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

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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 (North Coast 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*), 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) In 2008, the North Coast Water Board adopted the North Coast 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 North Coast 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.

10) 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.

11) The North Coast 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 North Coast 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 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 North Coast 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 North Coast 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 North Coast 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, North Coast 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 North Coast Water Board published the Draft Order and Draft EIR and began a 45-day public comment period. The North Coast Water Board received public comments requesting an extension and adjusted the comment period to 60 days.

4) In August 2023, North Coast 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, North Coast Water Board staff conducted public outreach in response to public comments received on the Draft Order and Draft EIR. North Coast 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, North Coast 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 North Coast 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. North Coast 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.

7) The public hearing to consider adoption of the Proposed Vineyard Order and certification of the Final Environmental Impact Report was held on December 4, 2024 and continued to June 12, 2025. Between December 2024 and June 2025, staff conducted additional outreach with the regulated community and interested persons. This outreach included three farm tours with growers, four vineyard workshops conducted in the field with growers to explain the Proposed Vineyard Order, a field tour with TAG members with environmental interests, and meetings with industry representatives and prospective Third-Party entities. Staff also responded to written ex parte communication received on the Proposed Vineyard Order from June 2023 through March 2025.

Assembly Bill 2108

8) 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.)

9) The North Coast 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 North Coast 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 North Coast 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.

10) The North Coast Water Board has satisfied the outreach requirements set forth in

Water Code section 189.7 by conducting outreach in affected disadvantaged and tribal communities.

11) Pursuant to Water Code section 13149.2, the North Coast 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.

12) The North Coast 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.

13) 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

14) 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.

15) In June 2022, North Coast 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.

16) Of the 22 AB 52 Tribes contacted by the North Coast 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 North Coast Water Board authority to inspect, and/or evaluate regulatory status, water quality impacts, or regulatory requirements of

commercial vineyard activities. If the North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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. This Order incentivizes higher sediment and erosion control practice standards through reduced monitoring requirements. This Order finds that Sediment and Erosion Control Plans that are certified by a Qualified Professional and/or No-Till Ground Cover in Planted Areas and Seasonal Roads provide greater water quality protection when implemented in accordance with the requirements in this Order.

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 North Coast 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) Coalitions are discussed in Attachment C: Third-Party Program Requirements. The North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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.

North Coast Water Board Plans and Policies

Basin Plan

31) The Basin Plan is the North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 Planted Areas and Seasonal Roads 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast Water Board published an Initial Study for a 45-day public comment period. The North Coast 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, North Coast Water Board staff held an in-person and a virtual CEQA scoping meeting.

47) During the public comment period for the Initial Study the North Coast 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 North Coast Water Board released a Draft Environmental Impact report (EIR) for a 45-day comment period. The North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast Water Board to consider certain factors, including economic considerations, in the adoption of water quality objectives. Water Code section 13263 requires the North Coast 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 North Coast Water Board previously considered costs and economics associated with implementation. For example, when the North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast Water Board needs these reports to document and ensure compliance with this Order. The North Coast 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 North Coast Water Board or North Coast 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 North Coast Water Board or North Coast 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 North Coast 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) No-Till Management – involves conversion from a clean-tilled (conventional tilled) system to no-till or strip-till system. This involves managing the amount, orientation and distribution of crop and other plant residue on the soil surface year round while limiting soil-disturbing activities used to establish and harvest crops. The practice is used to reduce sheet and rill erosion, reduce wind erosion, improve soil quality, reduce CO2 losses from the soil, reduce energy use, increase plant available moisture and provide food and escape cover for wildlife. The no-till system includes non-tillage types of weed control and may also include a period of no till fallow. System

is applicable in both irrigated and non-irrigated fields of organic and non-organic operations. Costs are estimated at $22 per acre.

h) 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.

i) 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.

j) 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
No-Till Management (329)	40 acres	$22/acre	$800	$1000
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 North Coast 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: Estimated Costs of Management Practices/Scenarios for Road Storm-proofing

Management Practice	Scenario Size	Unit Cost	Total Cost (low)	Total Cost (High)
Rolling Dip	1,000 feet	$10-20/ft	$10,000	$20,000
Critical Dip	1,000 feet	$10-20/ft	$10,000	$20,000
Road Out-sloping	5,000 feet	$3-$30/ft	$15,000	$150,000
Ditch Relief Culvert	20 feet	$75-200/ft	$1,500	$4,000
Debris Deflector	Each	$300-$1,200	$300	$1,200
Stream Crossing Rock Armor	100 tons	$200-400/ton	$20,000	$40,000

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 Report	$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 (Coalition): 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 North Coast 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 North Coast 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 North Coast Water Board relevant to the General Waste Discharge Requirements for Commercial Vineyards, were considered in establishing these waste discharge requirements.

