measures. As required in the Napa River Sediment TMDL, the construction of detention basins (or any compliance action) in this watershed on areas beyond the development footprint authorized by the local

land use authority would not be allowed in the following sensitive natural communities: redwood forest, Ponderosa Pine alliance, Tanbark Oak alliance, Oregon white oak woodland, mixed serpentine chaparral, and wet meadow grasses NFD super alliance.

Dischargers may seek to construct new engineered drainage facilities in order to reduce the potential for surface erosion, but such facilities must be constructed in a manner so as not to result in increased runoff leading to downstream increases in rates of bed or bank erosion in order to comply with the General WDRs runoff performance standard. Existing engineered drainage facilities that are problematic in terms of concentrating runoff would have to be corrected and/or retrofitted in order to meet the runoff performance standard. New vineyards approved by the local land use authority are subject to the General WDRs' requirement that there be no increases in storm runoff rates over existing conditions.

8. **Establishing Vegetated Buffers and Setbacks.** The creation of stream setbacks is not required by the General WDRs, but is voluntary. The General WDRs provides incentives to owners/operators of vineyards developed on a slope less or equal to 5 percent that border or contain streams to establish setbacks that promote water quality improvements. Setbacks allow stormwater to flow overland, slowing, spreading, and infiltrating runoff before entering receiving waters. Creation of stream setbacks provides a water quality and habitat function that is compatible with agricultural uses, while resulting in more riparian habitat and fishery benefits. Although the creation of stream setbacks could potentially result in removal of some grape vines, setbacks would not result in conversion of farmland to non-agricultural use. The decision to create desired setbacks within a vineyard parcel is entirely within individual landowner's discretion and not a requirement of the program. This action along with other program implementation measures may allow vineyard owners to be exempt from the requirement to apply for coverage under the proposed General WDRs.

Actions to comply with the proposed General WDRs would result in a multitude of environmental benefits, including reducing sediment inputs to creeks and streams, improving water quality, reducing erosive forces from stormwater runoff, improving channel stability, improving fish habitat, and enhancing riparian habitat.

In some cases, however, it is possible that the adoption of the WDRs could lead to potentially significant impacts that will be evaluated in the EIR and mitigated where required.

I. AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

Background

Vineyard properties in the Napa and Sonoma watersheds that would be subject to the proposed General WDRs are typically located in rural agricultural settings. These lands are visible from public roads and neighboring properties and may also be partially visible from public open space areas. Vineyards are generally relatively large, open, cultivated areas. Trees, or other shrubs or landscape plantings, may be present, particularly along property boundaries and along riparian corridors. Vineyard structures may include one or more residences, equipment sheds, water well pump structures, frost control facilities, and roads.

Several highways that are eligible for State Scenic Designation are located in Napa and Sonoma counties including all or portions of highways 1, 12, 29, 37, and 121. Of these only Highway 12 is officially designated as a California Scenic Highway by Caltrans. (http://www.dot.ca.gov/hq/LandArch/scenic/schwy.htm).

Discussion of Impacts

a) Have a substantial adverse effect on a scenic vista.

Less than Significant Impact. The Napa and Sonoma Creek watersheds are situated in a scenic area of northern California with expansive views of wineries, long rows of vineyards, large oak woodlands and annual grasslands that create a visual mosaic landscape. There are abundant scenic vistas at various vantage points in each watershed. Implementation of BMPs to comply with the General WDRs are expected to be small in scale (plantings of cover crop, minor road re-

grading or repair, installation of small-scale structures such as culvert-protection trash racks, and no large building construction would occur. On-the-ground changes that could result from compliance with the General WDRs would consist of minor alterations to vegetation and topography that are low in profile (i.e., located near the ground surface) and will therefore blend into the existing landscape.

Implementation of the General WDRs would require minor grading or regrading of existing roads that drain to the Napa River or Sonoma Creek which could require the temporary clearing of land followed by re-vegetation. Grading and road erosion control activities would be short-term and could result in minor impacts to scenic views in various viewshed locations in both watersheds. Exposed soils would be visible along with earth-moving equipment. However, exposed areas would be replanted to blend into the landscape. Within weeks or months following construction, it is expected that the replanted vegetation will become established and blend in with the surrounding landscape. Given that anticipated actions are expected to be small in scale (from a regional context), low in profile, are short-term, and affected areas would be fully restored to blend into the existing environment, impacts to scenic vistas would be less than significant.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

Less than Significant Impact. Both Napa and Sonoma watersheds have abundant scenic resources with the flat valley topography, established vineyards and winery buildings, wildlands and Mayacamas Mountains as a backdrop**.** Highway 12 is the only designated State Scenic Highway in the project area. While some unique trees or rock outcroppings may be present on some vineyard properties, the types of BMPs that would be implemented to comply with the General WDRs would not affect these features. The anticipated compliance actions for the General WDRs are intended to preserve and enhance riparian areas, including large trees, promote vegetated buffers, and to prevent erosion, both of soil and rock outcrops.

Vineyard management actions to comply with the General WDRs may affect some parcels of land adjacent to Highway 12, a designated State scenic highway; however, these actions would typically be small in scale. Such compliance actions would not require the construction of facilities that could substantially damage scenic resources within this scenic corridor. Therefore, because the anticipated actions are small in scale (from a regional perspective), and no construction of major facilities are expected in the scenic corridor, the potential scenic resource impacts of the proposed project are considered less than significant.

c) Substantially degrade the existing visual character or quality of the site and its surroundings.

Less than Significant Impact. As described above, the General WDRs would be implemented on vineyard properties located in predominantly rural areas. The visual character of the area is generally open, typified by cultivated rows of vines, intervening cover crops, and surrounding natural hillside vegetation. Implementation of vineyard and road BMPs could result in small scale, temporary alteration of ground cover vegetation or topography that would not be highly visible and would not degrade or change the overall visual character of vineyard sites or the surrounding regional viewshed areas. Therefore, the impacts to scenic resources would be less than significant.

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

No Impact. The project would not require those complying with the General WDRs to install any lighting or structures that could create light or glare and impair day or night time views. Therefore, it would have no impact to light and glare.

II. AGRICULTURE AND FOREST RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the Calif. Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the CalFIRE regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the Calif. Air Resources Board. Would the project*:*				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?			X	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined by Public Resources Code section 4526?				X
d) Resulting in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use			X	

Background

Napa and Sonoma counties are premier wine-making regions of the world, with most agricultural land dedicated to vineyards and winery operations. Data from the county planning departments,

Agricultural Commissioner, and the RCDs indicate that greater than 60,000 acres of vineyards are actively producing in the Napa River and Sonoma Creek watersheds. The General WDRs would apply, based on the eligibility and exemption criteria, to an estimated 89 percent of the existing vineyards in the Napa River and the Sonoma Creek watersheds.

