CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION
ORDER NO. R1-2024-0056
GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
COMMERCIAL VINEYARDS IN THE
NORTH COAST REGION

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

Order No. R1-2024-0056 General Waste Discharge Requirements for Commercial Vineyards in the North Coast Region

Table of Contents

Attachment A: Monitoring and Reporting Program for Individual Enrollees

Table of Contents

Attachment B: Monitoring and Reporting Program for Enrollees in a Coalition

Table of Contents

Attachments C-F

Table of Contents

NORTH COAST
REGIONAL WATER QUALITY CONTROL BOARD
ORDER NO. R1-2024-0056
GENERAL WASTE DISCHARGE REQUIREMENTS FOR COMMERCIAL VINEYARDS IN THE NORTH COAST REGION

I. Findings

The California Regional Water Quality Control Board, North Coast Region finds:

A. Background and Purpose

1) The purpose of this General Waste Discharge Requirements (WDRs) for Commercial Vineyards, Order R1-2024-0056 (hereinafter Order or General Order), is to provide a water quality regulatory structure to minimize discharges of waste and to prevent adverse impacts to water resources resulting from the commercial cultivation of winegrapes (hereinafter, commercial vineyards or vineyards) on private lands within the North Coast Regional Water Quality Control Board jurisdiction (Regional Water Board). As described in the Water Quality Control Plan for the North Coast Region (Basin Plan) the region is comprised of approximately 19,400 square miles of northwestern California (see Figure 1) stretching from the California-Oregon state line to the southern boundary of the watershed of the Estero de San Antonio and Stemple Creek in Marin and Sonoma counties, and encompasses all basins draining into the Pacific Ocean, including the Lower Klamath Lake and Lost River basins.

2) There are approximately 65,000 acres of land currently planted to commercial vineyards in the North Coast Region (as shown in Figure 1) with the potential to discharge wastes to surface waters and groundwater and affect other related controllable water quality factors such as the loss of riparian shade. More than 98 percent of land planted to vineyards in the North Coast Region is located within the Big-Navarro-Garcia, Gualala-Salmon, and Russian River Hydrologic Unit Code (HUC) HUC-8 watersheds.

3) Cultivation of winegrapes involves soil disturbance and use of agricultural chemicals both of which can generate discharges of waste (e.g., sediment, nutrients, pesticides, herbicides, fumigants, pathogens). If not properly managed, these discharges can degrade water quality, cause or contribute to pollution and nuisance conditions, and adversely affect beneficial uses of waters of the state. These effects can occur through the loss of riparian shade (a controllable factor[1]) and discharges from Agricultural Drainage Structures, percolation, tile drain water, stormwater runoff flowing from agricultural lands, and runoff resulting from frost control or operational spills.

4) The North Coast Region is home to numerous threatened and endangered species that are sensitive to excessive sediment, increased stream temperature, and loss of suitable habitat. The migration, spawning, reproduction, and early development

of cold-water fish, such as Coho salmon (*Oncorhynchus kisutch*) and Chinook salmon (*O. tshawytscha)* and California steelhead trout (*O. mykiss*), are impacted in the North Coast Region due to excessive sediment, elevated stream temperatures, and other conditions. Beneficial uses of waterbodies within the North Coast viticultural region include cold, freshwater habitat, migration of aquatic specifics, wildlife habitat, and spawning, reproduction, and early development of fish. Figure 2 shows the winter steelhead and coho salmon distribution ranges in the North Coast viticultural region.

5) The State Water Resources Control Board (State Water Board) and Regional Water Quality Control Boards (Regional Water Boards) are the principal state agencies (collectively the Water Boards) with primary responsibility for the coordination and control of water quality for the health, safety, and welfare of the people of the state pursuant to the Porter-Cologne Water Quality Control Act (Porter-Cologne Act, codified in Water Code Division 7). The legislature, in the Porter-Cologne Act, directed the state, through the Water Boards, to exercise its full power and jurisdiction to protect the quality of the waters in the state from degradation and to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible, and considering precipitation, topography, population, recreation, agriculture, industry, and economic development (Wat. Code §13000).

6) Numerous water bodies within the Russian and Navarro River watersheds are listed as impaired for various pollutants including sediment, temperature, nutrients, and indicator bacteria pursuant to United States Clean Water Act section 303(d). The United States Environmental Protection Agency (USEPA) has approved Total Maximum Daily Loads (TMDLs) to address many of these impairments in water bodies throughout the North Coast Region. Approximately 61 percent of the North Coast Region drains to sediment impaired rivers and streams that are listed on the Clean Water Act section 303(d) list (303 (d) list).

7) The Navarro River was added to the 303(d) list for sedimentation/siltation in 1994 citing agriculture as one of many sources of sediment. A TMDL was approved by the U.S. EPA in December 2000 which identified vineyards as approximately two percent of the watershed area and estimated a seven percent contribution to the anthropogenic sediment load. Vineyards as a potential source of sediment can be locally significant in sub-watersheds where vineyard density is high. The TMDL assigned vineyards a watershed wide 80 percent load reduction in sediment.

8) The Russian River was added to the 303(d) list for sedimentation/siltation in 1998 citing agriculture as one of many sources of sediment. A TMDL has not been approved by the U.S. EPA. Sediment impacts in Russian River tributaries prompted listing the entire Russian River watershed for sediment impairment. Vineyards occupy approximately five percent of the watershed, although vineyard density exceeds 75 percent in smaller sub-watersheds.

9) This Order is consistent with the TMDL Implementation Policy Statement for Sediment Impaired Receiving Waters in the North Coast Region[2] by requiring Enrollees to inventory sediment discharge sites on commercial vineyards, implement sediment and erosion control management practices, monitor management practice effectiveness, and implement adaptive management as a response to monitoring.

10) In 2008, the Regional Water Board adopted the Regional Water Board Staff Work Plan To Control Excess Sediment In Sediment-Impaired Watershed (Sediment Work Plan). The Sediment Work Plan was developed by staff to fulfill the Regional Water Board's direction under the Total Maximum Daily Load (TMDL) Implementation Policy Statement for Sediment Impaired Receiving Waters in the North Coast Region (Resolution No. R1-2004-0087). The Sediment Work Plan describes the actions and tasks staff are currently taking or intend to take over the next ten years, as resources allow, to control human-caused excess sediment in the sediment-impaired water bodies of the North Coast Region. The Work Plan is a staff-level planning document that will help prioritize work associated with excess sediment control.

11) The Regional Water Board has not previously adopted general waste discharge requirements for non-point source discharges from commercial vineyards in the North Coast Region. Over the past 25 years, the Regional Water Board has issued Cleanup and Abatement Orders and Administrative Civil Liability Orders related to erosion and sediment discharges from vineyard and agricultural road developments. Certain aspects of new vineyard planting and replants are regulated through Sonoma County VESCO program which is discussed below. Implementation of Management Practices to minimize or prevent erosion and discharges of sediment in addition to protection of riparian areas occur as a result. In addition to the VESCO program, voluntary programs have been implemented at a large scale to provide another mechanism for implementation of erosion and sediment control Management Practices.

12) The Sonoma County Vineyard and Orchard Erosion and Sediment Control Ordinance (VESCO) was adopted in 2000 and amended several times since. VESCO applies to all new vineyard development, vineyard replanting, and agricultural grading and drainage occurring in the unincorporated area of Sonoma County (Sonoma County Code, Chapter 36). New vineyard planting and replanting require a ministerial local permit prior to commencing work, including preparatory land clearing, vegetation removal, or other ground disturbance. VESCO establishes setbacks requirements for streams, wetlands, areas of slope instability, and ridgetops. VESCO prohibits new vineyards on slopes greater than 50 percent. VESCO includes standards for the proper conduct of new vineyard development, vineyard, and agricultural grading and drainage. All new vineyard development, replanting, and agricultural grading and drainage must comply with best management practices adopted by the Sonoma County Agricultural Commissioner. No analog to VESCO is currently in place in Mendocino County.

13) Voluntary programs to control erosion and sediment discharges from vineyards in the North Coast Region have been implemented at a large scale under the leadership of the Gold Ridge, Sonoma, and Mendocino County Resource Conservation Districts, the USDA Natural Resources Conservation Service, the California Land Stewardship Institute, the Sonoma County Winegrowers, and third-party sustainability certifiers such as California Sustainable Winegrowing Alliance, Sustainability-in-Practice, and LODI Rules. While all voluntary programs operate distinctly, these programs broadly include the submission of farm planning documents, implementation of Management Practices to control discharge of sediment and other pollutants from vineyards, and on-farm audits to confirm Management Practices are being implemented. Over 80 percent of land planted to vineyards in the North Coast Region participate in one of these voluntary programs.

14) Both the Russian River and the Navarro River watersheds are included on the Clean Water Act 303(d) list for impairments associated with excessive sediment and high temperatures. TMDLs addressing temperature impairments for the Navarro River watershed were established by the U.S. Environmental Protection Agency (USEPA) in December 2000. The USEPA TMDL documents can be found at https://www.epa.gov/tmdl/impaired-waters-and-tmdls-pacific-southwest-region-9.

15) This Order is consistent with the Regional Water Board's Policy for the Implementation of the Water Quality Objective for Temperature (Temperature Implementation Policy[3]) by requiring Enrollees to allow natural establishment of native riparian vegetation and to protect and maintain those natural riparian conditions, including shade. As discussed in the Temperature Implementation Policy, the removal of vegetation that provides shade to a waterbody is a controllable water quality factor. Riparian shade-related temperature TMDL load allocations are based on the concept of "site-specific potential effective shade," which means the shade equivalent to that provided by topography and potential vegetation conditions at a site. Site specific shade controls that are effective at correcting temperature impairments also operate to provide other water quality protections such as bank stability and filtering of sediment and other waste discharges.

B. Public Participation

1) From July 20, 2022, to March 15, 2023, the Regional Water Board convened a Technical Advisory Group (TAG) to advise on conceptual options and preliminary draft regulatory language. The TAG was comprised of 34 stakeholders representing industry, environmental interests, technical service providers, partnering agencies and community organizations. The TAG provided feedback on regulatory concepts through distributed surveys and in monthly Focus Group meetings. Survey and Focus Group meeting topics included farm evaluations, sediment and erosion control requirements, streamside area requirements, Coalition requirements, and the Monitoring and Reporting Program.

2) On August 8, 2022, the Regional Water Board published a Notice of Preparation and an Initial Study to begin soliciting input related to environmental review for the California Environmental Quality Act (CEQA), in preparation for developing a draft Environmental Impact Report (EIR). A 30-day public comment period was held for the Notice of Preparation and Initial Study. In September 2022, Regional Water Board staff held a series of public CEQA scoping meetings in person and virtually. Input received during the public comment period and public scoping meetings has been considered in the development of the draft EIR.

3) On June 30, 2023, the Regional Water Board published the Draft Order and Draft EIR and began a 45-day public comment period. The Regional Water Board received public comments requesting an extension and adjusted the comment period to 60 days.

4) In August 2023, Regional Water Board staff conducted a public workshop, which included presentations of the Draft Order and Draft EIR, time for oral public comments, and discussion among Board Members. The public workshop was conducted virtually and in-person.

5) From August 2023 to October 2024, Regional Water Board staff conducted public outreach in response to public comments received on the Draft Order and Draft EIR. Regional Water Board staff went on a series of vineyard tours with vineyard owners, industry representatives, and environmental representatives. A total of 43 separate vineyard sites were visited between August 2023 and June 2024. In addition to vineyard tours, staff conducted over 25 outreach meetings with interested persons representing environmental, industry, and racial equity interests. On May 28, 2024, Regional Water Board staff reconvened the TAG to discuss prospective revisions to the Draft Order. A public meeting was conducted on June 6, 2024 to review prospective revisions ahead of public release.

6) In July 2024, the Regional Water Board received 8 comment letters from interested persons who were concerned that meaningful outreach to Black, Indigenous, and People of Color (BIPOC) communities had not occurred during development of the Draft Vineyard Order. Regional Water Board staff examined outreach to date, including TAG member representation of environmental justice and community-focused perspectives, and concluded that additional outreach was warranted. In August 2024, staff produced outreach materials in Spanish and released information on the Draft Vineyard Order to media outlets including three Spanish-language newspapers and two radio stations in Sonoma and Mendocino Counties. In September 2024, staff distributed outreach materials throughout Sonoma and Mendocino Counties including at farmworker housing, community centers, libraries, post offices, and retail spaces. Staff also met with leaders in BIPOC communities and attended three outreach events targeted at Spanish speakers.

Assembly Bill 2108

7) Assembly Bill 2108 (Statutes of 2022, Chapter 347) requires State and Regional Boards to address issues of environmental justice and social equity as early as possible in permit and policy planning processes. AB 2108 specifies that Regional Boards engage in equitable, culturally relevant community outreach to meaningfully involve disadvantaged and tribal communities that may be disproportionately impacted by proposed discharges of waste and ensure that outreach and engagement shall continue throughout the review and permitting processes. (Wat. Code, § 189.7, subd. (a).) AB 2108 further requires the Water Boards when, among other actions, adopting general waste discharge requirements to make findings on anticipated water quality impacts in disadvantaged or tribal communities as a result of a permitted activity or facility, any environmental justice concerns within the Water Boards' authority that are raised regarding those water quality impacts, and available measures within the Boards' authority to address those water quality impacts. (Wat. Code, § 13149.2.)

8) The Regional Water Board publicly noticed the Order and provided opportunities for public comment. Public notice was provided to interested persons and public agencies in the North Coast Region. The Regional Water Board conducted outreach in potentially affected disadvantaged and tribal communities[4]. During outreach to tribal communities, three tribes who were not on the AB52 list responded to an invitation for consultation. These three tribes indicated that the project is not within their tribal area and did not wish to pursue consultation. The Regional Water Board included two community groups (North Bay Jobs with Justice and Russian River Confluence) on the TAG and solicited input during the development of the Order. During summer 2024, staff conducted outreach in Spanish language and farmworker communities. This outreach include distribution and postings of printed material, presentations to community groups, radio interviews, and press releases in Spanish.

9) The Regional Water Board has satisfied the outreach requirements set forth in Water Code section 189.7 by conducting outreach in affected disadvantaged and tribal communities.

10) Pursuant to Water Code section 13149.2, the Regional Water Board reviewed readily available information and information raised to the Board by interested persons concerning anticipated water quality impacts in disadvantaged or tribal communities resulting from adoption of this Order. The Board also considered environmental justice concerns within the Board's authority and raised by interested persons regarding those impacts.

11) The Regional Water Board anticipates that the discharges regulated by this Order will not result in disproportionate impacts that are within the scope of the Board's authority to tribal or disadvantaged communities.

12) Compliance with this Order and all mitigation measures identified in the accompanying EIR are expected to address impacts associated with the

management practices in this Order. The mitigation and monitoring required by the Order are not expected to disproportionately impact disadvantaged or tribal communities and mitigation measures are expected to mitigate any impacts to disadvantaged or tribal communities.

Assembly Bill 52

13) Assembly Bill 52 (Statutes of 2014, Chapter 532), which went into effect on July 1, 2015, requires that lead agencies under CEQA consult with California Native American tribes that have requested in writing to be notified and that are traditionally and culturally affiliated with the geographic area of a proposed project, prior to the development of a CEQA document. Under the same bill, Public Resources Code section 21084.2 specifies that a project with an effect that may cause a substantial adverse change in the significance of a Tribal Cultural Resource is a project that may have a significant effect on the environment.

14) In June 2022, Regional Water Board staff contacted all Tribes that had requested notification of this project under AB 52, as well as Tribes that had not requested AB 52 notification but could be affected by the Order to solicit consultation if desired.

15) Of the 22 AB 52 Tribes contacted by the Regional Water Board, seven separate tribes responded to the notice. One tribe responded with an update to their contact information. Two tribes indicated that the project is outside their tribal area and did not want to undergo formal consultation. One tribe asked for information on the consultation process but did not further pursue consultation. Two tribes asked for further information and maps on the project area. After being supplied with additional project information, these tribes decided they did not wish to undergo formal consultation. One tribe responded that the information should be forwarded to another tribe, who responded that the project was outside of their tribal area and they did not wish to pursue consultation.

C. Scope of Order

1) This Order regulates (1) discharges of waste from commercial vineyards producing a marketable crop; and (2) discharges of waste from Appurtenant Agricultural Roads.

2) Commercial vineyards located outside the Big-Navarro-Garcia, Gualala-Salmon, and Russian River Hydrologic Unit Code (HUC) HUC-8 watersheds (North Coast viticultural region) shall comply with Section II of this Order but are not required to submit enrollment documents or conduct monitoring and reporting unless directed by the Executive Officer. As of 2019, commercial vineyards outside the aforementioned HUC-8 watersheds comprise about 1.5 percent of the land planted to commercial vineyards in the North Coast Region (approximately 975 acres).

3) Commercial vineyards that constitute less than five planted acres of an individual

or entity's combined owned holdings in the North Coast viticultural region at the time of Order adoption, shall comply with the requirements and prohibitions of this Order (Section II of the Order) but are not required to submit enrollment documents or conduct monitoring and reporting unless directed by the Executive Officer.

4) For the purposes of this Order, the term 'vineyard' is limited to commercial winegrape vineyards.

5) For the purposes of this Order, a commercial vineyard is land planted in winegrapes including vineyard avenues and Appurtenant Agricultural Roads/structures with one or more of the following characteristics: (1) The landowner or operator holds a current Operator Identification Number/Permit Number for pesticide use reporting; (2) The crop and/or its product is sold, including but not limited to: (a) an industry cooperative, (b) harvest crew/company, or (c) a direct marketing location, such as Certified Farmers Markets; or (3) the federal Department of Treasury Internal Revenue Service form 1040 Schedule F Profit or Loss from Farming is used to file federal taxes.

6) Discharges from commercial vineyards regulated by this Order include discharges to surface water and groundwater, through mechanisms such as Agricultural Drainage Structures, percolation, tile drain water, stormwater runoff flowing from agricultural lands, and runoff resulting from frost control or operational spills. These discharges can contain wastes that could affect the quality of waters of the state and impair beneficial uses. This Order also regulates the removal or degradation of riparian vegetation associated with commercial vineyards resulting in the loss or degradation of instream beneficial uses.

7) This Order does not limit Regional Water Board authority to inspect, and/or evaluate regulatory status, water quality impacts, or regulatory requirements of commercial vineyard activities. If the Regional Water Board determines that due to site-specific conditions a vineyard is not eligible for coverage under this General Order, or enrollment will not be protective of water quality, the Regional Water Board may issue site-specific WDRs.

8) This Order applies to landowners and operators of commercial vineyards on or from which there could be dischargers of waste or activities that could affect the quality of any surface water or groundwater or result in the impairment of beneficial uses. Either the owner or operator may enroll a commercial vineyard parcel under this Order. The owners or operators that enroll the respective commercial vineyard parcels are considered Enrollees under this Order and are responsible for complying with the conditions of this Order.

9) The Enrollee is required to provide written notice to the non-Enrollee property owner or operator (if applicable) that the parcel has been enrolled under the Order.

10) The Regional Water Board will hold both landowners and operators of commercial

vineyards liable for noncompliance with this Order, regardless of whether the landowner or the operator is the party to enroll under this Order. Enforcement action by the Board for non-compliance related to an enrolled commercial vineyard parcel may be taken against both the owner and operator.

11) This Order does not preclude the need for additional permits that may be required by other governmental agencies, nor does it supersede any requirements, ordinances, or regulations of any other regulatory agency.

12) This Order does not authorize violations of any federal, state, or local law or regulation.

13) This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code §§2050 to 2097) or the Federal Endangered Species Act (16 US Code §§1531 to 1544). If a "take" will result from any action authorized under this Order, the Enrollee shall obtain authorization for an incidental take prior to construction or operation of the project. The Enrollee shall be responsible for meeting all requirements of the applicable Endangered Species Act.

14) This Order does not supersede the Regional Water Board Basin Plan and policies, including prohibitions (e.g., pesticides) and implementation plans (e.g., TMDLs), or the State Water Board's plans and policies.

15) Enrollees are required to comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges to storm drain systems or other infrastructure under their jurisdiction.

16) The Regional Water Board acknowledges that it will take time to: (1) develop meaningful and effective Coalitions that facilitate compliance with this Order; (2) develop online reporting tools and templates, and (3) conduct outreach and education to help Enrollees and service providers become familiar with Order requirements. This Order considers this by delaying enrollment in the Order for 18 months after Board adoption.

D. Monitoring and Reporting

1) This Order requires the implementation of a monitoring and reporting program (MRP) pursuant to Water Code section 13267 that is intended to determine the effects of waste discharges on water quality, to verify the adequacy and effectiveness of the Order's conditions, to evaluate Enrollee compliance with the terms and conditions of the Order, to initiate adaptive management as needed, and to support an assessment of the long-term effectiveness of the Order.

2) An Enrollee covered under this Order must comply with Attachment A: Monitoring

and Reporting Program for Individual Enrollees, or Attachment B: Monitoring and Reporting Program for Enrollees in a Coalition if they choose to enroll through a Coalition[5].

3) Attachment A and Attachment B are part of this Order and may be subject to future revisions by the Executive Officer or Regional Water Board.

4) For Individual Enrollees, water quality monitoring under this Order assesses the individual's compliance with this Order's requirements (see Attachment A for complete MRP requirements).

5) For Enrollees in a Coalition (see Attachment B for complete MRP requirements), there are regional and representative surface water quality monitoring and groundwater quality trend monitoring requirements under this Order. The benefits of representative and regional monitoring include the ability to determine whether practices, at the watershed level, are protective of water quality. However, there are limitations to representative and regional monitoring effectiveness in determining possible sources of water quality standard[6] exceedances, the effectiveness of management practices, and individual vineyard compliance with Order requirements. This Order considers these limitations by requiring Management Practice Effectiveness Monitoring that drives individual adaptive management.

6) Where required monitoring and evaluation does not provide sufficient information for the Regional Water Board to determine potential sources of water quality standard exceedances or identify whether management practices are effective, this Order requires Enrollees to implement adaptive management and develop and implement Water Quality Management Plans to establish individual compliance with the Order as described in Section II.E of this Order. It may also be necessary for the Board to conduct investigations by obtaining information directly from Enrollees to assess individual compliance.

Monitoring for Sediment

7) The Russian (HUC-8) and Navarro (HUC-10) River watersheds contain approximately 95 percent of land planted to commercial vineyards in the North Coast Region, are impaired from excess sedimentation/siltation, and are within winter steelhead and coho salmon distribution ranges. This Order includes status and trend monitoring within these watersheds (tributaries) over an extended period following implementation of the Order.

8) This Order requires monitoring for sediment through representative tributary streambed monitoring for Enrollees in a Coalition as a method of tracking progress towards sediment conditions which are supportive of beneficial uses. Target conditions are decreasing trends in fine sediment and increasing trends in surface roughness.

9) This Order also requires Enrollees to conduct Management Practice Effectiveness monitoring to evaluate whether implemented management practices are effective at controlling, minimizing, or preventing the discharge of sediment from their Farm Areas. Enrollees must either sample Agricultural Drainage Structures for turbidity (as a proxy for suspended sediment) or conduct photo-point monitoring according to the standards they meet for management practice implementation.

Monitoring for Pesticides

10) The California Department of Pesticide Regulation (CDPR) maintains a Surface Water Database (SURF) containing data from a wide variety of environmental monitoring studies designed to test for the presence or absence of pesticides in California surface waters. Between 2016-2017 (most recent years of available data), SURF identifies 20 pesticides associated with vineyard farming in the North Coast viticulture region according to the 2016-2017 Pesticide Use Reports (PUR) that were detected in surface water samples. Figure 3 shows detections of pesticides over the most recent years of available data through the SURF database within the North Coast viticultural area

11) In July 2024, the CDPR Surface Water Protection Program analyzed the 20 pesticides that were detected by SURF in Sonoma and Mendocino Counties for use on wine grapes. CDPR also analyzed PUR data in Sonoma and Mendocino Counties from 2018-2022 (5 most recent years) through CDPR's internal database. CDPR recommended including pesticides in the Vineyard Order's surface water monitoring program based on the following factors:

    a) Pesticides detected through SURF with either a majority use in winegrapes (indicated by over 95% of the total mass used within the two counties) or a high use on wine grapes (>= 1000 lbs/yr for herbicides and fungicides, or >= 300 lbs/yr for insecticides.)

    (b) Pesticides with either a majority use or high use on winegrapes with a high toxicity to aquatic organisms using the USEPA's Aquatic Life USEPA aquatic life benchmarks (BM) and BM equivalent for acute toxicity, which generated a toxicity score. Toxicity scores above 3 (very high) were recommended for herbicides and fungicides and toxicity scores above 2 (high) were recommended for insecticides.

12) Six pesticides detected through SURF monitoring (glyphosate potassium salt, pendimethalin, fluopyram, boscalid, azoxystrobin, and trifloxystrobin) had a primary use in winegrapes (over 95% of the use between the two counties.) Four additional pesticides (imidacloprid, myclobutanil, tebuconazole, and oryzalin) detected by SURF had a high use on wine grapes (i.e., >= 1000 lbs/yr) and relatively low use in other commodities or urban use. The following pesticides had high to very high toxicity scores and either a high or majority use in winegrapes: oxyfluorfen, flumioxazin, pyraclostrobin, glufosinate-ammonium, cyprodinil, quinoxyfen,

difenoconazole, spirotetramat, bifenazate, acetamiprid, and thiamethoxam.

13) This Order requires surface water monitoring of 21 pesticides based on CDPR's recommended criteria through either stormwater discharge sampling for Individual Enrollees as described in Attachment A: MRP and representative pesticide monitoring for Enrollees in a Coalition as described in Attachment B: MRP.

14) CDPR maintains a Groundwater Protection List in sections 13144, 13145 and 13149 of the California Food and Agricultural Code. Pesticides labeled for agricultural, outdoor institutional or outdoor industrial use that are designated as having the potential to pollute groundwater and have been detected in groundwater or soil pursuant to section 13149 of the Food and Agricultural Code are on the CDPR 6800(a) list.

15) The CDPR Human Health Assessment Branch (HHA) has developed Human Health Reference Levels (HHRLs) for pesticides on the 6800(a) list. Residues measured in groundwater exceeding these reference levels indicate a health concern and should be sent to HHA for further evaluation.

16) The CDPR Groundwater Protection Program (GWPP) obtains groundwater monitoring data for pesticides and their degradates through its own sampling program and from sampling conducted by other public agencies. The GWPP has reported detections of one 6800(a) listed pesticide (Simazine) in groundwater within the North Coast viticultural region between 2012-2021 (see Figure 4). Simazine use has also been reported in CDPR PUR data for commercial vineyards in Mendocino and Sonoma County during those years. CDPR PUR data report three additional 6800(a) listed pesticides (Norflurazon, Diuron, and Bromacil) as having limited use in commercial Mendocino and Sonoma County vineyards between 2014-2018.

17) This Order addresses the human health concerns from 6800(a) listed pesticides in drinking water through sampling and noticing drinking water well users of 6800(a) listed pesticide exceedances of the CDPR HHRL, the Primary MCL, or a Public Health Goal[7] in the Drinking Water Well Sampling requirements as described in Attachment A and Attachment B.

Monitoring for Nutrients

18) Potential sources of applied nitrogen on commercial vineyards include organic and inorganic fertilizers, slow-release products, compost, compost teas, manure, extracts, nitrogen present in the soil, nitrate in irrigation water, and nitrate in recycled water. Nitrogen efficiency management practices are a mechanism to control the discharge of nitrogen to surface and groundwater.

19) Elevated levels of nitrates in drinking water can have significant negative health effects on sensitive individuals. The nitrate water quality objective for groundwater

is the maximum contaminant level (MCL) of 10 mg/L (milligrams per liter) for nitrate plus nitrite as nitrogen (or 45 mg/L of nitrate as nitrate) established by the California Department of Public Health (Cal. Code Regs. tit. 22, § 64431). The MCL was set to protect the most at-risk groups – infants under six months old and pregnant women. Sources of nitrate in groundwater include leaching of excess fertilizer, confined animal feeding operations, septic systems, and wastewater discharge to land (e.g., domestic, commercial, and industrial). Pathways of nitrate to groundwater include unprotected well heads, improperly abandoned wells, and lack of backflow prevention on wells.

20) This Order requires monitoring of nitrate in groundwater through: (1) individual and regional groundwater trend monitoring to evaluate broad impacts of agricultural practices on groundwater and (2) drinking water well sampling to notify well users of exceedances of the nitrate MCL.

21) This Order monitors the potential for discharge of nitrogen to surface water primarily through Irrigation and Nitrogen Management Plans (INMPs) which require Enrollees to (1) report nitrogen application and crop removal rates, (2) sample soil and irrigation water for nitrate concentration, (3) and identify management practices to minimize or prevent discharge of excess nitrogen to surface or groundwater. This Order requires certification of the INMP and adaptive management for Enrollees who are nitrogen application statistical outliers[8]. The Executive Officer may update the MRP to include a surface water monitoring program for nitrate should a program of implementation be adopted into the North Coast Basin Plan to evaluate nitrate in surface water or to develop a monitoring program for a nutrient TMDL.

22) Phosphorus is a naturally occurring element in North Coast soils and is used as a fertilizer in North Coast vineyards. However, because phosphates sorb to positively charged surfaces in soil, controlling and monitoring for the discharge of phosphorus in this Order is achieved through sediment and erosion management practices and Management Practice Effectiveness Monitoring.

E. Third-Party Programs

1) The State Water Board sets the fee schedule for agricultural and Irrigated Lands Regulatory Programs throughout the state, as specified in California Code of Regulations, title 23, section 2200.6. The fee schedule is based on whether an Enrollee is a member of a Coalition (e.g., a grower coalition, monitoring coalition, or other third-party effort) to collect and remit fees to the State Board. For the purposes of this Order, the term “Coalition” refers to the group collecting fees on behalf of Enrollees to qualify for the State Board’s Agricultural Activity Tier for Group Enrollment fee. Some entities in the North Coast Region may provide professional services to Enrollees for Order compliance but may not elect to collect State Board fees from Enrollees (e.g., sustainability certification programs, Voluntary Sediment Control Programs). For purposes of this Order, the term

'Voluntary Program' shall refer to these entities.

2) The Regional Water Board encourages Enrollees to participate in Coalitions and Voluntary Programs[9] to facilitate and document compliance with this Order. These entities can be used to implement outreach and education, monitoring and reporting, management practices, and/or water quality improvement projects. Regionally-scaled Coalitions addressing multiple Order requirements are preferred to provide economies of scale to reduce Enrollee costs, maximize effectiveness, and streamline Water Board oversight; however, watershed- or basin-scale third-party programs of limited scope may be appropriate under certain circumstances and should be coordinated to the extent practicable for consistency and effectiveness.

3) Third-party Groups are discussed in Attachment C: Third-Party Program Requirements. The Regional Water Board will provide more detailed expectation documents as part of the Coalition Request for Proposals (RFP). The intention of the RFP is to inform and solicit proposals for Executive Officer consideration.

4) This Order requires Enrollees to provide the Coalition with contact information of the person(s) authorized to provide access to the enrolled property for inspections. This requirement provides a procedure to enable Board staff to contact grower representatives so that it may more efficiently monitor compliance with the provisions of this Order.

F. Regulatory Framework

1) Order No. R1-2024-0056, General Waste Discharge Requirements for Commercial Vineyards in the North Coast Region, requires Enrollees to comply with applicable state plans and policies and applicable state and federal water quality standards and to prevent nuisance. Water quality standards are set forth in state and federal plans, policies, and regulations. The Regional Water Board Basin Plan contains specific water quality objectives, beneficial uses, and implementation plans that are applicable to discharges of waste and/or waterbodies that receive discharges of waste from commercial vineyards.

2) The State Water Board has adopted plans and policies that may be applicable to discharges of waste and/or surface waterbodies or groundwater that receive discharges of waste from commercial vineyards.

3) The USEPA has adopted the National Toxics Rule and the California Toxics Rule, which constitute water quality criteria that apply to waters of the United States.

4) The specific waste constituents required to be monitored are set forth in Attachment A: MRP for Individual Enrollees and Attachment B: MRP for Enrollees in a Coalition.

Water Code Considerations

5) The California Water Code (Water Code) grants authority to the State Water Board with respect to state drinking water, water rights and water quality regulations and policy, and establishes nine Regional Water Boards with authority to regulate discharges of waste that could affect the quality of waters of the state and to adopt water quality regulations and policy.

6) Water Code section 13260(a) requires that any person, citizen, or domiciliary discharging waste or proposing to discharge waste, other than to community sewer system, that could affect the quality of the waters of the state, file a ROWD to obtain coverage under WDRs or a waiver of WDRs. Waste, person, citizen, and domiciliary are defined in Water Code section 13050.

7) Water Code section 13263(a) requires Regional Water Boards to consider the provisions of Water Code section 13241 when prescribing WDRs. Water Code section 13241 requires Regional Water Boards to consider several factors, including "water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area." Riparian setbacks are a controllable water quality factor. 13241 also requires the Board to consider "economic considerations" when establishing water quality objectives to ensure the reasonable protection of beneficial uses and prevent nuisance. The Section G (Cost Considerations) discusses estimated costs of compliance with the Order.

8) Pursuant to Water Code section 13263(g), no discharge of waste into the waters of the state, whether or not the discharge is made pursuant to WDRs, shall create a vested right to continue to discharge. All discharges of waste into waters of the state are privileges, not rights.

9) Pursuant to Water Code section 13263(i), the Regional Water Board may prescribe general WDRs for a category of discharges if the discharges are produced by the same or similar operations, involve the same or similar types of waste, require the same or similar treatment standards, and are more appropriately regulated under general WDRs than individual WDRs. Discharges from commercial vineyards have certain common characteristics, such as similar land disturbing activities, use of nutrients and pesticides, agricultural practices, Agricultural Drainage Structures, and agricultural road networks that require similar best management practices to control, minimize, and/or prevent discharges of waste. These types of discharges are more appropriately regulated under general WDRs.

10) Water Code section 13267 states in relevant part:

    (b)(1) In conducting an investigation…, the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or, discharging, or who proposes to discharge waste within its region… shall furnish,

under penalty of perjury, technical or monitoring reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports.

(b)(2) when requested by the person furnishing a report, the portions of a report that might disclose trade secrets or secret processes may not be made available for inspection by the public but shall be made available to governmental agencies. However, these portions of a report shall be available for use by the state or any state agency in judicial review or enforcement proceedings involving the person furnishing the report.

(c) In conducting an investigation…, the regional board may inspect the facilities of any person to ascertain whether…waste discharge requirements are being complied with. The inspection shall be made with the consent of the owner or possessor of the facilities or, if consent is withheld, with a warrant issued pursuant to…Title 13 (commencing with §1822.50) of Part 3 of the Code of Civil Procedure.

11) Water Code section 13268 provides that any person who fails to furnish a technical or monitoring program or who falsifies any information provided in a technical or monitoring report, pursuant to Water Code section 13267, may be subject to administrative civil liability in an amount not to exceed $1,000 per day of violation. If the matter is referred to the Attorney General for judicial enforcement, a higher liability of $5,000 per day of violation may be imposed. Higher penalties may also be imposed for any person that knowingly commits any violation in section 13268 of the Water Code.

12) Water Code section 13350 provides that any person who discharges waste in violation of WDRs may be (1) subject to administrative civil liability imposed by the Regional Water Board or State Water Board in an amount of up to $5,000 per day of violation, or up to $10 per gallon of waste discharged; or (2) subject to civil liability imposed by a court in an amount of up to $15,000 per day of violation, or up to $20 per gallon of waste discharged. The actual calculation and determination of administrative civil penalties must be consistent with the State Water Board Water Quality Enforcement Policy (Enforcement Policy) and the Porter-Cologne Act.

Title 27 Exemption

13) Discharges from commercial vineyards eligible for coverage under this Order are exempt from the requirements of Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste in California Code of Regulations, title 27, division 2, subdivision 1, section 20005, et seq.

14) The commercial vineyard activities are exempt from the requirements of title 27 so

long as the activity meets and continues to meet all preconditions listed below. (Cal. Code Regs., tit. 27, §20090):

a) Wastewater – Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leach fields if all of the following conditions are met:

i) The applicable Regional Water Board has issued WDRs, reclamation requirements, or waived such issuance.

ii) The discharge complies with the applicable water quality control plan.

iii) The wastewater does not need to be managed according to California code of Regulations, title 22, division 4.5, chapter 11, as a hazardous waste. (Cal. Code Regs., tit. 27, §20090(b).)

b) Soil Amendments – Use of nonhazardous decomposable waste as a soil amendment pursuant to applicable best practicable treatment or controls (BPTC) measures, provided that Regional Water Boards may issue waste discharge or reclamation requirements for such use. (Cal. Code Regs., tit. 27, §20090(f).)

Nonpoint Source Policy

15) The State Water Board's Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program adopted on May 20, 2004 (NPS Policy) requires regulation of nonpoint source pollution in California through WDRs, WDR waiver programs, or discharge prohibitions (Water Code §13146; Gov. Code §11353).

16) The federal Clean Water Act (CWA) requires states to develop a program to protect the quality of water resources from the adverse effects of nonpoint source (NPS) water pollution. The NPS Policy is the State Water Board framework for addressing NPS pollution and requires each of the nine Regional Water Boards to regulate NPS pollution, including agricultural discharges. The NPS Policy states that Regional Water Board implementation programs for NPS pollution control must include five key elements, as follows:

Key Element 1: An NPS control implementation program's ultimate purpose shall be explicitly stated. Implementation programs must, at a minimum, address NPS pollution in a manner that achieves and maintains water quality objectives and beneficial uses, including any applicable antidegradation requirements.

Key Element 2: An NPS control implementation program shall include a description of the management practices and other program elements that are expected to be implemented to ensure attainment of the implementation program's stated purpose(s), the process to be used to select or develop management practices,

and the process to be used to ensure and verify proper management practices implementation. The Regional Water Board must be able to determine that there is a high likelihood that the program will attain water quality requirements. This will include consideration of the management practices to be used and the process for ensuring their proper implementation.

Key Element 3: Where the Regional Water Board determines it is necessary to allow time to achieve water quality requirements the NPS control implementation program shall include a specific time schedule, and corresponding quantifiable milestones designed to measure progress toward reaching the specified requirements.

Key Element 4: An NPS control implementation program shall include sufficient feedback mechanisms so that the Regional Water Board, dischargers and the public can determine whether the program is achieving its stated purpose(s) or whether additional or different management practices or other actions are required.

Key Element 5: Each Regional Water Board shall make clear, in advance, the potential consequences for failure to achieve an NPS control implementation program's stated purpose.

17) This Order constitutes an NPS Implementation Program for discharges regulated by this Order. This Order is consistent with all key elements of the NPS Policy as described below:

a) The ultimate purpose of this Order is explicitly stated in Section I: Findings. This Order includes requirements to meet applicable water quality objectives and State Water Board Resolution 68-16 (Antidegradation Policy). Further discussion of this Order's implementation of antidegradation requirements is given below under Antidegradation Policy. This Order is consistent with Key Element 1.

b) Water Code section 13360 limits the Regional Board from prescribing specific management practices when compliance with standards may be met through a variety of practices. The Regional Board may set forth performance standards, provide examples of practices that may meet those standards, and require Enrollees to report on what practices they have or will implement to meet those standards. Examples of the types of practices that commercial vineyards may implement to meet program goals and objectives have been described and evaluated in the EIR. This Order requires each individual operation to develop a Farm Evaluation that will describe their management practices in place to protect surface water and groundwater quality. This Order also requires Enrollees to develop water quality management plans (WQMP) in response to exceedances of the turbidity benchmark or where management practices are not properly implemented. Enrollees have an option to implement a Sediment and

Erosion Control Plan which is developed and certified by a qualified professional in lieu of on-farm turbidity monitoring. The requirements of this Order are consistent with Key Element 2.

c) This Order requires the development of WQMPs in response to benchmark exceedances or where management practices are not implemented properly or are insufficient. WQMPs include a time schedule for implementing required management practices and meeting water quality objectives. This Order also requires road standards that must be met within 10 years of adoption of this Order. The time schedule requirements in this Order are consistent with Key Element 3.

d) To provide feedback on whether program goals are being achieved, this Order requires surface and groundwater quality monitoring, tracking of management practices, and evaluation of effectiveness of implemented practices. This feedback will allow iterative implementation of practices to ensure that program goals are achieved. The feedback mechanisms required by this Order are consistent with Key Element 4.

e) This Order establishes the following consequences where requirements are not met: (1)The Coalition or Enrollees will be required, in an iterative process, to conduct additional monitoring and/or implement management practices where water quality objectives are not being met; (2) appropriate Regional Water Board enforcement action where the iterative management practices process is unsuccessful, program requirements are not met, or time schedules are not met; (3) require Enrollees, where the Coalition fails to meet the requirements of this Order, to enroll in the Order individually. This Order describes the consequences for failure to meet requirements and is consistent with Key Element 5.

Human Right to Water

18) On February 16, 2016, and April 23, 2019, the State Water Board and the Regional Water Board adopted resolutions (Resolution No. 2016-0010 and R1-2019-0024, respectively) identifying the human right to water as a top priority and core value of the Water Boards in association with Water Code section 106.3. The resolutions stated the Water Boards will work “to preserve, enhance, and restore the quality of California’s water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure proper water resource allocation and efficient use, for the benefit of present and future generations.” This Order promotes that policy by requiring the Enrollees to meet water quality objectives, as applicable, designed to protect human health and ensure that water is safe for domestic uses.

19) In 2019, to advance the goals of the Human Right to Water “HR2W”, California passed Senate Bill 200, which enabled the State Water Board to establish the Safe

and Affordable Funding for Equity and Resilience (SAFER) Program. Foremost among the tools created for SAFER is the Safe and Affordable Drinking Water Fund. The Fund provides up to $130 million per year through 2030 to enable the State Water Board to develop and implement sustainable solutions for underperforming drinking water systems. The annual Fund Expenditure Plan prioritizes projects for funding, documents past and planned expenditures, and is "based on data and analysis drawn from the drinking water Needs Assessment." The primary purpose of the SAFER program is to bring true environmental justice to California and address the continuing disproportionate environmental burdens in the state by creating a fund that will assist in providing safe drinking water in every California community, for every Californian. SAFER funds will help water systems provide a safe, accessible, and affordable supply of drinking water to communities in both the near and long terms by accelerating implementation of short- and long-term drinking water solutions, moving water systems to more efficient modes of operation, providing short-term operation and maintenance support as a bridge until long-term sustainable solutions are in place, and providing long-term operation and maintenance support when necessary.

Sources of Drinking Water Policy

20) The Policy (SWRCB Resolution No. 88-63) established the principle that all surface and ground waters within the State are considered suitable or potentially suitable for the municipal and domestic supply ("MUN") beneficial use with certain exceptions. Exceptions applicable to groundwater include: where there is contamination (unrelated to the pollution incident) that cannot reasonably be treated for domestic use; where groundwater contains total dissolved solids ("TDS") exceeding 3,000 milligrams per liter and is not reasonably expected to supply a public water system; and where there is insufficient water to supply a single well capable of producing an average, sustained yield of 200 gallons per day.

21) The Policy acknowledges Regional Water Boards have discretion to separately evaluate whether bodies of water are presently or potentially suitable for MUN designation. Regional Water Boards shall also ensure that the beneficial uses of municipal and domestic supply are designated for protection wherever those uses are presently being attained, and assure that any changes in beneficial use designations for waters of the State are consistent with all applicable regulations adopted by the Environmental Protection Agency

Antidegradation Policy

22) State Water Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California (Antidegradation Policy), requires that whenever the existing quality of water is better than the quality established in plans and policies as of the date on which such polices became effective,(e.g. water quality objectives established in such plans and policies) such existing water

quality shall be maintained unless otherwise provided by the provisions of the state Antidegradation Policy. The state Antidegradation Policy allows a discharge that may degrade high quality water if the change in water quality is: (1) consistent with the maximum benefit to the people of the State, (2) will not unreasonably affect present and anticipated beneficial use of such water, and (3) will not result in water quality less than that prescribed in water quality control policies and plans. Further, any activities that result in discharges to such high-quality waters are required to use: the best practicable treatment or controls (BPTC) necessary to avoid pollution or nuisance and maintain the highest water quality consistent with the maximum benefit to the people of the State.

23) This Order is consistent with the Antidegradation Policy by requiring development and implementation of Farm Evaluations, Irrigation and Nitrogen Management Plans, management practices including tracking of such practices, and surface and groundwater water quality monitoring and reporting that are designed to ensure that degradation is prevented or minimized and that management practices are protective of water quality. These requirements are aimed to ensure that all commercial vineyards are implementing management practices that prevent or minimize degradation. The effectiveness of such practices is evaluated through representative and individual water quality monitoring. The Order relies on implementation of practices and treatment technologies that constitute BPTC/best efforts, based to the extent possible on existing data.

24) The Regional Water Board finds that any limited degradation that may occur in these high-quality water bodies even following implementation of all applicable management practices designed to control discharges is to the maximum benefit of the people of the State. The Board has considered the social and economic significance of the commercial vineyard industry in the North Coast Region and the important role that North Coast commercial vineyards provide in economic value and support to local communities. The commercial vineyard industry is an important economic sector in Sonoma and Mendocino Counties which, in addition to gross farm income, provides local employment opportunities, and added economic value through supporting industries. The Board finds that coupled with the environmental and water quality benefits that will result from implementation of the conditions in this Order, maintaining the North Coast commercial vineyard industry is consistent with the maximum benefit of the people of the state to prevent a loss of jobs and adverse impacts to local communities. The Board has additionally considered the impacts to drinking water supplies from potential discharges to groundwater from commercial vineyard operations. However, even where there is limited degradation of high-quality groundwater, this Order sets the protection of water quality objectives as the floor to any degradation ensuring that drinking water beneficial uses are protected.

East San Joaquin Precedential Order

25) The State Water Board Irrigated Lands Regulatory Program sets forth precedential

requirements for all Regional Irrigated Lands in DWQ 2018-0002 In the Matter of Review of Waste Discharge Requirements General Order No. R5-2012-0116 for Growers Within the Eastern San Joaquin River Watershed (ESJ Order).

26) Commercial vineyards are irrigated agricultural lands and therefore, Enrollees regulated under this Order are part of the State and Regional Water Board Irrigated Lands Regulatory Program and subject to the ESJ Order requirements that the State Water Board designated as precedential. This Order is consistent with the precedential ESJ Order requirements by including conditions related to grower outreach events, farm evaluations, sediment and erosion controls, irrigation and nitrogen management, record keeping, and groundwater quality monitoring for Enrollees and approved Coalitions. Additionally, this Order requires monitoring and reporting to verify and provide feedback on the degree and effectiveness of implementation of these precedential requirements.

27) Specifically, this Order implements ESJ Order requirements through: (1) INMPs; (2) Drinking Water Supply Well Monitoring; (3) Groundwater Quality Trend Monitoring; and (4) Outreach and Education

High and Low Groundwater Vulnerability Areas

28) Precedential requirements set forth in the ESJ Order establish “high and low vulnerability” groundwater basins for threat from nitrates. The ESJ Order requires that development of Groundwater Protection Formulas and certification of irrigation and nutrient management plans be prioritized in “high vulnerability” groundwater basins which are defined in the ESJ Order as areas “where known groundwater quality impacts exist for which irrigated agricultural operations are a potential contributor or where conditions make groundwater more vulnerable to impacts from irrigated agricultural activities.”

29) The Regional Water Board adopted the Groundwater Basin Evaluation and Prioritization Resolution No. R1-2021-0006[10] which identifies priority groundwater basins having a relatively high threat from salts and nutrients and would benefit from salt and nutrient management planning. However, insufficient groundwater data is available to determine “where known groundwater quality impacts exist for which irrigated agricultural operations are a potential contributor.”

30) Once sufficient groundwater data is available to evaluate groundwater quality impacts from commercial vineyards through Groundwater Trend Monitoring and INMP reporting under this Order, the Regional Water Board’s Executive Officer may later identify “high vulnerability areas” where discharges from commercial vineyards may be causing or contributing to exceedances of water quality objectives, or a trend of degradation of groundwater that may threaten applicable basin plan beneficial uses.

Regional Water Board Plans and Policies

Basin Plan

31) The Basin Plan is the Regional Water Board's water quality control planning document. It designates beneficial uses and water quality objectives (WQOs) for waters of the state, including surface waters and groundwater. The Basin Plan was duly adopted by the Regional Water Board and approved by the State Water Board, the Office of Administrative Law, and the USEPA, as necessary. The Region's TMDLs and associated implementation plans are part of the Basin Plan. The latest version of the Basin Plan can be found on the Regional Water Board's website (https://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/).