7) The North Coast Water Board, in a public hearing held initially on December 4, 2024 and continued to June 12, 2025, 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 and June public hearings, this Order was found to be 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, 2029.** Upon submittal of a complete and accurate eNOI, the North Coast 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 North Coast 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 North Coast Water Board, and written approval by the North Coast 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 North Coast 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 North Coast 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, 2029** 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 North Coast Water Board to pose a potential threat to water quality.

7) Initial Replanting of enrolled commercial vineyards between November 15 and April 1 of each year is prohibited. Replanting commercial vineyards on Unstable Areas is prohibited unless repaired under the direction of a Qualified Professional and done in compliance with applicable local agency grading and drainage permitting requirements. 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. for Individual Enrollees and Attachment B: Section V. for Enrollees in a Coalition.

Sediment and Erosion Control

4) Enrollees shall implement management practices to minimize, control, or prevent erosion and sediment discharges[19] from all Farm Areas that are Hydrologically Connected to off-farm surface waters and drainages.

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

7) To comply with Sediment and Erosion Control requirements of this Order, Enrollees shall implement one of four Compliance Options as summarized in Table 5 and described below in this section. For vineyards with Agricultural Drainage Structures, Enrollees shall conduct the required Management Practice Effectiveness Monitoring for their Compliance Option as described in Section III of Attachment A: MRP for Individual Enrollees and Section II of Attachment B: MRP for Enrollees in a Coalition.

Table 5: Sediment and Erosion Control Compliance Options:

Compliance Options (Choose one from below:)	**Management Practice Effectiveness Monitoring**
Option A: Sediment and Erosion Control Plan (SECP): Develop and implement a SECP either individually or through an approved Voluntary Sediment Control Program (Voluntary Program)	Agricultural Drainage Structure Monitoring
Option B: Certified Sediment and Erosion Control Plan (SECP): Develop and implement a SECP that is certified by a Qualified Professional	Photo-Point Monitoring
Option C: Minimum Ground Cover: Achieve between December 15-April 1: • 50% Ground Cover on slopes less than 10% • 75% Ground Cover for slopes over 10%	Agricultural Drainage Structure Monitoring
Option D: No-Till Ground Cover: Implement No-Till Ground Cover in Planted Areas and Seasonal Roads between December 15-April 1 of each year	Photo-Point Monitoring

8) 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.

9) The Executive Officer may require any Enrollee to conduct Agricultural Drainage

Structure Monitoring where current management practices are insufficient to minimize or prevent the discharge of excess sediment or other pollutants.

Option A Requirements: Sediment and Erosion Control Plan (SECP)

10) Enrollees who choose Compliance Option A 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) Enrollees who choose Compliance Option A shall develop and implement a SECP **through one of two options:**

    a) SECP Developed through Approved Voluntary Program: The SECP is developed and implemented through a Voluntary Program which has been approved by the North Coast 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 North Coast Water Board staff on request.

    b) Individual SECP: The SECP is developed and implemented by the Enrollee using a template provided by the North Coast 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 North Coast Water Board annually in the Annual Compliance Report.

12) At a minimum, the SECP shall include:

    a) Vineyard Map: The map(s) for the SECP shall include all applicable Sediment Management Areas 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 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.

e) Agricultural Drainage Structure Monitoring Locations: 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. SECPs meeting Option B requirements are exempted from this requirement.

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 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.

Option B Requirements: Certified Sediment and Erosion Control Plan (SECP)

14) Enrollees who choose Compliance Option B shall complete and continuously implement a SECP that meets all applicable Option A requirements above. In addition, the Certified SECP must meet the following additional standards for all applicable enrolled parcels:

a) 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. 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.

b) 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.

c) The SECP must be certified and signed by a Qualified Professional.

d) 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.

e) Enrollees with Certified SECPs 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. The Certified SECP shall be maintained at the Enrollee's farming headquarters or primary place of business. The Certified SECP shall be provided to North Coast Water Board staff upon request.