The General WDRs would require implementation of vineyard BMPs that will result in reductions in erosion, sedimentation, and the discharge of pollutants from vineyard properties. These in turn will lead to an improvement of water quality, stream function, and riparian health. Implementation of the proposed General WDRs is consistent with Napa County's conservation goals and policies (Napa County General Plan) and Sonoma County's Policy and Goals for Reduction of Soil Erosion (Sonoma County General Plan) that encourage and support agriculture through implementation of programs that increase the sustainability of resources, conserve energy, and protect water and soil (refer to Section X, Land Use and Planning). The General WDRs are also consistent with many conservation policies and regulations of cities located within the two watersheds.

Discussion of Impacts

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

Less than significant. Many vineyard properties in the Napa and Sonoma Valleys are mapped by California Department of Conservation (www.conservation.ca.gov) as Unique Farmland; however, implementation of vineyard BMPs would not result in the conversion of Prime Farmland, Unique Farmland or Farmland of Statewide Importance to non-agricultural use for the following reasons:

- Individual landowners/operators may choose to implement BMPs (including creating setbacks or buffers of vineyards from riparian areas or constructing on-site drainage facilities such as detention basins) that could remove or relocate portions of some vineyard blocks. Removal of grapevines from production would not result in conversion to non-agricultural uses since all foreseeable uses on vineyard property under the General WDRs would be compatible with, and ancillary to, existing vineyard agricultural uses.
- It is possible for landowners/operators of vineyards to comply with the General WDRs without changing the total area of vineyard (e.g. implementation of BMPs that do not impact existing vineyard row layouts or adjusting vine and row spacing to allow for setbacks).
- Voluntary creation of stream setbacks at existing vineyards in flat areas adjacent to streams may cause loss of grape production areas which the landowner must take into account in deciding this compliance option. However, the establishment of a stream setback on a portion of a vineyard is not considered to be a significant impact given that this action is compatible with and ancillary to maintaining existing agriculture uses. In addition, establishment of setbacks is voluntary and not a required compliance action.

The General WDRs would not result in the conversion of existing vineyards for non-agricultural uses such as residential, commercial or industrial land uses. Therefore, impacts are considered less than significant.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract.

No Impact. Implementation of vineyard BMPs in the General WDRs would not affect existing agricultural zoning or any aspect of a Williamson Act contract because the actions are relatively

small from a watershed perspective and do not materially change the primary agricultural activity on the parcels that benefit from Williamson Act contracts.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined by Public Resources Code section 4526)?

No Impact. Implementation of vineyard BMPs would not conflict with existing zoning for, or cause rezoning of forest land (as Defined in Public Resources Code section 12220(g)) or timberland (as defined by Public Resources Code section 4526).

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. Implementation of vineyard BMPs resulting from this WDR would not result in the loss of forest land or conversion of forest land to non-forest use because the proposed project is focused entirely on existing vineyards or new vineyards that have received approval for development through local regulatory channels. Conversions of forest to vineyards would trigger local county land use regulations and California Department of Forestry and Fire Protection timber harvest regulations under the Forest Practice Act and associated planning and permitting processes by these agencies. The requirements of the proposed project by itself would not cause conversion of forest lands. The General WDR also exclude from coverage discharges associated with forest to vineyard conversions. Therefore, no impacts are anticipated.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

Less than Significant Impact. As indicated in response to Item II a, above, the General WDRs would not result in conversion of farmland to non-agricultural use, because all foreseeable vineyard BMPs (drainage facilities, stream buffers, or roads) would be compatible with, and ancillary to, existing agricultural practices and uses. No non-agricultural land uses would result from compliance with the General WDRs. Landowners/operators with vineyards in flat areas adjacent to streams may choose to remove select grape vines or reposition a road, to establish stream setbacks or to enhance riparian habitat. However, the resultant setbacks would be voluntary and consistent with existing county policies and regulations.

Efforts to comply with the General WDRs may result in planting of native vegetation around vineyards to create vegetated buffer strips and to increase the size and ecological function of riparian zones. Increases in riparian vegetation would have beneficial impacts to water quality by filtering pollutants, providing shade, and reducing algae blooms. Native vegetation in the riparian corridor should be selected using plant lists provided by the RCDs, so that host plants for vineyard pests (such as Pierces disease) are not planted. Therefore, planting native riparian vegetation near vineyards would not adversely affect and could help agricultural production.

III. AIR QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	X			
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	X			
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?			X	

Background

Napa and Sonoma counties are located in the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). These counties are situated in the northern part of the greater San Francisco Bay area and are bound on the west by Marin County, to the south by San Pablo Bay, and to the east by the Central Valley (Figure 1). The prevailing wind directions at the Napa County Airport are generally from the south to southwest and average wind speeds are about nine miles per hour. Average high temperatures are usually in the 50s in the winter and the 70s in the summer. The warmest months are August and September. Climate conditions in Sonoma Valley are similar to those in the adjacent Napa Valley.

The Bay Area is currently designated as a nonattainment area for State and national ozone standards and as a nonattainment area for the State particulate matter (particles with diameter 10 micrometers or less, referred to as PM_{10} and particles with diameter 2.5 micrometers or less, referred to as $PM_{2.5}$) standards. As required by federal and State air quality laws, the 2001 Bay

Area Ozone Attainment Plan and the 2000 Bay Area Clean Air Plan have been prepared to address ozone nonattainment issues. In addition, the BAAQMD, in cooperation with the Metropolitan Transportation Commission and the Association of Bay Area Governments, prepared the Bay Area 2005 Ozone Strategy. This report describes the Bay Area's strategy for compliance with State one-hour ozone standard planning requirements and how to improve air quality in the region and reduce transport of air emissions to neighboring air basins. No PM_{10} plan has been prepared nor is one currently required under State air quality planning law.

The BAAQMD monitors priority air pollutants at stations throughout the Bay Area. The Napa monitoring station (the only BAAQMD station in the area affected by the General WDRs) is the most representative of air quality conditions in the North Bay where vineyard BMPs would be implemented under the General WDRs. Criteria air pollutants routinely measured at the Napa Station include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and particulate matter (PM_{10}). Smaller particle size, $PM_{25,}$ is not monitored at the Napa Station. Combustion exhaust from the operation of vehicles, such as cars, trucks, and farm equipment may contribute to concentrations of these pollutants. Earthmoving for construction and road work can generate dust that is a source of particulate matter.

The 2007 through 2011 Napa air monitoring station data shows that carbon monoxide, nitrogen dioxide, and ozone concentrations are well below State and federal standards. The concentrations of PM_{10} varies throughout the year and is typically below the State standard of 50 micrograms per cubic meter (two days of exceedances in 5 years) and are well below the federal standard of 150 micrograms per cubic meter. Other air quality monitoring stations in the North Bay (San Rafael and Santa Rosa) also report concentrations of all criteria pollutants well below the standards.