Beneficial Uses

32) Pursuant to the Basin Plan, Board plans and policies (including State Water Board Resolution No. 88-63 Sources of Drinking Water Policy), and consistent with the Clean Water Act, the existing and potential beneficial uses of waters in the North Coast Region include: agricultural supply; aquaculture; commercial and sport fishing; cold freshwater habitat; estuarine habitat; flood peak attenuation or flood water storage; freshwater replenishment; groundwater recharge; industrial process supply; industrial service supply; inland saline water habitat; marine habitat, migration of aquatic organisms; municipal and domestic supply; Native American culture; navigation; non-contact water recreation; preservation areas of special biological significance; preservation of areas of special rare, threatened, or endangered species; spawning, reproduction, and/or early development; subsistence fishing; warm freshwater habitat; water quality enhancement; wetland habitat; water contact recreation; and wildlife habitat.

Total Maximum Daily Loads

33) The federal Clean Water Act section 303(d) requires the states to determine waterbody compliance with water quality objectives and to develop a list of impaired waterbodies. Federal regulations require that a TMDL be developed for 303(d)-listed waterbodies for each pollutant of concern. The USEPA has established TMDLs for 25 impaired stream segments in the North Coast Region. The Regional Water Board has adopted five additional TMDLs for impaired stream segments in the North Coast Region with accompanying implementation plans.

34) The majority of the Regional Water Board TMDLs developed to date have a common approach to meeting load allocations for sediment and temperature. The TMDLs typically list cold freshwater habitat (COLD) as an important beneficial use. While specific load allocations and targets may vary slightly, all address the need to reduce and prevent excess sediment inputs and decrease water temperature by protecting and restoring natural shade or conditions equivalent to natural shade.

35) Implementation of this Order will address sediment and temperature impairments

by requiring: (1) the application of management practices to minimize or prevent excess sediment and other waste discharges; (2) the protection and maintenance of riparian conditions and shade; (3) inventories, prioritization and remediation of sediment discharge sources; (4) implementation and evaluation of management practice effectiveness and adaptive management in response to deficiencies, and (5) ongoing education and outreach.

Sediment TMDL Policy

36) The Regional Water Board adopted the Sediment TMDL Policy on November 29, 2004. The Sediment TMDL Policy directs the Executive Officer to use all available authority including existing regulatory standards and permitting and enforcement tools, to more effectively and efficaciously pursue compliance with sediment-related standards by all Enrollees of sediment waste.

37) Approximately 61-percent of the North Coast Region drains to sediment impaired rivers and streams (2006 Clean Water Act §303(d) list). Sediment TMDLs have been established by the USEPA for the Albion River, Big River, Middle Fork Eel River, North Fork Eel River, South Fork Eel River, Garcia River, Gualala River, Mattole River, Navarro River, Noyo River, Redwood Creek, Ten Mile River, Trinity River, South Fork Trinity River, and Van Duzen River.

38) Compliance with this Order satisfies North Coast Region TMDLs for Controllable Sediment Discharge Sources from vineyards including Appurtenant Agricultural Roads and watercourse crossings through requiring the following: (1) slope-based ground cover on Farm Areas or commensurate protection to water quality through voluntary certification programs with approved sediment control elements[11], (2) agricultural road drainage designed and managed to reduce Hydrologic Connectivity[12]; (3) watercourse crossings which reduce diversion potential and crossing failure; (4) protecting slopes prone to erosion; (5) winterization of seasonal agricultural roads and avenues; and (6) prohibiting the construction of new commercial vineyards and Appurtenant Agricultural Roads on areas of slope instability.

39) This Order is consistent with the Basin Plan for the North Coast Region and the Sediment TMDL Implementation Policy by requiring all Enrollees to inventory sediment discharge sites on the commercial vineyard, implement sediment and erosion control management practices to prioritize preventing erosion, monitor management practice effectiveness, and implement adaptive management as a response to monitoring.

Temperature Policy

40) The Basin Plan includes the Temperature Implementation Policy, which specifies that activities resulting in water temperature increases shall be addressed on a case-by-case basis to reduce impairments and prevent further impairment. The

Temperature Policy directs staff to examine and address temperature when developing regulatory Orders. At a minimum, any program should implement temperature or shade load allocations in areas subject to existing temperature TMDLs, including US EPA-established temperature TMDLs. To attain and maintain the water quality objectives for temperature, the Regional Water Board and its staff implement programs and collaborate with others in such a manner as to prevent, minimize, and mitigate temperature alterations associated with sediment discharges and controllable water quality factors. Controllable water quality factors affecting water temperature include any anthropogenic activity which results in the removal of riparian vegetation, sediment discharges, impoundments and other channel alterations, reduction of instream summer flows, and the reduction of cold water sources. The Temperature Policy is implemented through adoption of WDRs.

41) This Order implements the Temperature Policy through two options for Enrollees. The first option is to comply with minimum setbacks of the Farm Area and Appurtenant Agricultural Roads to Streamside Areas, and establishing requirements and prohibitions within Streamside Areas which: (1) allow the natural establishment and abundance of native riparian vegetation; (2) allow sufficient native riparian vegetation to minimize and control discharge of sediment, nutrients, and pesticides to surface waters; (3) install and/or maintain a minimum width of vegetated buffers to minimize or prevent discharges of sediment, nutrient, pesticides to surface waters; and (4) allow essential functions supporting beneficial uses (e.g., sediment filtering, woody debris recruitment, streambank stabilization, nutrient cycling, pollutant filtering, shading).The second option Enrollees are provided to comply with the Temperature Policy is to propose a Riparian Vegetation Area Restoration Alternative where the Enrollee mitigates the difference in area available for natural riparian vegetation succession between what area exists at the date of Order adoption and the minimum setback area defined in the Order through restoration of riparian vegetation in the same HUC-12.

42) The Substitute Environmental Document[13] prepared for the Temperature Implementation Policy analyzed its potential environmental impacts. Impacts on Agricultural Resources include the potential conversion of Important Farmland to a non-agricultural use from riparian buffers which are considered compliance measures to preserve and maintain shade. Through adoption of Resolution R1-2014-0006, the Regional Water Board found the potential conversion of Important Farmland to a non-agricultural use and the potential conflict with existing zoning for agriculture use or a Williamson Act contract from implementing riparian buffers as significant and unavoidable.

Groundwater Protection

43) Resolution No. R1-2022-0040 acknowledges the Regional Water Board is committed to the protection of high-quality groundwater and the restoration of degraded groundwater to support all beneficial uses now and in the future, especially given increasing reliance on groundwater in the North Coast Region.

Groundwater supplies in the North Coast Region are currently beneficially used for: (1) drinking water, sanitation, and hygiene consistent with the Human Right to Water described in Regional Water Board Resolution No. R1-2019-0024; (2) agriculture and industry which are major economic drivers in the region, (3) Native American ceremonies and traditions; (4) aquaculture operations; and (5) replenishment of flows to streams (e.g., contribution to instream flows) to maintain beneficial uses of surface water, especially cold freshwater habitat, migration of aquatic specifics, wildlife habitat, and spawning, reproduction, and early development of fish.

California Environmental Quality Act

44) For the purposes of adoption of this Order, the Regional Water Board is the lead agency pursuant to the California Environmental Quality Act (CEQA) (Pub. Res. Code §21000 et seq.).

45) On August 8, 2022, the Regional Water Board published an Initial Study for a 45-day public comment period. The Regional Water Board submitted a Notice of Completion and Environmental Document transmittal as well as a Notice of Preparation of a Draft Environmental Impact Report to the State Clearinghouse (SCH Number 2022080129). The State Clearinghouse distributed the Initial Study to reviewing agencies.

46) In September 2022, Regional Water Board staff held an in-person and a virtual CEQA scoping meeting.

47) During the public comment period for the Initial Study the Regional Water Board received comments from the California Farm Bureau Federation, Sonoma County Farm Bureau, Mendocino County Farm Bureau, The Wine Institute, Jackson Family Wines, and Californians for Alternatives to Toxics.

48) On June 29, 2023, the Regional Water Board released a Draft Environmental Impact report (EIR) for a 45-day comment period. The Regional Water Board received 34 comment letters requesting an additional 45-day extension. The comment period was extended from 45 days to 60 days in response to the comment letters received.

49) During the public comment period for the Draft EIR the Regional Water Board received written comments from California Farm Bureau, Sonoma County Farm Bureau, Mendocino County Farm Bureau California Department of Fish and Wildlife, Kimberley Burr, the Wine Institute, Jackson Family Wines, Katherine Lee, Glenn McGourty, John C. Glaub, and Estelle Clifton. Responses to comments on the Draft EIR are available in Attachment B of the Final EIR.

50) Prior to the adoption of this Order, and after considering public comment, the Regional Water Board certified a final EIR that identifies the potential

environmental impacts associated with this Order and identifies mitigation measures to reduce the potential environmental impacts.

51) This Order relies on the environmental impact analysis contained in the final EIR to satisfy the requirements of CEQA. The final EIR identified, disclosed, and analyzed the potential environmental impacts of the Order. The potential compliance activities undertaken by the regulated Enrollees in response to this Order fall within the range of compliance activities identified and analyzed in the final EIR. Therefore, all potentially adverse environmental impacts of this Order have been identified, disclosed, and analyzed in the final EIR. If it is determined that an Enrollee filing for coverage under this Order could create impacts not identified in the final EIR, individual WDRs would be prepared for that Enrollee and additional CEQA analysis performed, which would likely tier off the final EIR as necessary. (See Cal. Code Regs., tit.14 §15152).

52) The final EIR concludes that implementation of some Order requirements has the potential to cause significant environmental impacts. There are potentially significant impacts due to construction of required management practices in the following categories: Hazards and Hazardous Materials, Hydrology and Water Quality, Geology and Soils, Biological Resources, Cultural Resources, and Tribal Resources.

53) Where potentially significant environmental impacts may occur as a result of Enrollees' compliance activities, this Order requires that Enrollees either avoid the impacts where feasible or implement identified mitigation measures in Attachment E: CEQA Mitigation Measures, to reduce the potential impacts to a less than significant level. The Order and MRP require Enrollees to track and monitor the implementation of mitigation measures identified in the CEQA Mitigation Monitoring and Reporting Summary Table of Attachment E.

54) The Final EIR identified potentially significant and unavoidable impacts to Agriculture Resources under this Order through Streamside Management Area setbacks. In Resolution No. R1-2024-0057 which certified the Final EIR, the Regional Water Board submitted CEQA Findings of Fact and a Statement of Overriding Consideration which listed potential environmental impacts, the written findings regarding those impacts consistent with section 15091 of the CEQA Guidelines, and the explanation for each finding.

G. Cost Considerations

1) Water Code section 13241 requires the Regional Water Board to consider certain factors, including economic considerations, in the adoption of water quality objectives. Water Code section 13263 requires the Regional Water Board to take into consideration the provisions of Water Code section 13241 in adopting waste discharge requirements. The following findings discuss the anticipated cost of compliance with the Order. Several assumptions were required to be made for

these analyses and there are several inherent limitations and uncertainties, discussed below.

2) There are relevant aspects of this Order where the Regional Water Board previously considered costs and economics associated with implementation. For example, when the Regional Water Board adopted the water quality objectives that serve as the basis for several requirements in this Order, it took economic considerations into account in accordance with Water Code section 13241. The Regional Water Board also previously considered the cost of complying with TMDL load allocations during the adoption of each TMDL.

3) When establishing monitoring and reporting requirements under Water Code section 13267, the Regional Water Board must ensure that the burden, including costs, of the reports bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. Many of the costs considered below are costs associated with the monitoring and reporting requirements of this Order. Enrollees can reduce their costs by joining a Third-Party Program for water quality monitoring and reporting in lieu of individual monitoring and reporting.

4) The monitoring and reporting requirements of this Order allow the Regional Water Board to identify agricultural waste discharges with a higher risk of degrading water quality so that those discharges may be promptly minimized or prevented. Monitoring and reporting of nitrogen application and groundwater monitoring and reporting protect human health by informing the Regional Water Board of discharges that may affect the quality of water designated as municipal and domestic supply and by allowing assessment of the extent to which the water quality objectives are being met in viticultural land use areas.

5) The Regional Water Board needs these reports to document and ensure compliance with this Order. The Regional Water Board finds that the burden of the requirements of the Order bears a reasonable relationship to the benefits of the requirements.

Cost of Compliance with the Order

6) The cost of compliance with the Order for Enrollees in the North Coast Region under existing conditions includes the costs associated with any management practices they may need to implement pursuant to the Order requirements, State Water Board fees, and monitoring and reporting costs. These costs are described further below.

State Water Board Fees

7) The State Water Board sets the fee schedule for agricultural and Irrigated Lands Regulatory Programs throughout the state, as specified in California Code of Regulations, title 23, section 2200.6. All enrolled commercial vineyards must pay

the State Water Board fees on an annual basis. Although the State Water Board fees may change from year to year, the fee categories/schedule for the 2024-2025 fiscal year are shown below.

a) If an Enrollee is a member of a group that has been approved by the Regional Water Board or Regional Water Board's Executive Officer to manage fee collection and payment (i.e., Coalition), then the annual fee shall be $1.50 per acre.

b) If an Enrollee is not a member of a Coalition that has been approved by the Regional Water Board or Regional Water Board's Executive Officer to manage fee collection and payment, then the annual fee shall be: $37.40 per acre up to 300 acres plus $18.71 per acre over 300 acres with a minimum fee of $710.

8) In Regions that have implemented Irrigated Lands Orders with Third-Party Programs or Grower Coalitions, the majority of Enrollees have elected to enroll through those entities. Coalitions manage fee collection, conduct representative surface and groundwater monitoring, provide outreach and education, and assist Enrollees with general Order requirements. The Regional Water Board anticipates that the majority of Enrollees under this Order will also elect to enroll through a Coalition.

Compliance with Water Quality Protection Requirements

9) All Enrollees must comply with requirements to implement and adapt management practices including sediment and erosion control minimum management practices and Streamside Area setbacks. This Order provides Enrollees flexibility in selecting management practices and requires Enrollees to monitor and report discharges and implemented management practices to minimize or prevent discharges of waste.

10) Enrollees may be required to implement improved or additional management practices, as necessary, and report on the water quality-related outcomes of their management practice implementation. Enrollees must ultimately implement management practices that result in compliance with the Order.

11) Management practices associated with irrigation, nutrient and pesticide use, and sediment and erosion control are already being implemented by many Enrollees. This may be due to requirements imposed by other regulatory agencies (e.g., pesticide tracking and reporting by the Department of Pesticide Regulation and Agricultural Commissioners) and through longstanding voluntary sustainability programs such as Fish Friendly Farming, California Sustainable Winegrowing Alliance, LODI Rules, and Sustainability in Practice (SIP).

12) Implementation of management practices may also have direct net cost benefits to

a vineyard (e.g., irrigation and nutrient management can result in less fertilizer costs and reduced water/pumping costs for irrigation; sediment and erosion management minimize or prevent erosion of valuable topsoil).

13) The Natural Resources Conservation Service (NRCS) has developed standard agricultural management practices to address irrigation and nutrient management, pesticide management, and sediment and erosion control management, some of the more common of which are discussed below. Implementation of many of these practices would result in compliance with multiple requirements of the Order. Table 1 provides estimated costs of management practices/scenarios Enrollees may implement to meet the requirements in the Order, as reported by the U.S. Department of Agriculture (USDA), NRCS[14].

    a) Conservation Cover – involves establishing and maintaining a permanent vegetated cover on lands that are either not currently in use/production or lands currently in production that would be taken out of production. The practice does not apply to plantings for forage production or to critical area plantings. This practice can be applied on a portion of the field. The Conservation Cover practice may be implemented to reduce erosion and sedimentation and reduce associated groundwater and surface water quality degradation by nutrients and sediment, as well as other purposes. Costs range between $200 and $300 per acre.

    b) Contour Buffer Strips – involves establishing narrow strips of permanent, herbaceous vegetated cover around hill slopes, which are alternated down the slope with wider cropped strips that are farmed on the contour. This practice may be implemented to reduce erosion and associated water quality degradation from the transport of sediment and other water-borne contaminants downslope. Costs range between $300 to $400 per acre.

    c) Cover Crop – involves planting grasses, legumes, and/or forbs for seasonal vegetated cover. The practice may be implemented to reduce erosion, maintain or increase soil health and organic matter content, reduce water quality degradation by utilizing excessive soil nutrients, or for other purposes. Costs range between $100 to $300 per acre.

    d) Filter Strip – involves establishing a strip or area of herbaceous vegetation that removes contaminants from overland flow. Filter strips can be established anywhere environmentally sensitive areas need to be protected from sediment, or other suspended solids, and dissolved contaminants in runoff. Costs range between $200 to $300 per acre

    e) Integrated Pest Management (IPM) program – involves implementing a site-specific combination of pest prevention, pest avoidance, pest monitoring, and pest suppression strategies. An IPM approach seeks to prevent or mitigate offsite pesticide risks to water quality from leaching, solution runoff

and adsorbed runoff losses; and prevent or mitigate on-site pesticide risks to pollinators and other beneficial species through direct contact; among other goals. Costs range between $50 and $100 per acre.

f) Micro-Irrigation System – involves implementation of an irrigation system that provides for targeted application of water on or below the soil surface (e.g., as drops, tiny streams, or miniature spray through emitters or applicators placed along a water delivery line. Drip tape, tubing, or micro sprayers may be used). This practice may be implemented to prevent contamination of groundwater and surface water by efficiently and uniformly applying chemicals, and to maintain soil moisture by efficiently and uniformly applying irrigation water. Costs range between $750 to $3,500 per acre.

g) Nutrient Management – involves managing the amount (rate), source, placement (method of application), and timing of plant nutrients and soil amendments. The practice is implemented to minimize agricultural nonpoint source pollution of surface waters and groundwater, among other reasons. Costs associated with this practice include soil testing, analysis, and implementation of the nutrient management plan and recordkeeping. Costs range between $10 and $320 per acre.

h) Riparian Vegetation Buffer – involves establishment of an area of predominantly trees and/or shrubs located adjacent to and up-gradient from waterbodies. The practice may be implemented to reduce excess amounts of sediment, organic material, nutrients and pesticides in surface runoff and reduce excess nutrients and other chemicals in shallow groundwater flow; reduce pesticide drift entering the waterbody; restore riparian plant communities; create shade to lower or maintain water temperatures to improve habitat for aquatic organisms; or to provide other benefits. Costs vary based on whether riparian forest buffer vegetation is established through seeding, cuttings, bare-root plantings, or small or large containers. For scenarios where land is taken out of production to establish the riparian vegetation buffer, foregone income is considered. Costs range between $3,000 to $5,500 per acre.

i) Sediment Control Basin – involves constructing a basin with an engineered outlet, formed by excavating a dugout, constructing an embankment, or a combination of both. The purpose of the sediment basin is to capture and detain sediment-laden runoff, or other debris for a sufficient length of time to allow it to settle out in the basin. Costs are estimated between $6,000 to $13,000 per basin.

14) These potential costs were considered when the water quality protection requirements were developed for the Order.

Table 1: Estimated Costs of Management Practices/Scenarios for Water Quality Protection

Management Practice[15]	Scenario Size	Unit Cost	Total Cost (low)	Total Cost (High)
Conservation Cover (327)	50 acres	$200-$300/acre	$10,000	$15,000
Contour Buffer Strip (332)	1 acre	$300-$400/acre	$300	$400
Cover Crop (340)	40 acres	$100-$300/acre	$4,000	$12,000
Filter Strip (393)	1 acre	$200-$300/acre	$200	$300
Integrated Pest Management (IPM) program (595)	40 acres	$50-$100/acre	$2,000	$4,000
Micro-Irrigation System (441)	20 acres	$750-$3,500/acre	$15,000	$70,000
Nutrient Management (590)	40 acres	$10-$320/acre	$400	$12,800
Riparian Vegetation Buffer (391)	1.5 acres	$3,000-5,000/acre	$4,500	$7,500
Sediment Control Basin (638)	Basin	Each	$6,000	$13,000

Compliance with Agricultural Road Storm-Proofing Requirements

15) Enrollees with Appurtenant Agricultural Roads must comply with requirements to implement road storm-proofing management practices. Existing commercial vineyards are provided with a compliance schedule (10 years from the date of the Order) to complete implementation of road storm-proofing management practices.

16) All storm-proofing management practices on Appurtenant Agricultural Road networks shall be properly designed, installed[16], maintained, and promptly repaired. Maintenance of management practices shall include periodic inspection of following qualifying storm events. Enrollees must ultimately implement management practices that result in compliance with the Order.

17) Management practices associated with road storm-proofing are already being implemented by many Enrollees. This may be due to requirements imposed by other regulatory agencies (e.g., existing County grading and drainage requirements), through long standing voluntary conservation programs, or as a result of individual land management ethics.

18) Implementation of road storm-proofing management practices may also have direct net cost benefits to a vineyard (e.g., reduced road maintenance costs).

19) The NRCS has developed standard management practices for agricultural road sediment, erosion, and drainage control, some of the more common of which are discussed below. Implementation of many of these practices would result in compliance with multiple requirements of the Order. Table 2 shows costs of management practices/scenarios Enrollees may implement to meet the requirements in the Order, as reported by the U.S. Department of Agriculture, NRCS and adjusted by Regional Water Board staff for anticipated scenarios.

    a) Rolling Dips: Shallow, rounded dip in the road where road grade reverses for a short distance and surface runoff is directed in the dip or trough to the outside or inside of the road. Rolling dips are drainage structures used primarily on gravel surfaced, out-sloped roads designed to drain the road surface and constructed to remain effective while allowing passage of motor vehicles at normal or slightly reduced road speed. Costs are estimated between $10 to $20 per linear foot.

    b) Critical Dips: A dip in the roadbed at a culverted stream crossing, preferably at the down-road hinge line of the fill, that prevents stream diversion. The dip is designed to act as an overflow structure if the main culvert were to plug and ponded water overtopped the fill. Although somewhat like a rolling dip, it must have sufficient capacity (width and depth) to carry flood flows from the stream without itself overtopping and diverting down the road. Costs are estimated at $10 to $20 per linear foot.

    c) Out-sloping: converting an in-sloped road to an out-sloped road. Out-sloping can also refer to the act of excavating the fill along the outside of the road and placing and grading it against the cut-bank, thereby creating an out-sloped surface where the roadbed once existed. Costs are estimated at $3 to $30 per linear foot.

20) These potential costs were considered when the Appurtenant Agricultural Road storm-proofing requirements were developed for the Order. Table 2 and Table 2.a also includes cost estimates provided by the Mendocino, Gold Ridge, and Sonoma Resource Conservation Districts (RCDs).

Table 2: Estimated Costs of Management Practices/Scenarios for Road Storm-proofing

Management Practice	Scenario Size	Unit Cost	Total Cost (low)	Total Cost (High)	RCD Estimate/linear foot
Rolling Dip	1,000 feet	$10-20/ft	$10,000	$20,000	$1800-$4000
Critical Dip	1,000 feet	$10-20/ft	$10,000	$20,000	$1400-$3000
Road Out-sloping	5,000 feet	$3-$30/ft	$15,000	$150,000	$15,840-$52,800

Table 2.a: Estimated Costs of Management Practices/Scenarios for Stream Crossing Management Practices Provided by the RCDs.

Management Practice	Total Cost (low)/Unit	Total Cost (High)/Unit
Ditch Relief Culvert	$1,500	$4,000
Trash Post/Debris Deflector	$300	$1,200
Culvert Stream Crossing Replacement	$15,000	$300,000

Monitoring and Reporting

21) All Enrollees are required to conduct monitoring and reporting either individually or as part of a Coalition effort. All Enrollees are required to report management practice implementation annually in their Farm Evaluation and report nitrogen applied and removed, in the Irrigation and Nitrogen Management Plan (INMP). Refer to Attachment A and Attachment B for monitoring and reporting requirements and Table 3 and Table 4a and 4b for estimated costs.

Table 3: Estimated Annualized Monitoring and Reporting Costs over Five Years for Individual Enrollees (assume 100-acre vineyard)

Task	Cost Estimate	Requirements
Agricultural Drainage Structure Monitoring (if applicable)	$120/Ag Drainage Structure	Annual turbidity monitoring for 20 percent of Agricultural Drainage Structures.
Photo-point Monitoring (if applicable)	$20/photo	Annual photo-point monitoring at representative sites to monitor effectiveness of management practices. Assume time and labor.
Representative Pesticide Monitoring	$1250/representative site	Pesticide monitoring occurs at representative sites once every five years for pesticides listed in the MRP that the Enrollee has applied.
Drinking Water Supply Well Monitoring (nitrates)	$110 per well	Annual sampling for three years for nitrates and once every five years after that.
Drinking Water Supply Well Monitoring (pesticides)	$200-1050 per well.	Sampling every five years for 6800(a) listed pesticides that the Enrollee has applied.
Groundwater Trend Monitoring	$0 -$400	Monitoring nitrates and field parameters annually and evaluating trends every five years.
Annual Compliance Form	$250-$500	Includes management practice reporting, nitrogen reporting, outreach attendance, CEQA mitigation measure monitoring, and annual water quality monitoring results.
Trend Monitoring Report	$250-$500	Includes water quality results for five-year monitoring requirements and trend analysis.

Table 4a: Estimated Annualized Monitoring Costs Over Five Years for Enrollees Enrolling in a Coalition (assume 65,000 acres of enrolled vineyards)

Task	Cost Estimate	Monitoring Sites (assumed)	Requirements
Representative Pesticide Monitoring	$0.01/acre	3 sites	Monitor for 20 pesticides in one representative site within each HUC-12 watershed in the top quartile by vineyard density. See Figure 5 for HUC-12 watersheds by vineyard density within the North Coast Region.
Tributary Streambed Monitoring	$0.59/acre	12 sites	Monitor streambed conditions every five years after two initial monitoring efforts in Year 1 and Year 4.
Agricultural Drainage Structure Monitoring (if applicable)	$120/Ag Drainage Structure	4000 Ag Drainage Structures	Annual turbidity monitoring for 20 percent of Agricultural Drainage Structures.
Photo-point Monitoring (if applicable)	$10/site	6500 sites	Annual photo-point monitoring at representative sites to monitor effectiveness of management practices.
Groundwater Trend Monitoring	$0.06/acre	25 wells	Monitoring for parameters in Attachment B: Section III annually and evaluating trends every five years.
Drinking Water Supply Well Monitoring	$110-320	per well	Includes annual sampling for three years for nitrates and sampling for 6800(a) listed pesticides that the Enrollee has applied every five years.

Table 4b: Estimated Annualized Reporting Costs Over Five Years for Enrollees Enrolling in a Coalition (assume 65,000 acres of enrolled vineyards)

Task	Cost Estimate	Requirements
Annual Compliance Report	$0.38/acre	Includes participant list, management practice reporting, nitrogen reporting and calculations, outreach attendance, and CEQA mitigation measure monitoring.
Annual Water Quality Monitoring Report	$0.38/acre	Results of any water quality monitoring conducted in the previous year.
Trend Monitoring Report	$0.38/acre	All water quality data for past five years reported and analyzed for trends.

Technical Reports and Planning Documents

22) As part of Order compliance, Individual Enrollees and Coalitions on behalf of their Enrollees are required to submit the following technical reports and planning documents:

a) Sediment and Erosion Control Plan (Optional): Enrollees may choose to develop a Sediment and Erosion Control Plan (SECP) as a compliance option for sediment and erosion control. Enrollees may develop an individual SECP, develop an SECP through a Voluntary Program, or develop an SECP that is certified by a Qualified Professional. Costs range from $1000-$5000 for the SECP developed by the Enrollee or through the Voluntary Program to $5000-$10,000 for the SECP developed by the Qualified Professional.

b) Water Quality Monitoring Workplan (Individual): Individual Enrollees shall submit a Water Quality Monitoring Workplan (Workplan) to the Executive Officer which describes how they will implement the water quality monitoring and reporting requirements of this Order as detailed in Attachment A: Section II. Estimated Cost (one-time): $1,000-$2,000.

b) Water Quality Monitoring Workplan (Third-Party): The Coalition shall submit a Workplan to the Executive Officer for approval, which (1) proposes surface water monitoring locations; (2) proposes a groundwater trend monitoring network; and (3) proposes how the Coalition will meet all group surface and groundwater monitoring requirements on behalf of Enrollees as detailed in Attachment B: Section II. Estimated Cost (one-time): $25,000-

$50,000.

c) Statistical Outlier Methodology (Coalition): The Coalition may choose to submit a methodology for determining outliers of Nitrogen Applied and Nitrogen Removed (AR). Estimated Cost (one-time): $10,000.

d) Water Quality Management Plan (WQMP) (all applicable Enrollees): Enrollees are required to develop and implement a WQMP when adaptive management and/or existing management practices are insufficient to achieve the goal of minimizing the discharge of pollutants to surface water. WQMPs require certification by a Qualified Professional. Estimated Cost (per WQMP): $5,000-$10,000.

H. Enforcement for Noncompliance

1) The State Water Board Water Quality Enforcement Policy (Enforcement Policy) describes progressive enforcement action for violations of WDRs when appropriate. However, the Enforcement Policy recommends formal enforcement as a first response to more significant violations. Progressive enforcement is an escalating series of actions that allows for the efficient and effective use of enforcement resources to: (1) assist cooperative Enrollees in achieving compliance; (2) compel compliance for repeat violations and recalcitrant violators; and (3) provide a disincentive for noncompliance. Progressive enforcement actions may begin with informal enforcement actions such as a verbal, written, or electronic communication between the Regional Water Board and an Enrollee. The purpose of an informal enforcement action is to quickly bring the violation to the Enrollee's attention and to give the Enrollee an opportunity to return to compliance as soon as possible. The highest level of informal enforcement is a Notice of Violation.

2) It is the policy of the State Water Board that every violation results in the appropriate enforcement response consistent with the priority of the violation established in accordance with the Enforcement Policy. This Policy acknowledges that enforcement prioritization enhances the Water Boards' ability to leverage their scarce enforcement resources and to achieve the general deterrence needed to encourage the regulated community to anticipate, identify, and correct violations. To that end, the Water Boards shall rank violations, then prioritize cases for formal discretionary enforcement action to ensure the most efficient and effective use of available resources. The North Coast Regional Water Board Enforcement Coordinator assists with prioritizing cases and implementing this Policy.

3) Any instance of noncompliance with this Order constitutes a violation of the Water Code. Such noncompliance is grounds for enforcement action, and/or termination of coverage for waste discharges under this Order, subjecting the Enrollee to enforcement under the Water Code for further discharges of waste to surface or groundwater.

I. General Findings

1) Pursuant to Water Code section 13263 subdivision (g), the discharge of waste into waters of the state is a privilege, not a right, and regulatory coverage under this Order does not create a vested right to continue the discharge of waste. Failure to prevent conditions that create or threaten to create pollution or nuisance will be sufficient reason to modify, revoke, or enforce this Order, as well as prohibit further discharge.

2) The fact that it would have been necessary to halt or reduce the discharge in order to maintain compliance with this Order shall not be a defense for violations of the Order by the Enrollee.

3) Water Code section 13260 subdivision (d) requires persons subject to waste discharge requirements to pay any annual fee established by the State Water Board.

4) The electronic Notice of Intent (eNOI) serves as a report of waste discharge (ROWD) for the purposes of this Order.

5) The Executive Officer may make non-substantive changes to this Order to correct typographical errors or to maintain consistency within this Order or between the Order and its Attachments, e.g., to conform changes made during this Order development process that were inadvertently not carried through this entire Order. The Board will provide public notice of the non-substantive changes.

6) The Findings of this Order and the administrative record of the Regional Water Board relevant to the General Waste Discharge Requirements for Commercial Vineyards, were considered in establishing these waste discharge requirements.

7) The Regional Water Board, in a public hearing held on December 4, 2024, has heard and considered all comments pertaining to the discharge and proposed Order. After considering all comments pertaining to this General Order during the December public hearing, this Order was found consistent with the Findings of this Order.

II. It Is Hereby Ordered

IT IS HERBY ORDERED that pursuant to Water Code sections 13260, 13263, and 13267, the Enrollee, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted hereunder, shall comply with the following:

All prohibitions, specifications, provisions, and other requirements are described below unless otherwise noted.

A. Coverage Requirements

Requirements for Coverage

1) These General WDRs apply to discharges or potential discharges of waste from commercial vineyards as described in Section I: Findings. Owners and/or operators of commercial vineyards are required to seek coverage under this Order except for commercial vineyards subject to the provision in II.A.3) below. Commercial vineyards are those operations that have one or more of the following characteristics:

    a) The landowner or operator has obtained a pesticide use permit from a local County Agricultural Commissioner,

    b) The crop is sold, including but not limited to (1) an industry cooperative, (2) a harvest crew/company, or (3) a direct marketing location, such as certified Farmers Markets; or

    c) The federal Department of Treasury Internal Revenue Service for 1040 Schedule F Profit or Loss from Farming is used to file federal taxes.

2) An Enrollee may obtain coverage under this Order either individually or by enrolling in an approved Coalition. By joining a Coalition, the Enrollee agrees to be represented by the Coalition. Any Order requirements not fulfilled by the Coalition are the responsibility of the Enrollee. Consistent with the Water Board's Policy for Implementation and Enforcement of the NPS Policy, the ineffectiveness of a Coalition through which an Enrollee participates in nonpoint source control efforts cannot be used as a justification for lack of individual Enrollee compliance. Enrollees are ultimately responsible for Order compliance.

3) Owners and/or operators of commercial vineyards that meet the following criteria shall comply with all general requirements and prohibitions of this Order as described in Sections II.B Prohibitions and II.C General Requirements but are not automatically required to: (1) submit enrollment documents under this Order, (2) conduct water quality monitoring, or (3) submit reports in accordance with the MRP (Attachment A for Individual Enrollees and Attachment B for Enrollees in a

Coalition):

a) Commercial vineyard(s) are not located within one of the following HUC-8 watersheds: Big-Navarro-Garcia, Gualala-Salmon, and Russian.

b) An individual or entity's combined owned or operated holdings of planted vineyard acres in the HUC-8 watersheds identified above do not exceed 5 acres.

4) The Executive Officer may require any owner/operator of a commercial vineyard within the North Coast Region to enroll in this Order and comply with all requirements upon finding that enrollment, monitoring, and reporting requirements are necessary to address threats or impacts to water quality.

Obtaining Coverage and Electronic Notice of Intent

5) Enrollment in this Order requires the submittal of the electronic Notice of Intent (eNOI) (see Attachment F: Templates) pursuant to Water Code section 13260. Submittal of all other technical reports pursuant to this Order is required pursuant to Water Code section 13267. Failure to submit technical reports or the attachments in accordance with the time frames established by this Order, applicable Monitoring and Reporting Program (MRP) documents, or failure to submit a complete technical report (i.e., of sufficient technical quality to be acceptable to the Executive Officer); may subject the Enrollee to enforcement action pursuant to Water Code sections 13261, 13268, or 13350. Enrollees and Third-Parties must submit technical reports in the format specified by the Executive Officer.

6) To obtain coverage under these General WDRs, Enrollees must submit an eNOI form with all required information including but not limited to: Assessor Parcel Numbers (APNs) covered by enrollment; Landowner(s); Operator(s); Contact information; and Coalition membership, if applicable.

7) Enrollees and shall complete an eNOI and enroll in the Order either individually or through an approved Coalition by **July 1, 2027.** Upon submittal of a complete and accurate eNOI, the Regional Water Board shall issue a Notice of Applicability (NOA), at which point the Enrollee shall be considered enrolled under this Order. Members of an approved Coalition shall be considered enrolled pursuant to the NOA issued to that Coalition.

8) eNOIs shall be updated within 60 days of a change in property ownership, grower contact information, email contact information, change in the parcels farmed by a Enrollee.

9) If the Regional Water Board determines that coverage under this Order is not appropriate for any Enrollee, the Executive Officer will inform the Enrollee in writing

and may request that the Enrollee submit a Report of Waste Discharge to obtain an individual permit for the discharge of waste.

10) Coverage under this Order is not transferable to any person except after the completion of a new eNOI and submittal to the Regional Water Board, and written approval by the Regional Water Board's Executive Officer.

11) If the Enrollee is not the landowner, the Enrollee shall provide written notice of the Order and its requirements to any landowner whose parcel is covered by this Order.

Termination of Coverage

12) Enrollees may terminate coverage under this Order by providing written notice to the Regional Water Board's Executive Officer and, if applicable, notice to the Coalition. At a minimum, the written notice must include the reason for terminating coverage (e.g., transfer of ownership, Enrollee applied for and obtained individual WDRs, discharge was discontinued, etc.). The Enrollee shall continue to be subject to the Order requirements, including fees, and comply with this Order until the Regional Water Board notifies the Enrollee in writing that coverage has been terminated.

13) Coverage under this Order is automatically terminated if confirmation of membership in the Coalition is not received from the Coalition during the annual Participant List submittal required by Attachment B: Section V.A, or if the Coalition indicates that the Enrollee is no longer enrolled through the Coalition. To obtain coverage, the Enrollee shall re-submit an eNOI.

14) Any instance of noncompliance with this Order is grounds for enforcement action, and/or termination of coverage for waste discharges under this Order, subjecting the Enrollee to enforcement under the Water Code for further discharges of waste to surface or groundwater.

Fees

15) Enrollees shall pay an annual fee to the State Water Board in compliance with the WDRs fee schedule set forth in California Code of Regulations, title 23, section 2200.6. The Coalition is responsible for collecting these fees from their enrolled members and submitting fees to the State Water Board.

16) A Coalition may require Enrollees enrolled with them to pay any relevant fees necessary to comply with monitoring and reporting conditions of this Order or Enrollees must comply with monitoring and reporting requirements individually.

Enrollment of Newly-Developed Commercial Vineyards

17) Commercial vineyards (Farm Areas and Appurtenant Agricultural Roads)

developed after the date of Order adoption shall comply with all requirements of the Order upon enrollment. Enrollees who do not meet Order requirements upon the date of their enrollment shall be considered in violation of the Order and shall adhere to a Time Schedule Order (TSO) issued by the Executive Officer.

18) Commercial vineyards developed after **July 1, 2027** must enroll for coverage under this Order within 30 days of the newly-developed vineyard being planted.

19) To be eligible for coverage under this Order, Enrollees constructing a new or expanding commercial vineyard must comply with the provisions of CEQA including the Construction Mitigation Measures in Attachment E and certify that they have complied with all applicable requirements. Enrollees may be subject to additional CEQA analysis as part of any local or state approvals necessary for the construction and development of a new vineyard operation.

20) Commercial vineyards developed on an existing Appurtenant Agricultural Road network (e.g., agricultural conversions) shall comply with all Farm Area requirements upon enrollment and shall meet all road requirements within 10 years of enrollment in accordance with Section II.C of this Order.

B. Prohibitions

1) Enrollees must comply with discharge prohibitions contained in the Basin Plan and all other applicable statewide water quality control plans.

2) Discharge of waste from vineyard operations in a manner or location other than that described in the Order or the Notice of Applicability (NOA) is prohibited.

3) Discharges of waste from commercial vineyards that cause or contribute to an exceedance of applicable water quality objectives in surface water and groundwater, adversely affect beneficial uses as defined in the Basin Plan, or cause or contribute to a condition of pollution or nuisance are prohibited. Creation of pollution, contamination, or nuisance (as defined in Water Code §13050) in surface water or groundwater is prohibited.

4) Discharge of waste classified as “hazardous,” as defined in California Code of Regulations, title 23, section 2521, or classified as “designated,” as defined in Water Code section 13173, is prohibited.

5) Discharge of debris, soil, silt, sand, bark, plant waste (including grape pomace), sawdust, rubbish, refuse, oil or petroleum products, or other organic/earthen material or solid waste from any vineyard operation or construction to any surface water other than those authorized by this Order is prohibited. Additionally, none of the materials listed above shall be stockpiled within the Streamside Area, adjacent to a surface water, or where materials may be discharged into a surface water.

6) The use of soil amendments containing any of the following is prohibited:

a) Municipal solid waste, except for biodegradable waste meeting the definition of "compost" as defined in Public Resources Code section 40116.

b) Septage, liquid waste oil, or grease.

c) Hazardous waste, designated waste, or any other waste determined by the Regional Water Board to pose a potential threat to water quality.

7) Re-planting of enrolled commercial vineyards between November 15 and April 1 of each year is prohibited. Re-planting commercial vineyards on Unstable Areas is prohibited unless repaired under the direction of a Qualified Professional. New Agricultural Drainage Structures that discharge onto unstable slopes, earthen fills, or directly to a waterbody are prohibited.

C. General Requirements

1) All management practices shall be properly designed, installed[17], maintained, and promptly repaired. Maintenance of management practices shall include periodic inspection during the winter to confirm their effectiveness and to repair them if needed.

2) Enrollees shall implement management practices that minimize or prevent excess nitrogen application relative to crop need. Proper nutrient management will minimize or prevent nutrients, such as nitrogen, from reaching state waters. Enrollees shall take site-specific conditions into consideration in identifying practices that will be implemented to minimize or prevent nitrate leaching past the root zone.

3) Enrollees shall comply with all mitigation measures in Attachment E: CEQA Mitigation Measures during construction of Ground Disturbing Management Practices[18]. These mitigation measures shall be reported in accordance with Annual Reporting as required in Attachment A: Section VI. and Attachment B: Section V.

Sediment and Erosion Control

4) Enrollees shall implement management practices to minimize, control, or prevent erosion and sediment discharges[19] from all Hydrologically Connected Farm Areas.

5) Enrollees shall a) prioritize Controllable Sediment Discharge Sources (CSDS) within Hydrologically Connected Farm Areas for management practice implementation, b) identify management practices to eliminate or minimize CSDS, and c) implement and/or repair applicable management practices[20] prior to Qualifying Storm Event.

6) Soil disturbance caused by wet season operations in vineyards during saturated soil conditions shall be prioritized for management practice implementation and/or

repair have necessary erosion control[21] applied as soon as is feasible and prior to a forecasted Qualifying Storm Event.

7) To meet Sediment and Erosion Control requirements of this Order, Enrollees shall choose one of two Compliance Options as summarized in Table 5: 1) develop a Sediment and Erosion Control Plan (SECP), or 2) implement minimum Ground Cover between December 15-April 1 of each year for all Hydrologically Connected Farm Areas. Each Compliance Option allows an Enrollee to choose one of two standards of implementation which determines which type of Management Practice Effectiveness Monitoring the Enrollee shall conduct. Enrollees shall refer to Table 5 for a summary of these standards and follow all applicable requirements as described below in this section.

8) To verify that management practices are effective at preventing, controlling, or minimizing sediment discharge to surface waters, Enrollees shall either conduct Agricultural Drainage Structure Monitoring or Photo-Point Monitoring as determined by the Implementation Standards given in Table 5 and described further in this section. Management Practice Effectiveness Monitoring requirements are given in Section III of Attachment A: MRP for Individual Enrollees and Section II of Attachment B: MRP for Enrollees in a Coalition.

9) The Executive Officer may require any Enrollee to conduct Agricultural Drainage Structure Monitoring or to mandate a specific Compliance Option where current management practices are insufficient to minimize or prevent the discharge of excess sediment or other pollutants, or when deemed necessary (e.g., in response to an inspection which documents violations of the Order).

Table 5: Sediment and Erosion Control Compliance Options and Implementation Standards for Management Practice Effectiveness Monitoring :

Compliance Options (Choose one from below:)	**Implementation Standard for Agricultural Drainage Structure Monitoring**	**Implementation Standard for Photo-Point Monitoring**
Sediment and Erosion Control Plan (SECP)	Develop and implement a SECP either individually or through an approved Voluntary Sediment Control Program (Voluntary Program)	Develop and implement a SECP that is certified by a Qualified Professional.
Minimum Ground Cover between December 15-April 1	50% Ground Cover on slopes less than 10% 75% Ground Cover for slopes over 10%	90% planted or rooted Ground Cover.

Sediment and Erosion Control Plan (SECP) Compliance Option

10) Enrollees shall complete and implement a SECP for all applicable enrolled parcels which describes management practices either existing or to be implemented in all Farm Areas to prevent, control, or minimize sediment discharge to surface waters. A single SECP may cover multiple parcels or Farm Areas as is consistent with the farming operation. SECPs shall be implemented continuously and amended upon changes to site conditions. At a minimum, SECPs shall be updated every five years.

11) The SECP shall be developed according to the following standards:

    a) Implementation Standard for Agricultural Drainage Structure Monitoring: Enrollees shall develop and implement a SECP through a Voluntary Program which has been approved by the Regional Water Board for sediment and erosion control compliance according to requirements set forth in Attachment C: Third-Party Program Requirements. Approved Voluntary Programs are listed and updated on the North Coast Vineyards website. The SECP that has been approved by the Voluntary Program shall be maintained at the Enrollee's farming headquarters or primary place of business and shall be provided to Regional Water Board staff on request.

    Enrollees may instead develop and implement an individual SECP using a template provided by the Regional Water Board and available on its website, or an alternate template approved by the Executive Officer. The SECP shall be self-certified by the Enrollee and submitted to the Regional Water Board annually in the Annual Compliance Report.

    b) Implementation Standard for Photo-point Monitoring: The Enrollee shall develop and implement a SECP that is certified and signed by a Qualified Professional. The Certified SECP shall be re-certified every five years, which shall include an on-site visit by the Qualified Professional.

12) At a minimum, the SECP shall include:

    a) Vineyard Map: The map(s) for the SECP shall include all applicable Sediment Management Units and may be an aerial photograph, topographic map, LiDAR-derived shaded relief map, Google Earth image, or equivalent that depicts features at 1-inch = 50 feet or larger scale. A 1-inch=200 feet scale base map is recommended so that smaller features can be discerned and delineated accurately. The Certified SECP map shall include 5-to-40 foot or higher resolution contour intervals, as is consistent with US Geological Survey 7.5-minute quadrangle conventions and identify slopes over 10% using methodologies in Attachment D: Methodologies and Procedures or an alternate methodology approved by the Executive Officer.

The map(s) shall include a north arrow and include the following: (1) parcels labeled by APN, boundaries of planted areas, and boundaries of Sediment Management Areas; (2) hydrology including stream and riparian network[22], Agricultural Drainage Structures , irrigation ditches, reservoirs, ponds, wetlands, and lakes; and springs and seeps; (3) farm buildings and equipment yards; (4) sites of slope instability[23] and erosion; and (5) Appurtenant Agricultural Roads. The Enrollee may use the map developed for the SECP for their Farm Evaluation map requirements.

b) Inventory of Site Conditions: The SECP shall include an inventory of the site conditions on the applicable enrolled parcels that may increase erosion or sediment delivery to Hydrologically Connected surface waters. These site conditions can include but are not limited to areas of erosion and sedimentation[24], Agricultural Drainage Structure Outlets, features upstream or downstream such as grade control structures, bank stabilization structures, and road crossings that may affect bed and bank erosion.

c) Inventory of Management Practices: The SECP shall describe management practices that are already implemented to control erosion and minimize sediment discharges to surfaces waters from all Hydrologically Connected Farm Area sources.

d) Recommended Actions and Implementation Schedule: The Certified SECP shall identify all recommended actions or management practices to be implemented to control erosion and minimize sediment discharges from all Hydrologically Connected Farm Area sources and a schedule of implementation for each recommended action.

e) Agricultural Drainage Structure Monitoring Locations (All SECPs except Certified SECP): The SECP shall locate and establish Agricultural Drainage Structure Monitoring locations in accordance with the requirements in the MRP that are representative of the range in tributary area, slope, soil type, and farming practices across the enrolled parcels for which the SECP is developed.

f) Photo-point locations and Monitoring (Certified SECP Only): Photo-points shall be numbered and depicted on maps contained in the certified SECP, with all associated photographs, records and field notes appended to the SECP.

g) On-Site Visit and Certification (Certified SECP Only): The Certified SECP shall be signed by a Qualified Professional. The Certified SECP shall be re-certified every five years, which shall include an on-site visit by the Qualified Professional. Upon re-certification, the Qualified Professional shall update the SECP with all relevant changes and note any recommended actions that were not accomplished within the schedule of implementation.

13) SECPs developed by the Enrollee must be submitted to the Regional Board by **March 1st** to be applicable for the next growing year[25], otherwise the Enrollee must choose a different Compliance Option. Enrollees with SECPs developed through a Voluntary Program or Qualified Professional shall report this Compliance Option in their annual reporting which is due **July 1st** of each year in accordance with Section VI of Attachment A: MRP for Individual Enrollees and Section IV of Attachment B: MRP for Enrollees in a Coalition.

Minimum Ground Cover Compliance Option

14) Enrollees shall designate Sediment Management Areas for the purposes of establishing compliance with minimum ground cover requirements. A Sediment Management Area is each contiguous planted vineyard area not separated by streams, all-season roads, non-planted areas, or parcel boundaries and not to exceed 10 acres. For contiguous vineyard areas which exceed 10 acres, Enrollees may delineate each 10-acre Sediment Management Area in a manner consistent with their farming operation. Enrollees must delineate Sediment Management Areas such that all Farm Areas (e.g., planted areas, vineyard avenues and areas appurtenant to the commercial vineyard) on an enrolled parcel are included in a Sediment Management Area.