Option C Requirements: Minimum Ground Cover

15) Enrollees who choose Compliance Option C 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 Planted Areas and Seasonal Roads on an enrolled parcel are included in a Sediment Management Area.

16) In each Sediment Management Area, Enrollees shall establish and maintain the following minimum slope-based Ground Cover between December 15-April 1:

    a) 50% Ground Cover for Sediment Management Areas with a slope average of under 10%; and

    b) 75% percent Ground Cover for Sediment Management Areas with a slope average of 10% or greater.

17) 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.

18) 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.

19) Areas within the Farm Area that are not Planted Areas or Seasonal Roads shall be maintained in accordance with the requirements in Section II.C.4-6.

Option D Requirements: No-Till Ground Cover

20) Enrollees who choose Compliance Option D must implement No-Till Ground Cover in the Planted Areas and Seasonal Roads of each applicable parcel or Sediment Management Area that meets the following standard:

    a) Maintenance of non-tilled, permanent Planted or Rooted Ground Cover at 90% coverage between December 15-April 1 of each year.

    b) No mechanical soil disturbance or herbicidal application in either the interrow or undervine areas as a regular, seasonal, or recurring cultural practice except for that which is necessary for periodic maintenance of the No-Till Ground Cover (i.e., gopher damage, control of invasive weeds, etc.). Areas of soil disturbance for periodic maintenance must be re-vegetated between December 15-April 1 of each year[26].

21) Enrollees may choose to implement No-Till Ground Cover across the entirety of their enrolled vineyard acres or a portion of their vineyard acres at a scale no smaller than a Sediment Management Area. In areas where No-Till Ground Cover is not planned and implemented, Enrollees must implement and report a different Sediment and Erosion Control Compliance Option and conduct the applicable Management Practice Effectiveness Monitoring. Areas within the Farm Area that are not Planted Areas or Seasonal Roads shall be maintained in accordance with the requirements in Section II.C.4-6.

Appurtenant Agricultural Roads

22) Enrollees shall implement and maintain[27] 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.

23) 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

24) 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 waterside edge of vegetation at ground level[28] and where the field side edge of the Vegetated Buffer meets the Farm Area. The Riparian Vegetation Area extends from the waterside edge of vegetation 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 waterside edge of vegetation 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.

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

26) 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.

27) 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 Waterside Edge of Vegetation at Ground Level.

Streamside Area component	Perennial Stream	Ephemeral/ Intermittent Stream	Hydrologically Connected Undesignated Channel[29]	Unfarmed Wetland[30]	Hydrologically-Connected[31] 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

28) 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. and/or local ordinances; (3) streamside area restoration outside of jurisdictional waters of the United States or waters of the State[32], (4) removal of riparian vegetation as part of necessary maintenance of existing watercourse crossings[33] and linear utilities, control of invasive species, and permitted surface water diversions[34], 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[35].

Vegetated Buffer Requirements

29) 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[36] and shall be measured from the Riparian Vegetation Area to the Farm Area along Perennial and Ephemeral/Intermittent Streams, and from the Waterside edge of vegetation to the Farm Area in Hydrologically Connected Undesignated Channels, Unfarmed Wetlands, and Hydrologically Connected Lakes, Ponds, or On-Stream Reservoirs.

30) 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). Maintenance and/or reconstruction of existing permanent structures within the existing footprint is allowed.

    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.

31) 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

32) 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.

33) 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.

34) 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.

35) 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.

36) 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

37) 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.

38) New and replaced stream crossings shall meet the following specifications, after receiving separate approval from the North Coast Water Board[37]:

    a) Drainage structure is designed for the 100-year flood flow including woody debris and sediment[38].

    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 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 North Coast 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[39] 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 Monitoring frequency for an Enrollee is reduced from annually to once every five (5) years under the following conditions: (1) the Enrollee has collected and reported at least five years of Agricultural Drainage Structure 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 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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[40] and submit their INMP for the previous growing season in the Annual Compliance Report either to the North Coast 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 North Coast 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 North Coast 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[41]. 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[42] for Individual Enrollees will be determined by the North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast Water Board will not be requiring the development of township-level targets for nitrogen loading at this time, because the North Coast 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 North Coast 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[43] 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 North Coast 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 North Coast 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 North Coast 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 North Coast 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 North Coast Water Board's Executive Officer.