Actions to comply with the General WDRs may generate particulates and other air pollutants from construction equipment exhaust and earth disturbance.

Discussion of Impacts

a-e. An analysis of potential air quality impacts due to the proposed project will be provided in the EIR.

IV. BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	X			
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	X			
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	X			
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Background

The Napa River and Sonoma Creek watersheds support a wide diversity of plant and animal species, including a number of special status species and sensitive natural communities. These communities include mixed evergreen forests, oak woodlands and savanna, native and non-native grasslands, chaparral, and riparian scrub and woodland. The watersheds provide habitat for several threatened aquatic species including steelhead trout (Oncorhynchus mykiss) and Chinook salmon (Oncorhynchus tshawytscha) that are protected under the Federal Endangered Species Act.

The proposed General WDRs would implement the sediment TMDLs, which were developed specifically to benefit biological resources in the watersheds, including fish, wildlife, and rare and endangered species, which have been adversely affected by sediment. Actions to comply with the General WDRs would primarily occur on land that is currently in vineyard production, or on existing roads in open space areas on vineyard properties. These areas have already been disturbed by land cultivation and by road construction. Some BMPs could, however, involve work in streams and riparian or wetland areas.

Discussion of Impacts

a-f. An analysis of potential biological impacts from the proposed project will be provided in the EIR.

V. CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	X			
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	X			
d) Disturb any human remains, including those interred outside of formal cemeteries?	X			

Background

Archaeological Resources. Before the European settlement, the Sonoma and Napa valleys were inhabited primarily by Native Americans of the Pomo, Wappo, Lake Miwok, and Patwin tribal groups. Artifacts indicate that the earliest dates of human occupation in Napa Valley date back approximately 5,000 years. This territory consisted of valleys and foothills with plentiful resources and a temperate climate. Permanent occupation sites were most frequently located at the confluence of streams, in the valleys, and at the bases of hills. As with most of the hunting-gathering groups of California, the 50- to 150-person tribelet represented the basic social and political unit. The acorn was the primary plant food, along with a variety of roots, bulbs, grasses, and other edible greens; and deer, elk, and antelope were the primary big game. Glass Mountain, located on the east side of the valley near Calistoga, was a regionally important obsidian source of high quality for Native Americans and was an important trading commodity (Watershed Information Center and Conservancy of Napa County, 2005).

With the advent of the mission system in the latter half of the 1700s, the numbers of Native Americans in the Napa and Sonoma regions decreased rapidly, as did all Native American populations throughout the San Francisco Bay Area and California.

Historic Resources. After European settlement the area's agricultural industry became cattle, grown to support the needs of the Sonoma Mission. Historic and archaeological remnants of these counties' pasts include sacred sites, burial grounds, cemeteries, ceremonial sites, barns, farmsteads, vineyards and walls, among others.

Historical resources, as distinguished from archaeological resources, include antiques, buildings, structures, and sites generally of the past two centuries, marking the successive eras of Russian, Mexican, and North American occupation of Sonoma and Napa counties, and are present in both watersheds.

CEQA §15064.5 considers historic resources significant if they are eligible for, or are listed in, the California Register of Historical Resources. Historic resources must meet one of the following criteria to be eligible:

- It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
- It is associated with the lives of persons important to local, California, or national history;
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
- It has yielded, or has the potential to yield, information important to the pre-history or history of the local area, California, or the nation.

Discussion of Impacts

a-d An analysis of potential impacts to cultural resources from the proposed project will be provided in the EIR.

VI. GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				X
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?				X
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

Background

Napa River Watershed: The Napa River watershed consists of Mesozoic and Cenozoic volcanic rocks with younger sedimentary rocks in the valley floor area. The watershed is located at the southern end of the northern California Coast Range province, an active zone of tectonic deformation and activity that is associated with the San Andreas Fault system. The San Andreas Fault is located about 35 miles (56 km) southwest of the watershed. The watershed is more locally bound by two major faults: the north-west striking Green Valley Fault in the east (about 7 miles [11 km] to the northeast of the watershed boundary), and northwest striking Healdsburg-Rodgers Fault in the west (about 15 miles to the southwest of the watershed boundary).

Sonoma Creek Watershed: The Sonoma Creek watershed, located in the Sonoma Valley, is also part of the Coast Range Physiographic province. The west side of the valley consists of young sedimentary rocks and the east side is predominantly older volcanic rocks of the Mayacama Mountains. Similar to the Napa Valley, the Sonoma Creek watershed lies in an active zone of tectonic activity that is associated with the San Andreas Fault system.

Several notable faults are aligned roughly southeast – northwest influencing the Sonoma Creek.

Discussion of Impacts

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

ii) Strong seismic shaking?

iii) Seismic-related ground failure?

iv) Landslides?

No impact. The proposed General WDRs would not involve the construction of habitable structures; therefore, it would not result in any human safety risks related to fault rupture, seismic ground-shaking, ground failure, or landslides.

b) Result in substantial soil erosion or the loss of topsoil?

Less than significant. The purpose of the General WDRs is to reduce soil erosion. Anticipated compliance actions consist of erosion management strategies such as increasing ground cover, stabilizing eroding areas, and repairing failing roadways or erosional features to eliminate sediment sources. Installation of anticipated compliance actions such as the construction of small structures or facilities (pipes, inlets, energy dissipaters, trash racks, drainage facilities, storm runoff diversion structures, etc.) could result in small scale earth moving from construction vehicles and equipment used during installation. Although these types of actions are routinely used in existing vineyard operations, the proposed General WDRs would likely result in increases in the installation and

maintenance of the above-mentioned structures. Such activities (e.g., promoting infiltration of rainfall on vineyards, the repair of erosion features, minor road rehabilitation or decommissioning, etc.) would not result in substantial soil erosion or the loss of topsoil because these actions are anticipated to be limited in size and scope and earth disturbance would be temporary.

Some of these projects may also be subject to the requirements of the Napa or Sonoma County grading ordinances, which would reduce potential erosion impacts from earthmoving. Therefore, potential soil erosion or loss of topsoil from the proposed project is considered less than significant because actions are expected to be temporary, limited in size and scope, and must comply with existing country grading ordinance requirements.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less than significant. The General WDRs is intended to reduce soil erosion. Geologic units or soils that are known to be unstable under various conditions in both watersheds have been identified by the Water Board as part of developing the proposed General WDRs. A map indicating where unstable conditions may exist on a watershed scale will be provided as part of the EIR. Site-specific areas of instability will be identified as part of the Farm Water Quality Plan preparation and will be avoided (to promote natural recovery and revegetation) or stabilized through selected BMPs and during planning for new vineyards or replanting on unstable geologic units or highly erosive soil areas. Because the General WDRs requires actions to stabilize existing sources of sediment, some grading and remedial actions, such as installation of retaining walls, stream bank repairs, and/or gully repair, could occur to stabilize these unstable areas. Outgrowth stabilization actions could include improvements to roads and creek crossings, and other projects located on unstable terrain. These projects would be designed to increase stability, both on-site and off-site, and to reduce erosion and sedimentation. Grading would be designed to minimize any potential for landslides, lateral spreading, subsidence, liquefaction, or collapse.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

No impact. Landowner/operator compliance with the General WDRs would not involve construction of buildings (as defined in the Uniform Building Code) or any habitable structures. Minor grading and construction could occur in areas with expansive soils but this activity would not create a substantial risk to life or property.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No impact. Compliance actions associated with the General WDRs would not require the installation of wastewater disposal systems; therefore, affected soils need not be capable of supporting the use of septic tanks or alternative wastewater disposal systems.