15) In each Sediment Management Area, Enrollees who choose Ground Cover as a Compliance Option shall establish and maintain a minimum Ground Cover between December 15-April 1 at one of two Implementation Standards:

    a) Implementation Standard for Agricultural Drainage Structure Monitoring: 50% Ground Cover for Sediment Management Areas with a slope average of under 10%; and 75% percent Ground Cover for Sediment Management Areas with a slope average of 10% or greater.

    b) Implementation Standard for Photo-point Monitoring: 90% Ground Cover that must be primarily comprised of planted or rooted material. In years in which 90% planted Ground Cover is not attained in a Sediment Management Unit, the Enrollee must conduct Agricultural Drainage Structure Monitoring in that Sediment Management Unit in accordance with the requirements in Section III of Attachment A: MRP for Individual Enrollees and Section II of Attachment B: MRP for Enrollees in a Coalition. Alternatively, the Enrollee may choose to develop a Sediment and Erosion Control Plan in accordance with the SECP requirements above in this section.

16) Enrollees shall deploy or implement sediment and erosion control measures (e.g., linear sediment controls or other applicable management practices) that prevent, control, or minimize sediment discharge to surface waters prior to all Qualifying Storm Events in which they do not meet minimum Ground Cover performance standards.

17) Enrollees shall refer to the methodologies identified in Attachment D: Methodologies and Procedures for calculating slope and ground cover or may propose an alternative methodology to be submitted and approved by the Executive Officer.

18) Individual Enrollees shall report their chosen Compliance Option in their Annual Compliance Report as described in Section VI of Attachment A: MRP for Individual Enrollees. Enrollees in a Coalition shall report this information to the Coalition which will be submitted to the Regional Board in accordance with Section V of Attachment B: MRP.

Appurtenant Agricultural Roads

19) Enrollees shall implement and maintain[26] the following minimum management practices on all Hydrologically Connected Appurtenant Agricultural Roads. Existing road segments shall meet the following specifications within 10 years of the date of the adopted order. New road segments shall meet the following specifications at completion of construction:

    a) Ditches are drained frequently by functional ditch relief culverts and/or rolling dips.

    b) Outflow from ditch relief culverts does not directly discharge to streams.

    c) Ditches and road surfaces drainage do not discharge (through culverts and/or rolling dips) onto active or potential landslides and/or into gullies.

    d) Fine sediment contributions from roads, cutbanks, and ditches are minimized by utilizing road surface shaping (outsloping, insloping, or crowning), rolling dips, ditch relief culverts, water bars, and other measures to disperse road surface runoff and reduce or eliminate sediment delivery to the surface waters.

20) Road segments shall be prioritized for implementation of minimum management practices based on visual observations of quantity of sediment being delivered to surface waters from each road segment.

Streamside Areas

21) For the purposes of this Order, a Streamside Area is comprised of two contiguous components: a Riparian Vegetation Area and a Vegetated Buffer in which different requirements are applied. A Streamside Area is defined as the area between the Ordinary High-Water Mark and where the field side edge of the Vegetated Buffer meets the Farm Area. The Riparian Vegetation Area extends from the Ordinary High-Water Mark to the Vegetated Buffer in Perennial and Ephemeral/Intermittent Streams. The Vegetated Buffer is measured from the Riparian Vegetation Area to the Farm Area along Perennial and Ephemeral/Intermittent Streams, and from the

Ordinary High-Water Mark in Hydrologically Connected Undesignated Channels, Unfarmed Wetlands, and Hydrologically Connected Lakes, Ponds, or On-Stream Reservoirs. Enrollees may refer to Section IV. of Attachment D: Methodologies and Procedures for an example of a Streamside Area.

22) Enrollees shall refer to Table 6 in determining widths for implementation of Streamside Area management practices.

23) Enrollees with vineyards existing at the date of Order adoption that do not meet the minimum widths in Table 6 must comply with minimum widths upon replant of the vineyard or comply with the requirements of the Riparian Vegetation Area Restoration Alternative as described below. Additionally, Enrollees shall comply with all requirements in existing Streamside Areas, regardless of whether or not minimum widths are met at the date of Order adoption.

24) Wetlands that are farmed at the date of Order adoption are not required to meet the Unfarmed Wetland Vegetated Buffer minimum horizontal width listed in Table 6 at the time of replant. However, Enrollees shall ensure that there are no long-term impacts to beneficial uses of the wetlands during replant activities.

Table 6: Streamside Area Minimum Horizontal Width (feet) as Measured from Ordinary High-Water Mark*

Streamside Area component	Perennial Stream	Ephemeral/ Intermittent Stream	Hydrologically Connected Undesignated Channel[27]	Unfarmed Wetland[28]	Hydrologically-Connected[29] Lake, Pond, or On-Stream Reservoir
Riparian Vegetation Area	25	10	N/A	N/A	N/A
Vegetated Buffer	25	15	10	50	50
Total Streamside Area width	50	25	10	50	50

Riparian Vegetation Area Requirements

25) Enrollees shall implement the following management practices in the Riparian Vegetation Area of all Streamside Areas:

a) Allow the natural establishment and abundance of native riparian vegetation to minimize or prevent discharge of sediment, nutrients, excess temperature, and pesticides to surface water.

b) Existing riparian vegetation may not be removed for activities appurtenant to the vineyard operation except for: (1) restoration and planting of vegetation which is native to California and naturally occurs in the local HUC-8 watershed; (2) work necessary for protection of public health or safety, including fire fuel management as required by California Fire Code section 304.1.2.; (3) streamside area restoration outside of jurisdictional waters of the United States or waters of the State[30], (4) removal of riparian vegetation as part of necessary maintenance of existing watercourse crossings[31] and linear utilities, control of invasive species, and permitted surface water diversions[32], or (5) other restoration and/or maintenance projects subject to the prior approval of the Executive Officer.

c) Allow essential functions supporting beneficial uses such as sediment filtering, woody debris recruitment, streambank stabilization, nutrient cycling, pollutant filtering, and shading,(e.g., to achieve site potential effective shade[33].

Vegetated Buffer Requirements

26) Enrollees shall install and/or maintain Vegetated Buffers to minimize or prevent discharges of sediment, nutrients, and pesticides to surface waters. Vegetated Buffers shall be the minimum width (feet) listed in Table 6[34] and shall be measured from the Riparian Vegetation Area to the Farm Area along Perennial and Ephemeral/Intermittent Streams, and from the Ordinary High-Water Mark to the Farm Area in Hydrologically Connected Undesignated Channels, Unfarmed Wetlands, and Hydrologically Connected Lakes, Ponds, or On-Stream Reservoirs.

27) The following activities are not allowed within a Vegetated Buffer:

    a) Construction and/or installation of new permanent structures appurtenant to commercial vineyard operations. (e.g., agricultural roads, water storage, and buildings).

    d) Storage of chemicals, oil, or petroleum products.

    e) Placement of construction materials, trash rubbish, refuse, plant waste, or other organic or earthen material or solid waste.

28) This Order allows All-Season Roads and Seasonal Roads existing at the time of Order adoption within the minimum Vegetated Buffer widths listed in Table 6 to retain their original footprint at replant provided the following management practices are implemented:

    a) Seasonal Roads within the minimum Vegetated Buffer are to be considered part of the vegetated buffer between December 15-April 1 of each year. Enrollees shall install ground cover on these Seasonal Roads to achieve a minimum of 90 percent cover between December 15-April 1 of each year and shall manage and maintain them to minimize, control, or prevent discharges of sediment, nutrients, and pesticides to surface waters.

    b) Enrollees shall improve and maintain All-Season Roads in a manner that minimizes or prevents controls the discharge of sediment to surface waters through implementation of road management practices as described in Section I.C: Appurtenant Agricultural Roads.

Riparian Vegetation Area Restoration Alternative

29) In lieu of meeting the Riparian Vegetation Area minimum widths for Perennial and Ephemeral/Intermittent streams in Table 6, an Enrollee may mitigate the difference in area available for natural succession of riparian vegetation between riparian vegetation existing at the date of Order adoption and Table 6 requirements. Mitigation must be accomplished through restoration and protection of native riparian vegetation at another location within the same sub-watershed (HUC-12). This alternative is only available to vineyards existing at the date of Order adoption.

30) The proposed Restoration Area (length and width) shall be no less than 200 percent of the difference between existing Riparian Vegetation Area and Table 6 requirements. The proposed Restoration Area shall be placed into a conservation easement with sufficient financial resources to fund 20 years of riparian vegetation maintenance and replacement of vegetation that does not survive.

31) Enrollees choosing this option shall implement restoration and protection within the Restoration Area(s) and have the Restoration Area(s) placed within a conservation easement within **five years** following approval of the proposal.

32) Enrollees selecting a Riparian Vegetation Area Restoration Alternative must submit a proposal to the Executive Officer for review and approval no later than **five years** after the date of Order adoption. The proposal must include the information necessary to indicate that the proposed Riparian Vegetation Area Restoration Alternative will satisfy the above requirements. The proposal must consider the following in site selection and restoration design: watercourse type, dimension of restoration area, type and quantity of each category of vegetation to be reestablished (i.e., tree, shrub, forb (non-woody herbaceous plant) and/or grasses); and adequate compensation for the temperature impacts from loss of riparian buffers including shade and discharge of sediment.

33) Restoration projects that discharge materials or pollutants into waters of the state must be authorized by the North Coast Water Board prior to implementation through an applicable permitting program (e.g., 401 Water Quality Certification).

Stream Crossings

34) Stream crossings existing at the date of Order adoption shall meet the following specifications within 10 years of the date of the adopted order:

    a) Critical dips shall be installed at the approaches to culverted crossings that have a diversion potential.

    b) Culvert inlets with high plug potential shall have trash barriers or deflection structures installed.

35) New and replaced stream crossings shall meet the following specifications, after receiving separate approval from the Regional Water Board[35]:

    a) Drainage structure is designed for the 100-year flood flow including woody debris and sediment[36].

    b) Do not have potential to divert the stream out of its channel and cause the stream to flow down the road rather than flow directly over the road fill and back into its natural channel.

    c) Culvert inlets have a low plug potential (trash barriers or deflectors are

installed where needed).

d) Culverts are installed at the base of the fill and in line with the natural channel.

e) Bridges have stable, non-eroding abutments and do not significantly restrict 100-year flood flow.

f) Stream crossing fills are stable.

g) Approaching road surfaces and ditches are “disconnected” from streams and stream crossing culverts to the maximum extent feasible using road shaping and road drainage structures.

h) Class I (fish-bearing) stream crossings meet California Department of Fish and Wildlife and National Marine Fisheries Service fish passage criteria.

D. Monitoring Requirements

1) Individual Enrollees shall comply with all monitoring requirements described in Attachment A: MRP for Individual Enrollees and summarized below. Enrollees in a Coalition shall comply with all monitoring requirements described in Attachment B: MRP for Enrollees in a Coalition and summarized below:

a) Management Practice Effectiveness Monitoring: Enrollees shall conduct either Agricultural Drainage Structure Turbidity Monitoring or Photo-point Monitoring in accordance with the Compliance Option standards they implement as described in Section II.C of this Order.

b) Drinking Water Supply Well Monitoring: Enrollees shall conduct monitoring of all Drinking Water Supply Wells present on enrolled parcels. If a well is identified as exceeding the MCL for nitrate or, a Human Health Reference Level (HHRL), the Primary MCL, or a Public Health Goal for a 6800(a) listed pesticide, the Enrollee shall notify the Regional Water Board and users of the well. Enrollees may elect to have a Coalition conduct Drinking Water Supply Well Monitoring on their behalf, however, results shall be uploaded individually to GeoTracker.

c) Groundwater Trend Monitoring: Individual Enrollees shall annually monitor representative[37] wells to characterize conditions and trends in groundwater quality across their enrolled parcels. On behalf of their Enrollee members, the Coalition shall submit a Workplan for and implement a representative groundwater trend monitoring well network to determine current water quality conditions and to develop long-term groundwater quality information that can be used to evaluate the regional effects of vineyard cultivation. Results shall be submitted and analyzed for trends in the Trend Monitoring Report as described in Section VI of Attachment A: MRP and Section V of

Attachment B: MRP.

d) Representative Surface Water Monitoring (Coalition Only): The Coalition shall submit a Workplan for Executive Officer review and approval that proposes a Tributary Streambed Monitoring and Representative Pesticide Monitoring program that includes all the requirements of Attachment B: Section III. Following approval of the Workplan by the Executive Officer, representative surface water quality monitoring shall be implemented accordingly, and the results of the representative surface quality monitoring program shall be reported in the Trend Monitoring Report.

e) Representative Pesticide Surface Water Monitoring (Individual Enrollees Only): Enrollees shall comply with representative pesticide monitoring requirements as described in Section IV of Attachment A: MRP for Individual Enrollees. In response to increasing trends or an exceedance of a trigger limit of a pesticide, the Enrollee shall follow Adaptive Management requirements in Section II.E of this Order.

Modifications and Reduced Monitoring Provisions

2) This Order allows modifications to monitoring schedules and/or frequencies in cases where: (1) the Enrollee or Coalition has demonstrated overall compliance with requirements of the Order; and (2) monitoring data indicate that the Enrollee or group of Enrollees are not causing, contributing to, or threatening an exceedance of applicable water quality objectives or a condition or pollution or nuisance; or unreasonably affecting applicable beneficial uses.

3) After a minimum of 10 years of Groundwater Trend Monitoring, Streambed Conditions Monitoring, or Representative Pesticide Monitoring, the individual Enrollee or Coalition may submit a request to the Executive Officer for a modification to the scope and frequency of water quality monitoring and reporting. The request must be supported by applicable water quality monitoring data and applicable information to indicate Enrollee compliance with Order requirements (e.g., Farm Evaluation data, inspection reports, or information supplied by the Enrollee or Coalition).

4) The Agricultural Drainage Structure Turbidity Monitoring frequency for an Enrollee is reduced from annually once every five (5) years under the following conditions: (1) the Enrollee has collected and reported at least five years of Agricultural Drainage Structure Turbidity Monitoring data; (2) there have been zero exceedances of the 250 NTU benchmark in any monitored location; and (3) there have been no NOV(s) related to this Order issued on the applicable parcel(s). Individual Enrollees shall report to the Regional Board in their Annual Compliance Report if they meet these conditions and will begin conducting monitoring at a reduced frequency. The Coalition will report to the Regional Board all of their Enrollees who meet these conditions and are monitoring at a reduced frequency. If

any Agricultural Drainage Structure exceeds 250 NTU, the Enrollee must return to an annual monitoring schedule for that Agricultural Drainage Structure and comply with associated Adaptive Management requirements.

5) The Executive Officer may revoke reduced monitoring frequencies and re-instate monitoring schedules indicated in the MRP for Enrollee(s) who no longer meet the conditions for which reduced monitoring was granted.

E. Adaptive Management

1) Adaptive management is an iterative process which requires improvement of management practices where visual observations and/or water quality monitoring data indicate that current practices on the commercial vineyard may not be sufficient to minimize or prevent the discharge of waste.

2) Enrollees shall comply with the Adaptive Management process, schedule, and threshold triggers as described and defined for each parameter in Attachment A: MRP for Individual Enrollees, and Attachment B: MRP for Enrollees in a Coalition.

3) Adaptive Management is triggered in response to the following:

   a) Agricultural Drainage Structure Turbidity Monitoring: Consecutive exceedances of the 250 Nephelometric Turbidity unit (NTU) turbidity benchmark as defined and described in Attachment A: Section III.A for Individual Enrollees, and in Attachment B: Section II.A for Enrollees in a Coalition. Exceedances of the 250 NTU turbidity benchmark in any one monitoring location for four consecutive years shall trigger the development of a Water Quality Management Plan (WQMP).

   b) Representative Pesticide Monitoring: Enrollees shall develop a Water Quality Management Plan in response to an increasing trend in the concentration of a detected pesticide over a five-year period or an exceedance of a pesticide benchmark if they have applied that pesticide Requirements are described in Attachment A: Section IV for Individual Enrollees and Attachment B, Section III.B for Enrollees in a Coalition.

   c) Adaptive Management may be required by the Executive Officer where current management practices are insufficient to minimize or prevent the discharge of excess sediment or other pollutants. The Executive Officer may require the Enrollee to develop and implement a WQMP when deemed necessary (e.g., in response to an inspection which documents violations of the Order, or upon failure to implement required management practices of this Order).

Water Quality Management Plan

4) A Water Quality Management Plan (WQMP) shall be developed and implemented

when Adaptive Management and/or existing management practices are insufficient to achieve the goal of preventing or minimizing the discharge of waste to surface water. A certified SECP as described in Section II.C of this Order shall be accepted as a WQMP if it meets all requirements below.

5) The WQMP shall describe and provide a schedule for the implementation of management practices to meet the requirements of the Order and achieve the goal of preventing or minimizing the discharge of waste to surface waters.

6) At a minimum the WQMP must include:

    a) An inventory of potential discharge sources in the Farm Area(s). The WQMP shall evaluate and inventory discharge sources specific to the pollutant for which the WQMP is being developed (i.e., sediment, pesticides, or nitrates).

    b) A plan for compliance that addresses and includes:

        i) A demonstration that implementing management practices will address and comply with requirements and prohibitions.

        ii) Prioritization of efforts to minimize or prevent the discharge of waste, but not limited to, severity of threat to water quality and beneficial uses, the feasibility of source control, and source site accessibility.

        iii) Schedule of implementation

        iv) A proposed management practice effectiveness monitoring plan that documents effectiveness and requires adaptive management of practices until the WQMP is deemed complete by the Executive Officer and the Farm Area complies with all requirements and prohibitions in this Order.

7) The WQMP must be prepared and certified in one of the following ways:

    a) The WQMP is developed and certified by a Qualified Professional and submitted to the Regional Water Board; or

    b) The WQMP is prepared and certified in an alternative manner approved by the Executive Officer. Such approval will be provided based on the Executive Officer's determination that the alternative method for preparing the WQMP meets the objectives and requirements of this Order.

8) Following certification, Enrollees shall submit the WQMP to the Regional Board. The Enrollee shall implement the WQMP and submit an annual update beginning one year after the initial WQMP submittal and annually thereafter until the following criteria are met:

a) The Farm Area complies with all requirements of this Order, and

b) The following requirement(s) are met:

i) For WQMPs developed in response to turbidity exceedances: There are no further exceedances of the turbidity benchmark in the required on-farm sampling locations for which the WQMP was developed.

ii) For WQMPs developed in response to pesticide exceedances: There are no further exceedances of the downstream surface water monitoring location that triggered development of the WQMP.

iii) For WQMPs developed in response to the Enrollee being in a township that has exceeded the Groundwater Protection (GWP) Target: The township no longer exceeds the GWP Target, or a determination is made by the Regional Water Board that vineyard practices are not causing or contributing to the GWP Target being exceeded in the township.

9) The WQMP Update shall include the following elements:

a) Implementation update of management practices.

b) Monitoring and recordkeeping necessary to demonstrate the effectiveness of implemented management practices to comply with all requirements and prohibitions of this Order.

10) Once requirements are met, the Regional Water Board will deem the WQMP complete and notify the Enrollee. The Enrollee may then cease submitting annual WQMP updates.

F. Reporting Requirements

General Reporting Requirements

1) All water quality monitoring data shall be submitted and reported in accordance with the following sections within the Monitoring and Reporting program:

a) Individual Enrollees shall report all water quality monitoring data in accordance with Attachment A: Section VI.

b) Enrollees in a Coalition shall submit all water quality monitoring data in accordance with Attachment B: Section IV.

c) The Coalition shall submit all water quality monitoring data in accordance with Attachment B: Section V on behalf of their enrolled Enrollees.

2) As described below, Enrollees must complete a Farm Evaluation, an Irrigation and

Nitrogen Management Plan (INMP), and an Annual Compliance Form using the templates provided either in Attachment F: Templates or provided by the Regional Water Board on its website. An Enrollee may propose an alternate template that meets applicable reporting requirements to the Executive Officer and, upon approval, use that template for reporting.

Annual Compliance Report

3) Individual Enrollees shall submit an Annual Compliance Report that consists of:

   a) Farm Evaluation,

   b) Irrigation and Nutrient Management Plan (INMP),

   c) Outreach event attendance,

   d) Individual water quality monitoring results, and

   e) CEQA Mitigation Measures Monitoring for mitigation measures in Attachment E.

4) The Coalition shall submit an Annual Compliance Report on behalf of its Enrollees that consists of:

   a) The Coalition participant list,

   b) Farm Evaluation data,

   c) INMP summary data,

   d) Nitrogen Applied and Removed (AR) data, reported by township, range and section,

   e) Outreach event attendance records, and

   f) CEQA Mitigation Monitoring in accordance with the schedule and details as outlined in Attachment E.

5) The Coalition may develop anonymous Enrollee identification numbers for the reporting of Enrollee data. The Coalition shall maintain and track Enrollee ID from year to year.

6) The Coalition shall submit Farm Evaluation and INMP Summary Report data by anonymous Enrollee ID, APN, and by township.

7) The Regional Water Board's Executive Officer may require the Coalition to directly provide data for individual Enrollees (without anonymous identifiers).

8) Individual Enrollees shall upload the Annual Compliance Report to GeoTracker by **July 1st** of each year. Coalitions shall submit an Annual Compliance Report to the Regional Water Board on behalf of their Enrollees by **July 1st** of each year.

Farm Evaluation

9) The purpose of the Farm Evaluation is to report management practices implemented. All Enrollees shall implement and submit an individual Farm Evaluation as detailed in Attachment A: Section VI for Individual Enrollees and Attachment B: Section IV for Enrollees in a Coalition to identify the type and location of management practices currently used on their commercial vineyard and additional management practices based on current conditions needed to prevent or minimize erosion and sediment, nutrient, and pesticide discharges to waters of the state from all Farm Area sources.

10) A copy of the Farm Evaluation shall be maintained at the Enrollee's farming headquarters or primary place of business and shall be provided to Regional Water Board staff on request.

11) Enrollees shall ensure that all management practices identified in the Farm Evaluation are properly operated, maintained, and promptly repaired in accordance with Section II.C of this Order. Enrollees shall annually certify in their Farm Evaluation that maintenance and periodic inspection of management practices were completed. Enrollees shall indicate where management practices are not sufficient to meet the requirements of the Order and shall implement adaptive management in response.

12) An Enrollee or group of Enrollees may request less frequent Farm Evaluation submittals to the Regional Water Board's Executive Officer if Farm Evaluation reporting has occurred for at least five (5) consecutive years, there have been minimal changes to reported practices in the Farm Evaluation, and no changes are anticipated in the next five years.

Irrigation and Nitrogen Management Plan (INMP)

13) Enrollees shall prepare and implement an Irrigation and Nitrogen Management Plan (INMP) for each parcel[38] and submit their INMP for the previous growing season in the Annual Compliance Report either to the Regional Water Board or Coalition as detailed in Attachment A: Section VI and Attachment B: Section IV.

14) The INMP shall include the information necessary for calculating an Applied/Removed (A/R) ratio for nitrogen, and an Applied-Removed (A-R) difference for nitrogen, as defined in the equations in Table A.5 of Attachment A and Table B.7 of Attachment B and collectively referred to as Nitrogen Applied and Removed (AR).

15) A copy of the INMP shall be located at the Enrollee's farming operations headquarters or primary place of business. The Enrollee must provide the INMP to Regional Water Board staff, if requested.

16) The Executive Officer may approve the use of multi-year INMPs for Enrollees or groups of Enrollees with consistent irrigation and nitrogen planning from year to year. Multi-year plans cannot exceed three years in length, and if the Enrollee decides to vary from the plan during its implementation period, a new INMP must be prepared and implemented. Enrollees using multi-year INMPs must submit INMP data annually either in their Annual Compliance Report or to the Coalition.

17) After no less than five years of INMP Reporting, the Executive Officer may approve reduction in the frequency of submission of INMP data, if the Enrollee or Coalition demonstrate that year-to-year changes in INMP data are minimal and the Executive Officer concurs that the implemented practices are not causing or contributing to exceedances of water quality objectives and/or trends of degradation that may threaten applicable Basin Plan beneficial uses.

18) The Regional Water Board does not require that each Enrollee's INMP be certified at this time. However, Enrollees identified as statistical outliers as described in this section, must work with an Irrigation and Nitrogen Management Planning Specialist for certification of the next INMP prepared following notification. On their next INMP, these Enrollees must also report that they were notified as outliers for reported AR data and reflect additional or improved management practices implemented to address potential over-application of nitrogen. All Enrollees in 'high vulnerability' areas, if designated at a later date will need to have their INMP certified. The INMP shall be certified in one of the following ways:

    a) Certified by an Irrigation and Nitrogen Management Planning Specialist[39]. The specialist that certifies the INMP must be capable of answering questions relevant to the INMP and should be fully competent and proficient by education and experience in the field(s) relevant to the development of an INMP; or

    b) Self-certified by the Enrollee who attends a California Department of Food and Agriculture (CDFA), or other Executive Officer approved Third-Party training for INMP certification. The Enrollee must retain written documentation of their attendance in the Third-Party training; participate and obtain documentation of such participation in any continuing education required by CDFA; and make such documentation available to the Regional Board on request; or

    c) Self-certified by the Enrollee that the plan adheres to a site-specific recommendation from the Natural Resources Conservation Service (NRCS) or the University of California Cooperative Extension. The Enrollee must retain written documentation of the recommendation provided and make

such documentation available to the Regional Board on request; or

d) Self-certified by the Enrollee if the Enrollee states that the Enrollee applies no fertilizer and no recycled water to the vineyard; or

e) Certified in an alternative manner approved by the Executive Officer. Such approval will be provided based on the Executive Officer's determination that the alternative method for preparing the INMP meets the objectives and requirements of this Order.

Nitrogen Applied and Removed Statistical Outliers

19) Following the initial five years of INMP reporting, a set of statistical outliers[40] for Individual Enrollees will be determined by the Regional Water Board based on reported AR data as described in Attachment A and Attachment B.

20) Following the initial five years of INMP reporting, the Coalition may propose an approach (see Attachment B: Section V.D) on behalf of their Enrollees, to be approved by the Regional Water Board's Executive Officer after public notice and comment, that defines a set of statistical outliers based on reported AR data. This approach may define statistical outliers on an annual or multi-year basis not exceeding three years.

21) The Regional Water Board shall define a methodology for determining statistical outliers if the Coalition does not submit a methodology by **July 1st,** of the seventh year following initial INMP reporting. Using this methodology, the Coalition shall notify any statistical outliers among their Enrollees annually.

22) Enrollees identified as statistical outliers by the Regional Water Board or the Coalition shall have their next INMP certified in one of the manners outlined above. On their next INMP, these Enrollees must also report that they were notified as outliers for reported AR data and reflect additional or improved management practices implemented to address potential over-application of nitrogen.

Groundwater Protection Formula and Targets

23) The Regional Water Board will not be requiring the development of township-level targets for nitrogen loading at this time, because the Regional Water Board does not have sufficient data and information at this time to indicate "high vulnerability areas" where commercial vineyards may be causing or contributing to exceedances of water quality objectives and/or trends of degradation that may threaten applicable Basin Plan beneficial uses.

24) As more data becomes available through monitoring and reporting under these General WDRs, the Regional Water Board's Executive Officer may later identify "high vulnerability areas" where discharges from commercial vineyards may be causing or contributing to exceedances of water quality objectives, or a trend of

degradation of groundwater quality that may threaten applicable Basin Plan beneficial uses.

25) The Executive Officer shall evaluate new data following at least five years of INMP reporting and groundwater trend monitoring to determine if any geographic areas qualify as "high vulnerability areas" for the development of township-level groundwater protection formulas, values, and targets. The Executive Officer will issue a letter to all Enrollees should this determination be made. The methodology for determining township-level nitrogen targets shall be subject to public review and comment.

26) Should the Executive Officer determine "high vulnerability areas" and require Groundwater Protection Targets in those areas, the following requirements will go into effect:

    a) By **July 1st** two years following the "high vulnerability" designation, the Coalition may elect to submit a Groundwater Protection Workplan to propose a Groundwater Protection (GWP) Formula to the Executive Officer. If this option is elected, the Coalition shall use the GWP Formula to compute GWP Values for each township in high vulnerability areas. The proposed GWP Formula and Values shall be submitted to the Executive Officer for approval, following an opportunity for public review and comment. If no Groundwater Protection Workplan is submitted, the Executive Officer will establish Groundwater Protection Formulas, Values and Targets, subject to public review and comment.

    b) By **July 1st** the year following approval of the GWP Formula and Values, the Coalition may submit Groundwater Protection Targets (GWP Targets) for each township within a "high vulnerability" area. The Regional Board will review and revise as necessary every five years.

    c) Following approval or establishment of GWP Targets, the Coalition shall report annual and 5-year average nitrogen loading rates for each township in the Trend Monitoring Report and compare the actual loading rate with the township's GWP Targets.

    d) For townships that exceed the GWP Target in a single Trend Monitoring Report period, the Coalition will propose an outreach strategy for approval by the Executive Officer that will (1) notify all their Enrollees within the township, and (2) focus on adaptive management of irrigation and nitrogen management practices within that township.

    e) The Coalition shall notify their Enrollees within each township that exceeds its GWP Target in 2 or more Trend Monitoring Report cycles. The Regional Board will notify Individual Enrollees within each township exceeding its GWP Target in 2 or more Trend Monitoring Report cycles. Within 2 years of

notification, all Enrollees in that township shall submit a WQMP in accordance with Section II.E of this Order that addresses irrigation and nitrogen management.

G. Outreach and Education

1) Enrollees shall participate in outreach and education[41] annually that focuses on: (1) actions necessary to attain compliance with water quality standards; and (2) and practices to prevent or minimize the discharge of sediment, pesticides, and nutrients to receiving waters.

2) Enrollees shall document annual outreach and education in the Annual Compliance Form as specified in Attachment A: MRP for Individual Enrollees and Attachment B: MRP for Enrollees in a Coalition.

H. Provisions

Noncompliance

1) Enrollees shall comply with all conditions of this Order. Noncompliance is a violation of the Porter-Cologne Water Quality Control Act (Water Code, § 13000 et seq.) and grounds for: (1) an enforcement action; (2) termination, revocation and reissuance, or modification of these waste discharge requirements; or (3) denial of an Order renewal application, or a combination thereof. Coalition(s) shall also comply with all relevant conditions of this Order on behalf of the Enrollees enrolled through their program(s).

2) Enrollees shall report any noncompliance that may endanger human health or the environment. Information shall be provided orally to the Regional Water Board office and the Office of Emergency Services within twenty-four (24) hours of when the Enrollee becomes aware of the incident. If noncompliance occurs outside of business hours, the Enrollee shall leave a message on the Regional Water Board's office voicemail. A written report shall also be provided within five business days of the time that the Enrollee becomes aware of the incident. The written report shall contain a description of the noncompliance and its cause, the period of noncompliance, the anticipated time to achieve full compliance, and the steps taken or planned, to reduce, eliminate, and prevent recurrence of the noncompliance.

Deadline Extension Requests

3) Enrollees or a Coalition may request an extension of a deadline in this Order by submitting a Request for Extension to the Executive Officer 60 days prior to the deadline. The request shall include an explanation of failure to meet the deadline and a proposed time schedule to come into compliance with this Order.

Enforcement

4) Enrollees, regardless of enrollment pathway, and any non-Enrollee owner or operator, bears ultimate responsibility for complying with this Order. The Regional Water Board reserves the right to take any enforcement action authorized by law. Accordingly, failure to comply with any provisions of this Order may subject Enrollees to enforcement action. Such actions include, but are not limited to, the assessment of administrative civil liability pursuant to Water Code sections 13323, 13268, and 13350, a Time Schedule Order issued pursuant to Water Code section 13300 or 13308, issuance of a Cease-and-Desist Order pursuant to Water Code section 13301, Cleanup and Abatement Order pursuant to Water Code section 13304 or referral to the California Attorney General for recovery of judicial civil liability. Enrollees shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment.

5) For Coalition(s), failure to comply with the applicable terms and conditions of this Order or the Third-Party Program requirements in Attachment C may result in revocation of approval to act as a Coalition or any other remedy provided by law. Affected Enrollees would be required to join an approved Coalition, meet requirements for Enrollees not represented by a Coalition, or obtain coverage under other applicable general or individual WDRs.

Inspection and Entry

6) Consistent with Water Code section 13267, subdivision (c), Enrollees and Coalition(s) shall allow the Regional Water Board, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

   a) Enter the premises regulated by this Order, or the place where records are kept under the conditions of this Order,

   b) Have access to and copy records kept under the conditions of this Order,

   c) Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order on a schedule consistent with CDPR pesticide re-entry intervals, and

   d) Sample or monitor for the purpose of ensuring compliance with this Order, or as otherwise authorized by the Water Code, any substances or parameters at locations regulated under this Order.

Records Retention

7) Enrollees and Coalitions, as appropriate, shall retain copies of all reports required by this Order and the associated MRP. Records shall be maintained for a minimum of ten years from the date of the sample, measurement, report, or application.

Records may be maintained electronically, and the Coalition must store backup files in a secure, offsite location managed by an independent third-party entity. This period may be extended during the course of any unresolved litigation or when requested by the Regional Water Board's Executive Officer.

8) Enrollees and Coalitions shall provide copies of any or all records when requested by Regional Water Board staff. Electronic submittals are acceptable.

Electronic Reporting

9) Enrollees and Coalition(s), as appropriate, shall submit reports and information required for Regional Water Board Executive Officer approval under this Order in an electronic format[42] via email to NorthCoast@Waterboards.ca.gov.

Claims for Exemption from Public Disclosure

10) If the Coalition and/or an Enrollee asserts that all or a portion of a report submitted pursuant to this Order is subject to an exemption from public disclosure (e.g., due to proprietary or trade secret information), the Coalition and/or Enrollee must provide an explanation of how those portions of the reports are exempt from public disclosure. The Coalition and/or Enrollee must clearly indicate on the cover of the report (typically an electronic submittal) that all or a portion of the report is exempt from public disclosure, submit a complete report with those portions that are asserted to be exempt in redacted form, submit separately (in a separate electronic file) unredacted pages (to be maintained separately by staff). Regional Water Board staff will determine whether any such report or portion of a report qualifies for an exemption from public disclosure. If staff disagrees with the asserted exemption from public disclosure, staff will notify the Enrollee prior to making such report or portions of such report available for public inspection.

Signature and Certification

11) All documents and reports requested herein shall be signed and dated by a duly authorized representative and shall contain a statement by the Enrollee, or as appropriate by an authorized representative of the Enrollee (e.g., Third-Party representative), certifying under penalty of perjury under the laws of the State of California, that the report is true, complete, and accurate. The document and/or report shall be submitted under the title: "General Waste Discharge Requirements for Commercial Vineyards."

Violation of Law and Property Rights

12) This Order does not authorize violation of any federal, state, or local laws or regulations.

13) This Order does not convey property rights of any sort, or exclusive privileges, nor does it authorize injury to private property or invasion of personal rights.

Modification, Revocation, Termination

14) This Order may be modified, revoked and reissued, or terminated as appropriate. The filing of a request by a Enrollee for an Order modification, rescission, or reissuance, or a Enrollee's notification of planned changes or anticipated noncompliance, does not stay any Order condition.

15) Any person aggrieved by this Regional Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. The State Water Board must receive the petition by 5:00 p.m. on the 30th day after the date of this Order; if the 30th day falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the statutes and regulations applicable to filing petitions are available on the State Water Board's website and can be provided upon request.

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100
Or by email at waterqualitypetitions@waterboards.ca.gov

Instructions to file a petition:
(http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml)

III. Certification

I, Valerie Quinto, Executive Officer do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California North Coast Regional Water Quality Control Board, on December 4, 2024.

Valerie Quinto
Executive Officer
California Water Quality Control Board,
North Coast Region

Appendix I: Acronyms and Definitions
Appendix II: Figures
Attachment A: Monitoring and Reporting Program for Individual Enrollees
Attachment B: Monitoring and Reporting Program for Enrollees in a Coalition
Attachment C: Third-Party Program Requirements
Attachment D: Methodologies and Procedures
Attachment E: California Environmental Quality Act Mitigation Measures
Attachment F: Templates

Appendix I: Acronyms, Definitions, and Endnotes

I. Acronyms and Abbreviations

Acronym/Abbreviation	Term
Antidegradation Policy	State Water Board Resolution 68-16, the Statement of Policy with Respect to Maintaining High Quality Waters in California
Basin Plan	Water Quality Control Plan for the North Coast Basin
BPTC	Best practicable treatment or control
CalFIRE	California Department of Forestry and Fire Protection
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CDPR	California Department of Pesticide Regulation
CDPH	California Department of Public Health
CEDEN	California Environmental Data Exchange Network
CEQA	California Environmental Quality Act
COLD	Cold Freshwater Habitat Beneficial Use
CN	Nitrogen Removal Coefficient
CSDS	Controllable Sediment Discharge Sources
CRHR	California Register of Historical Resources
CWA	Clean Water Act
DDW	State Water Board, Division of Drinking Water
DWR	Department of Water Resources
EIR	Environmental Impact Report
ESJ Order	Eastern San Joaquin Order (State Board Order WQ 2018-0002).

Acronym/Abbreviation	Term
ELAP	Environmental Laboratory Accreditation Program
Enforcement Policy	State Water Board Water Quality Enforcement Policy
eNOI	Electronic Notice of Intent
GPS	Global Positioning System
GWP	Groundwater Protection (see GWP Formula, GWP Values, GWP Targets)
HUC	Hydrologic Unit Code
ILRP	Irrigated Lands Regulatory Program
INMP	Irrigation and Nitrogen Management Plan
IPM	Integrated Pest Management
MCL	Maximum Contaminant Level
MDL	Method Detection Limit
mg/L	Milligrams per Liter
MRP	Monitoring and Reporting Program
NCRWQCB	North Coast Regional Water Quality Control Board
Nitrogen AR	Nitrogen Applied and Removed
NOA	Notice of Applicability
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NPS	nonpoint source
NPS Policy	State Water Board Policy for the Implementation and Enforcement of the Nonpoint Source Pollution Control Program
NRCS	Natural Resources Conservation Service

Acronym/Abbreviation	Term
NTU	Nephelometric Turbidity Units
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
QAPP	Quality Assurance Project Plan
Regional Water Board	North Coast Regional Water Quality Control Board
RFP	Request for Proposal
ROWD	Report of Waste Discharge
Sediment TMDL Policy	TMDL Implementation Policy Statement for Sediment Impaired Receiving Waters in the North Coast Region
SGMA	Sustainable Groundwater Management Act
State Water Board	State Water Resources Control Board
SWAMP	Surface Water Ambient Monitoring Program
Temperature Policy	Implementation of the Water Quality Objectives for Temperature
Trend Monitoring Report	Water Quality Trend Monitoring Report
TMDL	Total Maximum Daily Load
µg/L	Micrograms per Liter
UCCE	University of California Cooperative Extension
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
Water Code	California Water Code
WDRs	Waste Discharge Requirements
WQMP	Water Quality Management Plan

II. Definitions

The following definitions apply to Order No. R1-2024-0056 and its associated attachments, including the MRP. The terms are arranged in alphabetical order. All other terms not explicitly defined here for the purposes of this Order and the MRP have the same definitions as defined by Water Code Division 7 or are explained within the Order or MRP documents.

Abandoned Well. A well is considered “abandoned” when it has been destroyed in accordance with local and state well standards. An abandoned well is not synonymous with an “inactive well” (see also Inactive Well).

Active Well. A water well that is in operation/use.

Adaptive Management. The iterative process of modifying existing management practices or incorporating new scientific and programmatic information into the implementation of management practices to ensure the goals of the Order are achieved.

Agricultural Drainage Structure. Features that collect, convey, channel, hold, inhibit, retain, detain, infiltrate, divert, treat, or filter stormwater runoff, including detention and retention basins, overland flow paths, pipes, channels, and the inlets and outlets to these features. These can include vineyard tile drains and similar subsurface drainage structures. They do not include drainage alteration for private roads and driveways, dams, reservoirs, lakes, ponds, and structures. These features may also be classified as Class IV watercourses that do not support native aquatic species and are man-made, provide established domestic, agricultural, hydroelectric supply, or other beneficial use.

All-Season Road. An Appurtenant Agricultural Road that has a surface which is suitable for use by motorized vehicles throughout the entire year and is normally maintained for such use during the wet season.

Antidegradation. The State Water Board established a policy to maintain high quality waters of the State - Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality Waters in California." Resolution No. 68-16 requires existing high-quality water to be maintained until it has been demonstrated that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of water, and will not result in water quality less than that prescribed in the policies. When authorizing the discharge of waste into waters of the state, Regional Water Boards are required to comply with Resolution No. 68-16. Orders issued by the Regional Water Board must result in the best practicable treatment or control of the discharge necessary to assure pollution or nuisance will not occur and maintain the highest water quality consistent with maximum benefit to the people of the state. Resolution No. 68-16 has been approved by the USEPA to be consistent with the federal antidegradation policy (40 CFR 131.12).

Appurtenant. Belonging to, pertinent to, or used for the vineyard operation.

Appurtenant Agricultural Road. An agricultural road used for vineyard operations which connects or is used to access vineyard blocks under the ownership or control of the vineyard landowner or operator. Appurtenant Agricultural Roads can be All-Season Roads or Seasonal Roads (e.g., Vineyard Avenues) depending on whether the road is surfaced and maintained for use in the wet season.

Authorized Agent. An authorized agent is an individual, agency, or entity who has been given the power to act on behalf of another individual, agency, or entity (such as a farm or operation).

Authorized Representative. An individual, agency, or entity who acts on behalf of another individual, agency, or entity (such as an approved Third-Party program staff, Enrollee, or consultant retained by an approved Third-Party program acting on behalf of an individual grower or the Regional Water Board).

Basin Plan. The Basin Plan is the North Coast Region's Water Quality Control Plan. The Basin Plan describes how the quality of the surface and groundwater in the North Coast Region should be managed to provide the highest water quality reasonably possible. The Basin Plan includes beneficial uses, water quality objectives, and a program of implementation.

Beneficial Uses. The Basin Plan establishes the beneficial uses to be protected in the North Coast Region. Beneficial uses for surface water and groundwater have been identified in waterbodies within the Region: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Service Supply (IND), Industrial Process Supply (PRO), Groundwater Recharge (GWR), Freshwater Replenishment (FRSH), Navigation (NAV), Hydropower Generation (POW), Water Contact Recreation (REC-1), Non-Contact Water Recreation (REC-2), Commercial and Sport Fishing (COMM), Cold Freshwater Habitat (COLD), Warm Freshwater Habitat (WARM), Wildlife Habitat (WILD), Preservation of Areas of Special Biological Significance (ASBS), Preservation of Areas of Special Rare, Threatened, or Endangered Species (RARE), Marine Habitat (MAR), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), Shellfish Harvesting (SHELL), Estuarine Habitat (EST), Aquaculture (AQUA), Native American Culture (CUL), Flood Peak Attenuation/Flood Water Storage (FLD), Wetland Habitat (WET), Water Quality Enhancement (WQE), Subsistence Fishing (FISH), Inland Saline Water Habitat (SAL).

Commercial Vineyard. Land planted in winegrapes including vineyard avenues (Seasonal Roads) and Appurtenant Agricultural Roads/structures that has one or more of the following characteristics: (1) The landowner or operator holds a current Operator Identification Number/Permit Number for pesticide use reporting; (2) The crop and/or its product is sold, including but not limited to (a) an industry cooperative, (b) harvest crew/company, or (c) a direct marketing location, such as Certified Farmers Markets; or (3) the federal Department of Treasury Internal Revenue Service form 1040 Schedule F

Profit or Loss from Farming is used to file federal taxes.

Concentration. The relative amount of a substance mixed with another substance. An example is 5 mg/L of nitrogen in water or 5 ppm (parts per million).

Controllable Sediment Discharge Sources (CSDS). Areas discharging or having the potential to discharge sediment to waters of the state in violation of water quality standards or other requirements of this Order caused or affected by human activity and may feasibly and reasonably respond to management practices. Examples of CSDS include, but are not limited to ruts, ground disturbance, or damage caused by accessing Farm Areas during saturated soil conditions; landslides, areas of slope instability, areas of headward erosion, rills and gullies, soil stockpiles, seasonal vineyard roads/avenues, equipment staging areas, mixing and loading sites, or any other site discharging or threatening to discharge sediment to surface water.

Cover Crop. (See Ground Cover).

Discharge. A release of a waste to waters of the state, either directly to surface waters or through percolation to groundwater. Wastes from irrigated agriculture include but are not limited to earthen materials (soil, silt, sand, clay, and rock), inorganic materials (metals, plastics, salts, boron, selenium, potassium, nitrogen, phosphorus, etc.) and organic materials such as pesticides. Discharges from commercial vineyards regulated by this Order include discharges to surface water and groundwater, through mechanisms such as stormwater runoff flowing from irrigated lands, stormwater runoff conveyed in Agricultural Drainage Structures , and runoff resulting from frost control or operational spills. These discharges can contain wastes that could affect the quality of waters of the state and impair beneficial uses.

Discharge Point. A discharge point is defined as a location where surface water discharges, which are in hydrologic connection to off-farm surface waters, leave the Enrollee's property. A discharge point is any Hydrologically Connected discharge that is not an Agricultural Drainage Structure as defined above.

Disturbance. When natural conditions have been modified in a way that may result in waste discharge to waters of the state from the site. Disturbed areas are where natural plant growth has been removed, whether by physical, animal, or chemical means, or natural grade has been modified for any purpose. Disturbance includes all activities whatsoever associated with developing or modifying land for agricultural related activities or access. Disturbance activities include, but are not limited to, construction of roads, buildings, water storage areas; excavation, grading, and site clearing. Disturbance includes crop areas, storage areas where soil or chemicals (e.g., pesticides, fertilizers, compost, or biosolids) are located.

Drinking Water Supply Well. Any groundwater well that is connected to a residence, workshop, or place of business that may be used for human consumption, cooking, or sanitary purposes that is located within the enrolled Assessor Parcel Number (APN).

This includes all domestic wells located within the enrolled APN, not limited to the leased property or within the ranch boundary. This definition includes “dual-use” wells that are used for both irrigation and domestic purposes. The State Water Resources Control Board (State Water Board), Groundwater Ambient Monitoring and Assessment (GAMA) Program defines an individual well serving a single residential connection as a “private domestic well.” For the purposes of this Order, a “private domestic well” is a Drinking Water Supply Well if it is located on the enrolled parcel and there are drinking water users of that well.

Enrollee. A Landowner or Operator enrolled in the Vineyard Order. See also Landowner, Operator.

Ephemeral Stream. A Class III watercourse. A body of flowing water that contains water for only part of the year, but more than just after rainstorms and as snowmelt as shown in the NHD shapefile. In the absence of diversion, water is flowing less than three months during a typical year and the stream does not support riparian vegetation or aquatic life. Ephemeral watercourses typically have water flowing for a short duration after precipitation events or snowmelt and show evidence of being capable of sediment transport.

Erosion. The gradual destruction of land surface by wind or water, intensified by land-clearing practices related to farming, residential or industrial development, road building, or logging.

Exceedance. A reading using a field instrument or a detection by a California State-certified analytical laboratory where the detected result is above an applicable water quality standard for the parameter or constituent.

Farm Area. The planted area and appurtenant structures, vineyard avenues (Seasonal Roads), maintenance areas, mixing and loading sites, and appurtenant storage yards on a commercial vineyard.

Ground Cover. Ground cover refers to the following practices: (1) Cover crop can be grasses, legumes, forbs, or other herbaceous plants established in vineyards and orchards to provide seasonal or year-round ground cover for conservation purposes. (2) Perennial cover crops are permanent vegetation that do not need to be re-seeded every year (3) Annual cover crops are crops are planted in late summer to early Fall of each year (4) Low-till crops are grown with practices that limit the soil-disturbing activities used to grow and harvest crops in systems where the field surface is tilled prior to planting (5) No-till crops are planted and grown in narrow slots or tilled strips established in the untilled seedbed of the previous crop. This practice includes maintaining most of the crop residue on the soil surface throughout the year, commonly referred to as no till. The common characteristic of this practice is that the only tillage performed is a very narrow strip prepared by coulters, sweeps, or similar devices attached to the front of the planter. (6) Conservation cover is establishing and maintaining perennial vegetated cover to protect soil and water resources on lands

needing permanent protective cover that will not be used for forage production. (7) Effective soil cover includes mulching, straw mulching, plant residues or other suitable materials produced off site to the land surface. Mulching is used on bare, exposed soil surfaces that are deemed to be potential critical erosion areas. In most cases, mulch will consist of grain straw residue, but may include wood chips, leaves, composted yard waste, etc. (NRCS Conservation Practice Standards 2016[43]). Ground cover can also be considered all materials in contact with the soil surface. This mainly consists of rock fragments, portions of live vegetation including basal area and plant leaves that touch the soil, plants and plantlike organisms, such as mosses, algae, ferns, fungi, duff, plant litter, crop residue, applied materials, including manure, mulch, and manufactured erosion control products.