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

Electronic Reporting

9) Enrollees and Coalition(s), as appropriate, shall submit reports and information required for North Coast Water Board Executive Officer approval under this Order in an electronic format[44] 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). North Coast 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 North Coast 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 June 12, 2025.

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

Appendix I: Acronyms, Definitions, and Endnotes
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
North Coast 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. Constructed features, including but not limited to pipes, ditches, and channels, that work to collect, convey, and discharge stormwater from Farm Areas and Appurtenant Agricultural Roads to surface waters or to off-farm points of delivery. Agricultural Drainage Structures include both permanent, temporary, and seasonally constructed features (see Seasonal Agricultural Drainage Structure). Agricultural Drainage Structures are permanent and semi-permanent features. Temporary and non-recurring features that are constructed to collect, convey, and discharge stormwater from Farm Areas and Appurtenant Agricultural Roads to immediately protect life or property are considered Emergency Agricultural Drainage Structures and shall be prioritized for repair or management practice implementation in accordance with Section II.C of the Order. It is not an expectation under this Order that Emergency Agricultural Drainage Structures be sampled for turbidity (see Emergency Agricultural Drainage Structure).

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 North Coast 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 North Coast 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).

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 North Coast 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.

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, Emergency Agricultural Drainage Structures, 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.

Emergency Agricultural Drainage Structure. A temporary or unplanned and non-recurring Agricultural Drainage Structure that is constructed immediately to protect life or property. Examples include but are not limited to ditches, swales, or channels.

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[45]). 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 mulch, and manufactured erosion control products.

Ground Disturbing Management Practices. New or replacement Management Practices that, when constructed, disrupt, compact, or expose the soil surface. The construction of these practices includes, but is not limited to: digging, trenching, clearing, grading, excavating, and stockpiling. Ground Disturbing Management Practices do not include routine farming practices (e.g., cultivating or tilling).

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.

Waterside edge of vegetation. 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.

Initial Replanting. The work undertaken as part of the initial phase of vineyard replanting, including removal of existing grapevines, soil preparation, agricultural grading, construction or modification of vineyard infrastructure, and other similar work.

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[46]. For guidance on identifying species of concern, see the Cal-IPC website: Plants A to Z[47].

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.

Management Practices. Practices or combination of practices including, but not limited to, structural and non-structural (operational) controls that may be applied before, during and after waste producing activities to eliminate or reduce the generation of nonpoint source discharges and the introduction of pollutants into receiving waters.

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.

No-Till Ground Cover. Non-tilled, permanent vegetative cover in Planted Areas and Seasonal Roads that achieves 90% Planted or Rooted Ground Cover between December 15-April 1 of each year. No mechanical soil disturbance or herbicidal application in either the interrow or undervine areas as a regular, seasonal, or recurring cultural practice except for that which is necessary for periodic maintenance of the No-Till Ground Cover(i.e., gopher damage, control of invasive weeds, etc.). Areas of soil disturbance for periodic maintenance must be re-vegetated between December 15-April 1 of each year.

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.

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).

Planted or Rooted Ground Cover. A matrix of Ground Cover that is primarily composed of plants (e.g., grasses, forbs, legumes, vines, or other herbaceous plants) that are rooted in the ground. This term is distinguished from other types of acceptable Ground Cover under this Order such as straw and mulch, that are not rooted in the ground. See the term Ground Cover.

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 Agricultural Drainage Structure. A temporary drainage feature that is reconstructed or reinstalled on a seasonal basis to collect, convey and discharge stormwater to surface waters. Seasonal Agricultural Drainage Structures can include, but are not limited to ditches, swales, or channels.

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 North Coast 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 Waterside edge of vegetation and where the field side edge of the Vegetated Buffer meets the Farm Area. The Riparian Vegetation Area extends from the Waterside edge of vegetation 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 Waterside edge of vegetation 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.

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 North Coast 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[48]. "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 North Coast 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.

Waterside Edge of Riparian Vegetation. The line on the bank that is 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. Enrollees may refer to the definition of Waterside edge of vegetation in Appendix I and/or Attachment D: Methodologies and Procedures for examples.