VII. GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
GREENHOUSE GAS EMISSIONS – Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	X			
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X

Background

In 2006, California passed the California Global Warming Solutions Act of 2006, which requires the California Air Resources Board (CARB) to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide greenhouse gas (GHG) emissions are reduced to 1990 levels by 2020 (representing an approximate 25 percent reduction in emissions).

State law requires local agencies to analyze the environmental impact of GHG emissions under CEQA. The Natural Resources Agency adopted the CEQA Guidelines Amendments in 2009. The BAAQMD adopted CEQA thresholds for GHG emissions in the Bay Area in 2010. Sonoma County currently has an adopted a *Climate Action Plan* and Napa County is currently developing a *Climate Action Plan* in collaboration with the BAAQMD (Napa County, 2011). These plans address projects that would result in long-term, operation increases in GHG emissions.

Greenhouse gas emissions may be generated during short-term construction activities that would occur during installation of certain BMPs to address erosion and stormwater runoff control.

Discussion of Impacts

a-b. An analysis of potential impacts to greenhouse gas emissions from the proposed project will be provided in the EIR.

VIII. HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
HAZARDS AND HAZARDOUS MATERIALS -- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death				

involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

Background

Routine operations at vineyard facilities may involve the storage and use of a number of potentially hazardous materials such as agricultural chemicals and petroleum products. Vineyards typically contain facilities to store and mix agricultural chemicals such as pesticides, fungicides, herbicides, and fertilizers. These chemicals are a potential source of pollution to surface and groundwater if not properly stored, applied, and managed. The production, use, disposal and management of registered agricultural chemicals used at vineyards and associated farm operations are regulated by the Napa and Sonoma County Agricultural Commissioners and California Department of Food and Agriculture and the EPA. Hazardous chemicals and materials used at existing vineyard or as part of vineyard operations are covered by multiple state and federal laws including Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The federal Insecticide, Fungicide and Rodenticide Act (FIFRA) is the primary federal regulation overseeing the production and use of beneficial poisons. Hazardous materials business plans (HMBP) are enforced by local county fire and emergency response divisions. California Department of Toxic Substances Control (DTSC) regulates hazardous waste sites that are not within federal jurisdiction.

The proposed General WDRs do not require additional environmental protective measures dealing with hazardous wastes beyond those already being required and enforced under current state or federal laws.

Discussion of Impacts

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact: Construction associated with implementing vineyard BMPs and road erosion control (e.g., promoting infiltration on vineyards, repair of erosion features, road rehabilitation or retirement, etc.) would not involve the use or transport of hazardous materials, aside from those fuels (e.g., gasoline, diesel) and lubricants typically used for heavy construction equipment. Fuels and lubricant quantities used to implement selected vineyard BMPs would be small in quantity and their application would be limited to the operation of construction-related equipment and vehicles. These types of hazardous materials are currently used at most vineyards to power farm equipment such as trucks and tractors, and any impacts from their use during construction would be less than significant.

Compliance with the General WDRs would not affect the transportation or potential release of hazardous materials, nor create a significant public safety or environmental hazard beyond any hazards currently in existence. Actions to implement the General WDRs would not interfere with adopted local or State emergency response plans or emergency evacuation plans and would not affect the potential for wild-land fires.

The proposed General WDRs would require that pesticides be used in accordance with all applicable laws, regulations, and labeling requirements and allows for landowners/operators to meet

this requirement through a pesticide certificate issued by the County Agricultural Commission. The County Agricultural Commissioner is authorized to regulate and enforce federal and state laws regulating the storage and use of pesticides.

The proposed General WDRs would not involve hazardous emissions or acutely hazardous materials of waste within one quarter mile of existing or proposed schools in Napa or Sonoma Valley.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

No Impact. Refer to response to Item VIII a), above.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. Refer to response to Item VIII a), above.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. Refer to response to Item VIII a), above.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

e) & f) No Impact. There are two airports located in the Napa and Sonoma Valleys. The Sonoma Valley/Schellville Airport is located at 23980 Arnold Drive, about 4 mile south of town of Sonoma. The Napa County Airport is located about 3 miles south of downtown Napa. Although the Napa Valley Airport is adjacent to a business park, both airports are also adjacent to, or nearby to vineyards.

Regardless of vineyard proximity to these airports, the General WDRs would not require implementation actions on vineyards that could result in increasing existing safety hazards affecting residents residing within the vicinity of these airports.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

g) and h)
No Impact. Refer to response to Item VIII a), above.

IX. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements?				X
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	X			
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
f) Otherwise substantially degrade water quality?				X
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect				X

flood flows?				
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?				X

Background

Napa River. The Napa River watershed encompasses about 425 square miles (Figure 1). The Napa River and its tributaries drain the western portion of Napa County discharging into San Pablo Bay. The northeastern part of the county drains into Lake Berryessa, by way of Putah Creek and its tributaries.

Flow volume in the Napa River varies markedly between dry and wet years. The long-term average discharge of the Napa River is approximately 66,000 acre feet (af); however, the minimum recorded annual discharge (about 5,000 af) occurred in 1931, and the maximum recorded annual discharge (in excess of 200,000 af) occurred in 1986 (U.S. Geological Survey 2001).

The Napa Valley is a depositional basin filled to varying depths with unconsolidated and semi-consolidated alluvial material consisting of Mesozoic marine sediments, and metamorphic and igneous rocks, derived from nearby mountains. The largest volumes of groundwater reside the alluvium, with the Mesozoic rocks acting as confining units that generally restrict the flow of groundwater. Groundwater in the alluvium occurs primarily under unconfined aquifer conditions, while groundwater in the tuffaceous volcanic rocks occurs under both confined and unconfined aquifer conditions.

Groundwater in the Napa Valley is not a significant municipal use source of water. Less than one percent of the total volume of groundwater extracted from the Napa Valley is used for municipal use, chiefly by the city of Calistoga. About 70 percent of all groundwater is used for irrigation purposes (mainly for vineyards), and 30 percent for rural domestic use.

