CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. R2-2017-0033

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

The California Regional Water Quality Control Board, San Francisco Bay Region (Water Board), finds that:

Scope of Coverage

1. Order No. R2-2017-0033 (hereafter, Order) specifies general waste discharge requirements (WDRs) for existing and potential discharges of waste from Vineyard Properties located in the Napa River and/or Sonoma Creek watersheds that meet the terms and conditions of this Order.

2. For purposes of this Order, a "Vineyard Property" is defined by a parcel or contiguous parcels under the same ownership, each of which is developed to include a vineyard. Landowners and operators of Vineyard Properties discharging, or proposing to discharge, waste from a Vineyard Property are hereinafter referred to as "Dischargers".

3. Existing and potential discharges of waste from Vineyard Properties include storm runoff from vineyards and unpaved roads that contain elevated levels of sediment, pesticides, or nutrients or excess runoff that may cause a condition of pollution or nuisance due to erosion or flooding. This Order also regulates Vineyard Properties with on-channel reservoirs that receive treated wastewater. Only a few such reservoirs are known to occur within the Sonoma Creek and/or Napa River watersheds. Discharges from these reservoirs also are defined as "waste discharges."

4. This Order regulates discharges from Vineyard Properties that meet the following criteria:
   a. Each parcel within an *existing* Vineyard Property (including a replant) where ≥ 5 acres are planted in grapevines;
   b. Each parcel within a *new* Vineyard Property where ≥ 5 acres are planted in grapevines on a slope ≤ 30 percent; or
   c. Any parcel within an existing or new Vineyard Property where < 5 acres are planted in grapevines that is deemed by Water Board staff to discharge waste that could affect water quality and could be adequately regulated through this Order.

5. This Order does not apply to any parcels within a new Vineyard Property where: a) vineyard development involves a timber conversion plan or permit, b) any part of a vineyard is located on a slope > 30 percent, or c) the proposed vineyard would be constructed on a Ridgetop[1]. Any parcels within a new Vineyard Property that meet any of these criteria must submit a report of

[1] A Ridgetop is as defined per Sonoma County Code (Chapter 11): "A relatively flat topographic divide above divergent and descending slopes where one (1) or more of the descending slopes has a natural slope steeper than fifty (50) percent for more than fifty (50) feet in slope length."

waste discharge (ROWD) in accordance with Water Code section 13260 to be regulated through individual WDRs.

6. This Order contains three tiers that are based on the administrative costs to regulate Vineyard Properties and considers relative risk to water quality, as needed to achieve all water quality standards. Movement between tiers may occur subject to meeting the qualifications for enrollment in Tiers 1 through 3, which are defined as follows:

   Tier 1 (Stewardship Tier): A Discharger qualifies for enrollment under Tier 1 if the Farm Plan, as described in Attachment A, has been Verified[2] and is fully implemented to achieve all applicable performance standards for discharge, and, where the Vineyard Property is located adjacent to an unconfined alluvial channel, the Vineyard Property also meets the performance standard for Stream and Riparian Habitats (as specified in Attachment A).

   Tier 2: A Discharger qualifies for enrollment under Tier 2 if: a) it has developed a Verified Farm Plan or the Water Board has approved the Farm Plan, or b) it is working with an approved Third-Party Program[3] to develop a Verified Farm Plan.

   Tier 3: Dischargers who elect to develop a Farm Plan independently - without the Farm Plan being Verified – are required to enroll in Tier 3. These Dischargers must submit their Farm Plan (as specified in Attachment A) to the Water Board for review and approval. Following Water Board approval of the Farm Plan, the Discharger, as applicable, could move into Tier 2 or Tier 1.

   Attachment A (Farm Plan Requirements) and Attachment E (Monitoring and Reporting Requirements) provide additional information and specific details regarding conditions for compliance for Dischargers enrolled under Tiers 1, 2, and 3.

7. The Water Board recognizes that certain limited resource farmers (as defined by the U.S. Department of Agriculture, Natural Resources Conservation Service, 2014[4]) may have difficulty achieving compliance with this Order. The Water Board will prioritize assistance to these farmers, including but not limited to technical assistance, grant opportunities, and necessary flexibility to achieve compliance with this Order (e.g., adjusted farm plan, monitoring, reporting, or time schedules).

Water Quality Concerns

8. The Napa River, Sonoma Creek, and their tributaries provide habitat for federally-listed steelhead populations, locally-rare Chinook salmon populations, and exceptionally diverse native fish assemblages. Elevated concentrations of fine sediment (primarily sand) in streambeds and channel incision, defined by the progressive lowering of the streambed as a result of net erosion over the long-term, are significant threats to watershed fish populations and

[2] "Verified" means that an approved Third-Party Program has coordinated a technical review of the Farm Plan by a Qualified Professional who has signed - the Farm Plan, a verification form, or a letter - to indicate that she/he concludes that, upon full implementation, the Farm Plan would achieve all applicable performance standards for sediment and storm runoff control. Although a Verified Farm Plan receives technical review, it remains the Discharger's responsibility to ensure the Farm Plan is implemented to achieve all applicable performance standards for discharge. Third-Party Program verification does not constitute an approval of the Farm Plan.

[3] Third-Party Programs provide technical assistance/expertise to help the Dischargers comply with requirements of this Order. See Attachment C for description of Third-Party Programs.

[4] The USDA Natural Resources Conservation Service definition of a limited resources farmer can be found at https://lrftool.sc.egov.usda.gov/LRP_Definition.aspx (URL as indexed on June 3. 2017).

other special-status aquatic species including California freshwater shrimp, foothill yellow-legged frog, and western pond turtle.

9. Channel incision is a significant fine sediment source and is the primary mechanism for habitat simplification in the Napa River, Sonoma Creek, and alluvial reaches of their tributaries. As channels have incised, spawning and rearing habitats have been substantially reduced. Channel incision has separated the channels from floodplains and reduced baseflow persistence and the extent and diversity of riparian vegetation.

10. Vineyard Properties, including farming areas and extensive unpaved roads, have been identified as significant sources of fine sediment discharges to the Napa River, Sonoma Creek, and their tributaries. Storm runoff increases resulting from infiltration losses in vineyards and roads are two of several causes for channel incision. Also, where hard engineering approaches (rip-rap, gabions, etc.) are used to stabilize streambanks, these structures can compromise channel stability and habitat complexity in adjacent channel reaches. Such unintended impacts are magnified in incised channel reaches, where the force per unit area exerted on the channel bed and banks is substantially increased.

11. Vineyard Property development and management practices, including but not limited to: 1) deep ripping of soils to develop and/or replant a vineyard, 2) conversion of natural vegetation cover, 3) soil compaction as a result of the use of tractors to conduct agricultural activities, 4) establishment of engineered surface and subsurface drainage, and 5) the development and maintenance of property access roads, may cause or contribute to significant increases in erosion and/or storm runoff, which are direct or indirect sources of elevated rates of fine sediment delivery to channels, and/or in some cases a contributing factor to downstream channel incision.