Ground Disturbing Management Practices. These measures could include but are not limited to practices to prevent erosion of exposed soil and stockpiles, including watering for dust control, establishing perimeter silt fences, and/or placing fiber rolls; minimizing soil disturbance areas; implementing practices to maintain water quality, including silt fences, stabilized construction entrances, and storm drain inlet protection; limiting construction to dry periods; and revegetating disturbed areas.

Groundwater. The supply of water found beneath the Earth's surface, usually in aquifers which can supply wells and springs.

Groundwater Protection Formula, Values and Targets. The Groundwater Protection (GWP) Formula generates GWP Values, expressed as either nitrate-N loading numbers or concentrations of nitrate in water (e.g., mg/L), reflecting the influence of total applied nitrogen, total removed nitrogen, recharge conditions, and other relevant and scientifically supported variables that influence the potential average concentration of nitrate in water expected to reach groundwater in a given township over a given time period. GWP Values are calculated based on reported INMP data and reflect discharge estimates from the bottom of the root-zone. GWP Targets considers GWP Values to establish the nitrogen loading rate necessary to comply with the Antidegradation Policy and Basin Plan.

Ordinary High-Water Mark. That line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

High Vulnerability Groundwater Basin. Defined in the ESJ Order as areas "where known groundwater quality impacts exist for which irrigated agricultural operations are a potential contributor or where conditions make groundwater more vulnerable to impacts from irrigated agricultural activities." For the purposes of this Order, 'high vulnerability areas' are defined as the priority groundwater basins having a relatively high threat from salts and nutrients and would benefit from salt and nutrient management planning as defined in Groundwater Basin Evaluation and Prioritization Resolution No. R1-2021-

0006.

HUC-8, HUC-10, and HUC-12 Watersheds. Derived from Watershed Boundary Dataset maps developed by the U.S. Department of Agriculture, Natural Resources Conservation Service to define and compare true watersheds and hydrologic units and their applications for watershed assessment. The Watershed Boundary Dataset maps the full areal extent of surface water drainage for the United States, using a hierarchal system of nesting hydrologic units at various scales, each with an assigned hydrologic unit code (HUC). HUC-8 maps the subbasin level, analogous to medium-sized river basins. HUC-12 is a more local sub-watershed level that captures tributary systems.

Hydrologically Connected. Farm areas with a continuous surface flow path to a natural stream channel during a storm runoff event (also referred to as hydrologic connectivity). Connectivity usually occurs through Agricultural Drainage Structures , drainage inlets, road ditches, gullies, and channels. A natural stream is a Water of the State (Reference the State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State here: https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/2021/procedures.pdf)

Hydrologically Connected Undesignated Channel. Channels not part of the NHD dataset that are Hydrologically Connected to off-farm surface waters. Includes above-ground Agricultural Drainage Structures.

Hydrologic Unit. A hydrologic unit is a drainage area delineated to nest in a multi-level, hierarchical drainage system. Its boundaries are defined by hydrographic and topographic criteria that delineate an area of land upstream from a specific point on a river, stream, or similar surface water. Watersheds in the United States were delineated by the U.S. Geological Survey using a national standard hierarchical system based on surface hydrologic features and are classified into four types of hydrologic units: first-field (region), second-field (subregion), third-field (accounting unit), and fourth-field (cataloguing unit), a fifth field of classification (watershed) and sixth field (sub-watershed).

Inactive Well. A well is considered “inactive” when it has been taken out of service but has not been destroyed (see Abandoned Well definition). An inactive well must not allow impairment of water quality within the well and/or groundwater encountered by the well.

Intermittent Stream. A Class II watercourse. A body of flowing water that contains water only during or after a local rainstorm or heavy snowmelt as shown in the NHD shapefile. In the absence of diversions, water is flowing for three to nine months during a typical year, provides aquatic habitat for non-fish aquatic species, fish always or seasonally present within 1,000 feet downstream, and/or water is flowing less than three months during a typical year and the stream supports riparian vegetation.

Invasive Species. Organisms (plants, animals, or microbes) that are not native to an environment and that, once introduced establish, quickly reproduce and spread, and cause harm to the environment, economy, or human health. U.S. Department of Agriculture, Natural Resource Conservation Service website: EnviroAtlas Hydrologic Unit Codes Fact Sheet[44]. For guidance on identifying species of concern, see the Cal-IPC website: Plants A to Z[45].

Irrigation. Applying water to land areas to supply the water and nutrient needs of plants.

Irrigation Management Practices. Management practices designed to improve irrigation efficiency and reduce the amount of irrigation return flow, and associated degradation or pollution of surface and groundwater caused by discharges of waste associated with irrigated lands.

Irrigation and Nitrogen Management Planning Specialist. A certified Irrigation and Nitrogen Planning Specialist is a Certified Crop Advisor (CCA) who has completed the California Nitrogen Management exam through The California Department of Food and Agriculture (CDFA), the University of California – Davis, the American Society of Agronomy's (ASA) International Certified Crop Adviser (ICCA) Coalition and/or the CCA – Western Region (WR) Board and takes the required continuing education credits. Enrollees may self-certify their INMP if they take the CDFA Irrigation and Nitrogen Management Training for Grower Self-Certification, pass the Irrigation and Nitrogen Management Training and Exam and maintain the certification through continuing education. More information can be found at CDFA FREP Training (https://www.cdfa.ca.gov/is/ffldrs/frep/training.html).

Lake and Streambed Alteration Agreement. Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following: (1). Substantially divert or obstruct the natural flow of any river, stream or lake; (2). Substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or (3). Deposit debris, waste or other materials that could pass into any river, stream or lake. "Any river, stream or lake" includes those that are episodic (they are dry for periods of time) as well as those that are perennial (they flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.

Landowner. An individual or entity who has legal ownership of a parcel(s) of land. See also Enrollee, Operator.

Leaching. In agriculture, leaching is the loss of water-soluble plant nutrients from the soil, due to the percolation of rain and irrigation water. Leaching may also refer to the salinity control practice of applying a small amount of excess irrigation to drain down salts from the root soil profile to avoid salts from building up in the soil. In the natural environment leaching contributes to groundwater contamination. As water from rain,

flooding, or other sources seeps into the ground, it can dissolve chemicals and carry them into the underground water supply.

Linear Sediment Controls. Linear sediment controls are utilized to slow and spread runoff, reduce concentrated flow, and limit the movement of sediment. Examples include, but are not limited to: wattles, silt fences, and fiber rolls.

Load. The mass of a substance discharged over a given amount of time, for example 10 mg/day or 5 kg/day.

Method Detection Limit. The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in accordance with USEPA Definition and Procedure for the Determination of the Method Detection Limit, Revision 2. The laboratory establishes the MDL values based on the analytical test method and the types of calibrated laboratory equipment that are used.

Monitoring. Observing and checking a feature or factor over time to determine compliance with this Order or other regulatory requirements. Monitoring in this Order includes but is not limited to surface water or groundwater sampling and analysis to evaluate water quality in connection with agricultural activities, and inspecting operations, management practice implementation and effectiveness, maintenance of on-site records, and management practice reporting.

Nitrogen Management Unit. A term to describe aggregation of parcels or planted areas for the purposes of reporting. Where this Order requires reporting by parcel, Enrollees may report data for a portion of a parcel or for multiple parcels provided that the reported area has (1) the same fertilizer inputs, (2) the same irrigation management, and (3) the same management practices. These aggregated reporting areas are Nitrogen Management Units and can be defined by the Enrollee in a manner consistent with the farming operation (e.g., vineyard blocks).

Nitrogen Applied. Total nitrogen applied includes nitrogen in any product, form, or concentration including, but not limited to, organic and inorganic fertilizers, slow-release products, compost, compost teas, manure, extracts, nitrogen present in the soil, and nitrate in irrigation water; it is reported in units of pounds of nitrogen per crop, per acre for each commercial vineyard or nitrate loading risk unit.

Nitrogen Removed. Nitrogen Removed includes all nitrogen taken from the vineyard in harvested or other materials. Other materials may include wheat straw, orchard prunings, almond hulls, etc. In the case of perennial crops, Nitrogen Removed also includes the nitrogen annually sequestered in the permanent wood.

Nitrogen-Removal Coefficient (C_N). Percent of nitrogen content in the dry matter of plant tissue. The CN multiplied by the weight of plant material removed from the vineyard can be used to estimate the nitrogen removed from the marketable portion of a

crop.

Nonpoint Source (NPS) Pollution. The Basin Plan states that nonpoint sources of water pollution are generally defined as sources which are diffuse (spread out over a large area). Nonpoint sources of pollution are not subject to NPDES permitting. The wastes are generally carried off the land by runoff. Common nonpoint sources of pollution are activities associated with agriculture, timber harvest, certain mining, dams, and saltwater intrusion.

Nitrogen Management Practices. Management practices designed to reduce the nitrogen loss from agricultural lands, which occur through edge-of-field runoff or leaching from the root zone.

Offsite Sources. Discharges that originate from an area not located on the Enrollee's enrolled parcel and flow onto the Farm Area.

Operator. Person responsible for or otherwise directing farming operations in decisions that may result in a discharge of waste to surface water or groundwater, including, but not limited to, a farm/ranch manager, lessee, or sub- lessee. The operator is responsible for ensuring compliance with this Order and for any discharge of waste occurring on or from the operation. See also Enrollee, Landowner.

Operation. A distinct farming business, generally characterized by the form of business organization, such as a sole proprietorship, partnership, corporation, and/or cooperative. A farming operation may be associated with one-to-many individual farms/ranches.

Ordinary High-Water Mark. That line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. See Attachment D: Methodologies and Procedures for examples.

Perennial Stream. A Class I watercourse. In the absence of diversions, water is flowing for more than nine months during a typical year, fish always or seasonally present onsite or includes habitat to sustain fish migration and spawning, and/or a spring, an area where there is concentrated discharge of ground water that flows at the ground surface (a spring may flow any part of the year and does not have a defined bed and banks).

Pesticide. Any substance intended to control, destroy, repel, or otherwise mitigate a pest. The term pesticide is inclusive of all pest and disease management products, including insecticides, herbicides, fungicides, nematicides, rodenticides, algicides, etc.

Planted Area. The area of the Farm Area that is planted in grapevines. Planted area

does not include appurtenant structures, agricultural roads, or vineyard avenues (Seasonal Roads).

Pollutant. The man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water, including dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.

Pollution. Any alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following: (1) the waters for beneficial uses, (2) facilities which serve these beneficial uses. Pollution may include contamination.

Quality Assurance Project Plan. A Quality Assurance Project Plan (QAPP) integrates all technical and quality aspects of a project, including planning, implementation, and assessment.

Qualified Professional. An individual licensed in California under the Professional Engineer Act (e.g., Professional Engineer), Geologist and Geophysicist Act (e.g., Professional Geologist, Certified Engineering Geologist, or Certified Hydrogeologist), and Land Surveyors' Act (e.g., Professional Land Surveyor); a California Registered Professional Forester (RPF); or a Qualified Storm Water Pollution Prevention Plan (SWPPP) Developer (QSD), a certified soil scientist registered through the American Society of Agronomy; Certified Professional in Erosion and Sediment Control (CPSEC)™/Certified Professional in Storm Water Quality (CPSWQ)™ registered through EnviroCert International, Inc.; a or professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies (NICET). A Qualified Professional must only perform work they are qualified to complete, consistent with applicable licensing and registration restrictions, and must certify any work completed. See Business and Professions Code sections 6700-6799, 7800-7887, and 8700-8805, respectively.

Qualifying Storm Event. A Qualifying Storm Event is any weather pattern that is forecasted by the National Weather Service to have a 50 percent or greater chance of producing 0.5 inches or more precipitation on a site within a 48 hour or greater period between rain events.

Quality of the Water. The "chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water which affect its use" as defined in the California Water Code Sec. 13050(g).

Receiving Waters. Surface waters or groundwater that receive or have the potential to receive discharges of waste from irrigated lands.

Riparian Vegetation Area. Riparian Vegetation Area is the area that includes riparian vegetation (including dead, dying, or decaying vegetation along a watercourse that is

distinguished from other vegetation by its dependence on the combination of soil moisture and other environmental factors provided by a permanent or intermittent stream) and riparian vegetation canopy, which is the more-or-less continuous cover of branches and foliage formed collectively by the crowns of adjacent trees and other woody species adjacent to a watercourse.

Saturated Soil Conditions. Conditions when soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur. Indicators of saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing material during Timber Operations, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials.

Seasonal Road. An Appurtenant Agricultural Road that is part of the permanent road network that is not designed for year-round use. These roads have a surface that is suitable for maintaining a stable operating surface during the period of use. Vineyard avenues which are not surfaced are considered Seasonal Roads.

Sediment Basin. A constructed basin to capture and detain surface runoff for a sufficient length of time to allow sediment to settle.

Sediment and Erosion Control Practices. Practices used to prevent and reduce the amount of soil and sediment entering surface water in order to protect or improve water quality.

Sediment Management Area. A Sediment Management Area is each contiguous planted vineyard area not separated by streams, all-season roads, non-planted areas, or parcel boundaries and not to exceed 10 acres. For contiguous vineyard areas which exceed 10 acres, Enrollees may delineate each 10-acre Sediment Management Area in a manner consistent with their farming operation. Enrollees must delineate Sediment Management Areas such that all planted areas, vineyard avenues (Seasonal Roads) and areas appurtenant to the commercial vineyard (e.g., appurtenant structures, maintenance areas, storage yards, mixing and loading sites) on an enrolled parcel are included in a Sediment Management Area. Sediment Management Areas are only applicable for Enrollees who choose to implement Ground Cover as a Sediment and Erosion Control Compliance Option.

Site-Specific Potential Effective Shade. The shade equivalent to that provided by topography and potential vegetation conditions at a site. Shade controls that are effective at correcting temperature impairments also operate to prevent impairments and provide other water quality protections such as bank stability and filtering sediment and other waste discharges.

Source of Drinking Water. Any water designated as municipal or domestic supply

(MUN) beneficial use in a Regional Water Board Basin Plan and/or as defined in State Water Board Resolution No. 88-63.

Stormwater. Stormwater runoff, snow melt runoff, and surface runoff and drainage, as defined in 40 CFR 122.26(b)(13).

Stormwater Runoff. Precipitation water in excess of what can infiltrate the soil surface and be stored in small surface depressions.

Streamside Area. A Streamside Area is comprised of two contiguous components: a Riparian Vegetation Area and a Vegetated Buffer in which different requirements are applied. A Streamside Area is defined as the area between the Ordinary High-Water Mark and where the field side edge of the Vegetated Buffer meets the Farm Area. The Riparian Vegetation Area extends from the Ordinary High-Water Mark to the Vegetated Buffer in Perennial and Ephemeral/Intermittent Streams. The Vegetated Buffer is measured from the Riparian Vegetation Area to the Farm Area along Perennial and Ephemeral/Intermittent Streams, and from the Ordinary High-Water Mark in Hydrologically Connected Undesignated Channels, Unfarmed Wetlands, and Hydrologically Connected Lakes, Ponds, or On-Stream Reservoirs. See also Riparian Vegetation Area and Vegetated Buffer. Streamside Area examples are provided in Attachment D: Methodologies and Procedures.

Surface Runoff. Precipitation, snow melt, or irrigation water in excess of what can infiltrate the soil surface and be stored in small surface depressions, a major transporter of nonpoint source wastes in rivers, streams, and lakes.

Coalition. An organization or entity that is approved to represent Enrollees under this Order and is obligated to fulfill the following responsibilities: (1) collect fees from Enrollees and submit payments to the State Water Resources Control Board; (2) manage communications between Enrollees and the Regional Water Board; (3) provide outreach and education resources for Enrollees; and (4) fulfill monitoring and reporting requirements including but not limited to submitting monitoring workplans and necessary technical material, conducting regional surface water and groundwater monitoring, and connecting Enrollees to resources that can assist the preparation and implementation of Water Quality Management Plans.

Temporary Sediment Controls. Temporary sediment control best management practices (BMPs) are short-term measures that should be considered during a period where areas are disturbed due stormwater runoff, farming activities, or maintenance. A temporary sediment control BMP is normally used for 1—6 months, or until a more permanent BMP is put into place. Temporary sediment control BMPs are typically used in conjunction with erosion control BMPs and are designed and installed to keep as much sediment on-site as possible. Examples of temporary sediment controls could include, but are not limited to Linear Sediment Controls, dikes and berms, check dams, sediment basins, and inlet/outlet protection.

Total Maximum Daily Load (TMDL). The calculation of the maximum amount of a particular material that a waterbody can assimilate on a regular basis and still support beneficial uses designated for that waterbody.

Trend. A general direction in which something is developing or changing. See also Water Quality Trend.

Unfarmed Wetland. Any wetland not continuously farmed at time of adoption of the Vineyard Order. An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

Unstable Area. Areas showing evidence of mass downslope movement such as debris flow, landslides, rockfall, and hummock hill slopes with undrained depressions upslope. Examples are landforms exhibiting slip surfaces roughly parallel to the hillside; landslide scars and curving debris ridges; fences, trees, and telephone poles that appear tilted; and tree trunks that bend uniformly as they enter the ground. Active sand dunes are unstable landforms.

Voluntary Sediment Control Programs (Voluntary Programs). Programs approved by the Regional Water Board to provide Enrollees with a compliance option with the Order's erosion and sediment control requirements through a Sediment and Erosion Control Plan. See Attachment C: Third-Party Requirements for more information.

Vegetated Buffer. A narrow, permanent strip of dense perennial vegetation (including riparian vegetation) where no crops are grown and which is established parallel to the contours of and perpendicular to the dominant slope of the land applications area for the purposes of slowing water runoff, enhancing water infiltration, trapping pollutants bound to sediment and minimizing the risk of any potential nutrients or pollutants from reaching surface waters.

Vineyard Avenue. A Seasonal Road around or through a vineyard block, or an area at the end of a vine row where vehicles and equipment can turn around. If a vineyard avenue is surfaced for winter use, it is considered an All-Season Road.

Waste. "Includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal" as defined in the California Water Code Sec. 13050(d). "Waste" includes irrigation return flows and drainage water from agricultural operations containing materials not present prior to use. Waste from irrigated agriculture includes earthen materials (such as soil, silt, sand, clay, rock), inorganic materials (such as metals, salts, boron, selenium, potassium, nitrogen, phosphorus), and organic materials such as pesticides.

Water Quality Control. The “regulation of any activity or factor which may affect the quality of the waters of the State and includes the prevention and correction of water pollution and nuisance” as defined in the California Water Code Sec. 13050(i). 133. Water Quality Criteria. Levels of water quality required under Sec. 303(c) of the Clean Water Act that are expected to render a body of water suitable for its designated uses. Criteria are based on specific levels of pollutants that would make the water harmful if used for drinking, swimming, farming, fish production, or industrial processes. The California Toxics Rule adopted by USEPA in April 2000, sets numeric Water Quality Criteria for non-ocean waters of California for federal priority pollutants. See also Water Quality Objectives.

Water Quality Objectives. “Limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specified area,” as defined in Sec. 13050(h) of the California Water Code. Water Quality Objectives may be either numerical or narrative and serve as Water Quality Criteria for purposes of section 303 of the Clean Water Act. 135. Water Quality Standard. Provisions of State or Federal law that consist of the beneficial designated uses or uses of a waterbody, the numeric and narrative water quality criteria that are necessary to protect the use or uses of that particular waterbody, and an antidegradation statement. Water quality standards includes water quality objectives in the Regional Water Board’s Basin Plan, water quality criteria in the California Toxics Rule and National Toxics Rule adopted by USEPA, and/or water quality objectives in other applicable State Water Board plans and policies. For groundwater with the beneficial use of municipal or domestic water supply, the applicable drinking water standards are those established by the USEPA or California DDW, whichever is more stringent. Under Sec. 303 of the Clean Water Act, each State is required to adopt water quality standards.

Water Quality Trend. A change in time of a measured chemical constituent that represents as an aspect of the quality of the water (e.g., increasing, stable, or decreasing concentration of a constituent). The analysis of a water quality trend predicts the behavior of water quality parameters and overall water quality in the time domain.

Waters of the State. “Any surface water or groundwater, including saline waters, within the boundaries of the State” as defined in the California Water Code Sec. 13050(e). “Waters of the state” includes all “waters of the U.S.” Any significant accumulation of water above the ground surface, such as lakes, ponds, rivers, streams, creeks, springs, wetlands, and canals.

III. Endnotes

[1] Controllable water quality factors are those actions, conditions, or circumstances resulting from human activities that may influence the quality of the waters of the state and that may be reasonably controlled

[2] The North Coast Sediment TMDL Implementation Policy can be found at the link here: https://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/120204-0087.pdf

[3] The North Coast Temperature Implementation Policy can be found at the link here: https://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2012/120127_12_0013_Resolution_Temperature.pdf

[4] Regional Water Board staff contacted the Native American Heritage Commission to obtain a list of all Native American Tribes within the North Coast Region. Staff sent consultation letters to all 52 Tribes on the list that could be affected by the Order.

[5] Commercial vineyards located outside the Big-Navarro-Garcia, Gualala-Salmon, and Russian River Hydrologic Unit Code (HUC) HUC-8 watersheds (North Coast viticultural region) are not required to conduct monitoring and reporting.

[6] USEPA defines water quality standards as consisting of three elements: designated beneficial uses for each waterbody, criteria to protect those uses, and consideration of antidegradation requirements.

[7] California Office of Environmental Health Hazard Assessment (OEHHA) establishes Public Health Goals which is the level of a chemical contaminant in drinking water that does not pose a significant risk to health (https://oehha.ca.gov/water/public-health-goals-phgs).

[8] The methodology for determining statistical outliers may either be proposed by the Coalition or set by the Regional Board as described in the Monitoring and Reporting Program for Enrollees in a Coalition.

[9] See Attachment C for Voluntary Program Requirements. A list of approved Voluntary Programs will be available on the Regional Water Board's website upon enrollment.

[10] Ground Water Prioritization Resolution R1-2021-0006 (https://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2021/21_0006_Groundwater_Basin_Prioritization_Resolution.pdf) The Regional Water Board is required to update these priority basins every five years per the State Water Board Resolution No. 2009-0011, Recycled Water Policy.

[11] See endnote 9.

[12] See Hydrologically Connected in Appendix 1: Definitions. Farm areas with a continuous surface flow path to a natural stream channel during a storm runoff event (also referred to as hydrologic connectivity). Connectivity usually occurs through Agricultural Drainage Structures , drainage inlets, road ditches, gullies, and channels. A natural stream is a Water of the State (Reference the State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of

Dredged or Fill Material to Waters of the State here: https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/2021/procedures.pdf)

[13] The Temperature Implementation Policy Substitute Environmental Document (https://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/140516_temp/140327_Temp_Policy_Staff_Report_ADOPTED.pdf).

[14] NRCS costs of management practices/scenarios (https://www.nrcs.usda.gov/sites/default/files/2022-11/California-Scenarios-23-payment-rates.pdf).

[15] The listed management practices include the NRCS Conservation Practice Standard Number.

[16] Engineered management practices shall be designed and installed in compliance with plans and specifications prepared by a civil engineer.

[17] See endnote 16.

[18] These measures could include but are not limited to practices to prevent erosion of exposed soil and stockpiles, including watering for dust control, establishing perimeter silt fences, and/or placing fiber rolls; minimizing soil disturbance areas; implementing practices to maintain water quality, including silt fences, stabilized construction entrances, and storm drain inlet protection; limiting construction to dry periods; and revegetating disturbed areas.

[19] It is not the expectation of this Order to hold enrollees responsible for sediment discharges that occur as a result of inundation by flood waters.

[20] Examples may include but are not limited to critical area planting (see NRCS Conservation Practice Standards), conservation cover (see NRCS Conservation Practice Standards), or linear sediment controls such as silt fences and wattles. Accepted sediment and erosion control management practice standards and design can be found in the NRCS-USDA National Conservation Practice Standards; USEPA's National Management Measures to Control Nonpoint Source Pollution from Agriculture; Handbook of Forest, Ranch, and Rural Roads; A Guide for Planning, Designing, Constructing, Reconstructing, Upgrading, Maintaining, and Closing Wildland Roads; California's Management Measures for Polluted Runoff; Best Management Practices for VESCO Agricultural Erosion and Sediment Control; The Land Steward's Guide to Vineyard and Orchard Erosion Control; the California Code of Sustainable Winegrowing Workbook, and the California Stormwater Quality Association BMP Handbook.

[21] See above endnote for examples and standards of erosion controls. See also Temporary Sediment Controls in Appendix I.

[22] Swales, ephemeral channel reaches, intermittent channel reaches, and perennial channel reaches.

[23] Indications of instability include the occurrence of slope failures at nearby similar sites, weak soil layers, geologic bedding parallel to slope surface, hillside creep (trees, fence posts, etc. leaning downslope), tension cracks in the slope surface,

bulging soil at the base of the slope, and groundwater discharge from the slope.

[24] Areas of erosion and sedimentation include down-cutting and/or head-cutting stream channels, gullies, rills, and/or slope failures.

[25] For new Enrollees, the SECP shall be due by March 1st in the year following enrollment for Enrollees choosing this compliance option.

[26] Maintenance of management practice shall include periodic inspection of management practices during and after the winterization period to confirm effectiveness and prioritize repair.

[27] Includes above-ground Agricultural Drainage Structures .

[28] This Order does not authorize agricultural activities or work in an Unfarmed Wetland. Enrollees must seek coverage through the 401 Water Quality Certification and Wetlands Program (see https://www.waterboards.ca.gov/northcoast/water_issues/programs/water_quality_certification/) for discharges of dredged or fill material to waters of the state (e.g., agricultural development or agricultural activities in Unfarmed Wetlands). An Unfarmed Wetland is any wetland not currently farmed at time of adoption of the Vineyard Order. An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation. (See https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/2021/procedures.pdf).

[29] In this case, Hydrologically Connected refers to the lake or reservoir being Hydrologically Connected to the stream, not the Farm Area.

[30] Streambank restoration within waters of the United States or waters of the state requires separate regulatory coverage under either Clean Water Act section 404/401 or alternative waste discharge requirements. See Water Quality Certification (https://www.waterboards.ca.gov/northcoast/water_issues/programs/water_quality_certification/)

[31] Maintenance of existing watercourse crossings without the need for additional permitting by the Regional Water Board is limited to removal of vegetation impacting the use and function of the crossing (e.g., preventing vehicle access across the crossing or limiting the flow of water through the crossing infrastructure), clearing and maintaining watercourse function using hand tools or the manual placement of energy dissipating rock.

[32] Installation of surface water diversion infrastructure requires a valid water right from the State Water Board Division of Water Rights and may require additional permit coverage from the Regional Water Board through an approved 401 Water Quality Certification or alternate waste discharge requirements.

[33] The level of effective shade provided by vegetation when the vegetation is growing at

potential. For any given location, this term is called “site- specific potential effective shade.”

[34] NRCS Technical Note on Riparian Buffer Design and Species Considerations (https://www.nrcs.usda.gov/plantmaterials/idpmstn7248.pdf) and Dewalle, David. (2010). Modeling Stream Shade: Riparian Buffer Height and Density as Important as Buffer Width1. JAWRA Journal of the American Water Resources Association. 46. 323 - 333. 10.1111/j.1752-1688.2010.00423.x.

[35] Work within wasters of the United States or waters of the state requires separate regulatory coverage under either Clean Water Act section 404/401 or alternative waste discharge requirements (https://www.waterboards.ca.gov/northcoast/water_issues/programs/water_quality_certification/)

[36] Cafferata, P., T. Spittler, M. Wopat, G. Bundros, and S. Flanagan, 2004. Designing Watercourse Crossings for Passage of 100-Year Flood Flows, Wood, and Sediment. California Department of Forestry and Fire Protection: Sacramento, CA.

[37] Enrollees may reference Department of Water Resources guidance document Section D (Degraded Water Quality) to determine sufficient monitoring well network for groundwater quality assessment (https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents/Files/BMP-2-Monitoring-Networks-and-Identification-of-Data-Gaps_ay_19.pdf).

[38] Where this Order requires nitrogen reporting by parcel, Enrollees may report data for a portion of a parcel or for multiple parcels provided that the reported area has (1) the same fertilizer inputs, (2) the same irrigation management, and (3) the same management practices (e.g., vineyard blocks). These same areas of nitrogen management are designated as Nitrogen Management Units for the purposes of reporting efficiency.

[39] A certified Irrigation and Nitrogen Planning Specialist is a Certified Crop Advisor (CCA) who has completed the California Nitrogen Management exam through The California Department of Food and Agriculture (CDFA), the University of California – Davis, the American Society of Agronomy’s (ASA) International Certified Crop Adviser (ICCA) Third-Party and/or the CCA – Western Region (WR) Board and takes the required continuing education credits. Enrollees may self-certify their INMP if they take the CDFA Irrigation and Nitrogen Management Training for Grower Self-Certification, pass the Irrigation and Nitrogen Management Training and Exam and maintain the certification through continuing education (https://www.cdfa.ca.gov/is/ffldrs/frep/training.html).

[40] Examples of methodologies for calculating statistical outliers may include (but are not limited to): interquartile methods, z-scores, graphical methods depending on the data.

[41] Outreach and education sources include formal classroom training, individual

meetings with a qualified trainer, printed materials, and/or internet-based training with an approved Coalition, University of California Cooperative Extension (UCCE), Natural Resources Conservation Service (NRCS), Resource Conservation Districts (RCDs), Regional or State Water Boards, Department of Pesticide Regulation, California Department of Fish and Wildlife, California Department of Food and Agriculture, or other comparable organizations.

[42] Guidance for electronic submittal (https://www.waterboards.ca.gov/northcoast/publications_and_forms/available_documents/pdf/2014/ECM_Letter-Guidelines.pdf).

[43] Natural Resources Conservation Service: Conservation Practice Standards Informationv (https://www.nrcs.usda.gov/getting-assistance/conservation-practices).

[44] See the EnviroAtlas Hydrologic Unit Codes Fact Sheet (https://enviroatlas.epa.gov/enviroatlas/datafactsheets/pdf/Supplemental/HUC.pdf).

[45] See the Cal-IPC website: Plants A to Z (https://www.cal-ipc.org/plants/profiles/).

Appendix II: Figures

Figure 1: Vineyards in the North Coast Region

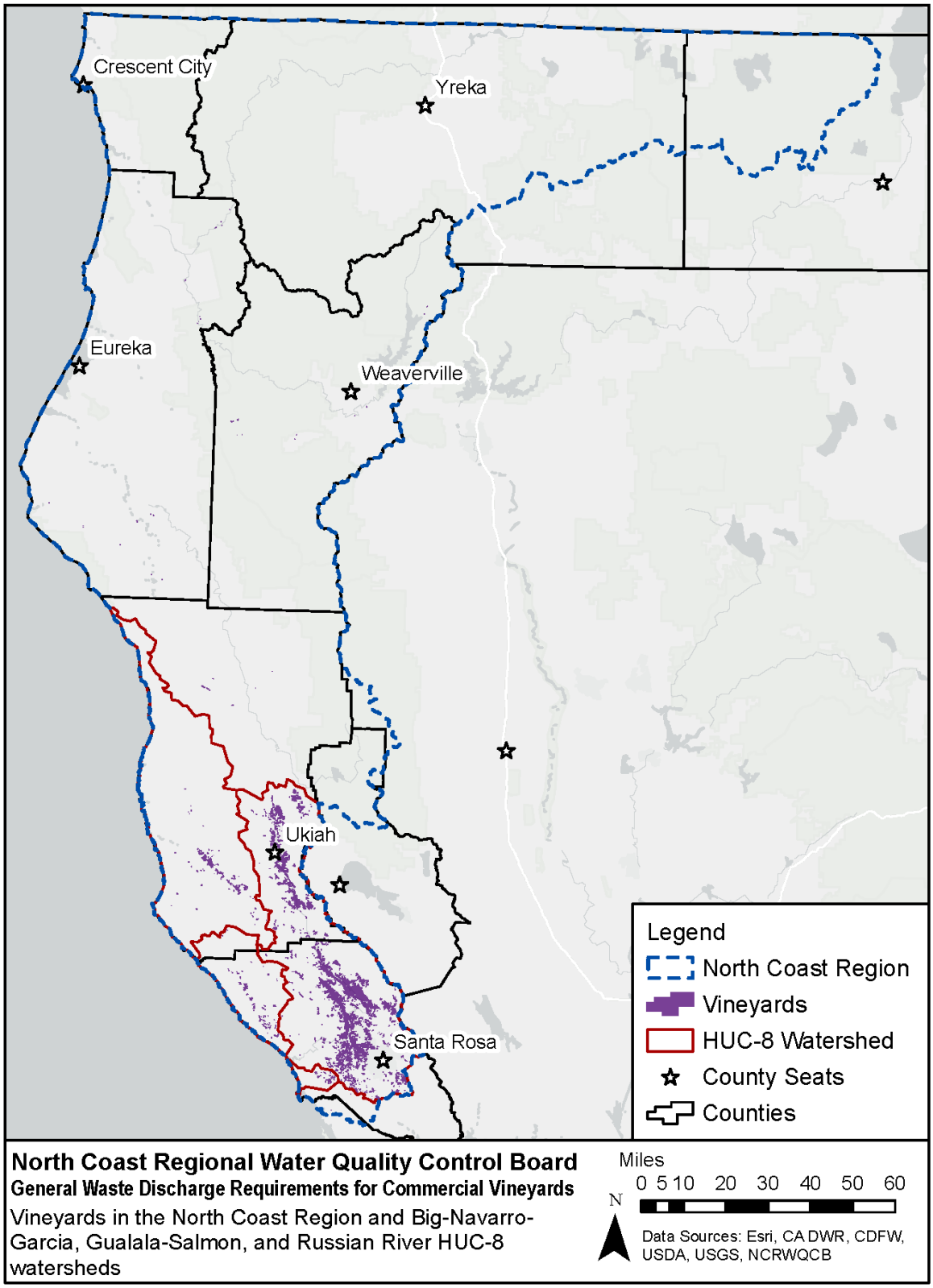


Figure 2: Coho Salmon and Winter Steelhead Distribution Ranges and Vineyard Density within Mendocino and Sonoma Counties

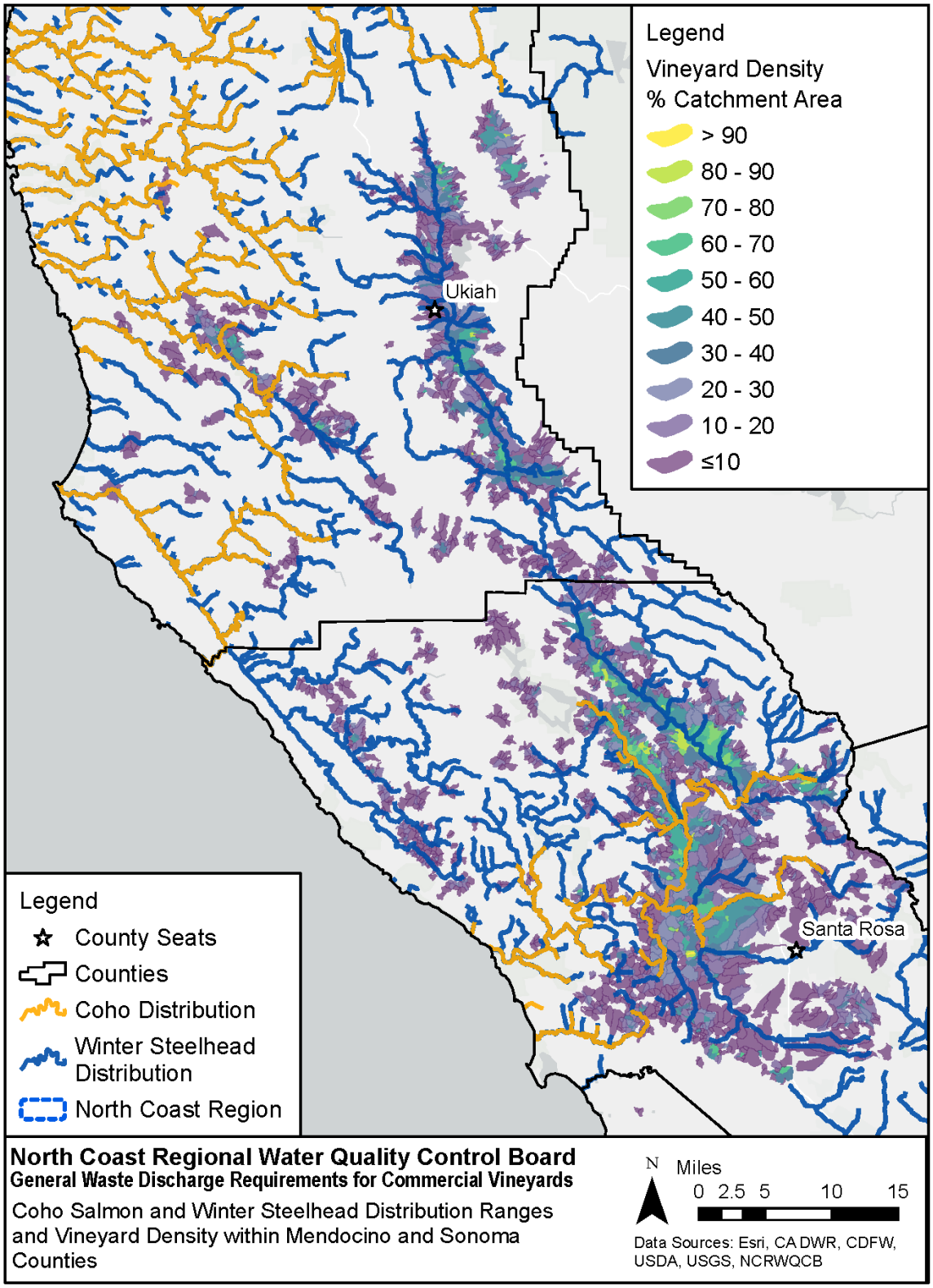


Figure 3: CDPR Pesticide Detections in Surface Water of Sonoma and Mendocino Counties (2016-2017)

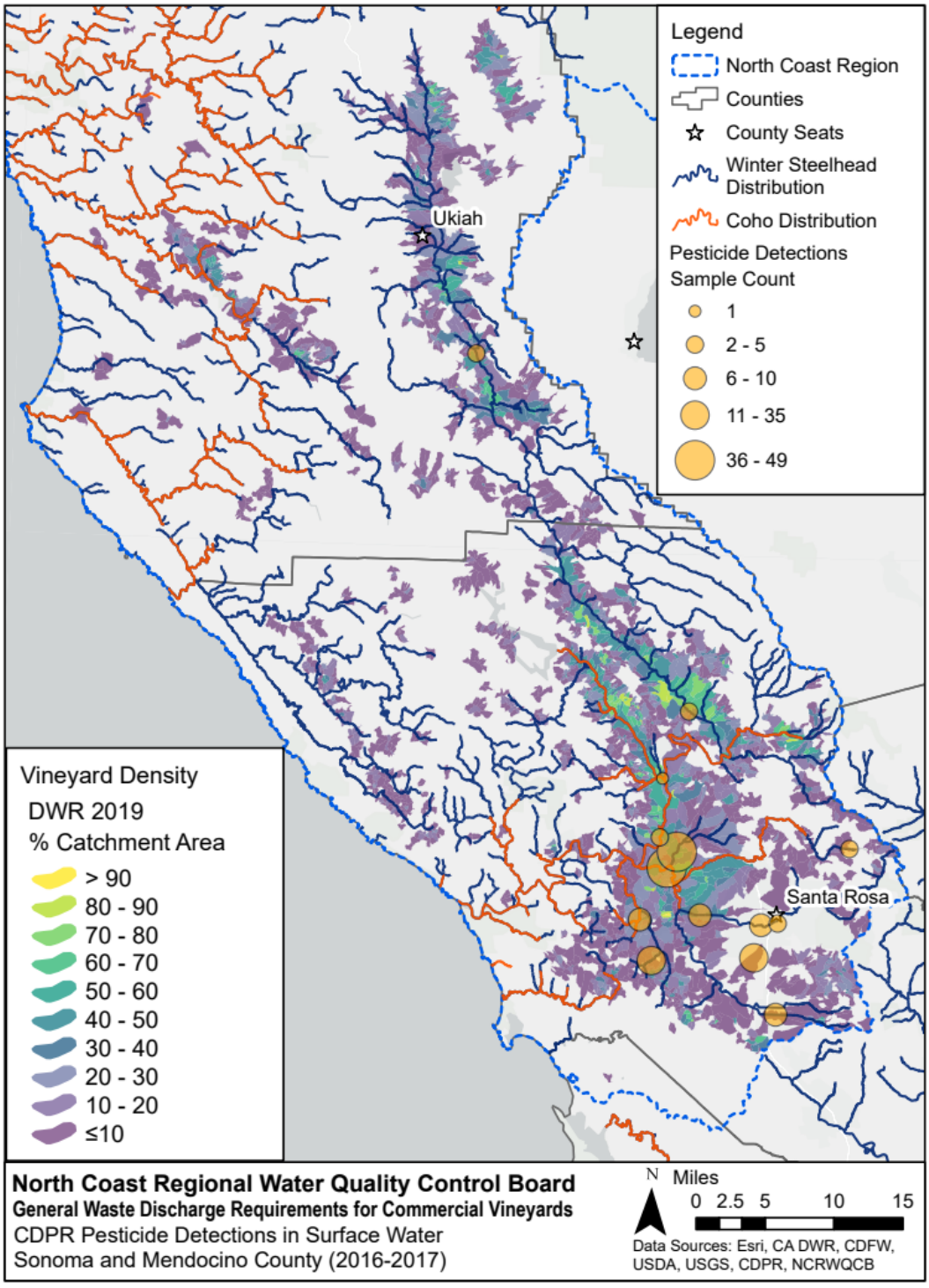


Figure 4: CDPR 6800(a) Pesticide Detections in Groundwater Wells in Sonoma and Mendocino Counties (2012-2021)

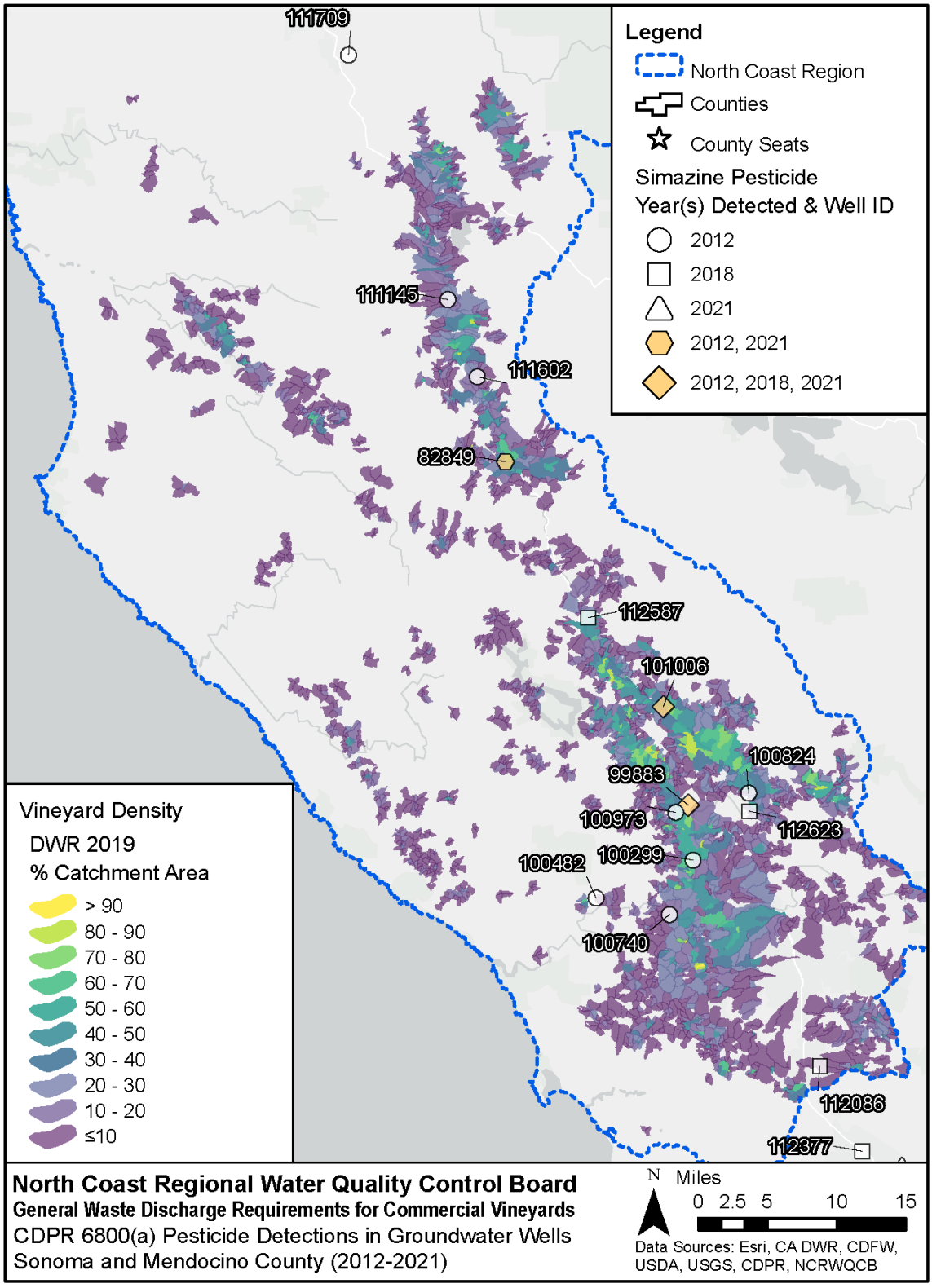
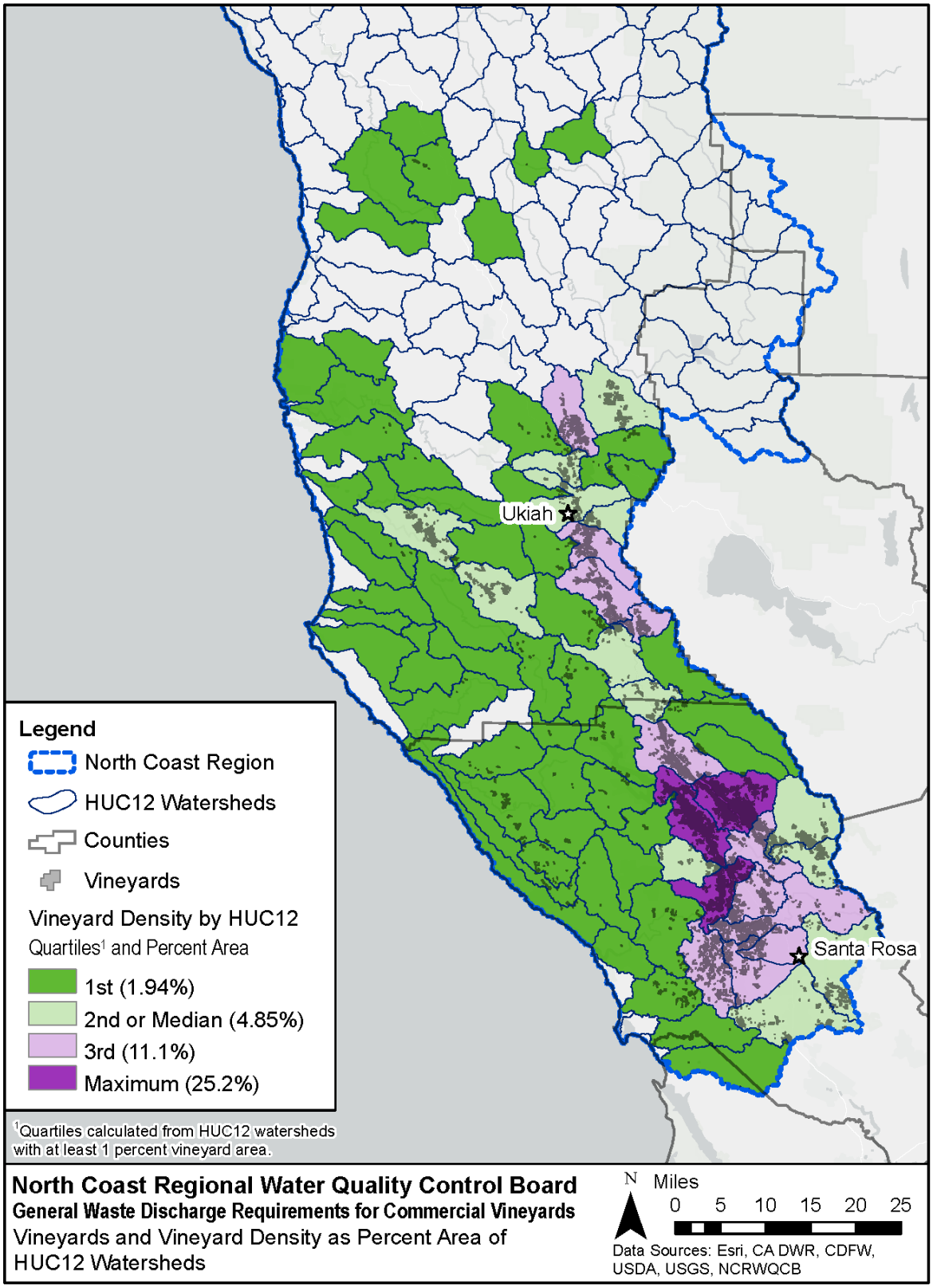


Figure 5: Vineyard and Vineyard Density as Percent Area of HUC-12 Watersheds



Attachment A: Monitoring and Reporting Program for Individual Enrollees

I. Summary

Individual Enrollees shall conduct monitoring and reporting for all enrolled parcels on their commercial vineyard and shall refer to Attachment D: Methodologies and Procedures for sample collection and handling instructions. All water quality monitoring data (except Agricultural Drainage Structure Monitoring) shall be reported in a format consistent with Water Boards' various data management systems (e.g., surface water data to CEDEN, groundwater data to GeoTracker).