Sonoma Creek. The Sonoma Creek watershed encompasses about 165 square miles (Figure 1). The watershed is commonly divided into three subbasins: Fowler Creek and the smaller creeks west of the City of Sonoma; Nathanson Creek and the creeks east of Schellville; and the mainstem of Sonoma Creek. The headwaters of the western tributaries lie in the Sonoma Mountains and flow into Fowler Creek, which eventually drains to Sonoma Creek near Sonoma. The eastern tributaries drain the hills to the north and east of Sonoma and join Schell Creek just south of Sonoma.

Sonoma Creek flows into San Pablo Bay via a number of circular sloughs and channels that have been highly modified over the last 150 years by dredging, levees, and realignment. Flows from Sonoma Creek also vary markedly between dry and wet years. The long-term average annual discharge of Sonoma Creek is approximately 43,000 af; however, the minimum recorded annual discharge (about 3,000 af) occurred in 1939, and the maximum recorded annual discharge (in excess of 115,000 af) occurred in 1956 (U.S. Geological Survey 2001).

Sonoma County's groundwater plays an extremely important role in our natural environment, communities, industry sectors and agriculture. In 2002, there were approximately 40,000 wells in Sonoma County, with 42 percent of the population supported at least in part by groundwater. Nearly all of the county's population relies on groundwater as either a primary or backup source of water supply.

The amount of groundwater in an area varies by the recharge from rainfall, the surface runoff in streams and drainage channels, and the local underground geology. The alluvial soils, sand and gravel found in valleys generally can hold large amounts of water and thus constitute the largest groundwater aquifers in the county. Although sandstone and some other sedimentary rocks can absorb some water, many upland areas of the county are composed of harder rock formations where groundwater is less continuous and is found only in cracks and fractures.

Existing and potential beneficial uses identified in the Basin Plan for the Napa River and its tributaries, Sonoma Creek and its tributaries, and San Pablo Bay (the receiving water for Napa River and Sonoma Creek) are listed in Table 6.

Table 6. Beneficial Uses for the Napa River, Sonoma Creek and their tributaries

Beneficial Use	San Pablo Bay	Napa River	Sonoma Creek
Agricultural Supply (AGR)		X	
Cold Freshwater Habitat (COLD)		X	X
Ocean, Commercial, and Sport Fishing (COMM)	X		
Estuarine Habitat (EST)	X		
Industrial Service Supply (IND)	X		
Fish Migration (MIGR)	X	X	X
Municipal and Domestic Supply (MUN)		X	
Navigation (NAV)	X	X	
Preservation of Rare and Endangered Species (RARE)	X	X	X
Water Contact Recreation (REC-1)	X	X	X
Non-contact Recreation (REC-2)	X	X	X
Shellfish Harvesting (SHELL)	X		
Fish Spawning (SPWN)	X	X	X
Warm Freshwater Habitat (WARM)		X	X
Wildlife Habitat (WILD)	X	X	X

Discussion of Impacts

a-g. An analysis of potential impacts to hydrology and water quality from the proposed project will be provided in the EIR.

X. LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Background

The General WDRs would apply to vineyard properties in the Napa and Sonoma valleys that meet the established eligibility criteria (Table 1). The zoning ordinances for these counties stipulate requirements for agricultural land uses, including vineyards. The general plan policies relevant to vineyards and water quality for Napa and Sonoma counties are summarized in Tables 7 and 8, respectively.

Napa County. Napa County has for many years been committed to the conservation of sensitive resources and has been at the forefront of both protecting agricultural land and providing for the conservation of natural resources including surface and ground water, soils, fisheries, wildlife, important plant species, and habitats. Napa County's Conservation Regulations, approved by the Board of Supervisors in 1991 established procedures for review of projects that might have an effect on water quality or other natural resources issues. In 2008, the Napa County Board of Supervisor's adopted an updated General Plan, which includes several Goals and Policies aimed at protecting and enhancing the natural resources within the County (Napa County 2008). The County's Conservation Regulations, discretionary Erosion Control Plan process, and applicable General Plan goals and policies make up the regulatory framework, which collectively regulate erosion and peak flow from new vineyard development on slopes greater than 5 percent.

Napa County Conservation Regulations require stream setbacks for development adjacent to streams designated in the Napa County General Plan. County designated streams require 35 to 150 foot setbacks depending on slope, which is measured from the top of bank to the outer edge of the area to be graded. Discretionary projects, including new vineyard development on slopes greater than 5 percent, are required to meet performance standards designed to ensure that peak

runoff from post-development projects is not greater than pre-development conditions for 2, 10, 50, and 100-year storm events.

Sonoma County. Though Napa County was the first to require erosion control for new vineyards, Sonoma County has its own version and regulates vineyards in accordance with the 2000 Grading, Drainage, & Vineyard & Orchard Site Development Ordinance, also known as "VESCO." Growers planting new vineyards, orchards or replanting existing vineyards or orchards are required to meet standards within the Sonoma County Code and comply with requirements including BMPs, as established in the Agricultural Commissioner's BMPs guidelines.

The County General Plan requires stream setbacks on all new developments. The setback is determined by slope and soil type. Stream setbacks in areas with gentle slope and more stable soils are 25 feet while steeper slopes with erodible soils require a minimum 50 foot setback. Additional regulations, adopted by the Board of Supervisors in 2012, require that BMPs be implemented for projects that propose to remove more than one half acre of trees on slopes greater than 10 percent or 15 percent, based on soil type. These updated BMPs require slope stability analysis as well as identification of soil types prone to slides. The use of predictive models is also required to show that the development will not increase erosion or sediment delivery from the pre-existing site conditions.

Discussion of Impacts

a) Physically divide an established community?

No impact. The General WDRs is not a land use approval regulation and new vineyards will not be approved by this regulation. The General WDRs requires that where vineyards exist or are proposed, the owners/operators of these existing or proposed vineyards implement BMPs to reduce non-point source pollutants and to control erosion, runoff and sedimentation. These BMPs will not include the construction of large permanent structures or other features that could divide a community, nor would they physically divide an established community.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The General WDRs would not affect any land use plan, policy, or regulation and would therefore not conflict with any zoning ordinances. On the contrary, the general plans for Napa County and Sonoma County include a number of policies relevant to the Water Board that articulate support for sediment TMDL compliance.

These policies are summarized in Tables 7 and 8 below, along with an assessment of the General WDRs' compliance with general plans. As the tables show, the General WDRs would comply with, and in some cases, augment general plan goals and policies for both Sonoma and Napa counties.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No impact. Actions to comply with the General WDRs would not conflict with any Habitat Conservation Plans or natural community plans in Sonoma or Napa counties.