12. Unpaved roads are a water quality concern because of their hydrologic connectivity to streams or other water bodies. Any road segment that has a continuous surface flow path to a natural stream channel during a storm runoff event is termed a “hydrologically connected” road or road reach. Connectivity usually occurs through road ditches, road surfaces, gullies, or other drainage structures or disturbed surfaces. Road-related erosion has been identified as a significant sediment source in both the Napa River and Sonoma Creek watersheds.

13. Vineyard Properties are a potential source of toxicity or bio-stimulatory substances where the application rate and/or discharge of agrichemicals and/or fertilizers are not properly controlled to limit discharges to the surface and/or groundwater. Wine grapes are planted over almost the entire land area devoted to farming in the Napa River and Sonoma Creek watersheds, making viticulture in this region susceptible to pest infestations and therefore subject at times to potentially high rates of pesticide application. At present, several pesticides are applied in large amounts (> 1000 pounds of active ingredient) and/or over extensive land areas (> 1000 acres) within the permit area that are xenoestrogens, which present the potential to contribute to feminization of Chinook salmon and/or which have moderate to very high potential to contribute to aquatic toxicity. Pesticides of highest concern that currently are applied in large amounts over extensive areas within the permit area include pedimethalin, pryaclostrobin, trifloxystrobin, oxyfluorfen, cyprodinil, triflumizole, and imidacloprid. These compounds may pose a potential threat to water quality; however, at present there is limited information on their occurrence in waters.

14. Vineyards developed on slopes > 30 percent present a much higher potential for significant landslide, fluvial, and surface erosion as a consequence of vineyard construction and management actions including removal of natural vegetation cover, grading, deep ripping of soils, engineered drainage, and additional road development on steep slopes. Therefore, new Vineyard Properties developed on slopes > 30 percent, as described earlier, must submit a ROWD in accordance with Water Code section 13260 to be regulated through individual WDRs.

15. When a forest is converted to a vineyard, rainfall interception, soil infiltration capacity, evapotranspiration, and root strength all can be substantially reduced with the potential for consequent significant increases in storm runoff and erosion. Also, tree root strength, in most circumstances, greatly increases mechanical resistance to shear stress, and, therefore, conversion from forest cover to vineyard also can significantly increase landslide activity. Therefore, new Vineyard Properties that involve a timber conversion plan or permit, as described earlier, must submit a ROWD in accordance with Water Code section 13260 to be regulated through individual WDRs.

16. New vineyard constructed on a Ridgetop (as defined earlier) also pose high risk of significant sediment delivery to channels as a result of their discharge into colluvial swales and headwater channels that are especially sensitive to development-related changes in storm runoff. Therefore, new Vineyard Properties that are constructed on a Ridgetop, as described earlier, must submit a ROWD in accordance with Water Code section 13260 to be regulated through individual WDRs.

Background

17. This Order implements the sediment Total Maximum Daily Loads (TMDLs) for the Napa River and Sonoma Creek watersheds that are included in Chapter 7 of the Water Quality Control Plan for the San Francisco Bay Basin Plan (Basin Plan). These TMDLs include load allocations to sediment sources and implementation plans that call for the adoption of pollutant control programs to control sediment discharges from Vineyard Properties and discharges from other significant land-use related sediment sources. The implementation plans also recommend developing and implementing plans to enhance stream-riparian habitat conditions and reduce sediment supply.

18. Vineyard Properties constitute about 162,000 acres or 40 percent of the total land area in the Napa River and Sonoma Creek watersheds. Vineyard Properties include: planted grapevines, which cover approximately 59,000 acres; farm buildings; adjacent open-spaces under natural vegetation cover; and property-wide road networks - most of which are unpaved. The 59,000 acres of planted grapevines correspond to about 16 percent of the total land area in these two watersheds.

19. In order to achieve load allocations for soil erosion in farmed areas, as specified in the Basin Plan, effective erosion and/or sediment control measures need to be in place at almost all Vineyard Properties in these watersheds. Based on GIS analysis, establishing a five-acre vineyard size threshold as the primary criteria for enrollment under the Order will result in approximately 90 percent of the vineyard acreage and two-thirds of total property acreage (i.e., a Vineyard Property includes the Farm Area, property-wide access roads, reservoirs, and

undeveloped areas) having effective Best Management Practices (BMPs) in place for the control of pollutant discharges.

20. Monitoring and reporting under Tier 1 is reduced as compared to Tier 2 and 3 because Dischargers enrolled under Tier 1 have: a) fully implemented a Verified Farm Plan to meet all applicable performance standards for discharge, in some cases in advance of the deadlines for compliance; and b) also as applicable, have achieved the performance standards for Stream and Riparian Habitats (as specified in Attachment A). Actions taken to protect and/or restore stream-riparian corridors significantly enhance habitat complexity and connectivity, contributing to resolution of impacts as related to channel incision.

Regulatory Framework

21. The State Water Resources Control Board (State Water Board) and the Regional Water Boards are the primary agencies with responsibility for the protection of water quality pursuant to the Porter-Cologne Water Quality Control Act (Porter-Cologne Act, codified in Water Code Division 7). The Legislature declared that the activities and factors that may affect the quality of the waters of the State shall be regulated to attain the highest water quality that is reasonable, considering all demands being made on it (Water Code § 13000).

22. Water Code (CWC) section 13260 (a) requires that any person discharging waste or proposing to discharge waste that could affect the quality of the waters of the State, other than into a community sewer system, file with the Water Board a ROWD containing such information and data as may be required by the Water Board, unless the Water Board waives such requirement pursuant to CWC section 13269.

23. CWC section 13263 (i) authorizes the Water Board to 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. The WDRs must implement relevant water quality control plans and take into consideration, among other things, the beneficial uses of water to be protected, the water quality objectives reasonably required for that purpose, and the need to prevent nuisance.

24. It is appropriate to issue general WDRs that apply to Vineyard Properties in the Napa River and the Sonoma Creek watersheds because:

    a. Vineyard Properties in these two watersheds have similar development and management practices, and consequently they have similar pollutant discharges;

    b. Vineyard Properties in these two watersheds pose similar threats to water quality, requiring the same or similar treatment standards, pollutant control, and monitoring programs; and

    c. Given the time and resources needed for regulatory oversight, most Vineyard Properties in these two watersheds are more appropriately regulated under general WDRs rather than individual WDRs.

25. Pursuant to this Order and CWC section 13267, Dischargers must implement a Monitoring and Reporting Program as specified in Attachment E. The burden, including costs, of the Monitoring and Reporting Program bears a reasonable relationship to the need for the Program and the

benefits to be obtained from it. Specifically, the Monitoring and Reporting Program is necessary to ensure compliance with this Order's terms and provisions in order to protect water quality. The Program requires regular BMP implementation monitoring, BMP effectiveness monitoring, streambed monitoring, reporting regarding Farm Plan completion and progress per implementation and achievement of performance standards, and record-keeping.