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] North Coast 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 North Coast 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 North Coast 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] Areas of soil disturbance in the No-Till vineyard from natural causes (i.e., wildlife) are considered a CSDS and must be prioritized for repair and management practice implementation

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

[28] The waterside edge of vegetation means the line on the bank that is 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. Enrollees may refer to the definition of Waterside edge of vegetation in Appendix I and/or Attachment D: Methodologies and Procedures for examples.

[29] Includes above-ground Agricultural Drainage Structures .

[30] 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).

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

[32] 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/)

[33] Maintenance of existing watercourse crossings without the need for additional

permitting by the North Coast 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.

[34] 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 North Coast Water Board through an approved 401 Water Quality Certification or alternate waste discharge requirements.

[35] 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."

[36] 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.

[37] 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/)

[38] 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.

[39] 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).

[40] 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.

[41] 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).

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

[43] 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.

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

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

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

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

[48] The term ‘waste’ as used in this Order is intended to be consistent with the definition in Water Code section 13050 subdivision (d).

Appendix II: Figures

Figure 1: Vineyards in the North Coast Region

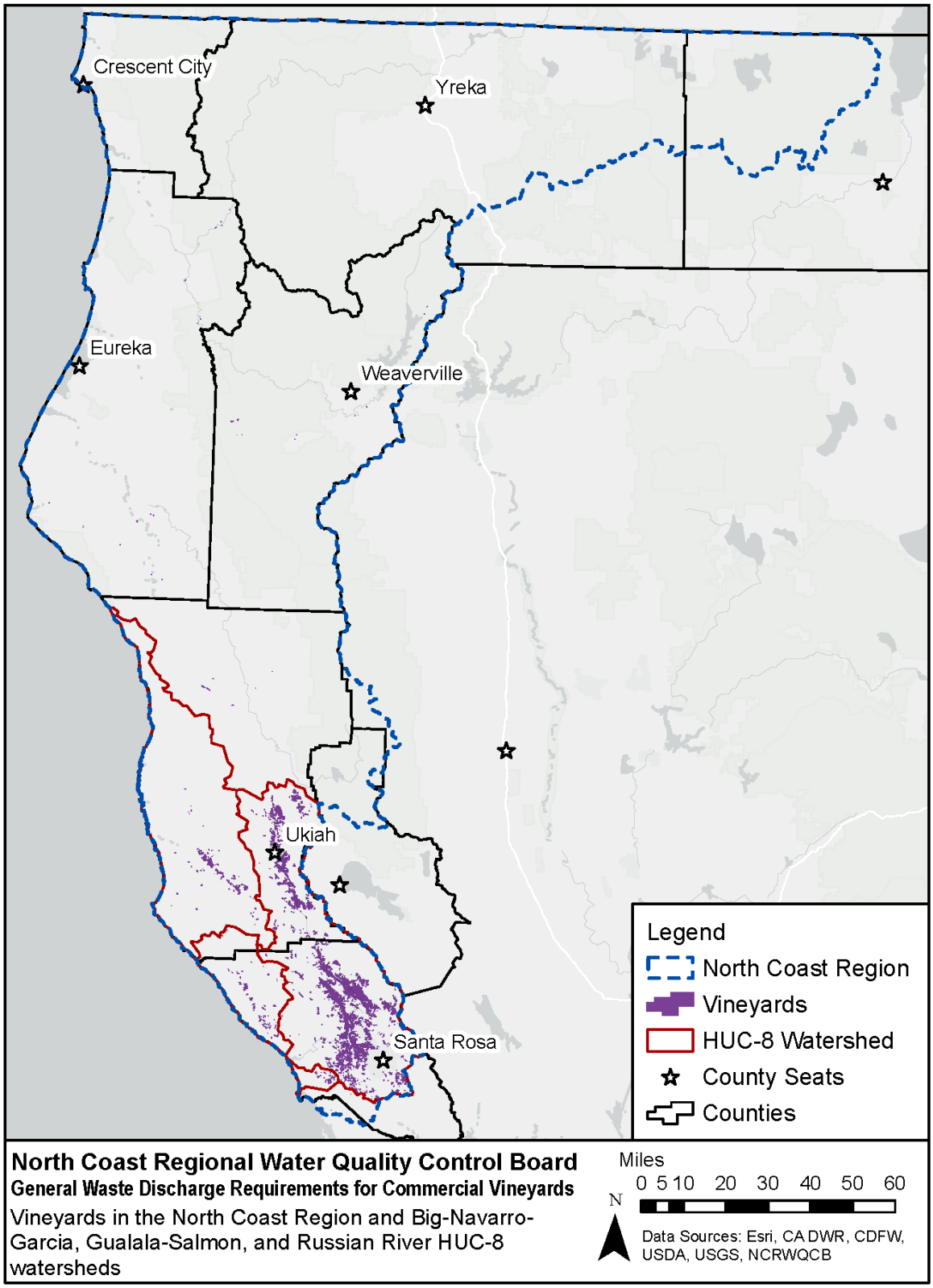

Figure 2: Coho Salmon and Winter Steelhead Distribution Ranges and Vineyard Density within Mendocino and Sonoma Counties

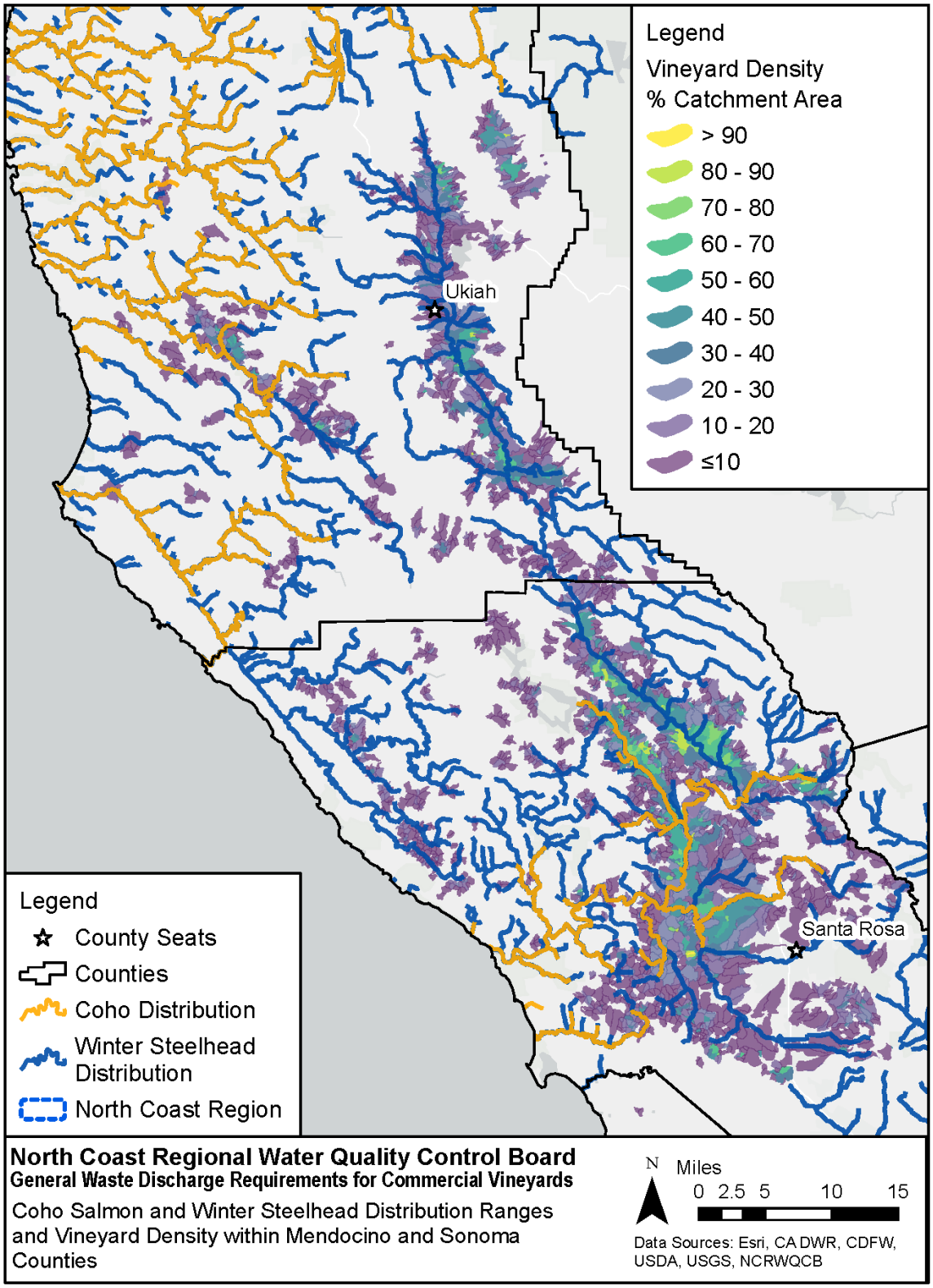

Figure 3: CDPR Pesticide Detections in Surface Water of Sonoma and Mendocino Counties (2016-2017)