Table 7. Napa County Water-Related General Plan Policies

POLICY	PROJECT COMPLIANCE
Policy CON-47: The County shall comply with applicable Water Quality Control/Basin Plans as amended through the Total Maximum Daily Load (TMDL) process to improve water quality. In its efforts to comply, the following may be undertaken: a) Monitoring water quality in impaired waterbodies identified by the Regional Water Quality Control Boards (RWQCBs). b) Addressing failing septic systems in the vicinity of Murphy, Browns Valley, and Salvador Creeks and throughout the County, should they be found to exist. c) Retrofitting County-maintained roads to reduce sediment caused by runoff. d) Supporting voluntary habitat restoration and bank stabilization efforts, with particular focus on the main stem and main tributaries of the Napa River. e) Ensuring continued effectiveness of the National Pollution Discharge Elimination System (NPDES) program and stormwater pollution prevention. f) Ensuring continued effectiveness of the County's Conservation Regulations related to vineyard projects and other earth-disturbing activities. g) Addressing effects related to past and current mining, grazing, and other activities to the extent feasible. h) Amending the County's Conservation Regulations or County Code to address excessive sediment delivered to waterways as required by state law, particularly as it relates to private roads and rural unimproved (i.e., dirt or gravel) roads. i) Developing outreach and education programs to inform land owners and managers about improving surface water quality (e.g., rural and private road maintenance, soil and vegetation retention, construction site management, runoff control, etc.) and cooperating with other governmental and non-governmental agencies seeking to establish waiver or certification programs.	One main purpose of the General WDRs is to implement the Napa River sediment TMDL and therefore the General WDRs would be consistent with this policy.

Policy CON-49: The County shall develop and implement a water quality monitoring program (or programs) to track the effectiveness of temporary and permanent Best Management Practices (BMPs) to control soil erosion and sedimentation within watershed areas and employ corrective actions for identified water quality issues (in violation of Basin Plans and/or associated TMDLs) identified during monitoring.	The General WDRs would support the Water Board's efforts to implement BMPs to control soil erosion and sedimentation. Furthermore, the General WDRs will require annual reporting to the Water Board on the BMPs deployed and their effectiveness. Actions to implement the requirements of the General WDRs are therefore consistent with this policy.
Policy CON-50: The County will take appropriate steps to protect surface water quality and quantity, including the following: a) Preserve riparian areas through adequate buffering and pursue retention, maintenance, and enhancement of existing native vegetation along all intermittent and perennial streams through existing stream setbacks in the County's Conservation Regulations b) Encourage flood control reduction projects to give full consideration to scenic, fish, wildlife, and other environmental benefits when computing costs of alternative methods of flood control. c) The County shall require discretionary projects to meet performance standards designed to ensure peak runoff in 2-, 10-, 50-, and 100-year events following development is not greater than predevelopment conditions. d) Maintain minimum lot sizes of not less than 160 acres in Agriculture, Watershed, and Open Space (AWOS) designated areas to reflect desirable densities based on access, slope, productive capabilities for agriculture and forestry, sewage disposal, water supply, wildlife habitat, and other environmental considerations. e) In conformance with National Pollution Discharge Elimination System (NPDES) requirements, prohibit grading and excavation unless it can be demonstrated that such activities will not result in significant soil erosion, silting of lower slopes or waterways, slide damage, flooding problems, or damage to wildlife and fishery habitats. a) Not Applicable b) Not Applicable	The General WDRs would support the Water Board's efforts to reduce erosion from vineyard properties, including their associated road networks, and to incentivize the creation of stream setbacks. These actions are therefore consistent with this policy.

h) Require replanting and/or restoration of riparian vegetation to the extent feasible as part of any discretionary permit or erosion control plan approved by the County, understanding that replanting or restoration that enhances the potential for Pierce's Disease or other vectors is considered infeasible.	

Table 8. Sonoma County Water-related General Plan Policies

POLICY	PROJECT COMPLIANCE
Policy WR-1a: Coordinate with the RWQCB, public water suppliers, Cities, Resource Conservation Districts (RCDs), watershed groups, stakeholders and other interested parties to develop and implement public education programs and water quality enhancement activities and provide technical assistance to minimize stormwater pollution, support RWQCB requirements and manage related County programs. Where appropriate, utilize watershed planning approaches to resolve water quality problems.	The General WDRs efforts would result in reduced erosion from vineyard properties, including their associated road networks, and are therefore consistent with this policy.
Policy WR-1e: Assist in the development of Total Maximum Daily Loads (TMDLs) for the impaired water bodies and pollutants of concern identified by the RWQCBs to achieve compliance with adopted TMDLs. Work with the RWQCB to develop and implement measures consistent with the adopted TMDLs.	One main purpose of the General WDRs is to implement the Sonoma Creek sediment TMDL and therefore the General WDRs would be consistent with this policy.
Policy WR-1g: Minimize deposition and discharge of sediment, debris, waste and other pollutants into surface runoff, drainage systems, surface water bodies, and groundwater.	The General WDRs would reduce sediment discharge to surface water bodies and would be consistent with this policy.
Policy WR-1h: Require grading plans to include measures to avoid soil erosion and consider upgrading requirements as needed to avoid sedimentation in stormwater to the maximum extent practicable.	The General WDRs would support the Water Board's efforts to implement BMPs to control soil erosion and sedimentation from vineyard properties and is therefore consistent with this policy.
Policy WR-1j: Support educational technical assistance programs for agricultural activities and dissemination of BMPs for erosion and sediment control, which include on-site retention of stormwater, maintaining natural sheetflow and drainage patterns, and avoiding concentrated runoff, particularly on slopes greater than 35 percent.	The General WDRs encourage property owners to work with technical assistance third-party programs, including but not limited to RCDs, the UC Cooperative Extension, and Fish Friendly Farming to develop Farm Water Quality Plans and to help implement the requirements of the General WDRs.

	The General WDRs requires the sediment control and minimization of erosive, concentrated stormwater flows through the implementation of site-specific BMPs that might include on-site stormwater retention, stormwater dispersion, etc. These actions are consistent with this policy.

XI. MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Background

The California Surface Mining and Reclamation Act of 1975 (SMARA) required identification of mineral resources in California. The California Department of Conservation is the state agency responsible for implementing and enforcing SMARA regulations and preparing SMARA maps of significant mineral resources in each county. SMARA maps exist for both counties and identify and classify mineral resources as to their relative value for extraction (http://www.quake.ca.gov/gmaps/WH/smaramaps.htm).

The Napa County General Plan Land Use Map contains a 'Mineral Resource' overlay zone that identifies mineral resources in the county and outlines resource management policies (Napa County 2008). Similarly, Sonoma County has adopted the Aggregate Resources Management (ARM) Plan, a plan for obtaining future supplies of aggregate material (Sonoma County 2010). The ARM plan serves as the state-mandated mineral management policy for the county and is intended to accomplish the mandated purposes.

Discussion of Impacts

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No impact: Compliance with the General WDRs may include minor earthmoving during grading for road rehabilitation, culvert repair and replacement and construction of small structures. These projects would be relatively small in scale and would not result in the loss of availability of a known mineral resource or physically preclude future mining activities from occurring.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. Refer to response to Item XI a), above.