26. This Order is consistent with the State Water Board's 2004 Policy for the Implementation and Enforcement of the Nonpoint Source Pollution Control Program (NPS Policy) because it regulates nonpoint source discharges that may adversely affect water quality.

Water Quality Control Plan for the San Francisco Bay Basin

27. The Basin Plan is the Water Board's master 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 Region's TMDLs and associated implementation plans to achieve WQOs are also part of the Basin Plan. The Basin Plan was duly adopted by the Water Board and approved by the State Water Board, the Office of Administrative Law, and U.S. EPA. The latest version can be found on the Water Board's website at http://www.waterboards.ca.gov/sanfranciscobay/basin_planning.shtml.

28. Pursuant to the Basin Plan, the existing and potential beneficial uses of waters in the San Francisco Bay Region that could be impacted by the discharge of wastes include:

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

29. The Basin Plan provides a framework for actions needed to achieve water quality objectives for sediment, settleable material, and population and community ecology to address elevated concentrations of fine sediment (primarily sand) in the beds of the Napa River, Sonoma Creek, and their tributaries and pervasive channel incision. These actions translate into 50 percent-or-greater reduction in human-caused sediment inputs as identified in the TMDLs.

30. In order to protect beneficial uses, this Order includes requirements to implement the Basin Plan. Consistent with U.S. EPA's Section 404(b)(1) Guidelines for Dredge and Fill, in determining the circumstances under which stream or wetland filling may be permitted, in general, it is preferable to avoid disturbance. When this is not possible, disturbance should be minimized. Mitigation for lost stream or wetland acreage and habitat values through restoration or creation should only be considered after disturbance has been minimized.

Anti-Degradation

31. State Water Board Resolution 68-16 ("*Statement of Policy with Respect to Maintaining High Quality of Waters in California*") requires whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality must be maintained. Resolution 68-16 only allows change in the existing high quality if it has been demonstrated to the Water Board that the change is consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses of such water, and will not result in water quality less than that prescribed in the policies. Resolution 68-16 further requires that discharges meet WDRs that will result in the best practicable treatment or control of the discharge necessary to assure that (a) pollution or nuisance will not occur and (b) the highest water quality consistent with the maximum benefit to the people of the State will be maintained. Resolution 68-16 incorporates the federal "antidegradation" policy (Cal. Code Regs., tit. 40, § 131.12). This Order is consistent with these policies because its implementation will result in improved water quality and achievement of TMDL sediment load allocations.

32. This Order will result in the best practicable treatment or control (BPT) of discharges to prevent pollution or nuisance and the maintenance of the highest water quality consistent with the maximum benefit to the people of the State. The management practices required under the Order are BPT because they reflect the state-of-the-art methods for Vineyard Property controls that integrate soil and site management practices for pest management and weed control, nutrient management, pesticide storage, handling and modern spray techniques, vineyard and road erosion, and road runoff control. The methods have proven to be effective where implemented in vineyards and associated roads.

California Environmental Quality Act (CEQA)

33. The Water Board is the lead agency pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code section 21000 *et seq*.).

34. The Water Board has satisfied its obligation to address tribal cultural resources under AB 52. The notification and consultation provisions of that statute were not applicable, because no tribes in the project area had requested notification at the time of the decision to undertake general WDRs.

35. On July 7, 2014, the Water Board filed a Notice of Preparation (NOP) with the State Clearinghouse, which included an Initial Study, to public agencies and persons with interest in the Order. Copies of the NOP and Initial Study were available for review at the Water Board's Oakland office. Additionally, the NOP and Initial Study were posted at the Water Board's webpage, and an announcement of its availability was forwarded to individuals that subscribed to the electronic mailing lists relevant to information on the Order. Filing of the NOP started a 30-day comment period that closed on August 6, 2014.

36. On July 23, 2014, the Water Board conducted a CEQA scoping meeting in the Napa County Agricultural Commissioner's Office, for the Environmental Impact Report (EIR) to solicit input from agencies and interested parties on issues to be addressed in the EIR.

    On July 15, 2016, the Water Board issued a draft Environmental Impact Report (DEIR) for public review and filed a Notice of Completion with the State Clearinghouse (SCH). (Cal. Code Regs., tit. 14, § 15085.) The public comment period for the DEIR (SCH No. 2014072013) was from July 15, 2016 to August 29, 2016, which was extended to September 14, 2016, at the request of stakeholders. The Water Board received and evaluated comments on the DEIR from public agencies and the other interested parties. The Water Board has considered, certified, and approved the final EIR (FEIR) pursuant to California Code of Regulations (CCR), title 14, sections 15090 - 15092.

37. Impacts and mitigation measures identified in the EIR are included in Attachment F. Mitigation measures identified in the EIR for this Order, and required to be implemented as described in Attachment F, will substantially reduce environmental effects of the project. The mitigation measures included in this Order have eliminated or substantially lessened all significant effects on the environment, where feasible. Where noted, some of the mitigation measures are within the responsibility and jurisdiction of other public agencies. The mitigation measures discussed herein can and should be adopted, as applicable, by those other agencies. Pursuant to CCR, title 14, sections 15091 and 15093, the Water Board makes the following Statement of Overriding Considerations in conjunction with the approval of this Order.

38. **Statement of Overriding Considerations Supporting Approval of the Order.** The Water Board has duly considered the EIR, which conservatively identifies significant and unavoidable impacts resulting from adoption and implementation of the Order. Consistent with CEQA Guidelines section 15093, subsection (a), the Water Board has considered and balanced the economic, legal, social, technological, and other benefits of this Order, including region-wide environmental benefits, against the unavoidable environmental risks. The benefits outweigh the potentially unavoidable adverse environmental effects, and the unavoidable adverse environmental effects are acceptable because:

    - Adoption of this Order will greatly improve water quality through compliance actions to reduce sediment and storm runoff discharges from vineyards and roads and to restore properly functioning substrate conditions in freshwater channel reaches that provide critical habitat for listed populations of steelhead, locally-rare Chinook salmon populations, and exceptionally diverse assemblages of native fish species.

    - Compliance with this Order will result in effective pollutant discharge control measures for pesticides and nutrients being implemented and maintained at Vineyard Properties throughout the Napa River and Sonoma Creek watersheds, reducing potential impacts to beneficial uses including all native aquatic and riparian species.

- Compliance with the Order, including performance standards for storm runoff from Hillslope Vineyards[5] and roads, will significantly reduce storm runoff and, therefore, also contribute to a significant enhancement of groundwater recharge.