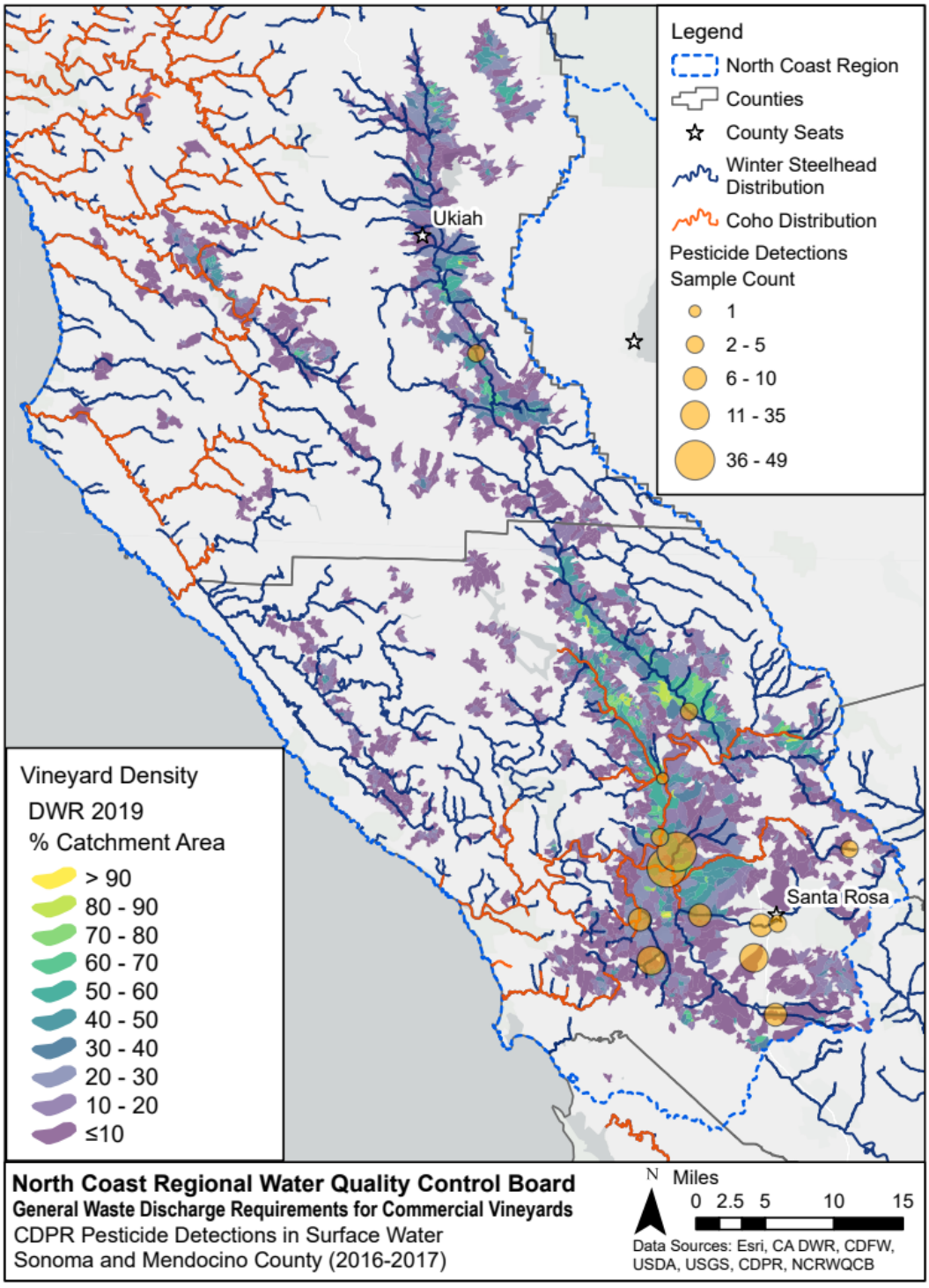

Figure 4: CDPR 6800(a) Pesticide Detections in Groundwater Wells in Sonoma and Mendocino Counties (2012-2021)