XII. NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
NOISE -- Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Background

Vineyard properties meeting the eligibility criteria for coverage under the General WDRs are usually located in rural areas that are typically large open landscapes where main noise sources are from seasonal agricultural activities and nearby public roads and highways. Small airports are located in each watershed and they may also be an intermittent noise source (refer to response to Item VIII (e), above).

Furthermore, vineyard properties covered under this General WDRs would typically consist of larger land parcels that are mostly located away from schools, hospitals, and other sensitive land uses. Residential uses in agriculturally zoning districts are very low density, consisting typically of only a few residences on each of the larger vineyard parcels.

Adoption of the General WDRs may result in an increase in implementation of projects that could involve minor grading and construction (e.g., road rehabilitation project and construction of detention basins) that may result in local, temporary, construction-related noise emissions above ambient noise levels. Increased noise levels would be limited to the immediate area of grading operation and construction site and would not expose sensitive receptors to harmful levels of noise, likely to be located substantial distances from eligible vineyard properties. BMPs to comply with the General WDRs would not result in any on-going new noise sources. Sonoma and Napa County General Plans have noise ordinances or noise elements that address acceptable community noise levels (Napa County 2009, Sonoma County 2010). The Napa County Health and Safety Code has established limits for exterior noise; these limits vary depending on land use and range from 45 decibels for rural residential areas to 75 decibels for industrial areas. The Sonoma County Noise Element describes thresholds for exterior noise during the daytime and nighttime. These standards allow for a maximum exterior noise level of 70 decibels, with the average over a one hour time period not exceeding 50 decibels during the daytime. The nighttime allowable noise ranges from 45 to 65 decibels.

Discussion of Impacts

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

No Impact. The General WDRs could involve earthmoving and construction activities by vineyard owners. Construction would generally be small in scale, short-term in duration, and could temporarily generate noise above ambient levels. Construction timing, equipment types, and noise-generating operations at construction sites for projects to comply with the General WDRs would have to be consistent with Napa and Sonoma Counties' own noise standards, as discussed in response to item XII (b), below.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

No impact. Actions to comply with the General WDRs could involve minor earthmoving and construction. Construction would generally be small in scale and would not involve deep excavation, pile driving or other construction methods that may generate excessive groundborne vibration or groundborne noise. The Napa County Health and Safety Code and the Sonoma County Noise Element establish limits for exterior noise, as described under the Background section above.

Actions proposed to comply with the General WDRs are not expected to be of the size or scope that would generate excessive groundborne vibration or groundborne noise. Furthermore, construction projects undertaken to comply with the General WDRs will need to comply with their respective county standards to minimize construction-related noise.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

No Impact. As described above, actions to comply with the General WDRs would not include new, permanent noise generating sources and would not cause any permanent increases in ambient noise levels. Any noise would be short-term in nature.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant Impact. Actions to comply with the General WDRs could involve minor earthmoving and construction that would generate increased noise above ambient levels. Although construction activities would generally be small in scale, they could temporarily generate noise. Noise generating activities would, however, have to comply with their respective county standards to keep noise levels to less than significant levels. Construction activities would occur on rural land generally located away from schools, hospitals, and other sensitive receptors. Therefore, construction activities that may result from compliance with the General WDRs would not result in substantial noise, and the impacts would be less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No impact. The General WDRs would not cause any permanent increase in ambient noise levels, including aircraft noise. Therefore, it would not expose people living within an area subject to an airport land use plan to excessive noise and thus, no impact would occur.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No impact. The General WDRs would not cause any permanent increase in ambient noise levels, including aircraft noise. Therefore, it would not expose people living in the vicinity of a private airstrip to excessive noise and thus, no impact would occur.

XIII. POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Background

Implementation of the General WDRs would occur in areas where the dominant land use is agriculture. Vineyard properties typically contain structures including one or more residences, equipment sheds, wells, roads and road crossings.

Discussion of Impacts

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. Actions to implement the General WDRs would not affect the population of the Sonoma Creek and Napa River Watersheds. It will not induce growth through such means as constructing new housing or businesses, or by extending roads or infrastructure. Implementation of the General WDRs would not displace any existing housing or any people that would need replacement housing.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No impact. Refer to response to Item XIII a), above.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No impact. Refer to response to Item XIII a), above.

XIV. PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
PUBLIC SERVICES-- Would the project:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?				X
Police protection?				X
Schools?				X
Parks?				X
Other public facilities				X

Background

This section characterizes existing and proposed public services in Napa River and Sonoma Creek watersheds and evaluates changes that may result from actions to comply with the General WDRs. Public services include services that address community needs and are usually provided by local or regional government, although they may be provided through private contracts. Public services include fire and emergency response, police protection, airports, schools, libraries, and parks.

Napa County: The County of Napa contracts with the California Department of Forestry (CalFIRE) for fire protection services as the Napa County Fire Department. CalFIRE provides administrative support and coordination with six full-time paid stations and nine volunteer fire companies operating under a County Fire Plan. Napa County contracts with the cities of St. Helena and Calistoga, and Schell-Vista Fire Protection District for the provision of fire protection services to specified unincorporated areas adjoining these agencies. The Napa County Fire Department provides fire and emergency service dispatching for the American Canyon Fire Protection District, City of St. Helena, Calistoga and Napa State Hospital Fire Departments. The Town of Yountville contracts with the County to provide fire services to those jurisdictions.

The Napa Sheriff's Office maintains several substations in various locations throughout Napa County including the City of Napa, Yountville, St. Helena, Lake Berryessa and Angwin. Within the County limits are several incorporated cities and towns. These include American Canyon, Napa, Yountville, St. Helena and Calistoga. The Sheriff's Office provides police services for American Canyon and Yountville.

Sonoma County. Land located in unincorporated Sonoma County is under the jurisdiction of the Sonoma County Department of Emergency Services, Fire Services Division, and County Service Area #40. Fifteen volunteer fire companies comprise CSA #40. In addition, 17 Fire Protection Districts are operated by the Fire Division of the Department of Emergency Services. Additional fire protection in the unincorporated areas of the county is provided by the California Department of Forestry and Fire Protection. Emergency Medical Service (EMS) systems in Sonoma County is a blend of First Responder agencies, ground and air ambulance providers, EMS – Fire Dispatch Center, and acute care receiving facilities. Unincorporated Sonoma County receives police protection and coroner and correctional services from the Sonoma County Sheriff's Department. The Sheriff maintains 24-hour patrol from five substations and a main office. Peace officers work in patrol, administration, the helicopter unit, boating, civil bureau, and investigations. The City of Sonoma provides police services in their jurisdiction.