- Compliance with the Order would significantly reduce operational GHG emissions through decreases in tillage and increases in cover crops at vineyards, substantial reductions in soil erosion throughout vineyard properties (including extensive networks of property access roads), and increases in riparian vegetation resulting from the implementation of soil biotechnical projects.

- Implementation of BMPs would enhance agricultural productivity through increases in soil organic matter, enhanced soil infiltration capacity, and a reduction in soil erosion both within and adjacent to Farm Areas.

After balancing the above benefits of the Order against its unavoidable environmental risks, the benefits of the Order outweigh the unavoidable adverse environmental effects, and these adverse environmental effects are considered "acceptable."

39. In accordance with CCR Title 14, section 15094, the Water Board will file a Notice of Determination with the State Clearinghouse, along with payment of applicable fees as required by the Department of Fish and Wildlife (https://www.wildlife.ca.gov/Conservation/CEQA/Fees) within five working days from the issuance of the Order.

Annual Fees

40. Water Code section 13260 authorizes the Water Board to include as a condition of general WDRs the payment of an annual fee. The Discharger shall pay an annual fee to the State Water Board in accordance with the fee schedule for each fiscal year. (Cal. Code Regs., tit. 23, § 2200).

Third-Party Programs

41. The NPS Policy encourages the Water Boards to "be as creative and efficient as possible in devising approaches to prevent or control nonpoint source pollution." This includes development of third-party programs, including coalitions of dischargers, in cooperation with a third-party representative, organization, or government agency to assist the dischargers in complying with the requirements and assure the Water Board and the public that actions have been taken to reduce nonpoint source pollution.

42. The Water Board supports the use of Third-Party Programs that have been approved by the Executive Officer to assist Dischargers in filing required forms, to provide technical assistance to Dischargers in preparing Farm Plans and implementing non-point source pollutant control projects, and/or to assist Dischargers with the monitoring and reporting requirements described in Attachment E. Third-Party Programs may also opt to collect fees on behalf of its members.

[5] A "Hillslope Vineyard" is defined by grapes planted on an average slope > 5 percent. The method for determining slope is as specified by Napa County: www.countyofnapa.org/WorkArea/DownloadAsset.aspx?id=4294967662. An "existing" Hillslope Vineyard is one that was planted prior to adoption of this Order.

43. Attachment C explains the roles, responsibilities, and prerequisite qualifications of Third-Party Programs and provides guidance on the types of information needed for Third-Party Program approval.

44. The Water Board will review a Third-Party Program's performance to ensure that adequate Farm Plans are being consistently prepared by the Dischargers subject to this Order and that all monitoring and reporting requirements are being met.

Safe Drinking Water Act

45. It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring the Dischargers to meet water quality objectives, as applicable, designed to protect human health and ensure that water is safe for domestic uses.

California Endangered Species Act

46. This Order does not allow for the take, or incidental take, of any special status species. The applicant shall use the appropriate protocols, as approved by the California Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, and/or the National Marine Fisheries Service, to ensure that activities do not impact the beneficial use of the Preservation of Rare and Endangered Species.

Public Notice

47. The Water Board has notified the Dischargers, interested agencies, and the public of its intent to adopt this Order and has provided them the opportunity to attend a public meeting and to submit their written comments.

48. The Water Board, in two public meetings (April 12, 2017, and July 12, 2017), heard and considered all comments pertaining to this matter.

IT IS HEREBY ORDERED that in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, all Dischargers of Vineyard Properties that meet the criteria described in the above findings shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. The discharge of waste to waters of the State other than as defined in this Order is prohibited.

2. The discharge of hazardous waste, as defined in CWC section 13173 and CCR Title 23 section 2521(a), respectively, is prohibited.

3. The discharge of wastes (e.g., fertilizers, fumigants, pesticides) into groundwater via backflow through a water supply well is prohibited.

4. The discharge of any wastes (e.g., fertilizers, fumigants, pesticides) down a groundwater well casing is prohibited.

B. **PERFORMANCE STANDARDS:** The Discharger shall install, maintain, and evaluate effectiveness of BMPs as needed throughout the Vineyard Property to attain the following discharge Performance Standards:

1. Soil erosion in the Farm Area: soil loss rate ≤ tolerable soil loss rate. The tolerable soil loss rate is as defined by the USDA Soil Conservation Service (1994).

2. Sediment delivery from existing unpaved roads (Hillslope Vineyards only): a) culvert inlets have a low plug potential[6]; b) critical dips shall be installed at culverted crossings that have a diversion potential; and c) ≤ 25 percent of the total length of unpaved roads are hydrologically connected[7].

3. Sediment delivery from new roads (Hillslope Vineyards only): all new roads (unpaved and/or paved) shall be storm-proofed roads (as specified in Attachment A).

4. Storm runoff from an existing Hillslope Vineyard[8]: shall not cause or contribute to downstream increases in bed and/or bank erosion (as specified in Attachment A).

5. Storm runoff from a new Hillslope Vineyard[9]: a) peak storm runoff in 2-, 10-, 50-, and 100-year (24-hour duration) rainfall events following vineyard development shall not be greater

[6]Trash barriers or deflectors are installed where needed. For additional guidance, please see Weaver et al. (2014), "Culvert Inlet and Outlet Treatments", pp. 137-143.

[7] Hydrologic connectivity refers to the length or proportion of a road that drains runoff directly to streams or other water bodies. Any road segment that has a continuous surface flow path to a natural stream channel during a storm runoff event is termed a hydrologically connected road or road reach. Connectivity usually occurs through road ditches, road surfaces, gullies, or other drainage structures or disturbed surfaces.

[8] A "Hillslope Vineyard" is defined by grapes planted on an average slope > 5 percent. The method for determining slope is as specified by Napa County:

http://www.countyofnapa.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=4294967662 . An "existing" Hillslope Vineyard is one that was planted prior to adoption of this Order.

than pre-development peak storm runoff[10], and b) shall not cause or contribute to downstream increases in bed and/or bank erosion (as specified in Attachment A).

6. Pesticide management: an integrated pest management program shall be developed and implemented for the vineyard (UC Statewide IPM Program, 2015), and effective practices implemented to avoid mixing, storage, or application of pesticides near wells and surface waters or in ways that could contribute to receiving water toxicity.

7. Nutrient management: BMPs to guide nutrient applications (e.g., fertigation, cover crops, soil amendments, plant and/or soil testing) shall be implemented such that discharges do not contribute to violation of water quality standards.