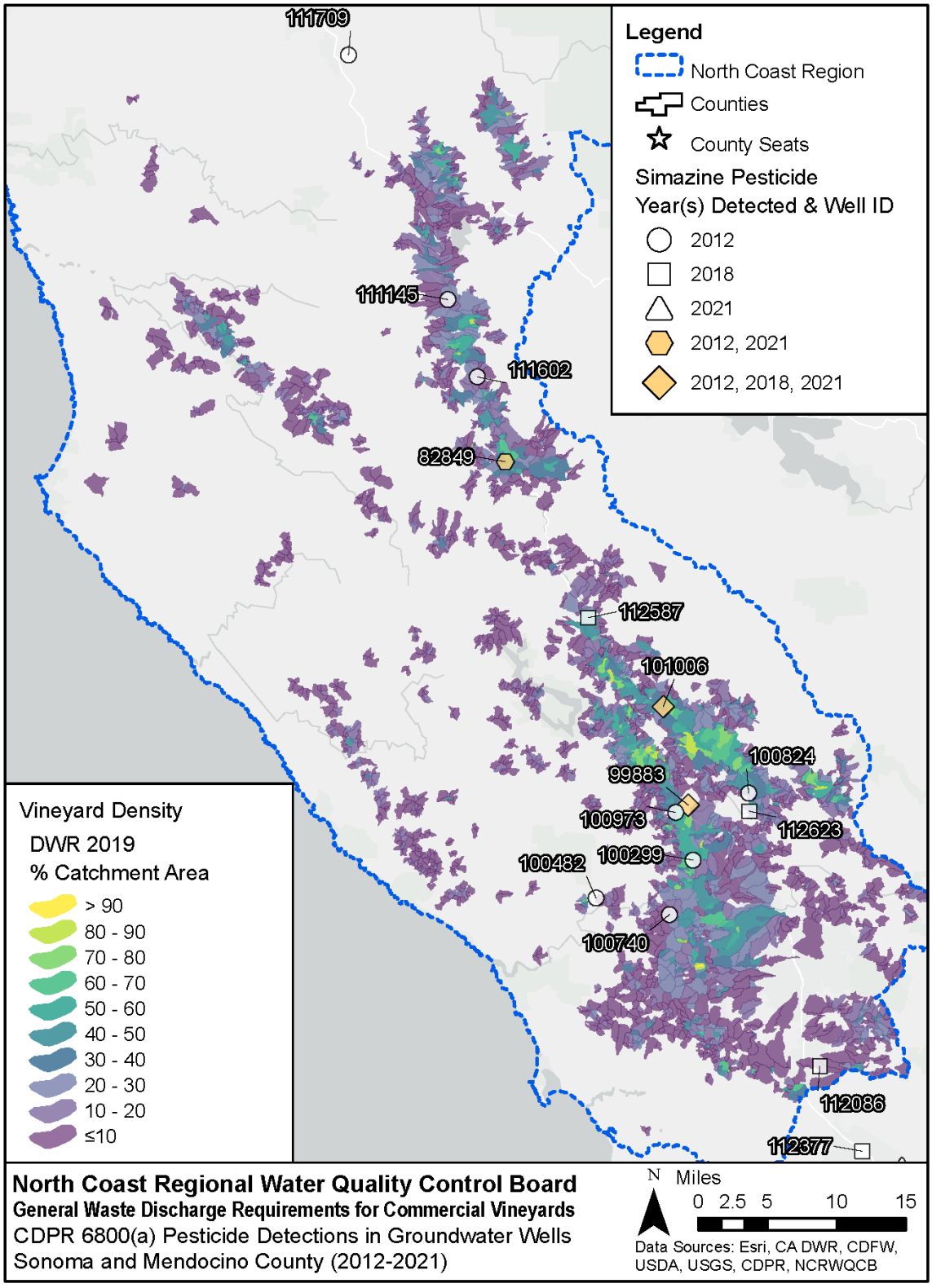

Figure 5: Vineyard and Vineyard Density as Percent Area of HUC-12 Watersheds