The Monitoring and Reporting Program (MRP) for Individual Enrollees consists of (1) Management Practice Effectiveness Monitoring; (2) Drinking Water Supply Well Monitoring; (3) Representative Pesticide and Groundwater Trend Monitoring; (4) Annual Compliance Reporting; and (5) Water Quality Trend Monitoring Reporting every five years.

Enrollees shall submit a Water Quality Monitoring Workplan to the Regional Water Board's Executive Officer which describes how they will implement the water quality monitoring and reporting requirements of this Order as summarized in Table A.1 and A2 below:

Table A.1: Monitoring Master Schedule

Requirement	Frequency	Where to Report
Management Practice Effectiveness Monitoring	Annually	Annual Compliance Report submitted to GeoTracker
Representative Pesticide Monitoring	Every five years	Trend Monitoring Report submitted to GeoTracker
Groundwater Trend Monitoring	Annually	Trend Monitoring Report submitted to GeoTracker.
Drinking Water Well Monitoring	Varies; see Section V.A of this MRP	Submitted to GeoTracker.

Table A.2: Reporting Master Schedule

Requirement	Elements of Report	Submittal deadline and Frequency
Water Quality Monitoring Workplan	Surface and Groundwater Quality Monitoring Workplans	By **July 1, 2028**, Submit to GeoTracker.

Requirement	Elements of Report	Submittal deadline and Frequency
Annual Compliance Report	Farm Evaluation, Irrigation and Nutrient Management Plan, Annual Management Practice Effectiveness Monitoring, CEQA Mitigation Measures, and Outreach event attended.	By **July 1, 2028** and by **July 1st** annually following initial submittal thereafter. Note that the Annual Water Quality Monitoring results are not due until the year after the Workplan is approved.
Water Quality Trend Monitoring Report (Trend Monitoring Report)	Representative Pesticide and Groundwater Trend Monitoring	Within five years of approval of Water Quality Monitoring Workplan and every five years by **July 1st** thereafter.

II. Water Quality Monitoring Workplan

1) A Water Quality Monitoring Workplan (Workplan) shall be submitted to the Regional Water Board's Executive Officer for review and approval by the date listed in Table A.2.

2) The Workplan shall present proposed monitoring sites, work tasks, milestones, and method(s) used to evaluate data to comply with all monitoring requirements and parameters in this MRP.

3) The Workplan shall include a map and description of stormwater discharge points that are representative of the range in tributary area, slope, soil type, and farming practices across the applicable enrolled parcels to characterize conditions and trends for purposes of pesticide monitoring.

4) The Workplan shall map and identify a sufficient number[1] of monitoring wells to characterize conditions and trends in groundwater quality across their enrolled parcels. The Workplan shall consider the following in well determination: (1) Soil type and saturated hydraulic conductivity of soil; (2) Existing water quality data; (3) Depth to groundwater; (4) Absence of nearby domestic/commercial wastewater disposal and/or biosolids application to avoid effects of other nitrate sources; (5) the distribution of wells within both high and low vulnerability groundwater areas[2] in the enrolled parcels; and (6) proximity to Drinking Water Supply Wells (public and private).

5) The Workplan map shall include all enrolled parcels of the commercial vineyard and may be an aerial photograph, topographic map, LiDAR-derived shaded relief map, Google Earth image, or equivalent that depicts features at 1-inch = 50 feet or larger scale.

6) The Workplan shall include methodology(s) to: (1) evaluate trends in groundwater monitoring data, (2) evaluate pesticide concentration trends in surface water monitoring data, and (3) determine statistical increases of pesticide concentrations in surface water quality monitoring data.

7) The Workplan shall include a Quality Assurance Project Plan (QAPP) that outlines procedures used to ensure the required data that is collected and analyzed meet requirements of this MRP. The QAPP shall be consistent with guidance provided by the State Water Resources Control Board (State Water Board) Quality Assurance/Quality Control[3] and the sampling collection and handling procedures outlined in Attachment D: Methodologies and Procedures.

8) By **July 1st,** five years following approval of the Workplan and every five years thereafter, a Water Quality Trend Monitoring Report (Trend Monitoring Report) that presents and analyzes all water quality monitoring results in the previous five years shall be submitted. The scope and contents of the Trend Monitoring Report are covered in Section VI.A of this MRP.

III. Management Practice Effectiveness Monitoring

Enrollees shall conduct Management Practice Effectiveness Monitoring based on the Implementation Standard of the Sediment and Erosion Control Compliance Option they have chosen in accordance with Section II.C of the Order. Enrollees will either be required to conduct Agricultural Drainage Structure Turbidity Monitoring or Photo-point Monitoring. The purpose of Management Practice Effectiveness Monitoring is to (1) assess the effectiveness of management practices at preventing erosion and controlling sediment discharge; and (2) drive Adaptive Management.

A. Agricultural Drainage Structure Turbidity Monitoring Requirements

1) The Enrollee shall annually monitor turbidity values in at least 20 percent of Agricultural Drainage Structures at the outlet that discharges from the Farm Area to surface waters. Enrollees shall choose monitoring locations that are representative of the range in tributary area, slope, soil type, and farming practices across the applicable enrolled parcels. Upon notice from the Executive Officer that monitoring locations chosen by the Enrollee are not representative, the Enrollee shall propose and begin implementing for monitoring new locations for concurrence by the Executive Officer. The Executive Officer has the discretion to determine representative or additional monitoring locations.

2) Turbidity values in Agricultural Drainage Structures shall be monitored during a Qualifying Storm Event from the first two hours of discharge which occurs during daylight hours using a calibrated[4] turbidity meter (turbidimeter), either on-site or at an accredited lab. Acceptable laboratory test methods include Standard Method 2130 or USEPA Method 180.1[5]. Results shall be recorded in Nephelometric Turbidity Units (NTU). Representative discharge for the purposes of Agricultural

Drainage Structure Sampling should not include periods of inundation from flood waters.

3) Samples shall be collected, maintained, and shipped in accordance with the current version of the SWAMP Quality Assurance Third-Party Plan[6] or the Sampling Collection and Handling procedures outlined in Attachment D: Methodologies and Procedures.

4) The Enrollee shall include annual Agricultural Drainage Structure Turbidity Monitoring results in the Annual Monitoring Report as described in Section VI.B of this MRP.

Exceedances of Turbidity Benchmark and Adaptive Management

5) If an Agricultural Drainage Structure exceeds the 250 NTU benchmark, the Enrollee shall, when it is safe and reasonable to do so, implement Temporary Sediment Controls[7] or management practices[8] to prevent or minimize erosion, control mobilization of sediment to that ag drainage structure and control the discharge of sediment from that ag drainage structure. Examples of temporary sediment controls may include but are not limited to hay bales and linear sediment controls such as silt fences and wattles. These in-season repairs shall be implemented in response to every ag drainage structure exceedance.

6) The Agricultural Drainage Structure at which the benchmark exceedance occurred shall be monitored in each subsequent Qualifying Storm Event following repair until there are no further exceedances, at which point the Enrollee may return to monitoring that location annually. If the Agricultural Drainage Structure continues to experience exceedances of the benchmark during the final QSE of the year, the Enrollee shall resume monitoring that location at the first QSE in the following year.

7) If an Agricultural Drainage Structure has exceedances of the 250 NTU turbidity benchmark in two consecutive years, the Enrollee shall continue to implement in-season repairs and attend a training focused on sediment and erosion control management practices. This event may also serve as the Enrollee's annual outreach and education event as required by the Order; however, the primary subject of the training must include sediment and erosion control management practices.

8) If an Agricultural Drainage Structure has exceedances of the 250 NTU turbidity benchmark in three consecutive years, the Enrollee shall implement in-season repairs and shall include in the Annual Compliance Report an Adaptive Management Assessment which is comprised of:

    a) A review of the management practices for compliance with approved management practices standards[9], and any needed management practice improvements to minimize or prevent erosion and the discharge of

sediment to surface water.

b) Photographs of all management practices implemented to minimize or prevent sediment discharge to that agricultural drainage structure or discharge point.

c) Documentation of education or attendance of outreach event focused on sediment erosion and control management practices.

9) If an agricultural drainage structure or drainage point has exceedances of the 250 NTU turbidity benchmark in four consecutive years, the Enrollee shall develop and implement a Water Quality Management Plan as described in Section II.E of the Order.

Offsite Stormwater Run-on

10) In the case of run-on from concentrated flow (including ag drainage structures) from Offsite Sources[10], the Enrollee may sample the run-on where it enters the planted area, Appurtenant Agricultural Roads, structures, or areas of the commercial vineyard and adjust the turbidity benchmark to 250 NTUs above the run-on turbidity value in all Agricultural Drainage Structures that receive discharge from that run-on location. In the case of multiple run-on sources into the same Agricultural Drainage Structure, the Enrollee may discount the run-on turbidity value from the source with the highest estimated flow rate.

11) In the case of run-on resulting in soil erosion on the enrolled parcel that delivers sediment to Agricultural Drainage Structure, the Enrollee may submit a demonstration to the Executive Officer that the soil erosion is solely attributable to the run-on that originates off the enrolled parcel, The determination shall include a map showing location(s) of run-on and run-on associated erosion, photographs, and all records necessary to demonstrate that the offsite run-on is solely responsible for erosion and sediment mobilization resulting in turbidity benchmark exceedance(s). The determination shall be certified by a Qualified Professional. Upon Executive Officer approval of this determination, the Enrollee shall continue sampling those impacted Agricultural Drainage Structures every five years and reporting results but is not obligated to perform adaptive management or corrective action in response to turbidity benchmark exceedances in the impacted ag drainage structure. An update of this determination shall be submitted to the Executive Officer for approval every five years in order for the Enrollee to be exempt from adaptive management or corrective action in response to turbidity benchmark exceedances. This update shall be certified by a Qualified Professional.

12) The Enrollee shall characterize the land-use source of the Offsite Stormwater run-on as part of submission of their Agricultural Drainage Structure Monitoring results. For each monitoring result in which the Enrollee either discounts the Offsite Stormwater run-on value or has submitted and received approval of a

determination by the Executive Officer, the Enrollee shall report the general land-use(s) immediately upslope that is the source of the run-on.

13) Onsite sources of waste discharge that are not appurtenant to the vineyard operation on the enrolled parcel(s) may be subject to a ROWD and individual waste discharge requirements, a WQMP, or another regulatory mechanism.

B. Photo-Point Monitoring Requirements

1) For Enrollees choosing Ground Cover as a Sediment and Erosion Control Compliance Option, one photo-point per Sediment Management Unit shall be established and annually monitored to verify that Ground Cover is present at a level the Regional Board has established to be effective at preventing, controlling, or minimizing sediment discharge to surface waters (i.e., 90%). Photo-points shall be depicted on the Enrollee's Farm Evaluation map. Photographs shall be appended to the Farm Evaluation.

2) For Enrollees with a Certified SECP, the objective of Photo-point Monitoring is a qualitative indication that implemented management practices are effective at preventing, controlling, or minimizing sediment discharge to surface waters. At a minimum, photo-points shall be established and annually monitored at the following locations: (1) at locations representative of the range in tributary area, slope, soil type, and farming practices across the applicable enrolled parcels to monitor Ground Cover and other applicable sediment and erosion control management practices; (2) at each Agricultural Drainage Structure; (3) at sites representative of the Appurtenant Agricultural Road network; and (4) at locations identified by the Qualified Professional which have been prioritized for management practice implementation or repair. Photos and associated field notes shall be appended to the Enrollee's Certified SECP.

3) Guidance regarding establishment and protocols for photo-point monitoring are provided by the NRCS Quick Guide to Photo Monitoring[11].

IV. Representative Pesticide Monitoring Requirements

1) Every five years, the Enrollee shall monitor a representative number of hydrologically-connected stormwater discharge points or Agricultural Drainage Structures at the location where stormwater leaves the Farm Area for any pesticide indicated in Table A.3 that the Enrollee has applied on the commercial vineyard within five years of the sampling event.

2) Water quality sampling for pesticides shall be conducted three times in the required monitoring year. The first sampling event shall take place within 48 hours of the first Qualifying Storm Event (QSE) after November 1st. The second sampling event shall take place within 48 hours of the first QSE following January 1st and the third sampling event shall take place within 48 hours of the first QSE following March 1st.

If a sampling event is missed for any reason, the Enrollee shall sample following the next QSE and include rationale in the results for why the sampling event was missed.

3) Enrollees shall include pesticide monitoring results in the Trend Monitoring Report and shall use a template provided by the Regional Board and available on its website. An Enrollee may submit alternative procedures and forms for consideration but must receive written approval from the Executive Officer before using them.

4) Samples shall be collected, maintained, and shipped in accordance with the current version of the SWAMP Quality Assurance Third-Party Plan or in accordance with the Sampling Collection and Handling Instructions in Attachment D: Methodologies and Procedures.

5) The appropriate USEPA analytical method shall be utilized to analyze all applicable analytes consistent with the Method Detection Limit.

Table A.3: Pesticide Monitoring Constituents and Trigger Limits

Active Ingredient	**Trigger Limit (µg / L)**	**Source[12]**
glyphosate potassium salt	700	DDW Primary MCL; USEPA Primary MCL.
pendimethalin	0.7	USEPA Aquatic Life Benchmark
fluopyram	135	USEPA Aquatic Life Benchmark
boscalid	116	USEPA Aquatic Life Benchmark
azoxystrobin	20	USEPA Aquatic Life Benchmark
trifloxystrobin	2.76	USEPA Aquatic Life Benchmark
imidacloprid	0.01	USEPA Aquatic Life Benchmark
myclobutanil	220	USEPA Aquatic Life Benchmark
tebuconazole	11	USEPA Aquatic Life Benchmark
oryzalin	13	USEPA Aquatic Life Benchmark
oxyfluorfen	0.33	USEPA Aquatic Life Benchmark

Active Ingredient	**Trigger Limit (µg / L)**	**Source[12]**
flumioxazin	0.022	USEPA Aquatic Life Benchmark
pyraclostrobin	1.18	USEPA Aquatic Life Benchmark
glufosinate-ammonium	3	USEPA IRIS Reference Dose (RfD) as a drinking water level.
cyprodinil	8.2	USEPA Aquatic Life Benchmark
quinoxyfen	13	USEPA Aquatic Life Benchmark
difenoconazole	0.86	USEPA Aquatic Life Benchmark
spirotetramat	100	USEPA Aquatic Life Benchmark
bifenazate	150	USEPA Aquatic Life Benchmark
acetamiprid	2.1	USEPA Aquatic Life Benchmark
thiamethoxam	0.74	USEPA Aquatic Life Benchmark

6) If a pesticide is detected above the MDL, the Enrollee will annually monitor for that pesticide in that location until there is no detection above the MDL in any sampling event for two consecutive years, after which point monitoring may occur every five years.

7) If a pesticide is detected in any sampling event for four consecutive years in any monitoring location, the Enrollee shall analyze monitoring results for that pesticide in that monitoring location for trends in the Trend Monitoring Report. If there is no statistical increase in concentration of that monitored pesticide, the Enrollee may resume sampling every five years.

8) If there is a five-year increasing trend in concentration of a pesticide or the pesticide is detected above the Trigger Limit, the Enrollee shall develop a Water Quality Management Plan in accordance with Section II.C.5 of this Order.

V. Groundwater Quality Monitoring Requirements

The evaluation of groundwater quality focuses on two primary areas: (1) drinking water supply well monitoring and (2) groundwater trend monitoring. The purpose of drinking water supply well monitoring is to monitor drinking water wells for nitrate and pesticide exceedances and notify well users of the potential for human health impacts. The purpose of groundwater quality trend monitoring is to evaluate regional trends in groundwater nitrate concentrations associated with commercial vineyards.

Drinking Water Supply Well Monitoring is not included in the Workplan and shall be conducted independent of Workplan approval.

A. Drinking Water Well Sampling

The purpose of drinking water supply well monitoring is to: (1) identify drinking water wells that have nitrate concentrations that exceed the Maximum Contaminant Level (MCL) of 10 mg/L (milligrams per liter) of nitrate+nitrite as N; (2) identify drinking water wells that have California Department of Pesticide Regulation (CDPR) 6800(a) list[13] pesticide concentrations that exceed the Human Health Reference Level (HHRL), the Primary MCL, or the Public Health Goal; and (3) notify any users of those wells of the potential for human health impacts

General Monitoring Requirements

1) Enrollees shall sample all private Drinking Water Supply Wells [14] located on their enrolled parcels for nitrates. Enrollees shall sample in one representative private drinking water supply well for CDPR 6800(a) listed pesticides that the Enrollee has applied on any of their enrolled parcels in the previous five years.

2) The initial sampling event must be completed in time to allow for the results to be submitted electronically to the State Water Board's GeoTracker database by **July 1, 2028**, and by July 1st thereafter.

3) Groundwater samples shall be collected using proper sampling methods, chain-of custody, and quality assurance/quality control protocols. Groundwater samples shall be collected at or near the well head before the pressure tank and prior to any well head treatment. In cases where this is not possible, the water sample shall be collected from a sampling point as close to the pressure tank as possible, or from a cold-water spigot located before any filters or water treatment systems.

4) Laboratory analyses for groundwater samples shall be conducted by an Environmental Laboratory Accreditation Third-Party (ELAP)-certified laboratory according to the USEPA approved methods; unless otherwise noted, all monitoring, sample preservation, and analyses shall be performed in accordance with the latest edition of Test Methods for Evaluating Solid Waste, SW-846, USEPA[15], and analyzed as specified herein by the above analytical methods and reporting limits indicated. Certified laboratories and program information can be found on the Water Board's ELAP website (https://www.waterboards.ca.gov/drinking_water/certlic/labs/index.html).

5) All drinking water supply well monitoring data, including any existing data, shall be submitted electronically to the State Water Board's GeoTracker database by the testing laboratory. The data submitted shall include the Assessor's Parcel Number (APN) where the drinking water supply well is located and the coordinates (latitude and longitude) of the drinking water supply well.

Drinking Water Well Sampling for Nitrates

6) Initial Sampling: Enrollees shall conduct annual drinking water supply well sampling for nitrates for three years from all drinking water wells located on enrolled parcels. In lieu of one or more of these initial three annual tests, Enrollees may submit one or more annual drinking water supply well sampling results from one or more of the five prior years, provided: (1) nitrate sampling of a drinking water well was completed prior to enrollment in the Order; and (2) sampling and testing for nitrates and pesticides were completed using USEPA-approved methods and by an ELAP-certified laboratory.

7) Sampling Frequency: If the nitrate concentration is above 5 mg/L nitrate+nitrite as N in any of the first three annual samples, Enrollees shall continue conducting annual drinking water supply well sampling for nitrates. If the nitrate concentration is below 5 mg/L nitrate+nitrite as N in three consecutive annual samples, Enrollees may conduct sampling every five years. Sampling once every five years may continue unless the nitrate concentration exceeds 5 mg/L in any sample, in which case the Enrollee must sample annually until the nitrate concentration is below 5 mg/L for three consecutive years. An alternative sampling schedule based on trending data for the well may be required by the Executive Officer at any time.

8) Terminating Sampling: Sampling may cease if a drinking water well is taken out of service or no longer provides drinking water because sufficient replacement water is being supplied. Enrollees shall keep any records (e.g., photos, bottled water receipts) establishing that the well is not used for drinking water.

9) Exceedances: If water in any well that is used for drinking water exceeds 10 mg/L of nitrate+nitrite as N, the Enrollee shall provide notice to the drinking water well users within 10-days of learning of the exceedance and send a copy of the notice to the Regional Water Board. If the Enrollee is not the owner of the parcel enrolled in the Order, the Enrollee may provide notice instead to the owner within 24 hours of learning of the exceedance, and the owner shall provide notice to the drinking water well users within nine days and send a copy of the notice to the Regional Water Board.

10) Form of Notice: At a minimum, the Enrollee or non-Enrollee owner shall notice drinking water well users of the exceedance by providing them a copy of a Drinking Water Notification Template approved by the Executive Officer. The template shall be signed by the Enrollee or non-Enrollee owner certifying notice has been provided to the users. A copy of the signed template shall be sent to the Regional Water Board and retained by the Enrollee or non-Enrollee owner.

Drinking Water Supply Well Sampling for Pesticides

11) Sampling: Enrollees shall sample one representative[16] well every five years for any CDPR 6800(a) listed pesticides that were applied on any of the Enrollee's enrolled

parcels in the five years prior. In lieu of the initial sample, Enrollees may submit drinking water supply well sampling results from the five prior years, provided: (1) sampling of a drinking water well for the pesticide(s) was completed prior to enrollment in the Order; (2) sampling and testing for the pesticide(s) were completed using USEPA-approved methods and by an ELAP-certified laboratory; and (3) that sampling event occurred at least one year following the application of the pesticide(s).

12) Sampling Frequency: If the sampled concentration of a pesticide exceeds any of the following three values: (1) the CDPR Human Health Reference Level (HHRL)17, (2) the Primary MCL, or a (3) Public Health Goal, the Enrollee shall sample all their drinking water wells for that pesticide in the following year. Annual sampling shall continue for all wells exceeding the HHRL or water quality objective for that pesticide until the concentration is below the HHRL and water quality objective for two consecutive years. Enrollees may then sample for that pesticide once every five years until the pesticide has not been applied in any of the five years prior to the sampling year. The Enrollee may then cease sampling for that pesticide. An alternative sampling schedule based on trending data for the well may be required by the Executive Officer at any time.

13) Terminating Sampling: Sampling may cease if a drinking water well is taken out of service or no longer provides drinking water because sufficient replacement water is being supplied. Enrollees shall keep any records (e.g., photos, bottled water receipts) establishing that the well is not used for drinking water.

14) Exceedances: If water in any well that is used for drinking water exceeds CDPR's HHRL, the Primary MCL, or a Public Health Goal, the Enrollee shall provide notice to users of the drinking water well within 10 days of learning of the exceedance and send a copy of the notice to the Regional Water Board. If the Enrollee is not the owner of the parcel enrolled in the Order, the Enrollee may provide notice instead to the owner within 24 hours of learning of the exceedance, and the owner shall provide notice to the drinking water well users within nine days and send a copy of the notice to the Regional Water Board.

15) Form of Notice: At a minimum, the Enrollee or non-Enrollee owner shall notice drinking water well users of the pesticide exceedance by providing them: (1) location of the drinking water well in which the exceedance occurred, (2) CDPR's Pesticide Information and Use Fact Sheet[18] and CDPR's Drinking Water Standards Fact Sheet[19] and (3) a copy of a Drinking Water Notification Template approved by the Executive Officer. The template shall be signed by the Enrollee or non-Enrollee owner certifying notice has been provided to the users. A copy of the signed template shall be sent to the Regional Water Board and retained by the Enrollee or non-Enrollee owner.

B. Groundwater Quality Trend Monitoring

The objectives of Groundwater Quality Trend Monitoring are: (1) to determine current groundwater quality conditions associated with commercial vineyards, and (2) to develop long-term groundwater quality information that can be used to evaluate regional groundwater quality impacts from commercial vineyards. This section provides the objectives and minimum sampling and reporting requirements for Groundwater Quality Trend Monitoring.

Monitoring Requirements

1) Minimum Parameters and Frequency: Monitoring wells shall be sampled, at a minimum, annually at the same time of the year and analyzed at least for the indicator parameters identified in Table A.4 below.

2) Monitoring Network: Details for wells proposed for groundwater monitoring in the Workplan shall include:

    a) GPS coordinates.

    b) California state well number (if known).

    c) Total well depth.

    d) Top and bottom depths of well casing perforations.

    e) A copy of the water well drillers log (if available).

    f) Depth of standing water (static water level), if available (this may be obtained after implementing the Coalition).

    g) Well seal information (type of material, length of seal).

3) Sampling Requirements: Groundwater samples shall be collected using proper sampling methods, chain-of custody, and quality assurance/quality control protocols. Laboratory analyses for groundwater samples shall be conducted by an ELAP-certified laboratory according to the USEPA approved methods; unless otherwise noted, all monitoring, sample preservation, and analyses shall be performed in accordance with the latest edition of Test Methods for Evaluating Solid Waste, SW-846, USEPA, and analyzed as specified herein by the above analytical methods and reporting limits indicated. Certified laboratories can be found on the Water Board's ELAP website (https://www.waterboards.ca.gov/drinking_water/certlic/labs/index.html).

4) Data Submission: Groundwater monitoring data shall be submitted electronically to the State Water Board's GeoTracker database annually by the testing laboratory and included in the Annual Compliance Form as detailed in Section VI.B. The annual reports shall include a map of the sampled wells, tabulation of the analytical data, and time concentration charts.

5) Results for the five years preceding the Water Quality Trend Monitoring Report shall be included and shall be analyzed for trends within that report as detailed in Section VI.A of this MRP.

Table A.4: Individual Groundwater Monitoring and Minimum Frequency

Trend Monitoring Parameters	Units	Analysis Type	Frequency
pH	pH units	Field	Annually
Conductivity (at 25º C)	µmhos/cm	Field	Annually
Temperature	ºC	Field	Annually
Nitrate as Nitrogen	mg/L	Laboratory	Annually
Total Dissolved Solids (TDS)	mg/L	Laboratory	Annually

VI. Reporting Requirements:

1) Enrollees shall comply with the following reporting requirements and schedule outlined in Tables A.1 and A.2.

2) The Individual Enrollee shall create a GeoTracker user account. Instructions for setting up an account and the process of claiming a site, formatting, and uploading data, and other technical information can be found under “ESI Overview” and “Getting Started” sections on the State Water Board’s website[20].

3) Groundwater monitoring analytical data shall be uploaded to GeoTracker in an Electronic Deliverable Format (EDF). Additionally, monitoring data, monitoring reports, and correspondence shall be in searchable Portable Document Format (PDF) and shall be uploaded annually to GeoTracker.

A. Water Quality Trend Monitoring Report (Trend Monitoring Report)

The Trend Monitoring Report shall be submitted on July 1st five years following approval of the Water Quality Monitoring Plan and by July 1st every year thereafter. The Trend Monitoring Report shall cover the monitoring periods from the previous five calendar years and shall include the following components:

1) A signed transmittal letter shall accompany each report. The transmittal letter shall be submitted and signed in accordance with the requirements of Section II.H: Provisions of the Order.

2) Title page.

3) Table of contents.

4) Executive summary.

5) Monitoring objectives and design.

6) Sampling site/monitoring well descriptions and rainfall records for the time period covered under the Trend Monitoring Report.

7) Location map(s) of sampling sites/monitoring wells.

8) Results of all surface water and groundwater analyses. In reporting monitoring data, the Enrollee shall arrange the data in tabular form so that the required information is readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with the data collection requirements of the MRP.

9) Discussion of data. The report shall include a discussion of the Enrollee's compliance with the data collection requirements of the MRP. If a required component was not met, an explanation for the missing data shall be included. Results shall also be compared to water quality objectives and trigger limits.

10) Sampling and analytical methods used.

11) Electronic laboratory data reports of chemical results must include analytical results, as well as associated quality assurance data including method detection limits, reporting limits, matrix spikes, matrix spike duplicates, laboratory blanks, and other quality assurance results required by the analysis method. The Enrollee may ask the laboratory to provide assistance with evaluation of their QA/QC data, provided that the Enrollee prepares the summary table or narrative description of the results for the Trend Monitoring Report.

12) Summary of turbidity benchmark exceedances from the past five years of Agricultural Drainage Structure Monitoring, pesticide detections above the MDL, and pesticide exceedances of the Trigger Limits.

13) Actions taken to address turbidity benchmark exceedances that have occurred, including but not limited to, revised or additional management practices implemented.

14) Evaluation of monitoring data to identify spatial trends and patterns.

    a) The Enrollee shall evaluate its monitoring data in the Trend Monitoring Report to identify potential trends and patterns in surface water and groundwater quality that may be associated with waste discharge from their property.

    b) Wherever possible, the Enrollee should utilize tables or graphs that

illustrate and summarize the data evaluation.

c) Conclusions and recommendations.

B. Annual Compliance Report

The Annual Compliance Report shall be uploaded to GeoTracker by **July 1, 2028**, and by July 1st annually thereafter and shall consist of the following elements:

Farm Evaluation: inventory of management practices to control the discharge of sediment, pesticides and nutrients from the Farm Area and identification of wells, watercourses, and appurtenant structures. See Section VI.B below.

Irrigation and Nutrient Management Plan: Inventory of management practices to control the movement of nutrients to groundwater and reporting of Nitrogen Applied and Removed. See Section VI.B below.

Annual Water Quality Monitoring Results: Results of a) Ag Drainage Structure Sampling if applicable (See Section III), and b) Groundwater Quality Monitoring (see Section V.).

Outreach Event Attendance: The Enrollee shall report on the annual outreach event attended in the previous year.

CEQA Mitigation Monitoring: The Enrollee shall report on the CEQA Mitigation Measures in Attachment D employed to comply with the provisions of the Order.

Farm Evaluation

1) The Farm Evaluation shall indicate the management practices already in place and describe modifications to existing management practices or additional management practices that have been or will be implemented and maintained to comply with all conditions of this Order.

2) Enrollees shall use the Farm Evaluation Template approved by the Regional Water Board's Executive Officer and available on the Regional Water Board website, or an alternate template approved by the Executive Officer. At a minimum, the Farm Evaluation Template will include the following:

   a) Owner/Operator Identification: The name, business address, mailing address, email address, phone number of the owner and operator (if different from owner).

   b) Commercial Vineyard Identification: Location(s) of commercial vineyard parcel(s) under contiguous ownership, including: (1) the address, (2) the Assessor Parcel Numbers (APNs) and the county in which each parcel is located, (3) the Township, Range, and Section (TRS) of each enrolled APN;

and (4) the total acreage under cultivation for each APN.

c) Vineyard Map: A vineyard map shall include all enrolled parcels and may be an aerial photograph, topographic map, LiDAR-derived shaded relief map, Google Earth image, or equivalent that depicts features at 1-inch = 50 feet or larger scale. The vineyard base map(s) shall include a north arrow and label the following appurtenant features on all enrolled parcels: (1) Streamflow diversion structures; (2) Agricultural Drainage Structures; (3) Farm buildings[21] and equipment yards; (4) Appurtenant Agricultural Roads; and (5) Photo-points, if applicable.

d) Sediment and Erosion Control Option and Implementation Standard: The Enrollee shall indicate which Sediment and Erosion Control Compliance Option and Implementation Standard was chosen. If changing Compliance Options for the next growing season, the Enrollee must indicate that change.

e) Management Practices: A list of management practices implemented to prevent erosion and control the discharges of sediment, nutrients, and pesticides from the Farm Area, Appurtenant Agricultural Roads (including All-Season and Seasonal Roads (e.g., vineyard avenues)) and Streamside Areas

f) Irrigation and Nutrient Management: (1) A list of management practices implemented within each parcel to minimize or prevent discharges of nutrients to surface waters and to minimize leaching of nitrogen past the root zone, (2) Primary and secondary irrigation methods for each APN, and (3) irrigation management practices to minimize or prevent surface run-off or groundwater leaching.

g) Well Identification: The number of (1) irrigation wells, (2) Drinking Water Supply Wells, and (3) abandoned or inactive wells associated with each enrolled APN. Each well shall be given a unique Well ID.

h) Certification of Maintenance: The Enrollee shall certify on their Farm Evaluation that all management practices are designed, installed, maintained, and promptly repaired in accordance with Section II.C of the Order.

i) Stormwater or Agricultural Drainage Structure Sampling Points (if applicable): Labeled Sampling Points for every storm water discharge point or Agricultural Drainage Structure at its furthest downstream location on the commercial vineyard for which the discharge is in hydrologic connection[22] to surface waters.

Irrigation and Nitrogen Management Plan

3) Enrollees shall prepare and implement an Irrigation and Nitrogen Management Plan (INMP) for each parcel and submit the INMP to the Regional Water Board for the previous crop year as part of the Annual Compliance Form in accordance with the schedule in Tables A.1 and A.2.

4) Enrollees identified as nitrogen application and removal (AR) outliers by the Regional Water Board, based on enrolled Enrollees in their Township, Range and Section (TRS), shall ensure the next INMP is prepared by an irrigation and nitrogen management planning specialist or self-certify their INMP[23]. On their certified INMP, these Enrollees shall report that they were notified as outliers for reported AR data and the INMP reflects additional or improved management practices implemented to address the potential over-application of nitrogen.

5) Where this Order requires reporting by parcel, Enrollees may aggregate data for a portion of a parcel or for multiple parcels provided that the reported area has (1) the same fertilizer inputs, (2) the same irrigation management, and (3) the same management practices. In no case should a reported area exceed a total size of 640 acres. These “Nitrogen Management Units’ shall be defined, labeled and consistent across all INMP and Farm Evaluation reporting.

6) Enrollees shall use the INMP Template approved by the Regional Water Board’s Executive Officer. At a minimum, the INMP will collect the following information:

    a) Crop Year.

    b) Owner/Manager name.

    c) Assessor Parcel Number (APN).

    d) Acreage for each APN identified.

    e) Crop age.

    f) Irrigation method(s).

    g) Crop Yield (tons/acre)

    h) Nitrogen Applied (lbs./acre) from the following sources:

        i) All applied water (e.g., irrigation, frost protection, recycled water, winery process wastewater, etc.)

        ii) Synthetic Fertilizers, and/or

        iii) Organic Amendments (e.g., grape pomace, manure, compost, etc.)

    i) Documented outreach and education received or attended during the

previous year in accordance with Section II.C.4 of this Order.

7) Enrollees shall use this information to calculate the Applied/Removed (A/R) ratio for nitrogen, and an Applied-Removed (A-R) difference for nitrogen, as defined in the equations in Table A.2. These shall be submitted in the Annual Compliance Report in accordance with the schedule outlined in Tables A.1 and A.2.

8) Every third reporting year, Enrollees shall average the past 3 years of their AR Reporting and provide a 3-year A/R Ratio and A-R Difference in the Annual Compliance Form as defined in the equations in Table A.5.

Table A.5: Nitrogen Reporting Equations

Description	Equation
The A/R ratio is the ratio of total Nitrogen Applied[24] to Nitrogen Removed[25] (including all harvested materials and nitrogen annually sequestered in woody material)	$$\text{A/R Ratio} = \frac{\text{Nitrogen Applied (lbs./acre)}}{\text{Nitrogen Removed (lbs./acre}}$$
For each parcel for which three consecutive years of A/R ratio is available, the multi-year A/R ratio shall be reported as the ratio of total nitrogen applied to total nitrogen removed (calculated below) for the three prior consecutive years	$$A/R_{3\ year}\ \text{Ratio} = \frac{A_n + A_{n-1} + A_{n-2}}{R^n + R_{n-1} + R_{n-2}}$$ Where n = current reporting cycle A = Nitrogen Applied R = Nitrogen Removed
The A-R difference is the difference of total Nitrogen Applied and the total Nitrogen Removed	A-R Difference= Nitrogen Applied (lbs./acre) – Nitrogen Removed (lbs./acre)
The multi-year A-R difference shall be reported as the numerical difference between total nitrogen applied and total nitrogen removed for the three prior consecutive years.	$A\text{-}R_{3\ year}$ Difference= $[A_n + A_{n-1} + A_{n-2}] – [R_n + R_{n-1} + R_{n-2}]$ Where n = current reporting cycle A = Nitrogen Applied R = Nitrogen Removed
Total Nitrogen Removed is determined by multiplying a Enrollee's crop yield by a crop-specific nitrogen coefficient, (C_N) which represents the amount of nitrogen in the harvested crop. The C_N coefficient may be obtained through a University of California Viticultural advisor, an irrigation and nutrient planning specialist, the Regional Water Board, or through literature.	Nitrogen Removed (lbs./acre) = Crop Yield (tons/acre) x C_N (lbs./tons)

Annual Water Quality Monitoring Results

9) The Enrollee shall submit results of water quality monitoring for all applicable annual monitoring requirements. The initial submittal will be by July 1st in the year following approval of the Water Quality Monitoring Workplan and by **July 1st** annually thereafter.

10) The annual report shall include a map of applicable monitoring locations, sampled wells, tabulation of the analytical data, and concentration trend charts. All water quality data are to be submitted electronically in EDF format to the State Water Board's GeoTracker Database.

11) The Enrollee shall submit groundwater field measurements and laboratory analysis results as they are available in an electronic format. The annual water quality monitoring data results shall include the following for the required reporting period:

    a) All surface and groundwater monitoring data in tabular form. For each Agricultural Drainage Structure monitoring result in which the Enrollee either discounts the Offsite Stormwater run-on value or has submitted and received approval of a determination by the Executive Officer, the Enrollee shall report the general land-use(s) immediately upslope that is the source of the run-on.

    b) Electronic copies of all field sheets.

    c) Electronic copies of photos obtained from all Agricultural Drainage Structure Monitoring sites, clearly labeled with location code and date.

    d) Electronic copies of all applicable laboratory analytical reports shall be submitted once per year with the Annual Compliance Report.

    e) Calibration logs from all turbidimeters used in sampling.

    f) For chemistry data, analytical reports shall include, at a minimum, the following:

        i) A lab narrative describing quality control failures.

        ii) Analytical problems and anomalous occurrence.

        iii) Chain of custody and sample receipt documentation.

        iv) All sample results for contract and subcontract laboratories with units. Reporting Limits and Method Detection Limits.

        v) Sample preparation, extraction, and analysis dates.

        vi) Results for all quality control samples including all field and laboratory blanks, lab control spikes, matrix spikes, field and laboratory duplicates,

and surrogate recoveries.

12) If any data is missing from the annual report, the submittal shall include a description of what data is missing and when it will be submitted to the Regional Water Board.

Outreach Event Attendance

13) As part of the Annual Compliance Report, the Enrollee shall submit outreach event attendance information. At a minimum, the outreach event records shall include:

    a) Date of annual outreach event attended,

    b) Type of outreach event (e.g., in-person meeting, online video, printed materials), and,

    c) Brief description of topics covered.

CEQA Mitigation Monitoring

As part of the Annual Compliance Report, the Enrollee shall report on the CEQA mitigation measures in Attachment E employed to comply with provisions of the Order. The CEQA Mitigation Monitoring reported in the Annual Compliance Report shall include information on the implementation of CEQA mitigation measures (mitigation measures are described in Attachment E of the Order), including the measure implemented, identified potential impact the measure addressed, parcel(s) where of the mitigation measure was employed, and any steps taken to monitor the ongoing success of the measure.

VII. Attachment A Endnotes

[1] Enrollees may reference Department of Water Resources guidance document Section D (Degraded Water Quality) to determine sufficient monitoring well network for groundwater quality assessment (https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents/Files/BMP-2-Monitoring-Networks-and-Identification-of-Data-Gaps_ay_19.pdf).

[2] High vulnerability groundwater areas are groundwater basins designated as priority groundwater basins for salt and nitrate planning based on the 2021 North Coast Groundwater Basin Prioritization Resolution (https://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2021/21_0006_Groundwater_Basin_Prioritization_Resolution.pdf). Low vulnerability groundwater areas are groundwater basins not designated as 'priority basins.' See 'high-vulnerability groundwater' in Appendix 1: Acronyms and Definitions.

[3] See the QA/QC Program (https://www.waterboards.ca.gov/water_issues/programs/quality_assurance/qapp.html).

[4] Calibration logs shall be kept with the instrument and submitted with the Annual Water Quality Monitoring Report as required in Section VII.D.

[5] See USEPA Method 180.1 (https://www.epa.gov/sites/default/files/2015-08/documents/method_180-1_1993.pdf).

[6] See the SWAMP Quality Assurance Plan (https://www.waterboards.ca.gov/water_issues/programs/swamp/quality_assurance.html).

[7] Temporary Sediment Controls are Temporary sediment control best management practices (BMPs) are short-term measures that should be considered during a period where areas are disturbed due stormwater runoff, farming activities, or maintenance. A temporary sediment control BMP is normally used for 1—6 months, or until a more permanent BMP is put into place. Temporary sediment control BMPs are typically used in conjunction with erosion control BMPs and are designed and installed to keep as much sediment on-site as possible. Examples of temporary sediment controls could include, but are not limited to Linear Sediment Controls, dikes and berms, check dams, sediment basins, and inlet/outlet protection.

[8] Accepted sediment and erosion control management practice standards and design can be found in the NRCS-USDA National Conservation Practice Standards; USEPA's National Management Measures to Control Nonpoint Source Pollution from Agriculture; Handbook of Forest, Ranch, and Rural Roads; A Guide for Planning, Designing, Constructing, Reconstructing, Upgrading, Maintaining, and Closing Wildland Roads; California's Management Measures for Polluted Runoff; Best Management Practices for VESCO Agricultural Erosion and Sediment

Control; The Land Steward's Guide to Vineyard and Orchard Erosion Control; the California Code of Sustainable Winegrowing Workbook, and the California Stormwater Quality Association BMP Handbook.

[9] Accepted sediment and erosion control management practice standards and design can be found in the NRCS-USDA National Conservation Practice Standards, USEPA's National Management Measures to Control Nonpoint Source Pollution from Agriculture ; Handbook of Forest, Ranch, and Rural Roads, A Guide for Planning, Designing, Constructing, Reconstructing, Upgrading, Maintaining, and Closing Wildland Roads , California's Management Measures for Polluted Runoff ; Best Management Practices for VESCO Agricultural Erosion and Sediment Control ; The Land Steward's Guide to Vineyard and Orchard Erosion Control, the California Code of Sustainable Winegrowing Workbook , and the California Stormwater Quality Association BMP Handbook.

[10] Flows that originate from an area not located on the Enrollee's enrolled parcel and flow onto the Farm Area

[11] See the Quick Guide to Photo Point Monitoring https://efotg.sc.egov.usda.gov/references/public/NM/bio61a6_PhotoDocumentation_Protocol.pdf

[12] Trigger limit sources were determined from the lowest of numeric water quality thresholds. These thresholds are used to assess whether beneficial uses of surface water are likely to be impaired or threatened. USEPA Aquatic Life Benchmarks are based on toxicity values from scientific studies that EPA reviewed and used to estimate risk to freshwater organisms from exposure to pesticides and their degradates in their most recent publicly available ecological risk assessments and preliminary Problem Formulations written in support of pesticide registration or registration review. The USEPA Aquatic Life Benchmarks used were for chronic freshwater vertebrates and invertebrates benchmarks and nonvascular and vascular plants. For more information on Water Quality Goals, visit the State Water Board's website at: https://www.waterboards.ca.gov/water_issues/programs/water_quality_goals/

[13] Department of Pesticide Regulation 6800(a) list (https://www.cdpr.ca.gov/docs/legbills/calcode/040101.htm).

[14] Drinking Water Supply Wells are any domestic or irrigation Wells that are used to provide drinking water to residents, tenants, or farm employees.

[15] Test Methods for Evaluating Solid Waste, SW-846 (https://www.epa.gov/hw-sw846).

[16] Representative well shall be within the same HUC12 in which the pesticides were applied, or within the closest drinking water well if no drinking water Wells are within the HUC12 of the applied pesticide.

[17] CDPR HHRLs are available online (https://www.cdpr.ca.gov/docs/emon/grndwtr/gwp_sampling.htm).

[18] Pesticide Information and Use Fact Sheet (https://www.cdpr.ca.gov/docs/dept/factshts/pesticide_info_and_use_gw.pdf).

[19] CDPR Pesticide Drinking Water Standards Fact Sheet (https://www.cdpr.ca.gov/docs/dept/factshts/pesticide_drinking_water_gw.pdf).
[20] GeoTracker electronic submittal of information (https://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/).
[21] Farm buildings include equipment storage sheds, farmworker housing, and processing buildings.
[22] See definition in Appendix 1: Acronyms and Definitions.
[23] A certified Irrigation and Nitrogen Planning Specialist is a Certified Crop Advisor (CCA) who has completed the California Nitrogen Management exam through The California Department of Food and Agriculture (CDFA), the University of California – Davis, the American Society of Agronomy's (ASA) International Certified Crop Adviser (ICCA) Third-Party and/or the CCA – Western Region (WR) Board and takes the required continuing education credits. Enrollees may qualify as a Irrigation and Nitrogen Planning Specialist and self-certify their INMP if they take the CDFA Irrigation and Nitrogen Management Training for Grower Self-Certification, pass the Irrigation and Nitrogen Management Training and Exam and maintain the certification through continuing education (https://www.cdfa.ca.gov/is/ffldrs/frep/training.html).
[24] Nitrogen Applied – Nitrogen Applied includes all nitrogen proactively added to a vineyard from any source, such as organic amendments, synthetic fertilizers, manure, and irrigation water.
[25] Nitrogen Removed – Nitrogen Removed includes all nitrogen taken from the vineyard in harvested or other materials. Other materials may include wheat straw, orchard prunings, almond hulls, etc. In the case of perennial crops, Nitrogen Removed also includes the nitrogen annually sequestered in the permanent wood.

Attachment B: Monitoring and Reporting Program for Enrollees in a Coalition

I. Summary

The Monitoring and Reporting Program (MRP) for Enrollees in an approved Coalition consists of on-farm monitoring (Management Practice Effectiveness Monitoring and Drinking Water Supply Well Monitoring) to assess the effectiveness of management practices and assess on-farm drinking water; and representative surface and groundwater monitoring (Tributary Streambed Monitoring, Representative Pesticide Monitoring, and Groundwater Trend Monitoring) to characterize and analyze trends in water quality related to impacts from commercial vineyards.

Enrollees shall conduct Management Practice Effectiveness Monitoring in accordance with their chosen Sediment and Erosion Control Compliance Implementation Standard and sample all Drinking Water Supply Wells on every enrolled parcel in the Order. Enrollees shall complete a Farm Evaluation and Irrigation and Nutrient Management Plan (INMP) and submit them to the Coalition. The Coalition shall aggregate Enrollee management practice and nitrogen application reporting (Farm Evaluation and INMP) data and Management Practice Effectiveness Monitoring data into an Annual Compliance Report that is submitted to the Regional Water Board.

By **July 1, 2029**, the Coalition shall submit a Water Quality Monitoring Workplan (Workplan) to the Regional Water Board Executive Officer for approval, which details all group surface water and groundwater monitoring requirements on behalf of their Enrollees. The Coalition shall implement this Workplan and report results annually in the Annual Monitoring Report and every five years in a Trend Monitoring Report. By **July 1st**, seven years following initial INMP reporting, the Coalition may propose a methodology for determining statistical outliers in nitrogen reporting for approval by the Regional Water Board Executive Officer. All water quality monitoring data (except Agricultural Drainage Structure Monitoring) shall be reported in a format consistent with Water Boards' various data management systems (e.g., surface water data to CEDEN, groundwater data to GeoTracker).

A master schedule of Enrollee deliverables is provided in Table B.1 below. A schedule of deliverables for Coalitions on behalf of their enrolled Enrollees is provided in Table B.2 below. The Executive Officer may modify the MRP, as necessary or appropriate, at a future date.