Discussion of Impacts

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

i) Fire protection
ii) Police protection
iii) Schools
iv) Parks
v) Other public services

No Impact. The General WDRs would not result in adverse impacts on fire protection or police services or on schools and parks since this General WDRs is not growth inducing nor do they involve construction of substantial new government facilities or the need for physically-altered government facilities. While the General WDRs includes provisions that may result in construction activity on roads or elimination of some unused roads on vineyard properties, the General WDRs requires work on private roads only and would not affect roads used for public safety or fire protection service vehicles. Actions to comply with road-specific water quality requirements in the General WDRs, such as road resurfacing and the installation of rolling dips and water bars, would not limit emergency access to private property. Therefore, the General WDRs would not result in changes to roadway networks on private property that would affect service ratios, response times, or other performance objectives for any public services.

XV. RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
RECREATION – -- Would the project:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

Background

The California Department of Parks and Recreation, Sonoma County Agricultural Preservation and Open Space District, Napa County Regional Park and Open Space District, municipalities, and other private parties own and operate numerous park and recreational facilities in the counties. These facilities provide a variety of outdoor recreational, educational, and sporting opportunities for local residents, Bay Area residents, and visitors for around the world. The open space surrounding these parks and the many vineyards are an integral part of the rural agricultural and open space experience.

Discussion of Impacts

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. Actions to comply with the General WDRs would affect only vineyard facilities and private roads and would have no effect on existing neighborhood and regional parks or other recreational facilities. Therefore, no impacts would occur.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. Refer to response to Item XV a), above.

XVI. TRANSPORTATION/TRAFFIC

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
TRANSPORTATION/TRAFFIC -- Would the project				
a) Exceed the capacity of the existing circulation system, based on applicable measures of effectiveness (as designated in a general plan policy, ordinance, etc.), taking into account all relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				X
b) Conflict with an applicable congestion management program, including but not limited to, level of service standards and travel demand measures and other standards established by the county congestion management agency for designated roads or highways?				X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

Background

Highway 29 is the main highway through the Napa River Watershed. The Silverado Trail, which runs along the east side of the valley, is used mostly by locals to avoid tourist traffic. Two-lane highways lead into Napa County from both the east (Highway 12) and west (Highway 12/121). Highway 12 is the main highway through the Sonoma Creek Watershed. In addition, Sonoma County's highway network includes Highways 116 and 121. Highways 12/121 and 37 connect Sonoma and Napa Counties. Outside of urban areas, most roadways are two-lane rural roads.

General WDRs' water quality requirements could result in modifications to vineyard property roadway networks that are owned and under the control of private landowners/operators and would not affect public roads or maintenance easements.

Discussion of Impacts

a) Exceed the capacity of the existing circulation system, based on applicable measures of effectiveness (as designated in a general plan policy, ordinance, etc.), taking into account all relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

No Impact. The General WDRs may result in an increase in truck traffic. Where BMPs require construction to erect small structures, modify roadway networks, or install detention ponds, minor short-term additional vehicular traffic could increase on individual vineyard parcels. Construction may require importing construction materials such as gravel, pipe, rock, or cement and would require the use of heavy equipment and trucks to move soil, logs, or other materials needed for road repair and/or stream crossings. Minor construction-related truck traffic is likely to be limited in number and duration, be located in rural settings, and would likely not occur during peak traffic periods. Any increase in traffic would be minor, temporary and would be limited to local areas in the vicinity of individual projects and would not create substantial traffic increases on existing street systems.

b) Conflict with an applicable congestion management program, including but not limited to, level of service standards and travel demand measures and other standards established by the county congestion management agency for designated roads or highways?

No Impact. See response to Item XVI a), above. Levels of service would be unchanged.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No impact. The General WDRs would not result in increased air travel or otherwise affect air travel.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No impact. Although private vineyard roads may require erosion control treatment, compliance actions taken under the General WDRs do not require the construction of new roads, generate new hazards, or result in roads that are incompatible with vineyard operational uses. No road design or construction hazards would occur.

e) Result in inadequate emergency access?

No Impact. The General WDRs would result in grading and erosion control actions on unpaved roads that are not typically used for emergency access. Therefore, the General WDRs would not result in inadequate emergency access and no impacts would occur. Refer also to response to item XIV (a), Public Services, above.

f) Result in inadequate parking capacity?

No Impact. Because the General WDRs would not increase population or provide employment, it would not affect parking demand or supply, and no impacts would occur.

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

No impact. Because the General WDRs would not generate ongoing motor vehicle trips, it would not conflict with adopted policies, plans, or programs supporting alternative transportation.

XVII. UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
UTILITIES AND SERVICE SYSTEMS - Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X

Background

Napa and Sonoma counties are fully served by public services including fire and police protection, schools, parks, wastewater treatment plants, and other public facilities (refer to discussion in Section XIV above). In Napa County, water supply is provided by a series of

municipal dams and groundwater wells. In Sonoma County, the Sonoma County Water Agency provides surface and groundwater derived mainly from the Russian River watershed.

Discussion of Impacts

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact. The General WDRs do not include changes to wastewater treatment facilities and no impacts would occur.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. Refer to response to Item XVII a), above.

c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. The General WDRs would not include construction of new or expanded municipal stormwater drainage facilities or other drainage system affecting any non-agricultural activities and no impacts would occur. The changes to vineyard and road drainage systems that would result from the General WDRs would reduce erosion, sedimentation, peak runoff, and flooding, all beneficial environmental effects.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

No Impact. Because the General WDRs would not increase population or provide employment, it would not require an ongoing water supply. It would also not require ongoing wastewater treatment services and no impacts would occur.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. See response to Item XVII d), above.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

No Impact. The General WDRs would not substantially affect municipal solid waste generation or landfill capacities and no impacts would occur.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. See response to Item XVII f), above.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
MANDATORY FINDINGS OF SIGNIFICANCE --				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	X			
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?			X	

Background

The General WDRs permit discharges from existing and future vineyards that meet the eligibility criteria and adhere to all of the General WDRs requirements. The General WDR's compliance actions may have a physical impact on the environment. Other actions under the existing water quality and resource conservation regulations that may, together with the General WDRs, effect the environment, are listed below.

Napa County Conservation Regulations

Napa County General Plan Stream Setback Policies

Sonoma County Vineyard Erosion and Sediment Control Ordinance (VESCO)

Sonoma County Stream Setback Ordinance

Sonoma County Tree Removal Ordinance

Sonoma County General Plan Water Resources Element Policies

General Plan policies and other vineyard regulation in the cities of Calistoga, Napa, Sonoma, St. Helena, and Yountville.

The adoption of the General WDRs would not result in the relaxation of water quality standards and would reduce non-point source pollutant discharge from existing vineyards and roads (existing conditions). New vineyards covered by the General WDRs would not be allowed to increase erosion and runoff.

Discussion of Impacts

a-c A complete analysis of mandatory findings of significance, including cumulative impacts of the proposed project, will be provided in the EIR.

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