C. PROVISIONS

1. Time Schedule for Achievement of Performance Standards

a. Existing Vineyard Property: Performance Standards for soil erosion in the Farm Area, pesticide management, and nutrient management must be achieved within three years of adoption of the Order. The Performance Standard for storm runoff from Hillslope Vineyards – as related to bed and bank erosion - must be attained within six years of adoption of this Order. The Performance Standards for sediment and storm runoff discharges from existing unpaved roads must be achieved within ten years of adoption of this Order.

b. New Vineyard Property: Performance Standards for soil erosion in the Farm Area, pesticide management and nutrient management must be achieved by the date of vineyard construction. The Performance Standard for storm runoff from new Hillslope Vineyards – as related to peak storm runoff change - must be achieved by the date of vineyard construction. The Performance Standard for storm runoff – as related to bed and bank erosion – must be achieved within six years of vineyard construction. The Performance Standards for sediment discharge and storm runoff from existing unpaved roads must be achieved within ten years of construction of the new vineyard.

c. Hillslope Vineyard Properties: where a new road – paved or unpaved - is constructed following adoption of this Order, at the time of construction, the new road must achieve all applicable Performance Standards for storm-proofed roads (as specified in Attachment A).

2. Monitoring and Reporting

a. Dischargers shall conduct monitoring and site inspections of the entire Vineyard Property to document that discharge control actions implemented consistent with the Farm Plan are in-place and functioning properly such that the Performance Standards in B.1 through B.7 are being met.

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[9] A "new vineyard" is any vineyard that is 5 acres or more in size that is established subsequent to adoption of this Order.

[10] Attainment of this Performance Standard shall be evaluated through site-specific hydrologic modeling and subsequent to development, group or site-specific BMP effectiveness monitoring (see Attachment E). In modeling runoff change, deep ripping of soils cannot be credited for a reduction in peak runoff.

b. Representative photo-points shall be established and monitored to document winter readiness, demonstrate annual maintenance practices and BMP implementation, and document habitat and water quality conditions in receiving waters at and/or near points of discharge from the vineyard, as specified in Attachment E.

c. Site readiness inspections shall be completed annually, prior to the beginning of the rainy season, and shall encompass the Farm Area and property access roads to ensure the facility's readiness for the rainy season. Vineyard Property inspections shall be conducted periodically throughout the rainy season and after storm events to confirm that management practices have functioned as designed and to determine if additional management measures are required.

d. Required reporting is as specified in Attachment E. Tier 2 and Tier 3 Dischargers also must conduct stream monitoring and BMP effectiveness monitoring as specified in Attachment E. The Executive Officer may modify Attachment E as necessary or appropriate. Public notice of the modification of Attachment E would be provided, and revised requirements would be posted on the Water Board website.

e. This Order does not require a Discharger to perform inspections or take other implementation actions during dangerous weather conditions or when a storm begins after scheduled facility operating hours or when there is heavy flooding.

f. The Discharger shall maintain records of inspections, monitoring observations, and any responses taken to reduce potential sources of pollutants from the Vineyard Property. These records shall be maintained at the same location as the Farm Plan. If excessive rates of erosion are observed during the inspection, the Discharger shall record the source and cause of erosion (based on available information), note the management practices taken to correct it, and report it in the Annual Reporting Form.

3. CEQA Required Mitigation

Mitigation measures identified in the EIR for this Order shall be implemented as described in Attachment F (CEQA Mitigation Measures).

D. ENFORCEMENT

1. The Discharger shall comply with all of the conditions of this Order. Any noncompliance with this Order constitutes grounds for an enforcement action and/or termination of enrollment.

2. CWC section 13387(e) provides that any person who knowingly makes any false statement, representation, or certification in any record, report, plan, notice to comply, or other document filed with a regional water board or the State Water Board, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required under this division shall be punished by a fine of not more than $25,000, or by imprisonment in state prison for not more than two years, or by both.

E. PERMIT REOPENING, REVISIONS, REVOCATION, TERMINATION AND REISSUANCE

1. The Water Board may modify or revoke and reissue this Order at any time.

2. An authorization to discharge wastes under this Order is not transferable to any person. In the event of any change in operation, control, or ownership of land or waste discharge facilities, the Discharger shall notify any succeeding owner/operator of its responsibility to enroll under this Order by letter at least 30 days in advance of such change of ownership. A copy of such letter shall be submitted to the Water Board, along with a Notice of Termination (NOT), Attachment D, in order for the original Discharger to be relieved of its responsibility to comply with this Order.

3. To enroll under this Order, the succeeding owner/operator must submit a completed Notice of Intent to the Water Board within 15 days of receipt of the letter referenced in E.2 and request approval from the Executive Officer to discharge under this Order. The succeeding owner/operator is not authorized to discharge under the Order and may be subject to enforcement until written approval of the coverage transfer from the Executive Officer.

4. In the event of closure or change in land use of the Discharger's facility, the Discharger shall file a NOT (see Attachment D) that explains the extent of the change in operation, measures taken to close and/or change the operation, and owner/operator contact information.

5. Water Board staff shall review the NOT and determine its appropriateness. The review may include a field staff inspection to verify project completion and water quality protection. The Executive Officer shall notify the Discharger regarding approval or disapproval of the NOT.

6. This Order may be reopened to address any changes in State or federal plans, policies, or regulations that would affect the quality requirements for the discharges and as authorized by federal and State law.

7. The Executive Officer may, at any time, terminate coverage under this Order as to a particular Discharger where the Discharger fails to comply with this Order; such termination is in the public interest; the activities could adversely affect beneficial uses of waters of the State; or the Executive Officer determines, based on changes to the Discharger's facility, that coverage under individual WDRs is more appropriate.

8. If an owner or operator of a Vineyard Property can demonstrate that the Vineyard Property does not discharge to surface waters of the State and that existing and anticipated uses of waters of the State are fully protected from Vineyard Property operations, the owner or operator may request an exemption from this Order.

   The request shall be made in writing and will be subject to Water Board verification and Executive Officer approval. If future conditions or Vineyard Property operations change, or the potential for water quality impacts is found, the owner or operator of the Vineyard Property may need to obtain coverage under this Order, or in certain circumstances, individual WDRs.

F. REQUIRED REPORTS AND NOTICES

The Discharger must complete the following tasks in accordance with the time schedule required to achieve the performance standards:

1. Farm Water Quality Protection Plan

a. The Farm Water Quality Protection Plan (Farm Plan) must include a comprehensive inventory of vineyards, roads, reservoirs, and waterways located throughout the Vineyard Property to document the BMPs already in-place and/or to prescribe additional BMPs that shall be implemented and maintained to comply with all conditions of this Order, including but not limited to, attainment of all applicable Performance Standards for discharge and also to document the actions implemented to protect and/or enhance stream-riparian habitat complexity and connectivity. The Farm Plan also must include a specific time schedule and corresponding milestones to measure progress toward attainment of the Performance Standards and a monitoring plan to document BMP implementation and assess effectiveness.

b. For all existing Vineyard Properties, the Farm Plan must be completed and verified consistent with the requirements in Attachment A, **within 3 years following adoption of this Order**. At a new Vineyard Property, the Farm Plan shall completed and verified consistent with the requirements in Attachment A, **by the date of completion of vineyard construction or within 3 years following adoption of this Order, whichever date is later**.