Table B.1: Enrollee Monitoring Master Schedule

Requirement	Initial Due Date	Frequency	Submit to
Drinking Water Well Sampling	By **July 1, 2028**	Varies; See Section II.B	GeoTracker

Requirement	Initial Due Date	Frequency	Submit to
Management Practice Effectiveness Monitoring[1]	By **July 1, 2028**	Every five years	Coalition

Table B.2: Enrollee Reporting Master Schedule

Requirement	Initial Due Date	Frequency	Submit To:
Farm Evaluation and Irrigation and Nutrient Management Plan (INMP)	By a date set by the Coalition that accommodates inclusion into an initial Annual Compliance Report submittal deadline of **July 1, 2028**	Annually	Coalition

Table B.3: Coalition Monitoring Master Schedule

Requirement	Frequency	Where to Report Results
Tributary Streambed Monitoring	Following approval of Workplan: Year 1, Year 4, and every five years thereafter	Trend Monitoring Report
Representative Pesticide Monitoring	Every five years	Trend Monitoring Report
Groundwater Trend Monitoring	Annually	Annual Monitoring Report and Trend Monitoring Report

Table B.4: Coalition Reporting Master Schedule

Requirement	Elements of Report	Submittal Deadline and Frequency
Water Quality Monitoring Workplan (Workplan)	Surface and Groundwater Quality Monitoring Workplans	Preliminary scope of work due **January 1, 2029**. Workplan due **July 1, 2029**. Submit to Regional Water Board Executive Officer

Requirement	Elements of Report	Submittal Deadline and Frequency
Statistical Outlier Methodology (Optional)	AR outlier determination	**July 1st**, seven years following initial INMP reporting
Annual Compliance Report	Participant list, Management Practice data (Farm Evaluation, Irrigation and Nutrient Management Plan); AR calculations and outlier reporting, education and outreach tracking, CEQA Mitigation Monitoring.	By **July 1, 2028**, and by July 1st annually thereafter.
Annual Monitoring Report	Management Practice Effectiveness Monitoring	By **July 1, 2028** and annually thereafter.
Water Quality Trend Monitoring Report (Trend Monitoring Report)	Tributary Streambed Monitoring, Representative Pesticide Monitoring and Groundwater Trend Monitoring from the previous five years, trend analysis, and conclusions.	Within five years of approval of Water Quality Monitoring Workplan and by **July 1st** every five years thereafter.

II. Water Quality Monitoring Requirements for Enrollees

Enrollees shall conduct on-farm monitoring that consists of: (1) Management Practice Effectiveness Monitoring, and (2) Drinking Water Supply Well Monitoring.

A. Management Practice Effectiveness Monitoring

Enrollees shall conduct Management Practice Effectiveness Monitoring based on the Implementation Standard of the Sediment and Erosion Control Compliance Option they have chosen in accordance with Section II.C of the Order. Enrollees will either be required to conduct Agricultural Drainage Structure Turbidity Monitoring or Photo-point Monitoring. The purpose of Management Practice Effectiveness Monitoring is to (1) assess the effectiveness of management practices at preventing erosion and controlling sediment discharge; and (2) drive Adaptive Management.

Agricultural Drainage Structure Turbidity Monitoring Requirements

1) The Enrollee or Coalition shall annually monitor turbidity values in at least 20 percent of Agricultural Drainage Structures at the outlet that discharges from the Farm Area to surface waters. Enrollees shall choose monitoring locations that are representative of the range in tributary area, slope, soil type, and farming practices across the applicable enrolled parcels. Upon notice from the Executive Officer that monitoring locations chosen by the Enrollee are not representative, the Enrollee shall propose and begin implementing for monitoring new locations for concurrence by the Executive Officer. The Executive Officer has the discretion to determine representative or additional monitoring locations.

2) Agricultural Drainage Structures shall be assigned an anonymous location ID and aggregated and reported at the HUC-12 level[2].

3) Turbidity values in Agricultural Drainage Structures shall be monitored during a Qualifying Storm Event from the first two hours of discharge which occurs during daylight hours using a calibrated[3] turbidity meter (turbidimeter), either on-site or at an accredited lab. Acceptable laboratory test methods include Standard Method 2130 or USEPA Method 180.1[4]. Results shall be recorded in Nephelometric Turbidity Units (NTU). Representative discharge for the purposes of Agricultural Drainage Structure Sampling should not include periods of inundation from flood waters.

4) Samples shall be collected, maintained, and shipped in accordance with the current version of the SWAMP Quality Assurance Third-Party Plan[5] or the Sampling Collection and Handling procedures outlined in Attachment D: Methodologies and Procedures.

5) The Coalition shall include annual Agricultural Drainage Structure Turbidity Monitoring results in the Annual Monitoring Report as described in Section V.B of this MRP.

Exceedances of Turbidity Benchmark and Adaptive Management

6) Enrollees with Agricultural Drainage Structures that exceed the turbidity benchmark of 250 NTU shall be notified by the Coalition and included on the Flagged Table of the Participant List in accordance with Section V.A of this MRP.

7) Following an exceedance of an Agricultural Drainage Structure, when it is safe and reasonable to do so, the Enrollee shall implement Temporary Sediment Controls[6] or management practices[7] to prevent or minimize erosion, control mobilization of sediment to that ag drainage structure and control the discharge of sediment from that ag drainage structure. Examples of temporary sediment controls may include but are not limited to hay bales and linear sediment controls such as silt fences and wattles. These in-season repairs shall be implemented in response to every ag drainage structure exceedance.

8) The Agricultural Drainage Structure at which the benchmark exceedance occurred shall be monitored in each subsequent Qualifying Storm Event following repair until there are no further exceedances, at which point the Enrollee may return to monitoring that location annually. If the Agricultural Drainage Structure continues to experience exceedances of the benchmark during the final QSE of the year, the Enrollee shall resume monitoring that location at the first QSE in the following year.

9) If an agricultural drainage structure has exceedances of the 250 NTU turbidity benchmark in two consecutive years, the Enrollee shall continue to implement in-season repairs and attend a training focused on sediment erosion and control management practices. This event may also serve as the Enrollee's annual outreach and education event as required by the Order; however, the primary subject of the training must include sediment and erosion control management practices.

10) If an agricultural drainage structure has exceedances of the 250 NTU turbidity benchmark in three consecutive years, the Enrollee shall implement in-season repairs and shall append to their Farm Evaluation an Adaptive Management Assessment which is comprised of:

    a) A review of the management practices for compliance with approved management practices standards[8], and any needed management practice improvements to minimize or prevent erosion and the discharge of sediment to surface water.

    b) Photographs of all management practices implemented to minimize or prevent sediment discharge to that agricultural drainage structure or discharge point.

    c) Documentation of education or attendance of outreach event focused on sediment erosion and control management practices.

11) If an Agricultural Drainage Structure or drainage point has exceedances of the 250 NTU turbidity benchmark in four consecutive years, the Enrollee shall develop and implement a Water Quality Management Plan as described in Section II.E of the Order.

Offsite Stormwater Run-on

12) In the case of run-on from concentrated flow (including ag drainage structures) from Offsite Sources[9], the Enrollee may sample the run-on where it enters the planted area, Appurtenant Agricultural Roads, structures, or areas of the commercial vineyard and adjust the turbidity benchmark to 250 NTUs above the run-on turbidity value in all Agricultural Drainage Structures that receive discharge from that run-on location. In the case of multiple run-on sources into the same Agricultural Drainage Structure, the Enrollee may discount the run-on turbidity

value from the source with the highest estimated flow rate.

13) In the case of run-on resulting in soil erosion on the enrolled parcel that delivers sediment to an Agricultural Drainage Structure, the Enrollee may submit a demonstration to the Executive Officer that the soil erosion is solely attributable to the run-on that originates off the enrolled parcel. The determination shall include a map showing location(s) of run-on and run-on associated erosion, photographs, and all records necessary to demonstrate that the offsite run-on is solely responsible for erosion and sediment mobilization resulting in turbidity benchmark exceedance(s). The determination shall be certified by a Qualified Professional. Upon Executive Officer approval of this determination, the Enrollee shall continue sampling those impacted Agricultural Drainage Structures every five years and reporting results but is not obligated to perform adaptive management or corrective action in response to turbidity benchmark exceedances in the impacted Agricultural Drainage Structure. An update of this determination shall be submitted to the Executive Officer for approval every five years in order for the Enrollee to be exempt from Adaptive Management or corrective action in response to turbidity benchmark exceedances. This update shall be certified by a Qualified Professional.

14) The Enrollee shall characterize the land-use source of the Offsite Stormwater run-on as part of submission of their Agricultural Drainage Structure Monitoring results. For each monitoring result in which the Enrollee either discounts the Offsite Stormwater run-on value or has submitted and received approval of a determination by the Executive Officer, the Enrollee shall report the general land-use(s) immediately upslope that is the source of the run-on. This information will be submitted as part of the Annual Water Quality Monitoring Report by the Coalition.

15) Onsite sources of waste discharge that are not appurtenant to the vineyard operation on the enrolled parcel(s) may be subject to a ROWD and individual waste discharge requirements, a WQMP, or another regulatory mechanism

Photo-Point Monitoring Requirements

16) For Enrollees choosing Ground Cover as a Sediment and Erosion Control Compliance Option, one photo-point per Sediment Management Unit shall be established and annually monitored to verify that Ground Cover is present at a level the Regional Board has established to be effective at preventing, controlling, or minimizing sediment discharge to surface waters (i.e., 90%). Photo-points shall be depicted on the Enrollee's Farm Evaluation map. Photographs shall be maintained at the Enrollee's farming headquarters or primary place of business and shall be provided to Regional Water Board staff on request.

17) For Enrollees with a Certified SECP, the objective of Photo-point Monitoring is a qualitative indication that implemented management practices are effective at preventing, controlling, or minimizing sediment discharge to surface waters. At a minimum, photo-points shall be established and annually monitored at the following

locations: (1) at locations representative of the range in tributary area, slope, soil type, and farming practices across the applicable enrolled parcels to monitor Ground Cover and other applicable sediment and erosion control management practices; (2) at each Agricultural Drainage Structure; (3) at sites representative of the Appurtenant Agricultural Road network; and (4) at locations identified by the Qualified Professional which have been prioritized for management practice implementation or repair. Photos and associated field notes shall be appended to the Enrollee's Certified SECP.

18) Guidance regarding establishment and protocols for photo-point monitoring are provided by the NRCS Quick Guide to Photo Monitoring[10].

B. Drinking Water Supply Well Monitoring

1) The purpose of the drinking water supply well sampling is to: (1) identify drinking water wells that have nitrate concentrations that exceed the Maximum Contaminant Level (MCL) of 10 mg/L (milligrams per liter) of nitrate+nitrite as N; (2) identify drinking water wells that have California Department of Pesticide Regulation (CDPR) 6800(a)[11] list pesticide concentrations that exceed the Human Health Reference Level (HHRL), the Primary MCL, or a Public Health Goal; and (3) notify any drinking water well users of the potential for human health impacts.

General Monitoring Requirements

2) Enrollees shall sample all private Drinking Water Supply Wells located on their enrolled parcels for nitrates and one representative private drinking water supply well for CDPR 6800(a) listed pesticides that the Enrollee has applied on any of their enrolled parcels in the previous five years.

3) The initial sampling event must be completed in time to allow for the results to be submitted electronically to the State Water Board's GeoTracker database by **July 1, 2028**. Enrollees may elect to work with a Coalition to fulfill the sampling requirements of this section.

4) Groundwater samples shall be collected using proper sampling methods, chain-of custody, and quality assurance/quality control protocols. Groundwater samples shall be collected at or near the well head before the pressure tank and prior to any well head treatment. In cases where this is not possible, the water sample shall be collected from a sampling point as close to the pressure tank as possible, or from a cold-water spigot located before any filters or water treatment systems.

5) Laboratory analyses for groundwater samples shall be conducted by an Environmental Laboratory Accreditation Third-Party (ELAP)-certified laboratory[12] according to the USEPA approved methods; unless otherwise noted, all monitoring, sample preservation, and analyses shall be performed in accordance with the latest edition of Test Methods for Evaluating Solid Waste, SW-846,

USEPA[13], and analyzed as specified herein by the above analytical methods and reporting limits indicated. Certified laboratories can be found on the Water Board's ELAP website (https://www.waterboards.ca.gov/drinking_water/certlic/labs/index.html).

6) All drinking water supply well monitoring data shall be submitted electronically to the State Water Board's GeoTracker database by the testing laboratory. Any existing data may be submitted to GeoTracker by the Enrollee. All data submitted shall include the Assessor's Parcel Number (APN) where the drinking water supply well is located and the coordinates (latitude and longitude) of the drinking water supply well.

Drinking Water Well Sampling for Nitrates

7) Initial Sampling: Enrollees shall conduct annual drinking water supply well sampling for nitrates for three years. In lieu of one or more of these initial three annual tests, Enrollees may submit one or more annual drinking water supply well sampling results from one or more of the five prior years, provided: (1) nitrate sampling of a drinking water well was completed prior to enrollment in the Order, and (2) sampling and testing for nitrate was completed using USEPA-approved methods and by an ELAP-certified laboratory.

8) Sampling Frequency: If the nitrate concentration is above 5 mg/L nitrate+nitrite as N in any of the first three annual samples, Enrollees shall continue conducting annual drinking water supply well sampling for nitrates. If the nitrate concentration is below 5 mg/L nitrate+nitrite as N in three consecutive annual samples, Enrollees may conduct sampling every five years. Sampling once every five years may continue unless the nitrate concentration exceeds 5 mg/L, in which case the Enrollee must sample annually until the nitrate concentration is below 5 mg/L for three consecutive years. An alternative sampling schedule based on trending data for the well may be required by the Executive Officer at any time.

9) Terminating Sampling: Sampling may cease if a drinking water well is taken out of service or no longer provides drinking water because sufficient replacement water is being supplied. Enrollees shall keep any records (e.g., photos, bottled water receipts) establishing that the well is not used for drinking water.

10) Exceedances: If water in any well that is used for drinking water exceeds 10 mg/L of nitrate+nitrite as N, the Enrollee shall provide notice to the drinking water well users within 10 days of learning of the exceedance and send a copy of the notice to the Regional Water Board. If the Enrollee is not the owner of the parcel enrolled in the Order, the Enrollee may provide notice instead to the owner within 24 hours of learning of the exceedance, and the owner shall provide notice to the drinking water well users within nine days and send a copy of the notice to the Regional Water Board.

11) Form of Notice: At a minimum, the Enrollee or non-Enrollee owner shall notify drinking water well users of the exceedance by providing them a copy of a Drinking Water Notification Template approved by the Executive Officer. The template shall be signed by the Enrollee or non-Enrollee owner certifying notice has been provided to the users. A copy of the signed template shall be sent to the Regional Water Board and retained by the Enrollee or non-Enrollee owner.

Drinking Water Supply Well Sampling for Pesticides

12) Sampling: Enrollees shall sample one representative well[14] every five years for any CDPR 6800(a) listed pesticides that were applied on any of the Enrollee's enrolled parcels in the five years prior. In lieu of the initial sample, Enrollees may submit drinking water supply well sampling results from the five prior years, provided: (1) sampling of the drinking water well was completed prior to enrollment in the Order, and (2) sampling and testing for the pesticide(s) were completed using USEPA-approved methods and by an ELAP-certified laboratory; and that sampling event occurred at least one year following the application of the pesticide(s).

13) Sampling Frequency: If the sampled concentration of a pesticide exceeds the any of the following three values: (1) the CDPR Human Health Reference Level (HHRL)[15], (2) the Primary MCL, or a (3) Public Health Goal, the Enrollee shall sample all their drinking water wells for that pesticide in the following year. Annual sampling shall continue for all wells with exceedances for that pesticide until the concentration is below the exceedance level for two consecutive years. Enrollees may then sample for that pesticide once every five years until the pesticide has not been applied in any of the five years prior to the sampling year. The Enrollee may then cease sampling for that pesticide in all drinking water wells. An alternative sampling schedule based on trending data for the well may be required by the Executive Officer at any time.

14) Terminating Sampling: Sampling may cease if a drinking water well is taken out of service or no longer provides drinking water because sufficient replacement water is being supplied. Enrollees shall keep any records (e.g., photos, bottled water receipts) establishing that the well is not used for drinking water.

15) Exceedances: If water in any well that is used for drinking water exceeds either CDPR's Human Health Reference Levels (HHRLs), the Primary MCL, or a Public Health Goal, the Enrollee shall notify users of the drinking water well within ten days of learning of the exceedance and send a copy of the notice to the Regional Water Board. If the Enrollee is not the owner of the parcel enrolled in the Order, the Enrollee may provide notice instead to the owner within 24 hours of learning of the exceedance, and the owner shall provide notice to the drinking water well users within nine days and send a copy of the notice to the Regional Water Board.

16) Form of Notice: At a minimum, the Enrollee or non-Enrollee owner shall notify drinking water well users of the pesticide exceedance by providing them: (1)

location of the drinking water well in which the exceedance occurred, (2) CDPR's Pesticide Information and Use Fact Sheet[16] and CDPR's Drinking Water Standards Fact Sheet[17] and (3) a copy of a Drinking Water Notification Template approved by the Executive Officer. The template shall be signed by the Enrollee or non-Enrollee owner certifying notice has been provided to the users. A copy of the signed template shall be sent to the Regional Water Board and retained by the Enrollee or non-Enrollee owner.

III. Water Quality Monitoring Requirements for Coalitions

A. Water Quality Monitoring Workplan

1) The Coalition shall submit a scope of work by followed by a Workplan by the dates indicated in Table B.4 to the Regional Water Board Executive Officer on behalf of their Enrollees for the following purposes: (1) implementing a surface water quality monitoring program in accordance with Section III.B of this MRP; (2) implementing a groundwater monitoring program in accordance with Section III.C of this MRP; and (3) providing an adaptive management approach to monitoring informed by collected data.

2) The scope of work shall describe the intent, goals, objectives, and rationale for the proposed monitoring by the Coalition. The Workplan shall present proposed monitoring sites, work tasks, milestones, and method(s) used to evaluate data trends.

3) The scope of work shall be submitted to the Regional Water Board Executive Officer for approval by the dates indicated in Table B.4. The Regional Water Board shall review and provide a response to the scope of work or inform the Coalition in writing of an alternative review schedule within 90 calendar days of submittal. The Workplan shall be submitted for approval by the Regional Water Board Executive Officer by the date indicated in Table B.4. The Coalition shall implement the approved Workplan per the schedule of implementation as indicated in Table B.4.

4) The Workplan shall describe a sampling plan and frequency to comply with all requirements outlined in Section III.B (Surface Water Quality Monitoring Requirements) and Section III.C (Groundwater Trend Monitoring Requirements) of this MRP.

5) The Workplan shall include a map and description of all required surface water monitoring points. The map(s) may be an aerial photograph(s), topographic map, LiDAR-derived shaded relief map, Google Earth image, or equivalent that depicts features at 1-inch = 50 feet or larger scale and that clearly delineates all monitoring points required in this MRP. The map may also be transmitted digitally as a set of geographic information system (GIS) files such as points, lines, polygons, and rasters in commonly accessible formats such as shapefiles and GeoTIFFs.

6) The Workplan shall consider the following criteria for identifying Groundwater Trend Monitoring wells in areas that may be at higher risk of nitrate impacts to groundwater quality from commercial vineyards: (1) Vineyard land use density; (2) Nitrogen application/removal rates (see Section VI.B); (3) Soil type and saturated hydraulic conductivity of soil; (4) Existing water quality data; (5) Depth to groundwater; (6) Absence of nearby domestic/commercial wastewater disposal and/or biosolids application to avoid effects of other nitrate sources; and (7) proximity to Drinking Water Supply Wells (public and private).

7) The Workplan shall develop a method for ranking criteria and defining sensitive areas, use GIS-Based Spatial Analysis to develop a heat map[18] with the aggregated risk from each of the ranked criteria, and to prioritize higher risk areas for regional trend monitoring.

8) The Workplan shall include methodology(s) to: (1) evaluate trends in groundwater monitoring data, and (2) determine trends in Tributary Streambed monitoring data.

9) The Workplan shall include a Quality Assurance Project Plan (QAPP) that outlines procedures used to ensure the data collected and analyzed meet requirements of this MRP. The QAPP shall be consistent with guidance provided by the State Water Resources Control Board (State Water Board) regarding Quality Assurance/Quality Control[19].

10) The Coalition may choose to propose a crop removal coefficient (C_N) in the Workplan. Total Nitrogen Removed is determined by multiplying an Enrollee's crop yield by this coefficient (C_N) which represents the amount of nitrogen in the harvested crop. The Coalition may propose a C_N coefficient determined through nitrogen removed testing, literature review or recent research for converting crop yield to nitrogen removed. If no crop removal coefficient is proposed, the Regional Board will determine the coefficient.

11) Within five years of approval of the Workplan and every five years thereafter, a Water Quality Trend Monitoring Report (Trend Monitoring Report) that presents and analyzes all water quality monitoring results in the previous five years shall be submitted for review and approval by the Executive Officer. The scope and contents of the monitoring report are covered in Section V.C of this MRP.

B. Surface Water Quality Monitoring Requirements

1) Surface water quality in this MRP is addressed through: (1) measuring streambed conditions (fine sediment and surface roughness) following implementation of the Order requirements as a method of tracking progress towards sediment conditions which are supportive of beneficial uses; and (2) monitoring surface waters in catchments with a high density of vineyards for pesticides used on winegrapes.

2) The Coalition is encouraged to coordinate with the Russian River Regional

Monitoring Program (R3MP)[20]. The Regional Water Board Executive Officer may revise this MRP for Enrollees in a Coalition to reduce or suspend certain representative monitoring requirements (e.g. Tributary Streambed Monitoring) where participation in the R3MP provides reasonably equivalent monitoring information. The Regional Water Board will be an active member of the R3MP and represent its own monitoring resources available through the State's Surface Water Ambient Monitoring Program (SWAMP).

Tributary Streambed Monitoring

3) Tributary Streambed Monitoring measures certain streambed conditions (e.g., fine sediment and surface roughness). The purpose is to evaluate the status and trend in streambed conditions over an extended period following implementation of the Order. Results will be used to track and evaluate progress towards sediment conditions which are supportive of beneficial uses. Target conditions are decreasing trends in fine sediment and increasing trends of surface roughness.

4) Streambed composition shall be monitored to evaluate temporal changes in particle size distribution and roughness of exposed streambed surface deposits in Russian and Navarro River tributary channel reaches which are within steelhead and/or coho salmon distribution ranges.

5) The Coalition shall monitor ten channel reaches in the Russian River watershed and two in the Navarro River watershed. Selection criteria for target reaches shall include the following: (1) access to a minimum of 1,000 linear feet of channel; (2) located within a National Hydrologic Dataset (NHD) catchment with a vineyard land area density in the highest quartile for the watershed; (3) designated as within winter steelhead and/or coho distribution ranges; and (4) has in-stream conditions which adversely impact beneficial uses.

6) In the first five years of Workplan implementation, Streambed Monitoring shall occur on Year 1 and on Year 4 for comparison. Monitoring shall occur every five years thereafter and results shall be compared to the original year one results.

7) Monitoring plan design and data collection methods shall provide sufficient data to evaluate temporal changes in exposed streambed substrate composition. Acceptable sampling protocols include the following: (1) Wolman Pebble Count; (2) structure-from-motion close range photogrammetry[21] and the Buscombe Digital Grain Size method[22] (3) United States Environmental Protection Agency (USEPA) Environmental Monitoring and Assessment Program; (4) Surface Water Ambient Monitoring Third-Party (SWAMP)-Index to Measure the Quality of Physical Habitat in California Wadeable Streams; or (5) a protocol approved by the Executive Officer.

8) The Coalition shall submit Tributary Streambed Monitoring results every five years in the Water Quality Trend Monitoring Report as described in Section V.C of this

MRP.

Representative Pesticide Monitoring

9) Every five years, the Coalition shall monitor representative surface water sites for the pesticides listed in Table B.5 that have been applied to winegrapes in Sonoma and Mendocino Counties in the past five years according to the last available CDPR Pesticide Use Reports. The Executive Officer may revise required pesticides for monitoring as trends in use and detections shift.

10) The Coalition shall propose in the Workplan a representative network of surface water monitoring sites that meet the following requirements:

    a) No less than one surface water monitoring site per HUC-12 watershed that are in the top quartile of vineyard density.

    b) Site locations shall be chosen in places that are representative of commercial vineyard land use within the HUC-12 watershed, and to avoid signal from uses not regulated under this Order.

11) Surface water quality sampling for pesticides shall be conducted three times in the required monitoring year. The first sampling event shall take place within 48 hours of the first Qualifying Storm Event (QSE) after November 1st. The second sampling event shall take place within 48 hours of the first QSE following January 1st and the third sampling event shall take place within 48 hours of the first QSE following March 1st. If a sampling event is missed for any reason, the Coalition shall sample following the next QSE and include rationale in the results for why the sampling event was missed.

12) Samples shall be taken within the flow area of the water. Sampling should be avoided from ponded, sluggish, or stagnant water.

13) Samples shall be collected, maintained, and shipped in accordance with the current version of the SWAMP Quality Assurance Third-Party Plan or in accordance with the Sampling Collection and Handling Instructions in Attachment D: Methodologies and Procedures.

14) The appropriate USEPA analytical method shall be utilized to analyze all applicable analytes consistent with the Method Detection Limit.

15) The Coalition shall include pesticide monitoring results in the Annual Water Quality Monitoring Report and conduct trend analysis of each five-year period of pesticide monitoring in the Trend Monitoring Report.

Table B.5: Pesticide Monitoring Parameters and Trigger Limits

Active Ingredient	Trigger Limit (µg / L)	Source[23]
glyphosate potassium salt	700	DDW Primary MCL; USEPA Primary MCL.
pendimethalin	0.7	USEPA Aquatic Life Benchmark
fluopyram	135	USEPA Aquatic Life Benchmark
boscalid	116	USEPA Aquatic Life Benchmark
azoxystrobin	20	USEPA Aquatic Life Benchmark
trifloxystrobin	2.76	USEPA Aquatic Life Benchmark
imidacloprid	0.01	USEPA Aquatic Life Benchmark
myclobutanil	220	USEPA Aquatic Life Benchmark
tebuconazole	11	USEPA Aquatic Life Benchmark
oryzalin	13	USEPA Aquatic Life Benchmark
oxyfluorfen	0.33	USEPA Aquatic Life Benchmark
flumioxazin	0.022	USEPA Aquatic Life Benchmark
pyraclostrobin	1.18	USEPA Aquatic Life Benchmark
glufosinate-ammonium	3	USEPA IRIS Reference Dose (RfD) as a drinking water level.
cyprodinil	8.2	USEPA Aquatic Life Benchmark
quinoxyfen	13	USEPA Aquatic Life Benchmark
difenoconazole	0.86	USEPA Aquatic Life Benchmark
spirotetramat	100	USEPA Aquatic Life Benchmark
bifenazate	150	USEPA Aquatic Life Benchmark
acetamiprid	2.1	USEPA Aquatic Life Benchmark

Active Ingredient	**Trigger Limit (µg / L)**	**Source[23]**
thiamethoxam	0.74	USEPA Aquatic Life Benchmark

16) If a pesticide is detected above the MDL, the Coalition will annually monitor for that pesticide in that location until there is no detection above the MDL in any sampling event for two consecutive years, after which point monitoring may occur every five years. The Coalition shall notify the Regional Water Board of any pesticide reported above its MDL in the Annual Water Quality Report.

17) If a pesticide is detected in any sampling event for four consecutive years in any monitoring location, the Coalition shall analyze monitoring results for that pesticide in that monitoring location for trends in the Trend Monitoring Report. If there is no statistical increase in concentration of that monitored pesticide, the Coalition may resume sampling every five years. If there is a statistical increase, the Coalition shall notify all Enrollees in the HUC-12 watershed in which the pesticide was detected and resume annual sampling.

18) Following a five-year increasing trend in concentration of a pesticide all Enrollees shall comply with the following requirements until there the pesticide is reported below the MDL in every sampling event for two consecutive years, or the next Trend Monitoring Report indicates no statistical increase of the concentration of that pesticide:

    a) Enrollees shall indicate in their Farm Evaluation if they have applied the detected pesticide on any of their enrolled parcels in any of the years in which the pesticide was detected.

    b) Enrollees who had applied the detected pesticide in a detection year shall attend an annual outreach and education event focused on practice to prevent discharge of that pesticide to surface water. This event may also serve as the Enrollee's annual outreach and education event as required by the Order so long as the above requirements are satisfied.

19) If a pesticide is reported above the Trigger Limit, all Enrollees within the HUC-12 who have applied that pesticide in which the exceedance occurred shall develop a Water Quality Management Plan in accordance with Section II.E of this Order.

C. Groundwater Trend Monitoring Requirements

1) The objectives of Groundwater Quality Trend Monitoring are (1) to determine current water quality conditions of groundwater relevant to irrigated agriculture, and (2) to develop long-term groundwater quality information that can be used to evaluate the regional effects of vineyard operations and its practices. This section provides the objectives and minimum sampling and reporting requirements for

Groundwater Quality Trend Monitoring.

2) All wells shall be sampled annually, at a minimum, at the same time of the year and analyzed at least for the indicator parameters identified in Table B.6 below.

3) The Water Quality Monitoring workplan shall propose monitoring wells of sufficient number, location, and screening depth to provide coverage in the Third-Party geographic area so that current water quality conditions of groundwater and composite regional effects of vineyard operations can be assessed according to the trend monitoring objectives.

4) Details for wells proposed for groundwater monitoring shall include:

    a) GPS coordinates.

    b) Physical address of the property on which the well is situated (if available).

    c) California state well number (if known).

    d) Total well depth.

    e) Top and bottom depths of well casing perforations.

    f) Copy of the water well drillers log (if available).

    g) Depth of standing water (static water level), if available (this may be obtained after implementing the Coalition).

    h) Well seal information (type of material, length of seal).

5) Complete well details may not always be available for trend monitoring wells. In these cases, well details must be provided to the maximum extent possible, and it must be reasonable to conclude that the well's characteristics are such that monitoring results from the well are appropriate for use in meeting the objectives of Groundwater Quality Trend Monitoring. Wells used for trend monitoring that do not have complete well details should be flagged so that they can be distinguished within the well network. Inclusion of any well in the well network is subject to Executive Officer approval.

Table B.6: Regional Groundwater Trend Monitoring and Minimum Frequency

Trend Monitoring Parameters	Units	Analysis Type	Frequency
pH	pH units	Field	Annually
Conductivity (at 25º C)	µmhos/cm	Field	Annually

Trend Monitoring Parameters	Units	Analysis Type	Frequency
Temperature	ºC	Field	Annually
Nitrate as Nitrogen	mg/L	Laboratory	Annually
Total Dissolved Solids (TDS)	mg/L	Laboratory	Annually

IV. Reporting Requirements for Enrollees

1) Enrollees shall provide the following reports to the Coalition in accordance with the master schedule in Table B.2. The initial Farm Evaluation and Irrigation and Nutrient Management Plan shall be submitted by a date that the Coalition determines for inclusion in the Annual Compliance Report, which is due **July 1, 2028**, and by July 1st annually thereafter. The Farm Evaluation and INMP report on practices and nitrogen application for the previous crop year.

A. Farm Evaluation

1) The Farm Evaluation shall indicate the management practices already in place and prescribe additional management practices or modifications to existing management practices that have been or will be implemented and maintained to comply with all conditions of this Order.

2) Enrollees shall use a Farm Evaluation Template provided by the Regional Board and available on its website or an alternate template approved by the Regional Water Board's Executive Officer. At a minimum, the Farm Evaluation will include the following:

    a) Owner/Operator Identification: The name, business address, mailing address, email address, phone number of the owner and operator (if different from owner).

    b) Commercial Vineyard Identification: Location(s) of enrolled vineyard parcel(s), including: (1) the address, (2) the Assessor Parcel Numbers (APNs) and the county in which each parcel is located, (3) the Township, Range and Section (TRS) of each enrolled APN; and (4) the total acreage under cultivation for each APN.

    c) Vineyard Map: A vineyard map shall include all enrolled parcels and may be an aerial photograph, topographic map, LiDAR-derived shaded relief map, Google Earth image, or equivalent that depicts features at 1-inch = 50 feet or larger scale. The vineyard base map(s) shall include a north arrow and label the following appurtenant features on all enrolled parcels: (1) Streamflow diversion structures; (3) Agricultural Drainage Structures; (4)

Farm buildings[24] and equipment yards; (5) Appurtenant Agricultural Roads; and (6) photo-point locations (if applicable).

d) Sediment and Erosion Control Option and Implementation Standard: The Enrollee shall indicate which Sediment and Erosion Control Compliance Option and Implementation Standard was chosen. If changing Compliance Options for the next growing season, the Enrollee must indicate that change.

e) Management Practices: A list of management practices implemented to prevent erosion and control the discharges of sediment, nutrients, and pesticides from the Farm Area, Appurtenant Agricultural Roads (including All-Season and Seasonal Roads (e.g., vineyard avenues)) and Streamside Areas.

f) Irrigation and Nutrient Management: (1) A list of management practices implemented to control discharges of nutrients to surface waters and to minimize leaching of nitrogen past the root zone, (2) Primary and secondary irrigation methods for each APN and (3) Irrigation management practices to minimize surface run-off or groundwater leaching.

g) Well Identification: The number of (1) irrigation wells, (2) Drinking Water Supply Wells, and (3) abandoned or inactive wells associated with each enrolled APN. Each well shall be given a unique Well ID.

h) Certification of Maintenance: The Enrollee shall certify on their Farm Evaluation that all management practices are designed, installed, and maintained, and promptly repaired in accordance with Section II.C of the Order.

i) Agricultural Drainage Structure Sampling Locations (if applicable): Labeled agricultural drainage structure sampling locations for every agricultural drainage structure at its furthest downstream location on the Farm Area for which the discharge is in hydrologic connection[25] to surface waters. Agricultural drainage structure sampling locations are utilized for stormwater monitoring as specified in Section III of this MRP.

B. Irrigation and Nitrogen Management Plan

1) The Irrigation and Nitrogen Management Plan (INMP) budgets nitrogen application and removal (AR) rates on the commercial vineyard. The Coalition will use this data to calculate and transmit information in accordance with Table B.7 and identify outliers in accordance with Section V.D of this MRP.

2) Enrollees shall prepare and submit an INMP for each parcel for the prior crop year. Where this Order requires reporting by parcel, Enrollees may aggregate data for a

portion of a parcel or for multiple parcels provided that the reported area has (1) the same fertilizer inputs, (2) the same irrigation management, and (3) the same management practices. In no case should a reported area exceed a total size of 640 acres. These “Nitrogen Management Units’ shall be defined, labeled and consistent in the reporting.

3) Enrollees identified as outliers as described in Section V.D, shall get the INMP for the following year certified by an irrigation and nitrogen management planning specialist or self-certify their INMP. Enrollees shall indicate on the INMP following outlier notification that they were notified as outliers for reported AR data and reflect additional or improved management practices implemented to address potential over-application of nitrogen.

4) Enrollees must use the INMP Template approved by the Regional Water Board’s Executive Officer. At a minimum, the INMP will collect the following information:

    a) Crop Year.

    b) Owner/Manager name.

    c) Assessor Parcel Number (APN).

    d) Acreage for each parcel identified.

    e) Crop age (permanent crops).

    f) Irrigation method.

    g) Total Acreage.

    h) Crop Yield (in specified units)

    i) Documented outreach and education received or attended during previous year in accordance with Section III.C.4 of this Order.

    j) Nitrogen Applied (lbs./acre) from the following sources:

        i) All applied water (e.g., irrigation, frost protection, recycled water, winery process wastewater, etc.)

        ii) Synthetic Fertilizers, and/or

        iii) Organic Amendments (e.g., grape pomace, manure, compost, etc.)

V. Reporting Requirements for Coalitions on Behalf of their Enrollees

A. Annual Compliance Report

1) By **July 1, 2028**, and by July 1st annually thereafter, the Coalition shall submit to the Regional Water Board an Annual Compliance report consisting of:

    a) The Participant List,

    b) Management practice implementation data from the most recently submitted Farm Evaluations,

    c) Nitrogen reporting from the most recently submitted INMPs,

    d) Outreach Attendance, and

    e) CEQA Mitigation Monitoring.

2) This data shall be submitted in Excel Workbook format as described below. A report shall accompany the submitted data which summarizes submitted data and notes any significant changes in management practices or nitrogen application information since the previous year submittal. The summary of management practice data must include a quality assessment of the collected information by township (e.g., missing data, potentially incorrect/inaccurate reporting), and a description of corrective actions to be taken regarding any deficiencies in the quality of data submitted, if such deficiencies were identified.

Annual Participant List Submittal

3) The list of Enrollees enrolled through the Coalition shall be reported to the Regional Water Board in an Excel Workbook format and contain the following information in three separate Tables.

4) Table 1: Participating Enrollees:

    a) Owner/Operator Name

    b) Owner/Operator Address

    c) Total number of enrolled acres

5) Table 2: Non-Participating Enrollees. This table identifies Enrollees that are no longer participating with the Coalition since the last Annual Compliance Report submittal. This table must include the following information:

    a) Owner/Operator Name

    b) Owner/Operator Address

    c) Total number of acres no longer enrolled participating under Coalition enrollment,

d) Reason for non-participation in Coalition, including but not limited to:

i) No longer farming/sold farm,

ii) Enrolling in Order individually, or

iii) Failure to:

1. Implement water quality management practices,

2. Submit a complete Farm Evaluation,

3. Submit a complete annual INMP Summary Report,

4. Provide confirmation of participation in at least one outreach activity,

5. Pay the required fees, or

6. Respond to an information request associated with any applicable provisions of this Order.

iv) Other

6) Table 3: Flagged Enrollees. This table identifies Enrollees who have either been identified as Nitrogen AR outliers in accordance with Section V.D or are doing Adaptive Management due to any of the conditions outlined in this MRP. This table must include the following information:

a) Owner/Operator Name

b) For each owner/operator identified, note reason(s) for inclusion on this list and provide the following information, if applicable:

i) Identified as a Nitrogen AR Outlier in accordance with Section V.D of this MRP.

ii) Enrollee is implementing Adaptive Management. For each Enrollee implementing Adaptive Management, the Coalition shall indicate the year of Adaptive Management implementation, the parameter for which Adaptive Management is occurring, and whether a Water Quality Management Plan is due next reporting cycle.

Annual Submittal of Management Practice (Farm Evaluation) Data

7) The following data from the prior year's Farm Evaluations shall be reported to the Regional Water Board for each APN in an Excel Workbook format:

a) Anonymous Enrollee ID.

b) Township, Range and Section (TRS) of APN.

c) Sediment and Erosion Control Compliance Option and Implementation Standard.

d) Irrigation method(s) and practices.

e) Pest management practices.

f) Sediment and erosion management practices.

g) Nitrogen management practices.

h) Number of wells (irrigation, drinking water, and inactive or abandoned).

Annual Submittal of Irrigation and Nitrogen Management Summary Data

8) The Coalition shall submit data as described below from the prior year's Irrigation and Nitrogen Management Plans (INMP) and additional calculations as described below in three tables in Excel workbook format.

9) The Coalition shall calculate the values as described in Table B.7 and convert them to per acre values for inclusion into two tables as described below reported to the Regional Water Board as part of the Annual Management Practices Report.

10) Table 1: Individual Parcel-Level AR Data by Anonymous Enrollee ID and APN: One entry is made for each parcel reported:

a) Anonymous Enrollee ID: Each Anonymous Enrollee ID may be associated with more than one APN ID.

b) Anonymous APN ID and associated Township, Range, and Section.

c) Associated groundwater basin or sub-basin.

b) Nitrogen applied via fertilizers (lbs/acre).

c) Nitrogen applied via organics and compost (lbs/acre).

d) Nitrogen applied via water (lbs/acre).

e) Total Nitrogen applied (lbs/acre) [sum of nitrogen from fertilizer, organics/compost, and all applied water].

f) Nitrogen removed per acre (lbs/acre).

g) A/R ratio as defined in calculations in Table B.7.

h) A-R difference (lbs/acre) as defined in calculations in Table B.7.

i) 3-year A/R ratio if available as defined in calculations in Table B.7.

11) Table 3: Township-Level Aggregated AR Data Table:

a) Township, Range and Section.

b) Total acreage: sum for all the acreage within the township (acres).

c) Total nitrogen applied via fertilizer: sum for all acreage in township (total lbs).

d) Total nitrogen applied via organics and compost: sum for all acreage in township (total lbs). Total nitrogen applied via irrigation water, recycled water, and winery process wastewater: sum for all acreage in township (total lbs.).

e) Total nitrogen applied (total lbs.) [sum of nitrogen from fertilizer, organics/compost, and all applied water)].

f) Total nitrogen removed for all acreage in acreage (total lbs.).

g) A/R ratio for township as defined in calculations in Table B.7.

h) A-R difference for township (total lbs.) as defined in calculations in Table B.7.

Nitrogen Reporting Calculations

12) The Coalition shall review each Enrollee's INMP Summary Reports and independently calculate and report both the A/R ratio and the A-R difference for the current reporting cycle (A/R1 year and A-R1 year). Beginning the third year of reporting, for those locations with data available for three years, the Coalition shall calculate and report a three-year running total for both the A/R ratio and the A-R difference (A/R3 year and A-R3 year) in accordance with the equations in Table B.7 below.

13) The Coalition shall submit these calculations in accordance with the Nitrogen Summary Report requirements in Section V.A above.

Table B.7: Nitrogen Reporting Equations

Description	Equation
The A/R ratio is the ratio of total Nitrogen Applied[26] to Nitrogen Removed[27] (including all harvested materials and nitrogen annually sequestered in woody material)	$$\text{A/R Ratio} = \frac{\text{Nitrogen Applied (lbs./acre)}}{\text{Nitrogen Removed (lbs./acre}}$$
For each parcel for which three consecutive years of A/R ratio is available, the multi-year A/R ratio shall be reported as the ratio of total nitrogen applied to total nitrogen removed (calculated below) for the three prior consecutive years	$$A/R_{3\ year}\ \text{Ratio} = \frac{A_n + A_{n-1} + A_{n-2}}{R_n + R_{n-1} + R_{n-2}}$$ Where n = current reporting cycle A = Nitrogen Applied R = Nitrogen Removed
The A-R difference is the difference of total Nitrogen Applied and the total Nitrogen Removed	A-R Difference= Nitrogen Applied (lbs./acre) – Nitrogen Removed (lbs./acre)
The multi-year A-R difference shall be reported as the numerical difference between total nitrogen applied and total nitrogen removed for the three prior consecutive years.	$$A\text{-}R_{3\ year}\ \text{Difference} = [A_n + A_{n-1} + A_{n-2}] – [R_n + R_{n-1} + R_{n-2}]$$ Where n = current reporting cycle A = Nitrogen Applied R = Nitrogen Removed
Total Nitrogen Removed is determined by multiplying an Enrollee's crop yield by a crop-specific nitrogen coefficient (C_N) provided by the Regional Board or Coalition, which represents the amount of nitrogen in the harvested crop. The Coalition may propose, through nitrogen removed testing and research, the most appropriate C_N coefficient for converting crop yield to nitrogen removed. Until the C_N coefficients have been established, the Enrollee will only report the crop yield in the INMP. Nitrogen Removed includes nitrogen removal via harvest and nitrogen sequestered in permanent wood of perennial crops	Nitrogen Removed (lbs./acre) = Crop Yield (tons/acre) x C_N (lbs./tons)

Outreach Event Attendance

14) The Coalition shall submit outreach event attendance information on behalf of its Enrollees. At a minimum, the outreach event records shall include:

    a) Anonymous Enrollee ID,

    b) Date of annual outreach event attended,

    c) Type of outreach event (e.g., in-person meeting, online video, printed materials), and

    d) Brief description of topics covered.

CEQA Mitigation Monitoring

15) As part of the Annual Compliance Report, the Coalition shall report on the CEQA mitigation measures reported by its enrolled Enrollees to meet the provisions of the Order and any mitigation measures the Coalition has implemented on behalf of Enrollees. The Mitigation Monitoring Report shall include information on the implementation of CEQA mitigation measures (mitigation measures are described in Attachment E of the Order), including the measure implemented, identified potential impact the measure addressed, location of the mitigation measure (township, range, section), and any steps taken to monitor the ongoing success of the measure.

B. Annual Water Quality Monitoring Report (Annual Monitoring Report)

1) The Coalition shall submit an Annual Monitoring Report that includes results of Agricultural Drainage Structure Monitoring and groundwater monitoring over the previous year as described in Sections II and III of this MRP. The initial submittal for Agricultural Drainage Structure Monitoring data will be by **July 1, 2028** and for groundwater trend monitoring data by July 1st, one year following approval of the Water Quality Monitoring Workplan and by July 1st annually thereafter.

2) The annual reports shall include a map of the HUC-12 units in which ag drainage structure monitoring occurred in the previous year, sampled wells, tabulation of the analytical data, and time of concentration (Tc) charts. Groundwater quality monitoring data are to be submitted electronically to the State Water Board's GeoTracker Database.

3) The Coalition shall submit groundwater field measurements and laboratory analysis results as they are available in an electronic format. The annual water quality monitoring data results shall include the following for the required reporting period:

    a) One Excel workbook containing all surface water data and one Excel workbook containing all groundwater trend monitoring data. Agricultural

Drainage Structure Monitoring data shall be reported by anonymous location ID at the HUC-12 level. For each Agricultural Drainage Structure monitoring result in which the Enrollee either discounts the Offsite Stormwater run-on value or has submitted and received approval of a determination by the Executive Officer, the Coalition shall report the general land-use(s) immediately upslope that is the source of the run-on.

b) Electronic copies of all field sheets.

c) Electronic copies of photos obtained from all surface water monitoring sites, clearly labeled with anonymous location code, HUC-12, and date.

d) Electronic copies of all applicable laboratory analytical reports shall be submitted once per year with the Annual Monitoring Report.

e) Calibration logs from all turbidimeters used in sampling.

f) For chemistry data, analytical reports must include, at a minimum, the following:

g) A lab narrative describing quality control failures.

h) Analytical problems and anomalous occurrence.

i) Chain of custody and sample receipt documentation.

j) All sample results for contract and subcontract laboratories with units, Reporting Limits, and Method Detection Limits.

k) Sample preparation, extraction, and analysis dates.

l) Results for all quality control samples including all field and laboratory blanks, lab control spikes, matrix spikes, field and laboratory duplicates, and surrogate recoveries.

4) If any data is missing from the annual report, the submittal must include a description of what data is missing and when it will be submitted to the Regional Water Board.

C. Water Quality Trend Monitoring Report (Trend Monitoring Report)

1) On July 1st, five years following approval of the Workplan and by July 1st every fifth year thereafter, the Coalition shall submit a Water Quality Trend Monitoring Report (Trend Monitoring Report) that reports and analyzes all water quality monitoring data as described in Section II and Section III over the previous five years.

2) The Trend Monitoring Report shall include the following components:

a) A signed transmittal letter shall accompany each report. The transmittal letter shall be submitted and signed in accordance with the requirements of Section II.H: Provisions of the Order.

b) Title page.

c) Table of contents.

d) Executive summary.

e) Description of the Coalition's covered geographical area.

f) Monitoring objectives and design.

g) Sampling site/monitoring well descriptions and rainfall records for the time period covered under the Trend Monitoring Report.

h) Location map(s) of sampling sites/monitoring wells and land uses:

i) Location map(s) showing the sampling sites/monitoring wells and land uses within the geographic area of the Coalition's members must be included in the Trend Monitoring Report.

ii) An accompanying GIS shapefile or geodatabase of monitoring site and monitoring well information must include site code and name (for surface water only) and Global Positioning System (GPS) coordinates (for streambed monitoring and wells used for monitoring).

iii) GPS coordinates must be provided as latitude and longitude in the decimal degree coordinate system (at a minimum of five decimal places).

iv) Agricultural Drainage Structure sampling sites do not need to be identified and are reported by anonymous location ID and aggregated at the HUC-12 level.

v) The map(s) must contain a level of detail that ensures they are informative and useful. The datum must be clearly identified on the map. The source and date of all data layers must be identified on the map(s). All data layers/shapefiles/geodatabases included in the map shall be submitted with the Annual Monitoring Report.

i) Results of all analyses arranged in tabular form so that the required information is readily discernible. In reporting monitoring data, the Coalition shall arrange the data in tabular form so that the required information is readily discernible. The data shall be summarized in such a manner to

clearly illustrate compliance with the data collection requirements of the MRP.

j) The report shall include a discussion of the Coalition's compliance with the data collection requirements of the MRP. If a required component was not met, an explanation for the missing data must be included. Results must also be compared to water quality objectives and trigger limits.

k) Sampling and analytical methods used.

l) Summary of Quality Assurance Evaluation results (as identified in the most recent version of the Third-Party's approved QAPP):

   i) A summary of precision and accuracy of results (both laboratory and field) is required in the report. Acceptance criteria for all measurements of precision and accuracy must be identified. The Coalition must review all quality assurance/quality control (QA/QC) results to verify that protocols were followed and identify any results that did not meet acceptance criteria.

   ii) A summary table or narrative description of all QA/QC-verified results that did not meet water quality objectives must be included. Additionally, the report must include a discussion of how the failed QA/QC results affect the validity of the reported data and the corrective actions to be implemented.

   iii) The Coalition shall calculate report completeness which includes the percentage of all quality control results that meet acceptance criteria, as well as a determination of project completeness.

   iv) The Coalition may ask the laboratory to provide assistance with evaluation of their QA/QC data, provided that the Coalition prepares the summary table or narrative description of the results for the AMR.

m) Summary of exceedances of water quality objectives or trigger limits occurring during the reporting period. A summary of the exceedances of water quality objectives or triggers that have occurred during the monitoring period is required in the Trend Monitoring Report.

n) Actions taken to address water quality exceedances that have occurred, including but not limited to, revised or additional management practices implemented.

o) Evaluation of monitoring data to identify spatial trends and patterns:

   i) The Coalition must evaluate its monitoring data in the Trend Monitoring Report to identify potential trends and patterns in surface water and

groundwater quality that may be associated with waste discharge from commercial vineyards. As part of this evaluation, the Coalition must analyze all readily available monitoring data that meet quality assurance requirements to determine deficiencies in monitoring for discharges from commercial vineyards and whether additional sampling locations are needed.

p) If deficiencies are identified, the Coalition must propose a schedule for additional monitoring or source studies. Upon notification from the Executive Officer, the Coalition must monitor any parameter in a watershed that lacks sufficient monitoring data (i.e., a data gap should be filled to assess the effects of discharges from commercial vineyards on water quality). Wherever possible, the Coalition should utilize tables or graphs that illustrate and summarize the data evaluation.

q) Conclusions and recommendations.