2. Annual Report

a. The Discharger shall submit an Annual Compliance Form to the Water Board. The Annual Compliance Form shall certify that the facility meets the conditions of this Order and that the Farm Plan is being implemented according to the schedule established in the Farm Plan. A sample Annual Compliance Reporting Form is included in Attachment E (Table E-1).

b. Annual Reporting Forms shall be submitted electronically each year no later than December 15.

G. APPLICATION REQUIREMENTS

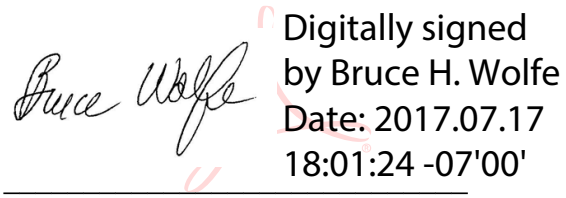
1. In order to obtain coverage under this Order, the Discharger shall apply for coverage by submitting an electronic Notice of Intent form (NOI) for an existing Vineyard Property within one year of the date of adoption of this Order. An example electronic NOI form is included as Attachment B. For a new Vineyard Property, which is one where a vineyard ≥ 5 acres is developed following adoption of the Order, the Discharger shall apply for coverage by submitting a NOI, as specified above, one year prior to construction of the new vineyard or within one year of adoption of this Order, whichever date is later. An example NOI form is provided as Attachment B.

2. If the Discharger becomes aware that a relevant fact was omitted in a Notice of Intent, or incorrect information was submitted in a Notice of Intent or in any report to the Water Board, it shall promptly submit the correct facts or information. Completed forms shall be sent to the Water Board at the following address:

   San Francisco Bay Regional Water Board
   ATTN: Vineyard Program
   1515 Clay Street, Suite 1400
   Oakland, CA 94612

3. Coverage under this Order is subject to fees as determined by the State Water Board. The annual fee schedule is developed by the State Water Board. The Discharger shall pay all required annual fees either directly to the State Water Board or through established discharger groups.

I, BRUCE H. WOLFE Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on July 12, 2017.



BRUCE H. WOLFE
Executive Officer

Attachment A – Farm Plan Requirements
Attachment B – Notice of Intent Form
Attachment C – Third-Party Program Roles, Responsibilities and Approval Process
Attachment D – Notice of Termination
Attachment E – Monitoring and Reporting Requirements
Attachment F – CEQA Mitigation Measures
Attachment G - Glossary

ATTACHMENT A

California Regional Water Quality Control Board
San Francisco Bay Region

General Waste Discharge Requirements
Order No. R2-2017-0033

Farm Plan Requirements

Introduction

This Order requires Dischargers to prepare and implement a Farm Plan[1] that controls sediment discharges and storm runoff increases from vineyards and roads and also controls pesticide and nutrient discharges from vineyards, as needed to attain the Performance Standards described in this attachment. Once the Farm Plan has been Verified[2], and/or has been approved by the Water Board, a copy of the Farm Plan shall be kept at the Vineyard Property and be available for review by Water Board staff upon request. The process for approval of a Third-Party Program is as specified in Attachment C to this Order. Except in cases of an unauthorized discharge or emergency circumstances, Water Board staff will typically provide Dischargers a minimum of 72 hours advance notice prior to inspection. Only Water Board staff, or other individuals authorized by the Discharger, will inspect the Vineyard Property. Table 1 of this attachment defines the schedule for compliance as related to attainment of Performance Standards for discharge (specified in Section 3 herein) and also for Farm Plan submittal.

1. Approach and Scope

The Farm Plan shall be based on an inventory of the vineyards, roads, reservoirs, and waterways located throughout the Vineyard Property[3] to document the conservation practices already in-place and/or to prescribe additional best management practices (BMPs) that will be implemented and maintained to comply with all conditions of this Order. As follows, "existing" (e.g., Vineyard Property, vineyard, road) means the feature is in-place prior to adoption of this Order, and "new" refers to the feature being constructed subsequent to adoption.

[1] The "Farm Plan" documents natural features, developed areas, and best management practices (BMPs) implemented to achieve applicable performance standards for discharge. Its scope and contents are as defined herein.

[2] "Verified" means that an approved Third-Party Program has coordinated a technical review of the Farm Plan by a Qualified Professional who has signed - the Farm Plan, a verification form, or a letter - to indicate that she/he concludes that, upon full implementation, the Farm Plan would achieve all applicable performance standards for sediment and storm runoff control. Although a Verified Farm Plan receives technical review, it remains the Discharger's responsibility to ensure the Farm Plan is implemented to achieve all applicable Performance Standards for discharge. Third-Party Program verification does not constitute an approval of the Farm Plan.

[3] A "Vineyard Property" is defined by a parcel or contiguous parcels under the same ownership, each of which is developed to include a vineyard.

2. Base Map

The base map for the Farm Plan shall include the entire Vineyard Property and may be an aerial photograph, topographic map, LiDAR derived shaded relief map, Google Earth image, or equivalent that depicts features at 1:6000 or larger scale (a 1:2400 scale base map is recommended so that smaller features including stream channels, riparian corridors, vineyard drainage structures, reservoirs, roads, etc., can be discerned and delineated accurately). Topography shall be delineated to distinguish the land areas where the average ground surface slope is < 5 percent, 5-to-30 percent, and those areas > 30 percent, and also shall include 5-to-40 foot (consistent with US Geological Survey 7.5 minute quadrangle conventions), or higher resolution contour intervals.

The Vineyard Property base map(s) shall include a north arrow and delineate the following:

- Property boundaries;
- Parcel boundaries and identifiers (APN numbers);
- Geomorphic terrane units (see Water Board, 2009, pp. 19-21) and/or soil series (with series identifier and erosion potential rating);
- Boundaries of vineyard blocks (showing row direction, slope, and block ID);
- Engineered drainage structures (e.g., subsurface drainage systems, underground outlets, diversion ditches, lined waterways or outlets);
- Vineyard avenues;
- Non-vineyard land uses (grazing areas, winery area, etc.);
- Farm buildings, agrichemical handling and mixing sites, agrichemical storage facilities, and equipment yards and/or staging areas;
- All channels including Class I, II, and III, and also human-made waterways/ditches;
- All water wells (agricultural, domestic, winery, unused, or abandoned) and streamflow diversion structures;
- Springs and seeps;
- Reservoirs, ponds, and lakes;
- All roads and road crossings, with road surface type (paved or unpaved) and crossing type (culvert, bridge, ford, etc.) also delineated; and
- Known active or potentially active landslides[4], soils with high erosion hazards, and known active or potentially active gullies.

[4] Mapped landslides and/or areas with a high potential for future landsliding may be identified based on field observations, aerial photo interpretation, and/or review of published information including: California Geological Survey (2016), US Geological Survey (1997a), and US Geological Survey (1997b). Also, a Debris Flow Potential Map developed for the Water Board by UC Berkeley is available upon request.