D. Statistical Outlier Methodology

1) By **July 1st**, seven years following initial INMP reporting, the Coalition may propose a methodology for determining statistical outliers in nitrogen application and removal rates by township. The purpose of AR outlier determination and notification is to identify Enrollees who may be contributing to nitrate leaching to groundwater. Enrollees identified as AR outliers will need their INMPs certified by an irrigation and nitrogen specialist in accordance with Section II.F of this Order.

2) In the first reporting cycle following approval of the Groundwater Protection Plan, the Coalition shall identify the entries in Table 1 of the INMP Data submittal in Section V.A of this MRP that Coalition considers to be outliers for the AR data, and which are subject to follow up actions as described in Section II.F of the Order.

3) The Coalition shall notify the Regional Water Board by **January 1** prior to the statistical outlier methodology submission deadline if they do plan to submit a proposal. If no proposal is submitted, the Regional Water Board will provide the methodology for determining AR outliers.

VI. Attachment B Endnotes

[1] The Enrollee may elect to have the Coalition fulfill these monitoring requirements.

[2] A hierarchical hydrologic unit code (HUC) consisting of 2 additional digits for each level in the hydrologic unit system is used to identify any hydrologic area (see Federal Standards and Procedures for the National Watershed Boundary Dataset, 4th ed. 2013). A complete list of Hydrologic Unit codes, descriptions, names, and drainage areas can be found in the United States Geological Survey Water-Supply Paper 2294, entitled "Hydrologic Unit Maps".

[3] Calibration logs shall be kept with the instrument and submitted with the Annual Water Quality Monitoring Report as required in Section VII.D.

[4] See USEPA Method 180.1 (https://www.epa.gov/sites/default/files/2015-08/documents/method_180-1_1993.pdf).

[5] See the SWAMP Quality Assurance Plan (https://www.waterboards.ca.gov/water_issues/programs/swamp/quality_assurance.html).

[6] Temporary Sediment Control best management practices (BMPs) are short-term measures that should be considered during a period where areas are disturbed due to stormwater runoff, farming activities, or maintenance. A temporary sediment control BMP is normally used for 1—6 months, or until a more permanent BMP is put into place. Temporary sediment control BMPs are typically used in conjunction with erosion control BMPs and are designed and installed to keep as much sediment on-site as possible. Examples of temporary sediment controls could include, but are not limited to linear sediment controls, dikes and berms, check dams, sediment catchment basins, and inlet/outlet protection.

[7] Accepted sediment and erosion control management practice standards and design can be found in the NRCS-USDA National Conservation Practice Standards; USEPA's National Management Measures to Control Nonpoint Source Pollution from Agriculture; Handbook of Forest, Ranch, and Rural Roads; A Guide for Planning, Designing, Constructing, Reconstructing, Upgrading, Maintaining, and Closing Wildland Roads; California's Management Measures for Polluted Runoff; Best Management Practices for VESCO Agricultural Erosion and Sediment Control; The Land Steward's Guide to Vineyard and Orchard Erosion Control; the California Code of Sustainable Winegrowing Workbook, and the California Stormwater Quality Association BMP Handbook.

[8] Accepted sediment and erosion control management practice standards and design can be found in the NRCS-USDA National Conservation Practice Standards, USEPA's National Management Measures to Control Nonpoint Source Pollution from Agriculture ; Handbook of Forest, Ranch, and Rural Roads, A Guide for Planning, Designing, Constructing, Reconstructing, Upgrading, Maintaining, and Closing Wildland Roads , California's Management Measures for Polluted Runoff ; Best Management Practices for VESCO Agricultural Erosion and Sediment Control

; The Land Steward's Guide to Vineyard and Orchard Erosion Control, the California Code of Sustainable Winegrowing Workbook , and the California Stormwater Quality Association BMP Handbook.

[9] Flows that originate from an area not located on the Enrollee's enrolled parcel and flow onto the Farm Area

[10] See the Quick Guide to Photo Point Monitoring https://efotg.sc.egov.usda.gov/references/public/NM/bio61a6_PhotoDocumentation_Protocol.pdf

[11] See the CDPR 6800(a) List. (https://calpip.cdpr.ca.gov/infodocs/gwpa/external_section6800.cfm).

[12] See ELAP Labs (https://www.waterboards.ca.gov/drinking_water/certlic/labs/).

[13] See USEPA SW-846 (https://www.epa.gov/hw-sw846).

[14] Representative well shall be within the same HUC12 in which the pesticides were applied, or within the closest drinking water well if no drinking water Wells are within the HUC12 of the applied pesticide.

[15] See CDPR HHRLs (https://www.cdpr.ca.gov/docs/emon/grndwtr/gwp_sampling.htm).

[16] See Pesticide Info Sheet (https://www.cdpr.ca.gov/docs/dept/factshts/pesticide_info_and_use_gw.pdf).

[17] See Pesticide Drinking Water Sheet (https://www.cdpr.ca.gov/docs/dept/factshts/pesticide_drinking_water_gw.pdf).

[18] Map representing data values using a range of cool to warm colors.

[19] See the State Water Board QA/QC (https://www.waterboards.ca.gov/water_issues/programs/quality_assurance/qapp.html).

[20] The R3MP was established in 2019 to provide the scientific information necessary for successful long-term management of Russian River watershed health, in the context of climate change, land use change, and population growth. These management challenges demand a coordinated watershed-scale approach to monitoring and assessment to inform water resource management in the watershed. Funded predominantly by the Regional Water Board during program development, the R3MP is envisioned as an integral part of a scientific enterprise centered on the watershed that services the many management interests, including counties, municipalities, other public agencies, Tribes, non-governmental environmental organizations, and private interests that need a dependable source of high quality, independent, scientific information to successfully address clearly defined watershed health issues. The goal of the R3MP is to ensure that all publicly and privately funded environmental monitoring conducted in the Russian River watershed and related to the implementation of public policy and regulatory requirements is adequately standardized, coordinated, accessible, and designed to cost-effectively answer watershed management questions. The Steering Committee of the R3MP is currently co-chaired by senior staff of the Regional Water Board and the City of Santa Rosa. The Initial Coordinated 5-year Monitoring

Plan, Version 1.1 was approved by the R3MP Steering Committee in June 2024. See the R3MP website for more information: https://sites.google.com/sfei.org/r3mp/

[21] Whitepaper on Structure from Motion (SfM) Photogrammetry: Constructing Three Dimensional Models from Photography Bureau of Reclamation Research and Development Office Science and Technology Third-Party Final Report ST-2015-3835-1.

[22] Buscombe, D., 2013, Transferable wavelet method for grain-size distribution from images of sediment surfaces and thin sections, and other natural granular patterns: Sedimentology 60. (https://onlinelibrary.wiley.com/doi/10.1111/sed.12049).

[23] Trigger limit sources were determined from the lowest of numberic water quality thresholds. These thresholds are used to assess whether beneficial uses of surface water are likely to be impaired or threatened. USEPA Aquatic Life Benchmarks are based on toxicity values from scientific studies that EPA reviewed and used to estimate risk to freshwater organisms from exposure to pesticides and their degradates in their most recent publicly available ecological risk assessments and preliminary Problem Formulations written in support of pesticide registration or registration review. The USEPA Aquatic Life Benchmarks used were for chronic freshwater vertebrates and invertebrates benchmarks and nonvascular and vascular plants. For more information on Water Quality Goals, visit the State Water Board's website at: https://www.waterboards.ca.gov/water_issues/programs/water_quality_goals/

[24] Farm buildings include equipment storage sheds, farmworker housing, and processing buildings.

[25] Physical connection of water and sediment between and through a drainage network.

[26] Nitrogen Applied – Nitrogen Applied includes all nitrogen proactively added to a vineyard from any source, such as organic amendments, synthetic fertilizers, manure, and irrigation water.

[27] Nitrogen Removed – Nitrogen Removed includes all nitrogen taken from the vineyard in harvested or other materials. Other materials may include wheat straw, orchard prunings, almond hulls, etc. In the case of perennial crops, Nitrogen Removed also includes the nitrogen annually sequestered in the permanent wood.

Attachment C: Third-Party Requirements

Attachment C outlines the approval process and requirements for Third-Party programs under this Order. Third-Parties are programs or entities approved by the Regional Board's Executive Officer to assist Enrollees in compliance with this Order. The general term 'Third-Party Program' encompasses two distinct types of programs under this Order:

Grower Coalitions (Coalitions) collect and submit State Board fees on behalf of Enrollees, manage communication between Enrollees and the Regional Board, conduct monitoring and reporting in accordance with the Coalition MRP, and provide education and outreach resources to Enrollees.

Voluntary Sediment Control Programs (Voluntary Programs) provide Enrollees with a compliance option with the Order's erosion and sediment control requirements through a Sediment and Erosion Control Plan and on-farm audits.

Coalitions and Voluntary Programs may work independent of one another in fulfilling their distinct functions under this Order. Enrollees may use Voluntary Programs to fulfill erosion and sediment control requirements whether they are enrolled in the Order individually or through a Coalition.

Coalitions and Voluntary Programs will be approved by the Regional Board's Executive Officer following adoption of this Order in accordance with expectations and requirements in this Attachment. Approved Third-Party programs will be listed on the Regional Water Board's Vineyards website.

I. Coalition Requirements

A. General Provisions

1) A Coalition that is approved to represent Enrollees under this Order shall fulfill the following responsibilities:

    a) Collect fees from Enrollees and submitting payment to the State Water Resources Control Board,

    b) Manage communications between enrolled Enrollees, the Regional Water Board, and State Water Board,

    c) Provide outreach and education resources for enrolled Enrollees; and

    d) Fulfill monitoring and reporting requirements as specified in Attachment B: Monitoring and Reporting Program for Enrollees in a Coalition on behalf of its Enrollees, including but not limited to submitting monitoring workplans and necessary technical material, conducting regional surface water and groundwater monitoring, notifying Enrollees of Adaptive Management thresholds triggered[1], notifying Enrollees if they are statistical outliers for

nitrogen application, and connecting enrolled Enrollees to resources that can assist the preparation and implementation of Water Quality Management Plans (required in Section II.E of this Order).

2) The Coalition may work with multiple entities or programs to meet one or more of the above requirements provided the Coalition has binding agreements (e.g., through contractual obligations, Memorandums of Agreement) that clearly define roles and responsibilities within each entity in order to meet all Third-Party requirements.

3) The Regional Water Board may revoke the status of an approved Coalition applicant and require its enrolled Enrollees to enroll individually or enroll in an alternative Coalition if the Coalition fails to meet requirements of this Order after initial approval.

4) Prospective Coalition entities shall follow the procedures outlined below in Section B and C to become an approved Coalition applicant for this Order. New Coalition(s) shall obtain written approval from the Regional Water Board's Executive Officer prior to assisting Enrollees with compliance with this Order.

B. Minimum Qualifications

Coalition(s) wishing to act as a representative on behalf of enrolled Enrollees shall meet the minimum qualifications below:

1) Effectiveness of scale and scope – The Coalition's program must be of sufficient scale and scope relative to its intended purpose to maximize Enrollee participation, Order implementation effectiveness, and Order compliance. Although regionally scaled programs are preferred, watershed-, basin-scale or county-scale programs will be considered as needed.

2) Administrative Capacity – The Coalition must have a well-defined and robust governance and administrative structure with clearly defined roles and responsibilities. The Coalition must have necessary administrative capabilities to manage Enrollee data, collect fees, conduct Enrollee outreach, and assist Enrollee with self-reporting requirements. The Coalition must demonstrate sufficient technical, managerial, and financial capacity to successfully achieve its goals and objectives.

3) Membership and fee accounting – The Coalition must track and provide ongoing accounting of its Enrollee membership and fees to document Enrollee compliance. The Coalition must have clearly stated membership eligibility requirements and report out on them as needed to document compliance.

4) Physical presence – The Coalition should have a physical presence in the North Coast Region, including staff and a headquarters that can assist its Enrollees on a continual and as-needed basis. If the Coalition administrator does not have or plan

to have a physical presence in the region, they must demonstrate they can effectively establish, maintain, and engage with core membership without a headquarters in the North Coast Region.

5) Transparency and accountability – The Coalition must have meaningful and clearly stated goals, objectives, and associated performance metrics relevant to the Order requirements that are the focus of the program. The Third-Party must provide regular assessments of its performance relative to its stated goals and objective based on meaningful performance metrics. This includes reporting of water quality data and farm-level data as needed to document compliance with this Order.

6) Data management and Record Keeping – The Coalition must upload data as required by this Order to the Water Boards' various data management systems (e.g., CEDEN, GeoTracker, etc.). The Coalition must have the capacity to manage and retain data for ten years and comply with record-keeping requirements in Section II.E (Provisions) of the Order.

7) Coordination – The Coalition must consider and coordinate with other Third-Party programs/groups or local entities as may be appropriate to create consistency; leverage the efforts, infrastructure, and expertise of others; and streamline the Coalition to maximize effectiveness.

8) Outreach and Education – The Coalition must include continuing education opportunities as appropriate either directly through the Third-Party Program or through coordination with other technical service providers or local entities to ensure its Enrollees obtain technical skills and assistance necessary to achieve compliance with the limits and requirements established in this Order. The Coalition must conduct Membership outreach and education to inform Enrollees about the monitoring results relative to meeting objectives and goals of this Order.

9) Development of Required Technical Material – The Coalition must have capability to develop and implement, or contract detailed technical documents as specified in Attachment B of the Order including, but not limited to: Water Quality Monitoring Workplan(s), Trend Monitoring Reports, a Quality Assurance Project Plan (QAPP), annual water quality and management practices reporting, and Groundwater Protection Plan(s).

10) Conducting Water Quality Monitoring – The Coalition must have the capability to develop or contract group surface water and groundwater quality monitoring programs in accordance with the requirements in Sections III and IV of the Attachment B of the Order

C. Request for Proposal Process and Establishing Approved Coalition

1) Within three months after adoption of the Order, the Regional Water Board will release a Request for Proposals (RFP). Coalition applicants shall apply within the stated deadline of the RFP to be considered.

2) Coalition proposals will be evaluated on a case-by-case basis relative to their ability to document compliance with this Order as part of a Request For Proposal process and as further informed by a forthcoming Coalition program expectations document.

3) The Regional Water Board's review of Coalition program proposals will consider the Minimum Qualifications outlined above relative to overall Third-Party program effectiveness, with an emphasis on approving Coalitions that can effectively assist their Enrollees in complying with the requirements of this Order.

4) Included in the RFP submittal, the Coalition applicant shall submit documentation of its organizational or management structure. The documentation shall identify persons and/or entities responsible for ensuring that Third-Party program requirements are fulfilled. This documentation shall be made readily available to Enrollees.

5) In evaluating whether to approve a new Coalition, the Executive Officer will consider the following factors:

    a) The ability of the applicant to carry out the identified Coalition responsibilities.

    b) Whether the applicant is a legally-defined Third-Party applicant (i.e., non-profit corporation; local or state government; Joint Powers Authority) or has a binding agreement among multiple entities that clearly describes the mechanisms in place to ensure accountability to its Enrollees.

    c) If the applicant plans to use subsidiary group(s) or partnering entities to assist with Coalition program requirements, whether the applicant has binding agreements with those entities to ensure any Coalition program responsibilities carried out by the entities, including the collection of fees, are done transparently and with accountability.

    d) Whether the applicant has a governance structure that includes a governing board of directors composed in whole or in part of Enrollees, or otherwise provides Enrollees with a mechanism to direct or influence the governance of the applicant through appropriate by-laws.

    e) Whether the applicant has membership eligibility requirements and follow-up consequences that are triggered, including revocation of membership eligibility, to address the following scenarios where Enrollees are no longer in good standing: (1) Non-payment of fees; (2) Non-submittal of information; (3) Non-participation in education/outreach or site visits; or (4) Failure to implement / adapt management practices.

6) If the Executive Officer determines that the applicant has the capacity to satisfactorily carry out the stated responsibilities, the Regional Water Board’s

Executive Officer will issue a Notice of Applicability to the Coalition for its enrolled members and, if appropriate, a Monitoring and Reporting Program specific to the new Coalition and its Enrollees. The new Coalition shall comply with the relevant terms and conditions of this Order and any applicable Monitoring and Reporting Program upon receipt of the letter of approval.

D. Coalition Requirements

1) Approved Coalitions shall comply with all requirements of Coalitions as outlined in the Order and Attachment B: Monitoring and Reporting Program for Enrollees in a Coalition.

2) Approved Coalitions shall be prepared to accept enrollments by **July 1, 2026**.

3) By **July 1, 2027,** and annually thereafter, the Coalition shall submit to the Regional Water Board a list of all its Enrollee members. The list shall specifically identify any new Enrollees, or any Enrollees terminated since the last reporting period. As part of the membership list submittal, the Coalition shall identify Enrollees who have failed to fulfil the requirements of this Order as specified in Attachment B: Section V.A

4) By **January 1, 2029**, the Coalition shall submit a scope of work for a Water Quality Monitoring Workplan. By **July 1, 2029**, the Coalition shall submit a Water Quality Monitoring Workplan (Workplan) in accordance with Attachment B: Section III.A.

5) The Coalition shall respond promptly to Regional Water Board requests for any of the information the Coalitions are required to maintain, which may include but is not limited to: (1) Enrollee contact information; (2) Enrollee reports (e.g., Farm Evaluations, INMPs), (3) outreach and education attendance lists, and (4) water quality monitoring locations.

II. Voluntary Sediment Control Programs

As indicated in Section II.C of the Order, Enrollees may choose to develop a Sediment and Erosion Control Plan through participation in a Voluntary Sediment Control Program (Voluntary Program) to meet erosion and sediment control requirements of this Order. Following adoption of the Order, the Regional Board will develop a list of approved Voluntary Programs that Enrollees may choose to meet this compliance option. Approved Voluntary Programs will be posted on the Regional Board's Vineyards website. The following outlines the approval process and requirements of Voluntary Programs.

A. Approval Process for Voluntary Programs

1) Within three months after adoption of the Order, the Regional Water Board will release a Request for Qualifications (RFQ). Voluntary Program applicants shall apply within the stated deadline of the RFQ to be considered.

2) Voluntary Program will be evaluated on a case-by-case basis relative to their ability to meet Voluntary Program requirements stated below and in the RFQ.

3) If the Executive Officer determines that the Voluntary Program effectively meets the requirements below and stated in the RFQ, the Regional Water Board's Executive Officer will issue a letter of approval and list the Voluntary Program on the Regional Board's Vineyards webpage. The Voluntary Program shall comply with the relevant requirements upon receipt of the letter of approval.

B. Voluntary Program Requirements

At a minimum, Voluntary Programs must include the elements stated below and meet all requirements to be eligible for approval under this Order:

1) Erosion and Sediment Control Standards: The Voluntary Program shall require its participants to meet stated performance standards or minimum requirements that will achieve the goal of preventing, minimizing, or eliminating erosion and excess sediment discharge from the Farm Area and will provide commensurate protection with the minimum ground cover requirements of Section II.C of this Order.

2) Sediment and Erosion Control Plan: The Voluntary Program shall, as a stand-alone or part of other program elements, include the development a plan that is consistent with the Sediment and Erosion Control Plan (SECP) requirements as described in Section II.C of the Order which inventories and implements erosion and sediment control management practices on the vineyard to meet stated performance standards or minimum requirements. At a minimum, the SECP shall include an inventory of existing and planned management practices in the Farm Area, a schedule for management practices not yet implemented, and a map consistent with Farm Evaluation map requirements in Section II.F of the Order and further described in the MRP. Enrollees may use the same map for their Farm Evaluation and Voluntary Program SECP.

3) On-Farm Audits: Voluntary Programs shall perform an on-farm audit of each participating vineyard at least once every five years. Audits shall take place between December 15th-April 1st each year to assess management practices in place during the winter. On-farm audits shall be performed by a third-party auditor independent of the Enrollee who is in good standing with the Voluntary Program. On-farm audits shall include:

    a) A review of erosion and sediment control management practices indicated in the SECP and an on-site verification that management practices are present.

    b) A review of implemented management practices against performance standards or requirements of the Voluntary Program.

    c) A review of management practice effectiveness at preventing, minimizing or

eliminating erosion and sediment discharge from the vineyard using the auditor's best professional judgement.

d) Where the auditor has indicated that management practices are either ineffective or fail to meet performance standards or requirements of the Voluntary Program, the auditor will develop a list of remedial actions and a schedule of implementation.

4) Remedial Actions and Schedule of Implementation: The Voluntary Program shall have a process for describing and providing a schedule for the implementation of management practices where participants do not meet the stated performance standards or minimum requirements of the Voluntary Program and achieve the goal of preventing or minimizing erosion and excess sediment discharge to surface waters. This process shall include follow-up consequences that are triggered, including revocation of program participation, to address the following scenarios where participants are no longer in good standing. (1) Failure to implement / adapt management practices that meet stated performance standards or minimum requirements of the Voluntary Program; (2) Failure to implement / adapt management practices according to the schedule of implementation (3) Non-submittal of information required by the Voluntary Program; or (4) Non-participation in on-farm audits.

[1] See Section II.E of the Order for a list of Adaptive Management triggers.

Attachment D: Methodologies and Procedures

I. Methodologies for Determining Slope

Enrollees may choose one of the following methodologies for determining the percent slope of each Sediment Management Area.

A Sediment Management Area is each contiguous planted vineyard area not separated by streams, all-season roads, non-planted areas, or parcel boundaries and not to exceed 10 acres. For contiguous vineyard areas which exceed 10 acres, Enrollees may delineate each 10-acre Sediment Management Area in a manner consistent with their farming operation. Enrollees must delineate Sediment Management Areas such that all planted areas, vineyard avenues (Seasonal Roads) and areas appurtenant to the commercial vineyard (e.g., appurtenant structures, maintenance areas, storage yards, mixing and loading sites) on an enrolled parcel are included in a Sediment Management Area. See Figure F.1 for an example of a Sediment Management Unit.

"Slope" means the inclination of the terrain calculated in accordance with the methodologies set forth below.

Figure F.1: Example of a Sediment Management Area shown outlined in red. Note the labeled all-season roads separating vineyard blocks as well as vineyard areas which are not contiguous (either through trees, drainages, or roads) to help determine the boundary of this particular Sediment Management Area.

A. Physical Determination

The slope gradient and slope length of each contiguous vineyard area shall be measured using a series of profiles perpendicular to topographic contours. See **Figure F.2** for an example. At least three profiles which are representative of slope variability shall be measured in segments using a maximum 10-foot contour interval for each ten acres or less of contiguous vineyard area. The slope and slope length of each segment in all profiles shall be used to calculate the weighted average slope of the vineyard using **Equation F.1** unless more than 50 percent of the total slope profile length measured for the vineyard area exceeds 10 percent slope. In this case, the minimum

ground cover percentage for this vineyard area falls into the greater than 10 percent slope category.

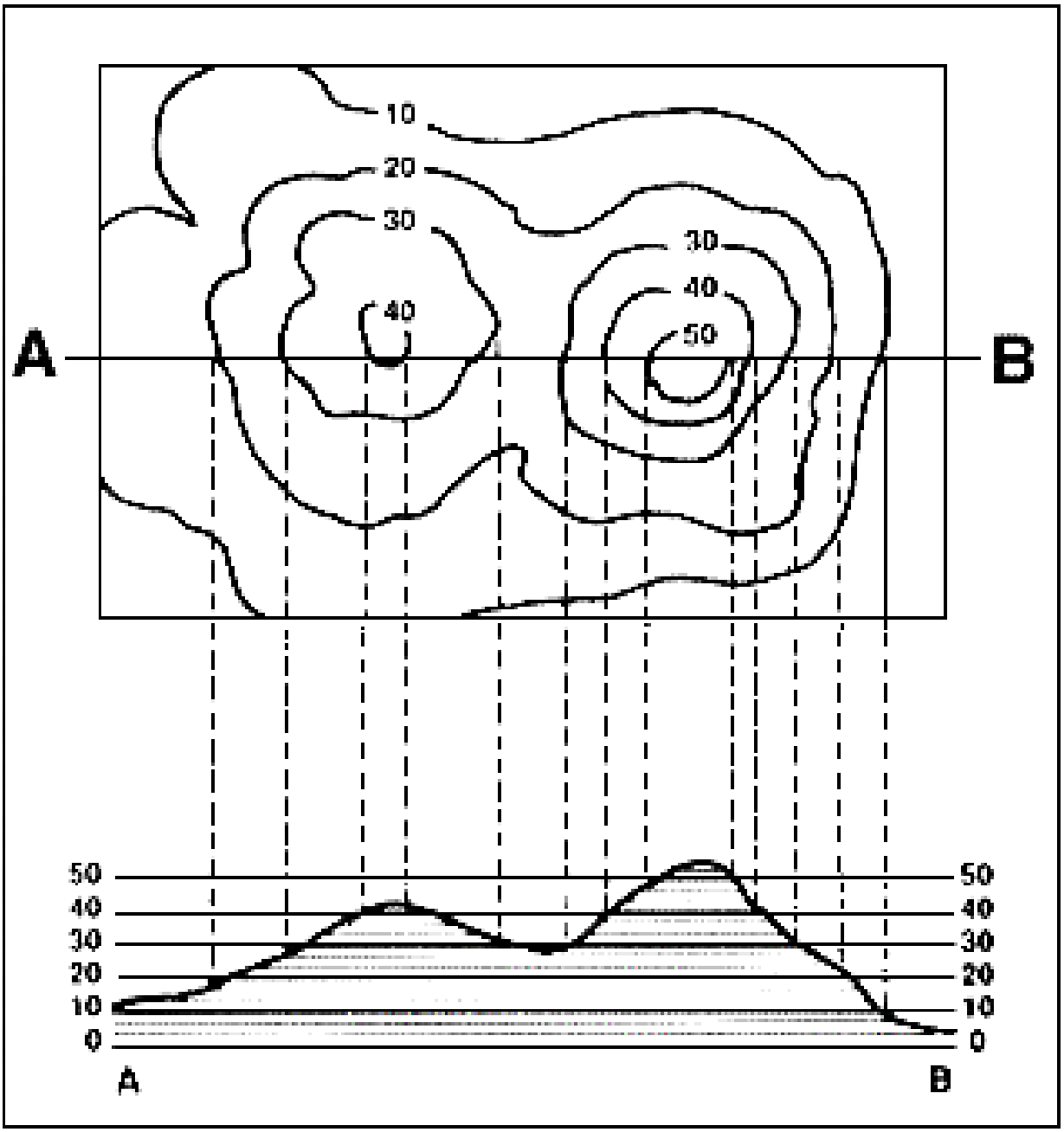


Figure F.2: Map showing topographic profile with slope segments using 10-foot contour interval. (Source: https://serc.carleton.edu/mathyouneed/slope/topoprofile.html)

Equation F.1:

The weighted average slope of the vineyard is calculated by the sum of the weighted slope (slope gradient x slope segment length) divided by the sum of all slope segment lengths.

Weighted Average Slope =

$$\frac{(\text{weighted slope})_1 + (\text{weighted slope})_2 + (\text{weighted slope})_3}{(\text{slope segment length})_1 + (\text{slope segment length})_2 + (\text{slope segment length})_3}$$

where: weighted slope = (slope segment gradient x slope segment length)

Equation F.1 Worksheet Example:

Slope Segment Gradient	Slope Segment Length	Weighted Slope: Slope Segment Gradient x Slope Segment Length
10%	500	50
15%	300	45
20%	200	40
SUM	1200	165

WEIGHTED AVERAGE SLOPE (sum of weighted slope divided by sum of slope segment length) = 13.5%

B. GIS or Map-based Slope Determination

Slope over the contiguous vineyard area may be determined using a GIS program that using contour intervals of a maximum of ten (10) feet and a scale of 1" = 100' or better. Slope shall be averaged for the planted vineyard area.

C. Alternate Methodology

Enrollees may submit an alternate average slope determination methodology to the Executive Officer for review and approval.

II. Methodologies for Determining Ground Cover

Enrollees may choose one of the following methodologies for determining the Ground Cover for each contiguous vineyard area (i.e., each planted area not separated by streams, all-season roads, non-planted areas, or parcel boundaries).

A. VESCO Methodology

To assess percent ground cover, a sampling procedure placed in a uniform grid shall be used to determine the ground cover of the area prior to operations. Plots shall be placed on a 50-foot x 50-foot grid or a minimum of 10 plots per contiguous area. Ground cover shall be measured from the percent bare soil covering the circle relative to the area absent of bare soil within a 1/300th acre circle (6'8"). Ground cover shall be determined from the average amount of cover within each plot, within the project area. Refer to the VESCO guidelines[1] for more information. Figure F.3 provides a visual example of different Ground Cover percentages for reference.

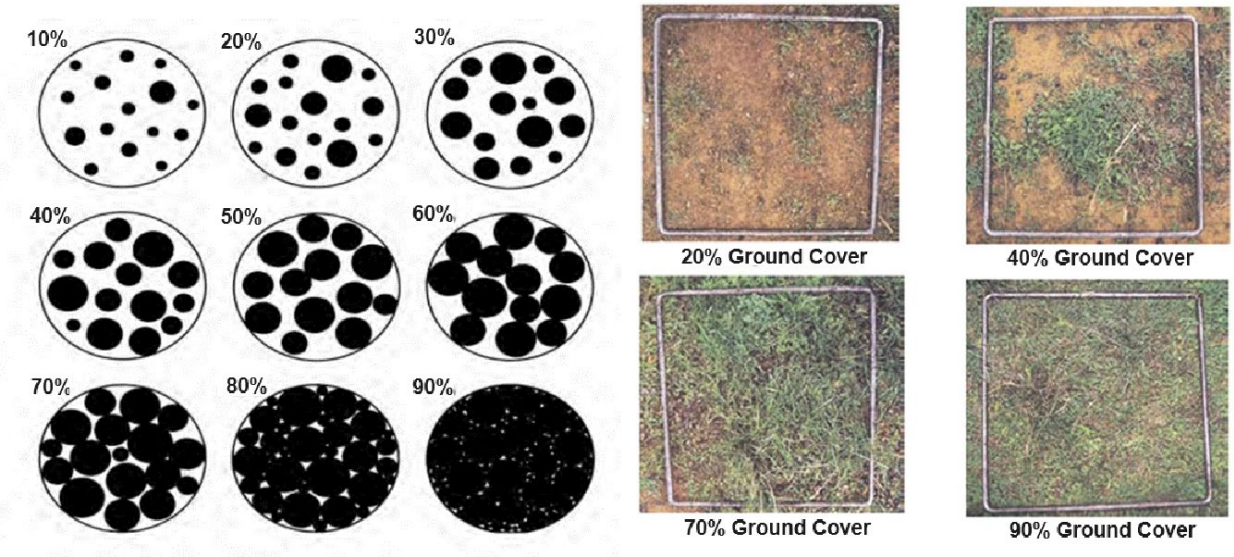


Figure F.3: Visual guide to different levels of cover using a two-dimensional circular frame (left) or grid (right). (Source: NRCS-USDA)

B. Alternate Methodology

Enrollees may submit an alternate ground cover determination methodology to the Executive Officer for review and approval. Alternate ground cover determination

[1] VESCO Guidelines
https://sonomacounty.ca.gov/Main%20County%20Site/General/Sonoma/Sample%20Dept/Divisions%20and%20Sections/Agriculture/Ordinances/GMO/_Documents/VESCO%20BMP%20and%20Technical%20Report%20Guidelines_Final.pdf

methodologies must reach similar outcomes to the VESCO methodology above.

III. Sample Collection and Handling Instructions

Enrollees shall follow the below procedures to comply with water quality monitoring requirements in this Order:

1) Identify the sampling parameters required to be tested and the number of locations that will be sampled.

2) Request the laboratory provide the appropriate number of sample containers, types of containers, sample container labels, blank Chain of Custody forms, and sample preservation instructions.

3) Prior to sampling, record information about the planned sampling event into Field Sheets and Chain-of-Custody forms. This information should include the vineyard name along with the sample location identifier and sample container types and number to be filled. Field measurement data and observations shall be recorded as they are collected.

4) Collect samples in accordance with the following instructions:

    a) Sampling from a Pipe: sample the outflow directly from the pipe. For hard-to-reach pipes, it may be necessary to fasten a collection bottle to a pole.

    b) Sampling From a Drainage Ditch or Swale: sample from a consistently flowing part of the ditch / swale. If the ditch / swale is too small or shallow, install a barrier device in the channel or deepen a small area so you are able to sample directly into the bottles. Allow sufficient time to pass after disturbing the bottom so that any solids stirred up do not contaminate your sample.

    c) Sampling From a Stormwater Detention / Retention Basin or Other Treatment Device: sample at the outlet of the structure. Collecting samples from stagnant or slowly moving water inside a pond will not yield a representative sample as the pollutants might not be adequately mixed. Stormwater basins may hold stormwater for long periods of time.

    d) Sampling From a Well: locate a valve or cold water tap as near to the well as possible, preferably prior to any storage/pressure tanks or physical/chemical treatment system that might be present. Open the valve (turn on pump if needed), monitor and record pH, specific conductance and temperature of the groundwater removed during purging at 5-minute intervals. Once these parameters have stabilized within 10 percent over 10 minutes, the well has been purged. Observe and record the rate and volume of water purged using a graduate bucket and stopwatch. Remove any hose that may be present before sample collection and reduce the flow to a low level to minimize sample disturbance. Collect samples directly into the laboratory supplied containers.

5) All monitoring instruments and equipment shall be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements.

6) Use only the sample containers provided/specified by the laboratory to collect and store samples. Use of any other type of containers could cause sample contamination.

7) Prevent sample contamination by not touching or putting anything into the sample containers before collecting samples.

8) Not overfill sample containers. Overfilling can change the analytical results. g. Secure each sample container cap without stripping the cap threads.

9) Label each sample container. The label shall identify the date and time of sample collection, the person taking the sample, and the sample collection location or discharge point. The label should also identify any sample containers that have been preserved.

10) Use the appropriate sample shipping method to the laboratory. The laboratory should receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory to meet all method hold times). The options are to either deliver the samples to the laboratory, arrange to have the laboratory pick them up, or ship them overnight to the laboratory.

11) Carefully pack the sample container into an ice chest or refrigerator to prevent breakage and maintain temperature during shipment; frozen ice packs or ice is placed into the shipping container to keep the sample close to 4° C (39° F) until arriving at the laboratory (do not freeze samples).

12) Complete a Chain of Custody form with each set of samples. The Chain of Custody form shall include the discharger’s name, address, and phone number, identification of each sample container and sample collection point, person collecting the samples, the date and time each sample container was filled, the analysis that is required for each sample container, and both the signatures of the persons relinquishing and receiving the sample containers.

13) Designate and train personnel for the collection, maintenance, and shipment of samples in accordance with the above sample protocols and laboratory-specific practices.

IV. Streamside Area Examples

A Streamside Area is comprised of two contiguous components: a Riparian Vegetation Area and a Vegetated Buffer in which different requirements are applied. A Streamside Area is defined as the area between the Ordinary High-Water Mark and where the field side edge of the Vegetated Buffer meets the Farm Area. The Riparian Vegetation Area extends from the Ordinary High-Water Mark to the Vegetated Buffer in Perennial and Ephemeral/Intermittent Streams. The Vegetated Buffer is measured from the Riparian Vegetation Area to the Farm Area along Perennial and Ephemeral/Intermittent Streams, and from the Ordinary High-Water Mark in Hydrologically Connected Undesignated Channels, Unfarmed Wetlands, and Hydrologically Connected Lakes, Ponds, or On-Stream Reservoirs. See also Appendix I: Acronyms, Definitions, and Endnotes for definitions of terms related to the Streamside Area.

The Ordinary High-Water Mark is defined as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. Refer to the Army Corps of Engineers "National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams[2]" for guidance in determining Ordinary High-Water Mark.

Figure 1 is an example of a Streamside Area on a Perennial Stream. The Riparian Vegetation Area extends 25 ft. from the Ordinary High-Water Mark of the Perennial Stream. The requirements specific to the Riparian Vegetation Area are given in the Streamside Area Section of the Order. Contiguous to the Riparian Vegetation Area is a Vegetated Buffer, which must extend at least 25 ft. until it hits the Farm Area. Seasonal roads (e.g., perimeter vineyard roads) are allowed within the Vegetated Buffer provided the applicable requirements given in the Streamside Area section of the Order are followed.

Figure 2 shows an example of a Streamside Area on an Ephemeral/Intermittent Stream. Figure 2 shows an example of a Streamside Area on a Hydrologically-Connected Undesignated Channel.

[2] National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams : Interim Version, Army Corps of Engineers, November 2022. https://www.erdc.usace.army.mil/Media/Publication-Notices/Article/3253541/

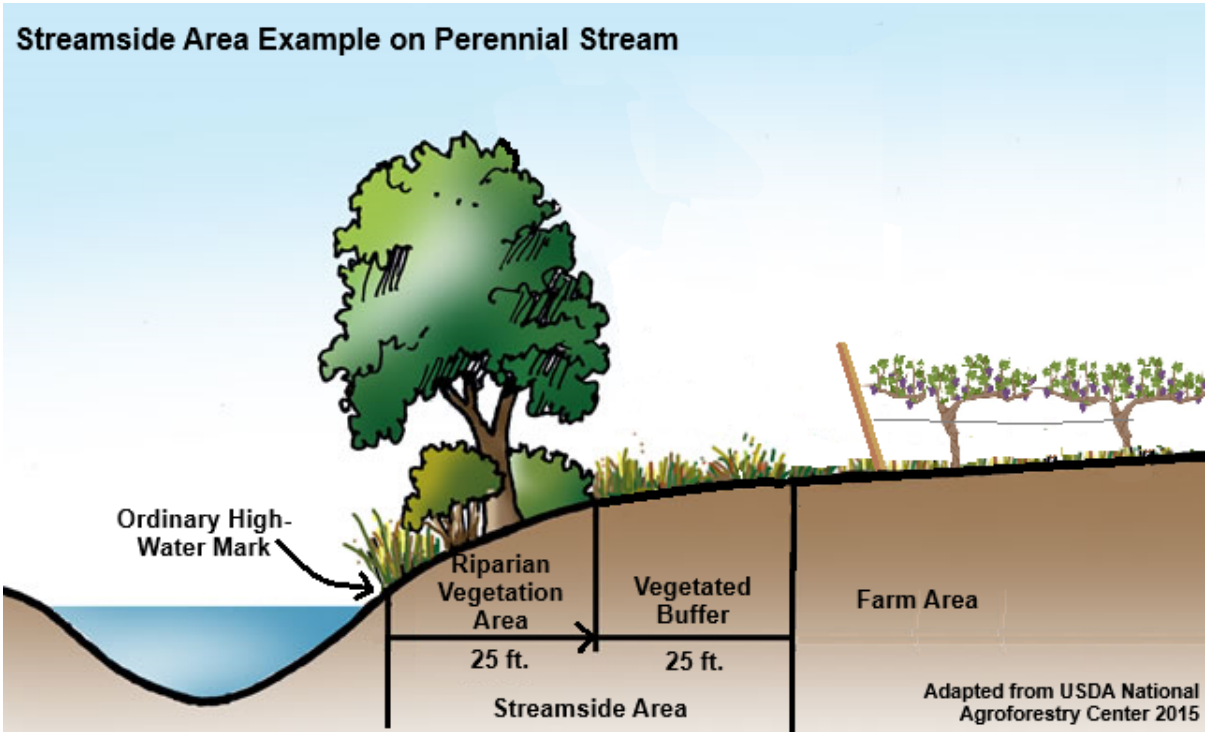


Figure 1: Streamside Area on a Perennial Stream

.

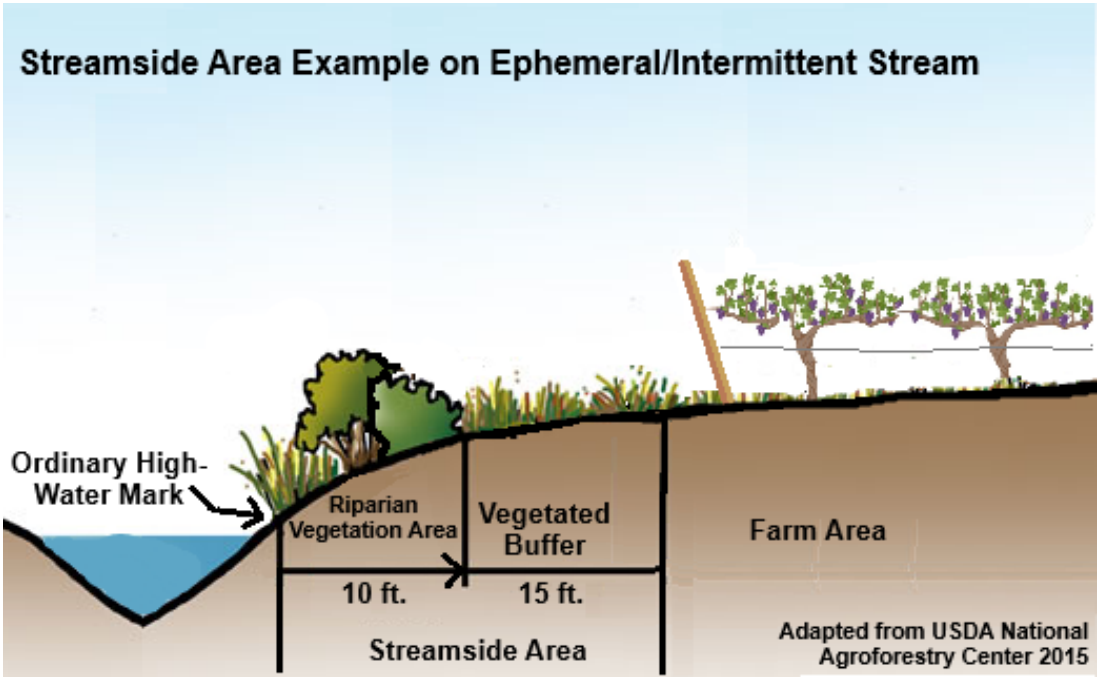


Figure 2: Streamside Area on Ephemeral/Intermittent Stream

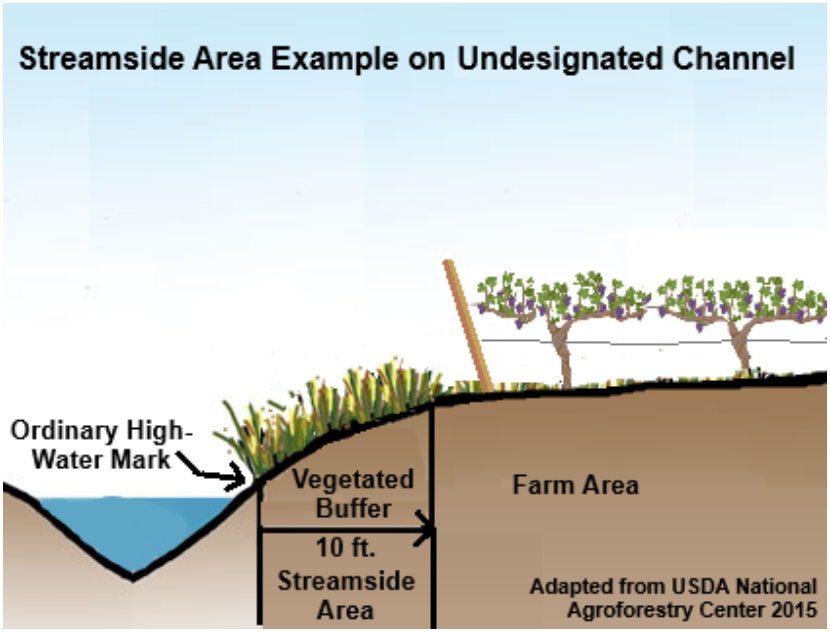


Figure 3: Streamside Area Example, Undesignated Channel

Attachment E: CEQA Mitigation Measures

The following Mitigation Monitoring and Reporting Program (MMRP) summary table includes the mitigation measures identified in the California Regional Water Quality Control Board, North Coast Region (Regional Water Board) draft environmental impact report (EIR) for the proposed Order project in accordance with the California Environmental Quality Act (CEQA). For each mitigation measure, this table identifies monitoring and reporting actions that must be carried out and the monitoring schedule.

Enrollees are responsible for complying with all mitigation measures in the final EIR and this MMRP summary table. Enrollees must determine whether their proposed activities (e.g., management practices) are subject to individual mitigation measures and, if applicable, take the necessary actions to ensure the mitigation measures are fully implemented. In some cases, this may involve hiring a professional (e.g., biologist, archaeologist) and becoming familiar with applicable laws and regulations.

Enrollees who enroll individually in the Order must report their compliance with mitigation measures in the Annual Compliance Report (ACR), which is submitted as part of their overall compliance reporting for the Order. The Coalition shall submit this information to the Regional Water Board on behalf of its enrolled Enrollees. As the CEQA Lead Agency, the Regional Water Board is ultimately responsible for ensuring compliance with the mitigation measures identified in the Final EIR. The Regional Water Board will accomplish this through review of ACRs to confirm that reported actions fully meet the requirements of the applicable mitigation measures. The Regional Water Board will also confirm mitigation measure compliance during periodic inspections of individual vineyards.

The MMRP will be made available to Enrollees, and they may use the checklist to help document their compliance with applicable mitigation measures. The Regional Water Board may also use the MMRP checklist to confirm and document compliance

Mitigation, Monitoring and Reporting Program (MMRP) Summary Table

Mitigation Category	Mitigation Measure	Monitoring and Reporting Action and Schedule (Responsible Party in Parenthesis)
Ag and Forestry Resources	N/A	N/A
Air Quality	N/A	N/A
Biological Resources: BIO-1	Where construction in areas that may contain sensitive biological resources cannot be avoided using alternative management practices, conduct an assessment of habitat conditions and the potential for presence of sensitive vegetation communities or special- status plant and animal species prior to construction. This may include the hiring of a qualified biologist to identify riparian and other sensitive vegetation communities and/or habitat for special-status plant and animal species. When conducting maintenance or repair on facilities that may provide habitat for species, ensure that such activities will not disturb any special-status species that may be present. If conducting maintenance or repair activities during the nesting season (generally February 1 to August 31), inspect the facilities to ensure that nesting birds are not present within or adjacent to areas where such activities will occur. If nests or young are identified in such areas, conduct the activities outside of the nesting season. Where adverse effects on sensitive biological resources cannot be avoided, undertake additional CEQA review and develop a restoration or compensation plan in consultation with the California Department of Fish and Wildlife to mitigate the loss of the resources	Confirm that the least impactful effective management practice is selected to avoid impacts to biological resources. Schedule: During design of management practice(s). (Enrollee) Where areas potentially containing sensitive biological resources cannot be avoided, confirm performance of habitat and species assessment. Schedule: Prior to construction / installation of management practice(s), if applicable.(Enrollee) Confirm that maintenance or repair activities will not disturb any special-status species. Prior to undertaking proposed activity. (Enrollee) For activities proposed during nesting season, confirm performance of survey for nesting birds and avoidance of nests / young. Schedule: Prior to undertaking proposed activity, if applicable. (Enrollee) In the event avoidance of sensitive biological resources is not feasible, confirm additional CEQA review and appropriate consultation with CDFW. Schedule: Prior to undertaking any construction / installation or other activities that could adversely affect sensitive biological resources (Enrollee and NCRWQCB)

Mitigation Category	Mitigation Measure	Monitoring and Reporting Action and Schedule (Responsible Party in Parenthesis)
Biological Resources: BIO-2	Riparian Habitat, Wetlands, and Lake and Streambed Alteration Notification Compliance. Culvert upgrades and replacement may be a management practice used to achieve the objective of Storm-Proofing Appurtenant Agricultural Roads for Surface Water Protection. Enrollees shall notify CDFW and comply with the Lake and Streambed Alteration Agreement, if issued. Enrollees shall obtain permits from the Regional Water Quality Control Board and Army Corps of Engineers pursuant to the Clean Water Act, if applicable	CDFW shall be notified pursuant to Fish and Game Code section 1600 et seq. for Project activities affecting lakes or streams and associated riparian habitat and shall comply with the Lake and Streambed Alteration Agreement, if issued. Enrollees shall obtain permits from the Regional Water Quality Control Board and Army Corps of Engineers pursuant to the Clean Water Act, if applicable (Enrollee) Schedule: Prior to construction of management practices.