3. Performance Standards for Discharge

BMPs shall be installed and maintained as needed throughout the Vineyard Property to achieve the following Performance Standards:

a) Soil erosion in the Farm Area[5]: soil loss rate ≤ tolerable soil loss rate. The tolerable soil loss rate is as defined by the USDA Soil Conservation Service (1994).

b) Sediment delivery from existing unpaved roads (Hillslope Vineyards only): a) culvert inlets have a low plug potential[6]; b) critical dips shall be installed at culverted crossings that have a diversion potential; and c) ≤ 25 percent of the total length of unpaved roads are hydrologically connected[7].

c) Sediment delivery from new roads (Hillslope Vineyards only): all new roads (unpaved and/or paved) shall be storm-proofed roads (see below, **Storm-Proofed Roads**).

d) Storm Runoff from an existing Hillslope Vineyard[8]: shall not cause or contribute to downstream increases in bed and/or bank erosion (see below, **Bed and Bank Erosion**).

e) Storm runoff from a new Hillslope Vineyard: a) peak storm runoff[9] in 2-, 10-, 50-, and 100-year (24-hour duration) rainfall events following vineyard development shall not be greater than pre-development peak storm runoff (see below, **Peak Storm Runoff)**[10], and b) shall not cause or contribute to downstream increases in bed and/or bank erosion (see below, **Bed and Bank Erosion**).

f) Pesticide management: an integrated pest management program shall be developed and implemented for the vineyard (UC Statewide IPM Program, 2015), and effective practices shall be implemented to avoid mixing, storage, or application of pesticides near wells and surface waters or in ways that could contribute to receiving water toxicity.

g) Nutrient management: BMPs to guide nutrient applications (e.g., fertigation, cover crops, soil amendments, plant and/or soil testing) shall be implemented as needed to protect water quality.

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[5] The Farm Area includes all vineyard blocks, lanes, and avenues. Vineyard lanes and avenues are the field roads along the edges and/or in between the vineyard blocks.

[6] Trash barriers or deflectors are installed where needed. For additional guidance, please see Weaver et al. (2014), "Culvert Inlet and Outlet Treatments", pp. 137-143.

[7] Hydrologic connectivity refers to the length or proportion of a road that drains runoff directly to streams or other water bodies. Any road segment that has a continuous surface flow path to a natural stream channel during a storm runoff event is termed a hydrologically connected road or road reach. Connectivity usually occurs through road ditches, road surfaces, gullies, or other drainage structures or disturbed surfaces.

[8] A "Hillslope Vineyard" is defined by grapes planted on an average slope > 5 percent. The method for determining slope is as specified by Napa County: http://www.countyofnapa.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=4294967662 . An "existing" Hillslope Vineyard is one that was planted prior to adoption of this Order.

[9] Peak runoff is defined as the instantaneous maximum value for discharge during a storm runoff event.

[10] Attainment of this Performance Standard shall be evaluated prior to vineyard development through site-specific hydrologic modeling. In modeling runoff, ripping of soils shall not be inferred to result in a long-term increase soil infiltration capacity, and Hydrologic Soil Group Classification shall not be modified.

Further Specification of Performance Standards for Discharge

Peak Storm Runoff: The model developed to evaluate attainment of the peak storm runoff Performance Standard, as specified above, shall include and be consistent with all of the following:

- Pre- and post-project peak runoff estimates shall be provided for each sub-watershed area that drains into a vineyard drainage outfall. The size of the sub-watershed area is dictated by the drainage area lying upslope of each drainage structure outfall directing runoff from a vineyard block.
- Pre- and post-project peak flow estimates shall also be quantified at all locations where runoff exits the property (e.g., swales, creeks, ditches).
- Numerical modeling shall include hydraulic computations that integrate routing of flow through drainage elements such as pipes, surface ditches, rock/grass-lined swales, sedimentation basins, etc., into the numerical rainfall-runoff model.
- Numerical modeling shall include and account for all types of runoff from roads that drain into modelled sub-watershed areas.
- Numerical modeling shall include routing of flow through proposed BMP structures that would be implemented to control erosion and/or attenuate runoff.
- BMP structures shall be designed to address predicted project hydraulic conditions, such as water depth and velocity.
- Similar to vineyard drainage elements, routing of flows through BMPs (e.g., flow control structures, energy dissipaters/outlet protection, rock lined ditches, check dams, sediment basins, slope drains, streambank stabilization structures, and gravel berms) may alter runoff rate and, therefore, shall be integrated into the model/hydrologic analysis.
- A comprehensive description of the modeling approach, methods, assumptions, and peak flow estimates shall be integrated into the erosion control plan.

Storm-Proofed Roads (applies only to new roads built within a Hillslope Vineyard Property) (as defined by Weaver, et al. (2014) shall meet the following specifications (as applicable) :

- Stream crossings have a drainage structure designed for the 100-year flood flow including woody debris and sediment (Cafferata, et al, (2004)).
- Stream crossings do not have diversion potential.
- Culvert inlets have a low plug potential (trash barriers or deflectors are installed where needed).
- Culverts are installed at the base of the fill and in line with the natural channel.
- Emergency overflow culverts that emerge higher in the fill have full round, anchored downspouts that extend to the natural channel.
- Deep fills (deeper than a backhoe can reach from the roadbed) with undersized culverts or culverts with high plugging potential are fitted with an emergency overflow culvert.

- Bridges have stable, non-eroding abutments and do not significantly restrict 100-year flood flow.
- Stream crossing fills are stable.
- 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.
- Class I (fish-bearing) stream crossings meet California Department of Fish and Wildlife and National Marine Fisheries Service fish passage criteria.
- Road surfaces and ditches are hydrologically "disconnected" from streams and stream crossing culverts. Road surface runoff is dispersed, rather than collected and concentrated.
- Ditches are drained frequently by functional ditch relief culverts and/or rolling dips.
- Outflow from ditch relief culverts does not discharge to streams.
- Ditches and road surfaces drainage does not discharge (through culverts and/or rolling dips) onto active or potential landslides and/or into gullies.
- Fine sediment contributions from roads, cutbanks, and ditches are minimized by utilizing seasonal closures and installing a variety of surface drainage techniques including 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 stream.

Bed and Bank Erosion: the Performance Standard for bed and bank erosion downslope of a Hillslope Vineyard is evaluated and achieved as follows:

1. Review available information including: property land-use and natural disturbance history; vineyard design and management practices; natural and engineered drainage features; and soil, geology, landslide, and topographic maps.
2. Conduct a field survey[11] to evaluate and document channel condition, beginning at the point(s) of discharge from the Hillslope Vineyard along overland flow pathways and/or into the receiving channel(s), downstream to the first response reach (e.g., gravel-bedded channel reach with a slope ≤ 0.02), and/or to the property boundary (whichever is encountered first).