Mitigation Category	Mitigation Measure	Monitoring and Reporting Action and Schedule (Responsible Party in Parenthesis)
Cultural Resources: CUL-1	Cultural Resources Inventory, Evaluation of Resources for Significance, and Implementation of Avoidance and/or Minimization Measures. For proposed actions or management practices that involve modifications to previously undisturbed soils (i.e., below the levels of current agricultural practices, or in areas that have not previously been cultivated or developed) or a structure that may qualify as a historical resource, the following steps must be taken to avoid and/or reduce potential impacts on significant cultural resources: The enrollee or third-party must retain an archaeologist who meets the U.S. Secretary of Interior's professional standards as an archaeologist to conduct a records search at the regional Information Center of the California Historical Resources Information System (CHRIS). The record search must determine if cultural resources have previously been identified in the proposed disturbance area and whether the proposed disturbance area has previously been subject to archaeological pedestrian survey. The professional archaeologist must contact the NAHC to request a search of the Sacred Lands files and a list of tribes with a traditional and cultural affiliation with the proposed disturbance area. The archaeologist must contact the tribes identified by the NAHC to request information about sites and resources that may not have been identified during the record search process, including TCRs, and whether the tribes have any concerns about the proposed action.	Confirm that the measure is included in contract documents, if any. Schedule: During preparation of contract and specifications (Enrollee) Confirm that construction workers are fully aware of all requirements pertaining to cultural resources and receive basic training on how to identify potential cultural resources. Schedule: Prior to construction / installation of applicable management practices. (Enrollee) For applicable activities, confirm retention of a qualified archaeologist to conduct a records search, contact tribes, and conduct pedestrian survey, as necessary. Schedule: Prior to construction / installation of applicable management practices.(Enrollee) Confirm any identified archaeological sites, and historic buildings and structures, are recorded on proper forms. Schedule: Prior to construction / installation of applicable management practices. (Enrollee) If historical resource(s) are identified within the proposed disturbance area, confirm avoidance of those resource(s) to the extent feasible. Schedule: Prior to construction / installation of applicable management practices. (Enrollee) If historical resource(s) cannot be avoided, confirm preparation of a data recovery plan and submittal to NCRWQCB. Schedule: Prior to construction / installation of applicable management practices. (Enrollee)

Mitigation Category	Mitigation Measure	Monitoring and Reporting Action and Schedule (Responsible Party in Parenthesis)
Cultural Resources: CUL-1 continued	If a pedestrian survey has not previously been conducted on the property, a survey must be conducted by a qualified archaeologist. All identified archaeological sites and historic buildings and structures must be recorded on California Department of Parks and Recreation 523 Site Record forms. A Historic Resources Identification Report must be prepared to document the findings of the study; the report must be submitted to the NCRWQCB and the CHRIS Information Center. If the property has been subject to previous study, additional survey is not required if no cultural resources, including TCRs, were identified during the study and the age and adequacy of the report are considered sufficient by the consulting archaeologist for the purposes of the present project. The report from the previous survey can then be used to satisfy the CEQA requirements for historical resources. If the property has been subject to previous survey and a cultural resource has been identified within the proposed disturbance area, a qualified archaeologist must conduct a pedestrian survey to assess the current condition of the resource relative to the proposed action.	See CUL-1.

Mitigation Category	Mitigation Measure	Monitoring and Reporting Action and Schedule (Responsible Party in Parenthesis)
Cultural Resources: CUL-2	If cultural resources are identified either by the record search or pedestrian survey, the qualified archaeologist must evaluate the significance of archaeological resources, per the State Water Board guidelines1. Note that buildings that would be impacted by the proposed action would require evaluation for California Register of Historical Resources (CRHR) eligibility by a qualified architectural historian. If the cultural resource(s) are determined to be historical resource(s) (i.e., listed or eligible for listing in the CRHR), the enrollee or third-party, in coordination with the qualified archaeologist, must avoid impacting the resource(s) to the extent feasible. This would include relocating or redesigning proposed management practice(s) such as to avoid the resource or leaving structures in place in setback areas or otherwise preserving structure(s) that are listed or eligible for listing. If the historical resource(s) cannot be completely avoided, the qualified archaeologist must develop and implement a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource(s) that may be impacted by the proposed activity.	Confirm that submitted data recovery plan adequately provides for recovery of scientifically important information about historical resource(s) to be impacted, and that consulting tribes are provided opportunity to review. Schedule: Prior to commencement of any excavation activities.(NCRWQCB) If approved, confirm that data recovery plan is properly and fully implemented. Schedule: During and potentially after construction / installation, if applicable. (Enrollee) In the event that cultural resources are encountered, ensure that work stops immediately. Schedule: During construction / installation, if necessary. (Enrollee) Ensure all accidentally discovered cultural resources are evaluated for inclusion in the CRHR and that avoidance measures or appropriate mitigation measures are implemented for historical resources. Schedule: During construction / installation, if necessary. (Enrollee)

Mitigation Category	Mitigation Measure	Monitoring and Reporting Action and Schedule (Responsible Party in Parenthesis)
Cultural Resources: CUL-2 cont'd.	The data recovery plan must be prepared and submitted to NCRWQCB for approval, and the data recovery plan must be approved by NCRWQCB prior to any excavation taking place that may impact the resource(s). NCRWQCB must ensure that data recovery plans for Native American archaeological sites have the opportunity to be reviewed by consulting tribes. Archaeological sites known to contain human remains must be treated in accordance with the provisions of section 7050.5 of the Health and Safety Code (see Mitigation Measure CUL-3). For any artifacts removed during project excavation or testing, the professional archaeologist must provide for the curation of such artifact(s). For structure(s) evaluated as a historical resource(s) that cannot be avoided, reconstruction of the structure(s) at an offsite location, consistent with the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings, may be an appropriate minimization measure that may be implemented in addition to, or as part of, the data recovery plan. Provisions must be made by the enrollee or third- party for the accidental discovery of historical or unique archaeological resources during construction of applicable management practices, pursuant to CEQA Guidelines 15064.5(f). If cultural resources2 are uncovered during construction, work must immediately cease within 50 feet of the finds and the materials must be evaluated by a qualified archaeologist. If the finds are determined to be a historical or unique archaeological resource, avoidance measures or appropriate mitigation (e.g., data recovery, documentation, and curation) must be implemented.	See CUL-2.

Mitigation Category	Mitigation Measure	Monitoring and Reporting Action and Schedule (Responsible Party in Parenthesis)
Cultural Resources: CUL-3	Comply with State Laws Pertaining to the Discovery of Human Remains. If human remains are discovered during construction, the requirements of Health and Safety Code section 7050.5 must be followed. Potentially damaging excavation must halt on the construction site within a minimum radius of 100 feet of the remains, and the county coroner must be notified. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code section 7050.5[b]). If the coroner determines that the remains are those of a Native American, the NAHC must be contacted by phone within 24 hours of making that determination (California Health and Safety Code section 7050[c]). Pursuant to the provisions of PRC section 5097.98, the NAHC must identify a most likely descendent (MLD). The MLD designated by NAHC must have at least 48 hours to inspect the site and propose treatment and disposition of the remains and any associated grave goods. The enrollee must work with the MLD to ensure that the remains are removed to a protected location and treated with dignity and respect. Ground disturbing activities must not resume until these requirements are met.	Confirm that measure is incorporated in contract documents, if any. Schedule: During preparation of contract and specifications.(Enrollee) Confirm that construction workers are fully aware of all requirements pertaining to human remains. Schedule: Prior to construction / installation of management practices or other activities involving ground disturbance. (Enrollee) In the event that human remains are encountered, confirm that work is stopped immediately and California Health and Safety Code requirements are followed and the county coroner is contacted. Schedule: During construction / installation, if applicable. (Enrollee) Confirm that any discoveries of human remains are evaluated and addressed properly as outlined in the measure. Schedule: During construction / installation, if applicable (Enrollee)

Mitigation Category	Mitigation Measure	Monitoring and Reporting Action and Schedule (Responsible Party in Parenthesis)
Geology: GEO-1	Comply with State Laws Pertaining to the Discovery of Paleontological Resources. If any items of paleontological interest are discovered during construction of management practices or other activities (e.g., installation of monitoring wells), work must be immediately suspended within 50 feet of the discovery site, or to the extent needed to protect the site. Discovered paleontological resources must be evaluated by a qualified paleontologist who meets the Society for Vertebrate Paleontology's professional requirements. If it is determined that the activities could damage a unique paleontological resource, mitigation must be implemented in accordance with PRC section 21083.2 and section 15126.4 of the State CEQA Guidelines. If avoidance is not feasible, the paleontologist must develop a treatment plan in consultation with NCRWQCB. Work must not be resumed until authorization is received from NCRWQCB and any recommendations received from the qualified paleontologist are implemented.	Confirm that the measure is incorporated into contract documents, if any. Schedule: During preparation of contract and specifications. (Enrollee) Confirm that construction workers are fully aware of all requirements pertaining to the discovery of paleontological resources and receive basic training on how to identify potential paleontological resources. Schedule: Prior to construction / installation of management practices or other activities involving ground disturbance. (Enrollee) In the event paleontological resources are identified during excavation and related activities, confirm that work stops immediately. Schedule: During construction / installation of management practices or other ground-disturbing activities. (Enrollee) If needed, confirm that a qualified paleontologist is retained to evaluate discovered resources. Schedule: Prior to resuming work activities in affected area (Enrollee) If unique paleontological resource(s) are identified and may be impacted, confirm that qualified paleontologist implements appropriate mitigation and/or develops a treatment plan in consultation with NCRWQCB, as appropriate. Schedule: Prior to resuming work activities in affected area. (Enrollee) Confirm treatment plan and mitigation approach are appropriate and sufficiently avoid or minimize impacts to unique paleontological resource(s). Schedule: Prior to resuming work activities in affected area (NCRWQCB)

Mitigation Category	Mitigation Measure	Monitoring and Reporting Action and Schedule (Responsible Party in Parenthesis)
Greenhouse Gas Emissions	N/A	N/A
Hazards and Hazardous Materials: HAZ-1	Hazardous Materials Spill Prevention, Control, and Counter-Measures for Land Disturbance Activities. Enrollees or their contractors must maintain/implement the following: A list of hazardous materials present on site during construction, to be updated as needed along with product safety data sheets and other information regarding storage, application, transportation, and disposal requirements; A hazardous materials communication plan, which lists contacts for emergency services, hazardous materials spill response agencies, and wildlife agencies, as well as protocols for communication in the event of a spill; Standards for secondary containment of hazardous materials stored on site; Spill response procedures based on product and quantity. The procedures must include spill response/clean-up materials to be used, location of such materials within the construction site, and disposal protocols.	Confirm that measure is included in contract documents, if any. Schedule: During preparation of contract and specifications. (Enrollee) Confirm list of hazardous materials, standards for secondary containment, and spill response procedures are on site/documented. Schedule: Prior to land disturbance activities. (Enrollee) Confirm preparation of a hazardous materials communication plan that includes all information identified in the mitigation measure. Schedule: Prior to land disturbance activities. (Enrollee)

Mitigation Category	Mitigation Measure	Monitoring and Reporting Action and Schedule (Responsible Party in Parenthesis)
Hazards and Hazardous Materials: HAZ-2	Review Proximity to Existing Known Hazardous Materials Cleanup Sites and Conduct an Environmental Site Assessment if Proposed Activity Is Located on or in Close Proximity to an Area of Hazardous Materials Contamination. Enrollees proposing construction/installation of management practices involving excavation or ground disturbance must evaluate the proximity of proposed management practices to existing known hazardous material cleanup sites. Prior to final design, enrollees, or their contractors, must review the planned management practice footprint in relation to records of hazardous materials sites in the State Water Board's GeoTracker database and the California Department of Toxic Substances Control's EnviroStor database. If the proposed management practice is located on or within 100 feet of a documented hazardous material contamination site, for which cleanup activities have not been completed or been successful, the enrollee or its contractor must commission a Phase I environmental site assessment (ESA) to more fully characterize the past land uses and potential for soil and/or groundwater contamination to occur at or in close proximity to the site.	For applicable activities, confirm applicable databases (i.e., GeoTracker and EnviroStor) are consulted prior to final design. Schedule: Prior to final design of management practices involving excavation or ground disturbance. (Enrollee) If applicable, confirm Phase I and/or Phase II ESAs are commissioned, per requirements identified in this measure. Schedule: Prior to final design of applicable management practices.(Enrollee) Confirm that construction is conducted in accordance with recommendations of the Phase II ESA, if applicable. Schedule: During construction / installation of applicable management practices. (Enrollee) Confirm proper disposal of contaminated soil/hazardous materials during construction, per applicable laws. Schedule: During construction / installation of applicable management practices. (Enrollee)

Mitigation Category	Mitigation Measure	Monitoring and Reporting Action and Schedule (Responsible Party in Parenthesis)
Hazards and Hazardous Materials: HAZ-2 cont'd:	If the Phase I ESA demonstrates a reasonable likelihood that contamination remains within the management practice's area of disturbance, the enrollee or its contractor must commission a Phase II ESA, including soils testing, to characterize the extent of the contamination and develop ways to avoid the contaminated areas during management practice design and construction. The enrollee and/or its contractor must follow all recommendations of the Phase II ESA and, to the extent feasible, design the management practice to avoid areas of contamination. In the event that it is not feasible to avoid all areas of contamination, the enrollee and/or its contractor must follow all applicable laws regarding management of hazardous materials and wastes. This includes proper disposal of any contaminated soil in a hazardous waste landfill and ensuring that workers are provided with adequate personal protective equipment to prevent unsafe exposure.	See HAZ-2.

Mitigation Category	Mitigation Measure	Monitoring and Reporting Action and Schedule (Responsible Party in Parenthesis)
Hydrology and Water Quality: HWQ-1	Implement Construction Best Management Practices for Erosion Control. Where construction of management practices would not be subject to the Construction General Permit or local grading ordinance, enrollees must implement the following measures during construction of the improvements, or must implement alternative measures that are demonstrated to be equally or more effective: Implement practices to prevent erosion of exposed soil and stockpiles, including watering for dust control, establishing perimeter silt fences, and/or placing fiber rolls. Minimize soil disturbance areas. Implement practices to maintain water quality, including silt fences, stabilized construction entrances, and storm drain inlet protection. Where feasible, limit construction to dry periods. Revegetate disturbed areas. The performance standard for these erosion control measures is to use the best available technology that is economically achievable. These measures may be included in SWPPP requirements, as appropriate.	Confirm that BMPs are included in contract documents, if any. Schedule: During preparation of contract and specifications. (Enrollee) Confirm that all BMPs are implemented fully, and that erosion control measures use the best available technology that is economically achievable. Schedule: During construction / installation of applicable management practices. (Enrollee)

Mitigation Category	Mitigation Measure	Monitoring and Reporting Action and Schedule (Responsible Party in Parenthesis)
Hydrology and Water Quality: HWQ-2	Place Management Practices that Involve Retention and/or Treatment of Surface Runoff Outside of 100-Year Floodplains or Tsunami or Seiche Inundation Zones. To the extent feasible, Enrollees must place structural management practices that involve retention or treatment of runoff outside of Federal Emergency Management Agency-designated 100-year floodplains or identified tsunami or seiche inundation zones. Where seiche inundation zones have not been mapped, enrollees should use good judgment in not placing structural management practices for sediment retention in areas immediately adjacent to large standing waterbodies that could be inundated during a seiche event.	Confirm that applicable management practices are not located within 100-year floodplains, tsunami or seiche inundation zones. Schedule: During design of applicable management practices (Enrollee)
Tribal Resources: TRI-1	See Cultural Resources (CUL-1 through CUL-3) above.	

[1] Guidelines for Applicants and their Consultants on Preparing Historic Property Identification Reports for the Clean and Drinking Water State Revolving Fund Programs. Revised 9/12/19. While these guidelines were developed for other State Water Board programs, they provide protocols that can generally be applied to other programs where cultural resources must be addressed.

[2] Native American archaeological materials or indicators may include, but are not limited to, arrowheads and chipped stone tools; bedrock outcrops and boulders with mortar cups; ground stone implements (grinding slabs, mortars, and pestles) and locally darkened midden soils containing some of the previously listed items plus fragments of bone, fire affected stones, shellfish, or other dietary refuse. Historic era archaeological materials may include, but not be limited

to: adobe or fired brick; metal objects such as nails, hinges, machine parts, etc.; household wares glass artifacts or shards; tin cans; milled lumber, etc.

Attachment F: Templates

Contents

North Coast Regional Water Quality Control Board

VINEYARD ORDER
NOTICE OF INTENT

To obtain regulatory coverage and comply with Waste Discharge Requirements General Order for discharges from Commercial Vineyards within the North Coast Region, Order R1-2024-0056.

You must complete the entire form. Please send the completed, signed form to the North Coast Regional Water Quality Control Board (Regional Board). Instructions for filling out and sending this form start on page 4.

Enrollment Type

I am enrolling in the Vineyard Order individually. By checking this box, I acknowledge that I must fulfill all Monitoring and Reporting requirements in Attachment A: MRP for Individual Enrollees.

I am enrolling in the Vineyard Order through an approved Coalition. By checking this box, I acknowledge that I must fulfill all Monitoring and Reporting requirements in Attachment B: MRP for Enrollees in a Coalition.

Name of Coalition: _____

1. Owner Information

1a. Landowner First Name:	1b. Landowner Last Name:
1c. Landowner Phone Number:	1d. Landowner Email:

1e. Landowner Mailing Address: _____

1f. Have you received a Directive Letter or an Order* from the Water Board? Yes No

* A Directive Letter or Order is a letter that identifies your requirements to seek regulatory coverage under the Vineyard Order.

1g. Is the landowner also the operator of the commercial vineyard? Yes No
(If you checked Yes, skip Operator Information 2a through 2d)

Notice of Intent

2. Operator Information

2a. Operator First Name:	2b. Operator Last Name:
2c. Operator Phone Number:	2d. Operator Email:

2e. Operator Mailing Address: _____

Commercial Vineyard Information

Name of Operation (DBA) if applicable: _____

3. Parcel Information

Please list parcels for which you would like to obtain regulatory coverage (*attach additional sheets as necessary*).

Assessor's Parcel Number (APN)	County	APN Acres	Farmed Acres

4. Map of Operation

Attach a map of the commercial vineyard that includes all enrolled parcels with parcel boundaries. A map may be an aerial photograph, topographic map, LiDAR-derived shaded relief map, Google Earth image, or equivalent that depicts features at 1-inch = 50 feet or larger scale. The vineyard base map(s) shall include a north arrow and label.

Notice of Intent

Owner Notification and Certification

If the facility is currently leased or operated by someone other than the owner, this section must be signed by the operator.

> *I certify that the owner of the parcel(s) I am enrolling has been notified of these General Waste Enrollee Requirements and that I have been designated by the owner as the "Enrollee".*

Operator's Printed Name: _____

Signature: _____

Title: _____Date: _____

Certification

> *"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the Order, including the implementation of the Monitoring and Reporting Program, will be complied with."*

Enrollee Printed Name*: _____

Enrollee Signature: _____Date: _____

Submittal of NOI Form

1. Fees

Irrigated Lands Fee information can be found at:
(https://www.waterboards.ca.gov/water_issues/programs/agriculture/)

2. Submittal

This NOI must be completed for existing commercial vineyards and submitted to the Regional Water Board no later than **July 1, 2027**, or, prior to enrollment by new, expanding, or reoperating previously inactive commercial vineyards.

If enrolling in a Coalition, please submit this completed NOI form and appropriate enrollment fee (when applicable) to the Coalition.

If enrolling individually, please submit this completed NOI Form and appropriate

Notice of Intent

enrollment fee (when applicable) to the following address:

North Coast Regional Water Quality Control Board
ATTN: Vineyard Order
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95401

Email: NorthCoast@waterboards.ca.gov

North Coast Regional Water Quality Control Board

VINEYARD ORDER
REQUEST FOR TERMINATION

Request to Terminate Coverage of Commercial Vineyard under General Waste Discharge Requirements for Commercial Vineyards Order R1-2024-0056.

Submission of this form constitutes an official notification to the North Coast Regional Water Quality Control Board (Regional Board) that the commercial vineyard identified below, and all associated APNs, has elected to terminate coverage under the Vineyard Order. To officially terminate your enrollment, this form must be completed, physically signed by the individual Operator and/or Operator (herein 'Responsible Party') listed on the operation eNOI and received by the Regional Board.

By submitting this Notice of Termination form, ALL parcels enrolled in the Vineyard Order will be terminated.

Owner/Operator Information

1. Complete this section if currently enrolled in a Coalition:

Responsible Party:	
Member ID (if enrolled through Coalition):	
Phone Number:	
Email:	
Business Mailing Address:	

2. Complete this section if currently enrolled Individually:

Request for Termination

Responsible Party:	
WDID:	
Phone Number:	
Email:	
Business Mailing Address:	

Reason for Termination

No longer farming commercially as of (month, day, year): ___/____/_____

Change in ownership as of (month, day, year): ___/____/_____

Have you notified the new owner of their requirement to send a Notice of Intent to the Regional Board? _____ Yes _____ No

Change in Operator as of (month, day, year): ___/____/_____

Have you notified the new operator of their requirement to send a Notice of Intent to the Regional Board? _____ Yes _____ No

Certification

I certify under penalty of law that the submitted information is to the best of my knowledge true, accurate, and complete.

Responsible Party Signature: _____

Printed Name: _____Date: _____

Submitting Form

Please send this form by mail to:

North Coast Regional Water Quality Control Board
Attn: Vineyard Order
5550 Skylane Boulevard. Suite A

Santa Rosa CA, 95403

Or you may send by email to:NorthCoast@waterboards.ca.gov

North Coast Regional Water Quality Control Board

INSTRUCTIONS FOR DRINKING WATER WELL INFORMATION FORM

*Note: Fields with an asterisk are the minimum data required for GeoTracker entry. The GeoTracker link and instructions can be found online at: (https://www.waterboards.ca.gov/ust/electronic_submittal/).

Enrollee Information

1a. Enrollee Name*: Name of person who is enrolled in the Vineyard Order.

1b. Enrollee Email*: Valid email address for Enrollee.

1c. Enrollee Phone*: Provide working phone number for Enrollee.

1d. Coalition: Identify Third-Party enrolled in, if applicable.

1e. Member Mailing Address*: Mailing address of the enrolled member

1f. Property Address: Address of the enrolled parcel if different from the mailing address.

1g. Is the Enrollee also the owner? If yes, skip 2a-2d below. If no, please provide landowner information.

1h. Is the Enrollee (including family) the only consumer of the drinking water?

In the event of nitrate + nitrite as nitrogen or pesticide exceedance - if yes, notify North Coast Regional Water Board; if no, notification required to all users and the North Coast Regional Water Board within 10 days.

Landowner Information

2a. Landowner Name: Provide name of landowner of enrolled parcel(s).

2b. Landowner Mailing Address: Provide a valid mailing address for the landowner of the enrolled parcel(s).

2c. Landowner phone: Provide valid phone number for landowner of enrolled parcel(s).
2d. Landowner email: Provide valid email for landowner of enrolled parcel(s).

Drinking Water Well Information

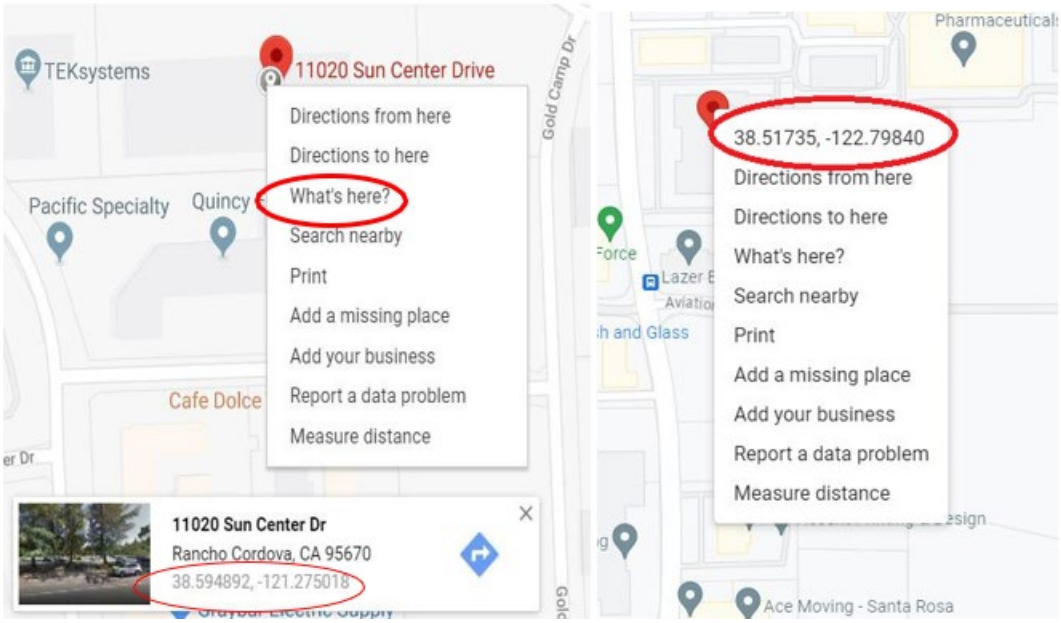
Well Name/Field Point Name*: Provide a specific name for each well. Name should clearly identify well for future sampling events (not to exceed 10 characters). If water is

collected after a treatment system provide TRT- at beginning of Well Name (e.g., TRT-SEwell)

An “X” should be placed in the column to the left of the Well Name/Field Point Name field if the well has previously been sampled. This column will be used for previously sampled wells (within the last 5 years) for data entry or during year 2 of sampling to help the laboratory identify previously sampled wells.

Longitude and Latitude can be found by using a cell phone or computer. Longitude and Latitude must be provided in decimal degrees. To determine your coordinates, while using google maps **on a computer**, type in the address and search. Once the address is displayed on the map, using your mouse, right click the pin drop select What’s here? A display box should appear near the bottom of the screen (left). In some versions, the latitude and longitude will appear on the top of the box (right).

In this case of the property on the left, latitude = 38.594892, longitude = -121.275018.



On your cell phone - using google maps drop a pin (by placing finger on map and hold in place where the drinking water well is located). When a dropped pin box comes up at the bottom of the screen, scroll down to pin symbol for latitude and longitude information.

County*: The county the enrolled parcel is located.

APN*: An Assessor's Parcel Number (APN) is a unique number that is assigned to each tract of land in a county by the Tax Assessor. Please provide the APN of the enrolled parcel with the drinking water well.

North Coast Regional Water Quality Control Board

DRINKING WATER WELL INFORMATION FORM

Complete entire form if you have a drinking water well on an enrolled Assessor's Parcel Number (APN) and submit it with your well samples to an Environmental Laboratory Accreditation Program laboratory for required data entry into the State's GeoTracker. The Enrollee is responsible for uploading the data into GeoTracker if the laboratory will not submit directly to GeoTracker.

1. Enrollee Information

(Personal information will not be available to the public, only APN and well sample data will be available to view through the GeoTracker database) – *Note: fields with asterisk are required to be filled out.

1a. Enrollee Name*

1b. Enrollee Email*:

1c. Enrollee Phone*:

1d. Coalition (if applicable)*:

1e. Member's Mailing Address*:

1f. Property Address (if different from mailing address):

1g. Is the Enrollee also the landowner:

- □ YES (if Yes, skip 2a-2d below)
- □ NO

1h. Is the Enrollee (including family) the only consumer of the drinking water

- □ YES
- □ NO (if no, notification to all consumers and the North Coast Regional Water Board is required if nitrate or pesticide exceedance is identified)

2. Landowner Information

(Fill out if Enrollee is not the landowner)

2a. Landowner's Name:

2b. Landowner's Mailing Address:

2c. Landowner's Phone:

2d. Landowner's Email:

3. Drinking Water Well Information*:

List all drinking water well on Irrigated Lands Regulatory Program enrolled parcel(s) below.

(Note: If well was previously sampled and data is entered into GeoTracker, place an "X" in column to the left of the Well Name/Field Point Name.)

X	Well Name / Field Point Name (required)	Latitude	Longitude	County (required)	Assessor Parcel Number (APN) (required)

4. Certification

"I certify under penalty of law that to the best of my knowledge and belief, this document and any attachments submitted is, true, accurate, and complete and was prepared by me or under my direction or supervision. I am aware that there are significant penalties for knowingly submitting false information."

Signature (required) Date

North Coast Regional Water Quality Control Board

DRINKING WATER NOTIFICATION TEMPLATE

At a minimum, the Enrollee or non-Enrollee owner shall notify drinking water well users of the exceedance by providing them a copy of a Drinking Water Notification Template approved by the Executive Officer. The template shall be signed by the Enrollee or non-Enrollee owner certifying notice has been provided to the users. A copy of the signed template shall be sent to the Regional Water Board and retained by the Enrollee or non-Enrollee owner.

Please complete template on next page for any Drinking Water Well that exceeds the Nitrate MCL of 10 mg/L. Provide a copy of this Drinking Water Notification Template to all users of the drinking water well within 10 days of learning of the exceedance and submit a copy to the Regional Board.

North Coast Regional Water Quality Control Board
ATTN: Vineyard Order Drinking Water Well Notification
5550 Skylane Blvd STE A
Santa Rosa CA 95403-1072

Drinking Water Well
Information Form

Do Not Drink Your Water

Use Only Bottled Water Until Further Notice

Failure to follow this advisory could result in serious illness.

Test Result: mg/L

Nitrate in your well was found to exceed the drinking water standard of 10 mg/L established for safe drinking water.

- **Pregnant women are at increased risk** for potential health effects and should not drink water with high levels of nitrate. Drinking water with high nitrate levels may also cause serious complications in pregnancy.
- **Do not give the water to infants.** Infant formula and other edible products should be prepared with bottled water or other water with low levels of nitrate. Infants are at increased risk to become seriously ill or even death from consumption of high levels of nitrate.
- **Do not boil your water.** Boiling your water may increase nitrate levels.

This notification was provided by:

Assessor's Parcel Number (APN):

County:

Name *(of Landowner/Operator)*:

Date:Signature:

Coalition (if applicable):

Member ID:

- □ No one drinks or cooks with this well water.
- □ Notification has been provided to the user(s) or appropriate landowner(s).
- □ Replacement water has been provided to the user(s).

Please submit a signed copy of this notification to the **North Coast Regional Water Board**:

North Coast Regional Water Quality Control Board

NITRATE FACT SHEET

What is nitrate?

Nitrate can occur naturally in surface and groundwater at levels that do not cause health problems. However, levels of nitrate in excess of the standard drinking water are dangerous, especially for infants and pregnant women. Nitrate contamination in groundwater is generally associated with septic systems, confined animal feeding operations, or fertilizer use.

What health concerns are associated with nitrate in drinking water?

High nitrate levels can interfere with the ability of red blood cells to carry oxygen to the tissues of the body, producing a condition called methemoglobinemia. This is of greatest concern in infants; clinical effects on infants ingesting high levels of nitrate are often referred to as the "blue baby syndrome." Symptoms include shortness of breath and blueness in the skin. Symptoms in infants can develop rapidly, with health deteriorating over a period of days. If symptoms occur, seek medical attention immediately. High nitrate levels may also reduce the oxygen-carrying ability of the blood in pregnant women and increase the risks for complication in their pregnancies.

What can consumers do to reduce exposure to nitrate in drinking water?

Use bottled water until an appropriate treatment system is in place.

Drinking water may be treated to remove nitrate. Home filters such as Brita filters do not remove nitrate from drinking water, but other systems can be used to remove nitrate. Please consult the State Water Board's residential water treatment approved list (https://www.waterboards.ca.gov/drinking_water/certlic/device/Documents/wtd2017/76Registered%20Models%20for%20Nitrate%20listing%20081117_WITH%20LINKS%20TO%20PDS.pdf).

Boiling water is not a solution, as it can concentrate the nitrate level.

Do not make infant formula with drinking water that contains nitrate levels above 10 mg/L.

Can nitrate-contaminated water be used to bathe babies and children?

Yes. Babies and children can be bathed in water with high levels of nitrate. Showers may also be taken. Nitrate is only a concern for ingestion (eating and drinking). Nitrate is not absorbed through your skin. People who install filter systems for nitrate often

install them just for their kitchen sink faucet, because they use that faucet for their cooking and drinking water.

Can nitrate-contaminated water be used to wash fruits and vegetables before they are eaten?

Generally, fruits and vegetables can be washed with water with high nitrate levels. The amount of water used for this purpose is small, and if the fruits and vegetables are wiped or blotted dry after washing, there should be no health risk. The water should not be used for cooking.

For more information

Or, for more information about nitrate in wells used for drinking water, visit the Groundwater Information Sheet regarding Nitrate online (www.waterboards.ca.gov/gama/docs/coc_nitrate.pdf).

Irrigation and Nitrogen Management Plan (INMP) Worksheet

Coalition ID (provided by Coalition):_____
If you are not enrolled in a Coalition, leave blank.

Nitrogen Management Unit ID (if applicable): _____Total Farm Area Acres:_____

Enrollee Name: _____GeoTracker ID# (if applicable):_____

Was this parcel or Nitrogen Management Unit identified as a statistical outlier by the Coalition or Regional Water Board last year?

□ Yes □ No

Crop Year (Harvested):

Instructions:

Fill out the INMP Worksheet. The INMP must be certified under the following conditions: (1) the commercial vineyard is located within a high vulnerability groundwater area, or (2) the Enrollee was notified that they are a statistical outlier. Complete instructions are located at the back of the worksheet.

1. Parcel Management

APN	Groundwater Basin or Sub-basin	Crop Age (Years)	Parcel Acres	Farm Area Acres

Total Farm Area Acres: _____

Comments:

2. Irrigation Pre-Season Planning

Crop Evapotranspiration (ET, inches):

Anticipated Crop Irrigation (inches):

Irrigation Water N Concentration (ppm or mg/L, as NO3 -N):

3. Irrigation Method

(Check one for Primary; if applicable, check one for Secondary)

Primary Secondary[1]

□ □Drip

□ □Micro Sprinkler

□ □Furrow

□ □Sprinkler

□ □Border Strip

□ □Flood

[1] A secondary irrigation system could be used for crop germination, frost protection, crop cooling, etc.

4. Irrigation Efficiency Practices (Check all that apply)

- Laser Leveling
- Use of ET in scheduling irrigations
- Water application schedule to need
- Use of moisture probe (e.g., tensiometer)
- Soil Moisture Neutron Probe
- Pressure Bomb
- Other: _____

5. Harvest/Yield Information

Production Unit (e.g., tons): _____Converted to lbs.: _____

Harvested Yield (lbs/acre): Expected: _____ Actual: _____

6. Nitrogen Efficiency Practices (Check all that apply):

- Split Fertilizer Applications

- Irrigation Water N Testing
- Soil Testing
- Tissue/Petiole Testing
- Fertigation
- Foliar N Application
- Cover Crops
- Variable Rate Applications using GPS
- Other:

7. Nitrogen Applied and Nitrogen Sources:

Sources	**Recommended/ Planned N (A)**	**Actual N (B)**
Soil – Available N in Root Zone (Annualized, lbs/ac)		
N in Irrigation Water* (Annualized, lbs/ac)		
Organic Amendments* (Manure/Compost/Other, lbs/ac estimate)		
Dry/Liquid Fertilizer N* (lbs/ac)		
Foliar Fertilizer N* (lbs/ac)		
Total Nitrogen Applied (lbs/ac)		

8. Nitrogen Removed*:

Nitrogen Removed	Harvest Yield x Crop Removal Coefficient** (C_N)	Nitrogen Removed (lbs/acre)
Harvest Yield (lbs/acre)		

*****Nitrogen Removed includes nitrogen removal via harvest and nitrogen sequestered in permanent wood of perennial crops. This is incorporated into the Crop Removal Coefficient which calculates the nitrogen removed in one season per pound per acre of winegrapes harvested.

******The Regional Board will provide you a C_N

Total Nitrogen Applied (lbs./acre): _____

Total Nitrogen Removed (lbs/acre): _____

Irrigation Nutrient Management Plan Certification

Check a box below:

- This INMP does not need to be certified (skip Certification).
- This INMP does need to be certified.

Certification:

The person signing this Irrigation and Nitrogen Management Plan (INMP) certifies, under penalty of law, that the INMP was prepared under his/her direction and supervision, that the information and data reported is to the best of his/her knowledge and belief, true, accurate, and complete, and that he/she is aware that there are penalties for knowingly submitting false information. Where the person signing the INMP is not the Enrollee, he/she may rely on the information and data provided by the Member and is not required to independently verify the information and data.

The person signing the INMP below further certifies that he/she used sound irrigation and nitrogen management planning practices to develop irrigation and nitrogen application recommendations and that the recommendations are informed by applicable training for meeting the crop's agronomic needs while minimizing nitrogen loss to surface water and groundwater. Where the person signing the INMP is not the Enrollee, he/she is not responsible for any damages, loss, or liability arising from subsequent implementation of the INMP by the Member in a manner that is inconsistent with the INMP's recommendations for nitrogen application. **This certification does not create any liability for claims for environmental violations.**

The person signing this document is:

- Certified INMP Specialist (e.g., Certified Crop Adviser who has completed CDFA training)

- Self-Certified by Enrollee who has completed the CDFA training program
- Self-Certified by the Enrollee who follows NRCS or UC site-specific recommendations (documentation required)
- I do not apply nitrogen

I, _____, certify this INMP in accordance with the statement above.

_____ Signature _____ Date

If the certifier is not the Enrollee, the Enrollee additionally agrees as follows:

I,_____, Enrollee, have provided information and data to the certifier above that is, to the best of my knowledge and belief, true, accurate, and complete, that I understand that the certifier may rely on the information and data provided by me and is not required to independently verify the information and data, and that I further understand that the certifier is not responsible for any damages, loss, or liability arising from subsequent implementation of the INMP by me in a manner that is inconsistent with the INMP's recommendations for nitrogen application. I further understand that the certification does not create any liability for claims for environmental violations.

_____ Signature _____ Date

Irrigation and Nitrogen Management Plan (INMP) Worksheet Instructions

Complete an Irrigation and Nitrogen Management Plan (INMP) Worksheet for every parcel or Nitrogen Management Unit enrolled in the Order. All INMP Worksheets must be kept on farm and made available upon request during inspections by the North Coast Regional Water Quality Control Board (Regional Board).

Each section heading below (in bold) corresponds to the section heading on the INMP Worksheet. The numbered references correspond to each numbered box on the INMP Worksheet.

Irrigation and Nitrogen Management Plan

Enter the Enrollee ID generated by your Coalition and name of the Owner or Operator enrolled in the Order.

Indicate if the parcel(s)/Nitrogen Management Unit you are writing the plan for was identified as a **Statistical Outlier** by the Regional Board for the previous crop year. The Regional Board conducts a statistical analysis on the data provided from individually enrolled Enrollees for the nitrogen applied and nitrogen removed (based on yield) to determine statistical outliers and will notify those Enrollees. If the parcel/Nitrogen Management Unit was identified as a statistical outlier by the Regional Board in the previous crop year, mark “Yes”.

Enter the **Crop Year (Harvested)**. Information on INMP Worksheets should be based on the calendar year in which harvest was completed. If the winegrape crop was harvested in November of 2024, enter ‘2024” in this space.

1. Parcel Management

Use this table to account for all parcels for which the plan applies. Multiple parcels, portions of parcels, or Nitrogen Management Units (not to exceed 640 acres) may be included in a single plan if they all have the same: crop, fertilizer inputs, irrigation management, and nitrogen management practices.

Enter the **Assessor’s Parcel Number (APN)** and **County** for each parcel associated with your plan.

Enter the **Crop Age** (in years). Count the crop age from the date the vineyard was planted.

Enter the Farm Area acres for each parcel or portion of parcel to which this plan applies. Farm Area acres incorporate all of the Farm Area (The planted area and appurtenant structures, vineyard avenues (Seasonal Roads), maintenance areas, mixing and loading sites, and appurtenant storage yards on a commercial vineyard). For example, if the parcel is 10 acres, but the Farm Area only includes 5 acres, record 5 acres in that box. Sum the Farm Area acres from each parcel for the Total Acres covered under the plan Use the Comment/Notes box to provide any further information that may be pertinent to the worksheet (e.g., nitrogen use efficiency, nitrogen removal rates, reasons

for substantial differences between plan and actual numbers, etc.).

2. Irrigation Pre-Season Planning

Crop Evapotranspiration. Enter the potential crop evapotranspiration (ETc) in inches anticipated for the season. Evapotranspiration rates are provided by geographical location and multiplied by a crop- specific coefficient to estimate the amount transpired by your crops.

Anticipated Crop Irrigation. Enter the amount of irrigation water in inches expected to be applied over the course of the season.

Irrigation Water N Concentration. Enter the concentration of nitrogen in the irrigation water used on your crop as parts per million (ppm) or milligrams per liter (mg/L). The concentration of nitrogen in your irrigation water can be obtained from sources such as local district testing, laboratory analysis, or other sources. These results can be reported as either Nitrate as N, nitrate-nitrogen, or NO3-N.

Irrigation Method. Check the box to indicate the irrigation method used the most for crop irrigation (primary irrigation) during the growing season for the parcel/Nitrogen Management Unit under this plan. If applicable, indicate any secondary irrigation systems. Secondary irrigation systems include those used for crop germination, frost protection, crop cooling, or salinity management**.**

Irrigation Efficiency Practices* (5). Check all boxes that apply to indicate irrigation efficiency practices used on your parcels during the season. Indicate if, to your knowledge, the parcels have been laser leveled.

3. Harvest/Yield Information

Production Unit. This is the standard unit in which you measure your harvest. For example, if winegrapes are harvested in tons per year, calculate harvested tons per acre for the parcels identified under **Parcel Management**. **You will need to convert this number to lbs per acre later**.

Harvested Yield. This includes all crop yield harvested for the season. For pre-season planning, fill in the Expected Yield for the season. The Expected Yield should be reported on a per-acre basis for the parcel or Nitrogen Management Unit covered by the plan. Expected Yield expectations will guide nitrogen management decisions and will inform the **TOTAL NITROGEN Recommended** to be used in the Nitrogen Management section below. Enter actual harvested Yield in the next box following harvest in lbs. per acre.

4. Nitrogen Efficiency Practices

Nitrogen Efficiency Practices. Check all boxes that apply to indicate any nitrogen efficiency practices used on your parcels during the season**.**

Nitrogen Applied and Nitrogen Sources

Recommended/Planned N (Column A): Complete the boxes in the Nitrogen Sources section in **Column A** based on the anticipated Nitrogen Sources required to obtain the

Expected Yield. Use crop recommendations from CDFA, UCCE, NRCS, commodity organizations or site-specific knowledge to appropriately estimate the amount of nitrogen (N) necessary. Use Recommended/Planned N totals for each source of N and schedule applications for the crop year. Use additional tools/spreadsheets to plan timing for each application. Proper scheduling of N applications and irrigations is essential for efficient nitrogen management.

Recommended / Planned TOTAL NITROGEN: All Nitrogen Sources in this section should be the total for **Recommended / Planned TOTAL NITROGEN (14A).**

5. Recommended / Planned TOTAL NITROGEN: Sum all values from Column A.

Complete the following sections based on the nitrogen source:

Soil – Available N in Root Zone. Represents nitrogen in the soil root zone that is available to the crop during the growing season. Enter the amount of residual soil nitrogen based on soil samples or other available data.

N in Irrigation Water. Enter the amount of nitrogen applied via irrigation water over the course of the crop year in pounds per acre. For planning, this value is calculated based on the **Anticipated Crop Irrigation** and the **Irrigation Water N Concentration**. For the Actual N column, this value is calculated based on the *actual* crop irrigation and irrigation water N concentration. To calculate N in irrigation water, use the following formula:

N concentration (ppm or mg/L) x inches of irrigation applied x 0.226

Nitrate as nitrogen is also referred to as Nitrate as N, nitrate-nitrogen, or NO_3-N.

Organic Amendments. Organic Amendments include any nutrient applications from sources that do not have a guaranteed nutrient content, such as compost and manure applications. Applied organic amendments should be reported as the amount of nitrogen available to the plant during the crop year, in pounds per acre.

Dry/Liquid Fertilizer N. The Dry/Liquid Fertilizers include any nitrogen- containing product with a guaranteed nutrient content. This number should be reported as the amount of nitrogen applied as pounds per acre; this may be different than the amount of fertilizer applied which may include other nutrients.

Foliar Fertilizer N. Foliar nitrogen applications include any nitrogen-containing product applied to the crop canopy or above ground plant parts, and should be reported in pounds per acre.

Actual N (Column B): Fill in the **Actual N (Column B)** based on actual applied nitrogen amounts. This should be completed after the crop is harvested for each of the nitrogen sources outlined above. Use the Recommended/Planned N schedule to guide nitrogen applications throughout the growing season. Actual application amounts and timing can be adjusted based upon changing conditions (weather, pest damage, expected yield, tissue samples, etc.). The information in this column should reflect the actual application during the Crop Year. Refer to the Nitrogen Source section above for additional instructions and definitions.

Actual TOTAL NITROGEN: Actual applied Nitrogen Sources. Actual TOTAL NITROGEN: Sum of all values from Column B.

Nitrogen Removed

Harvested Yield. This includes all crop yield harvested for the season in lbs/acre.

Harvest Yield x Crop Removal Coefficient (C_N).** Use this box to multiply the harvested yield by the crop removal coefficient. Nitrogen Removed includes nitrogen removal via harvest and nitrogen sequestered in permanent wood of perennial crops. This is incorporated into the Crop Removal Coefficient which calculates the nitrogen removed in one season per pound per acre of winegrapes harvested. The Regional Board will provide you a C_N.

Nitrogen Applied and Removed Totals

Enter your total Nitrogen Applied (from 6) and Nitrogen Removed (from 7) in lbs./acre.

6. INMP Certification

INMPs must be certified for the following conditions: (1) for parcels in a **High Vulnerability Area** (HVA) to groundwater must be certified. Please contact the Regional Board for more information regarding the vulnerability to groundwater of your parcels, and (2) If the Enrollee was identified as a statistical outlier by the Regional Board in the previous year. The person certifying the plan must complete the **INMP Certification** section including signature, date, and method of certification. Any plan certifier should also initial the INMP Worksheet page in the box in the bottom right corner.

Any INMP requiring certification must be certified by an Irrigation and Nitrogen Management Specialist, such as:

Crop Advisers certified by the American Society of Agronomy (CCA). Any Certified Crop Adviser who certifies an INMP must also have completed the nitrogen management training program offered by the University of California Agriculture and Natural Resources (UCANR) and the California Department of Food and Agriculture (CDFA).

Certified Professional Soil Scientists (CPSS)

Certified Professional Agronomists (CPAg)

Technical Service Providers (TSP) certified in nutrient management in California by the Natural Resources Conservation Service (NRCS)

Certified Agricultural Irrigation Management Specialists (CAIS) certified by The Irrigation Association.

Additionally, plans may be self-certified by the Enrollee if:

The certifying Enrollee has attended the California Department of Food and Agriculture (CDFA) or other approved training program for INMP certification. The Member must retain written documentation of their attendance in the training program.

The certifying Enrollee adheres to a site-specific recommendation from the Natural Resources Conservation Service (NRCS Nutrient Management Plan) or the University of California Cooperative Extension (UCCE). The Member must retain written documentation of the recommendation.

If you do not apply nitrogen fertilizer:

You must state that you do not apply nitrogen fertilizer to the vineyard on your INMP Worksheet.