As technically and economically feasible, at sites where a Hillslope Vineyard discharges into an Unstable Area,[12] as a precaution the Discharger shall implement additional BMPs to attenuate Vineyard Property storm runoff. For example, these BMPs may include establishment of no-till cover crops, application of composted mulch, soil amendments to increase organic matter content (e.g., crop residues, manure, and/or compost), installation of level-spreaders, disconnecting existing drainage pipe systems, and/or construction of detention basins. Also, as technically and economically feasible, the Discharger shall

[11] At a minimum, the field survey shall be conducted once every five years and also following a 5-year or greater recurrence interval peak discharge, that is ≥ 10,000 cfs at the Napa River near St. Helena gage.

[12] Unstable areas include down-cutting and/or head-cutting stream channels, gullies, and/or landslides.

implement soil bioengineering projects to control erosion in actively eroding gullies and landslides and also in channel reaches that are down-cutting and/or head-cutting. Example soil bioengineering projects are described in Marin Resource Conservation District (2007). Where a Hillslope Vineyard discharges into an unstable area, cross-section and photo-point monitoring is required to evaluate erosional volume and response to BMP implementation and other factors (see Attachment E, p. E-6 for specific details).

4. Performance Standards for Stream and Riparian Habitats[13] (only applicable to unconfined alluvial channel reaches)

To qualify for enrollment in Tier 1, stream-riparian habitats shall be fully protected by:

a) Establishing and maintaining stream setbacks, as measured from the top of bank, along all unconfined alluvial channels[14] that are on average ≥ 1.5 times the bankfull width (see Table 2 for calculation of setback width as a function of watershed area); and/or

b) Implementing active and/or passive restoration measures, including managed bank retreat with vegetation restoration only, through Farm Plan implementation and/or participation in a reach-based habitat enhancement project, including the Rutherford Napa River Restoration, the Oakville to Oak Knoll Napa River Restoration, the Carneros Creek Adaptive Management Plan, and/or any other reach or tributary scale stewardship plan that has been reviewed and approved by the Water Board.

Note: all permittees must prepare the stream-riparian element of the Farm Plan as specified below in Section 5.

5. Required Elements of the Farm Plan

The Farm Plan shall include all of the following elements:

a) Base map(s) (as specified above);

b) Conservation practices to control discharges of agrichemicals;

c) Conservation practices to control Farm Area sediment discharge and to attenuate peak runoff;

d) Conservation practices to reduce sediment discharge and attenuate peak runoff associated with property access roads;

e) Stream-riparian habitat characterization, and as applicable, a description of conservation practices implemented;

f) Water quality controls for reservoirs that receive recycled wastewater and which may discharge to surface waters of the State (as applicable); and

[13] An unconfined reach, is where the valley width is greater than four-times the bankfull channel width. Examples of unconfined alluvial channel reaches include: a) almost the entire length of the Napa River and Sonoma Creek; and b) also along their tributaries where they exit canyons to traverse alluvial fans or valleys.

[14] No vineyard avenues, roads, or rows can be maintained within the setback, which is measured perpendicular to the channel beginning at the top of the bank. Where the stream setback width required by the local land-use authority is greater than 1.5 times the bankfull channel width, the full width of the locally required stream setback must be complied with in order to qualify for Tier 1 designation under the General WDRs.

g) Photo point monitoring.

Progress toward achievement of the Performance Standards for unpaved roads and bed and bank erosion shall be reported as part of the Annual Compliance Reporting Form (See Attachment E, Table E-1).

Where the deadline for the achievement of a performance standard is later than the date of completion of the Farm Plan (Table 1), the Farm Plan shall include a time schedule for achievement of the performance standard and milestones to gauge incremental progress.

Agrichemical controls

The Farm Plan shall describe the BMPs that are in-place and those that will be implemented to control discharges of agrichemicals including all nutrients and pesticides. This element of the Farm Plan shall describe practices for safe storage, mixing, and loading of agrichemicals and/or to protect against discharges to surface and groundwater that could contribute to a violation of water quality standards. Specifically, this element of the Farm Plan shall be developed and implemented to attain the Performance Standards for pesticide management and nutrient management as specified above. Performance Standards for nutrient management and pesticide management must be achieved by the date of completion of the Farm Plan, which, for an existing Vineyard Property, is within three years of adoption of this Order and, for a new Vineyard Property, is within three years of adoption of this Order or by the completion of vineyard construction (whichever date is later)[15].

Farm Area sediment discharge and peak runoff controls

The Farm Plan shall describe the BMPs that are in-place and those that will be implemented within the Farm Area, which includes the vineyard blocks and avenues, to control sediment delivery to stream channels and to attenuate peak storm runoff. Specifically, this element of the Farm Plan shall be developed and implemented to attain the Performance Standards for vineyard soil erosion and, as applicable, for storm runoff from a Hillslope Vineyard (as specified above).

The Performance Standards for vineyard soil erosion must be achieved by the date of completion of the Farm Plan, which, for an existing Vineyard Property, is within three years of adoption of this Order and, for a new Vineyard Property, by the completion of construction of the new vineyard.

The Performance Standards for storm runoff from a Hillslope Vineyard - as related to bed and bank erosion - must be achieved: a) at an existing Hillslope Vineyard, within six years of adoption of this Order; and b) at a new Hillslope Vineyard, within six years of the completion of vineyard construction.

At a new Hillslope Vineyard, in addition to required monitoring and reporting (specified in Attachment E), achievement of the Performance Standard for peak runoff shall be evaluated through site-specific hydrologic modeling, and the Hydrologic Model shall be appended to the

[15] Whichever date is later is specified to allow new vineyards constructed in the year following permit adoption sufficient time to achieve compliance.

Farm Plan. In preparing the hydrologic model, ripping of soils may not be inferred to result in an improvement with regard to infiltration capacity.

Road sediment discharge and peak runoff controls

The Farm Plan shall describe the BMPs that are in-place and those that will be implemented throughout the Vineyard Property to control sediment delivery to stream channels and attenuate storm runoff peak from existing unpaved roads and also from all new roads including unpaved and paved roads. Specifically, this element of the Farm Plan shall be developed and implemented at a Hillslope Vineyard Property to attain the Performance Standards for existing unpaved roads including those for percent road length that is hydrologically connected, plug potential, stream diversion potential, and also for storm-proofing of all new roads (as specified above). At an existing Hillslope Vineyard Property, road-related Performance Standards for existing unpaved roads must be achieved within ten years of adoption of this Order. At a new Hillslope Vineyard Property, road-related Performance Standards for existing unpaved roads must be achieved within ten years of completion of construction of the vineyard. All new roads constructed within a Hillslope Vineyard Property must be storm-proofed by the completion of construction.

Stream-Riparian Habitat Characterization

The entire stream network, including swales, ephemeral channel reaches, intermittent channel reaches, and perennial channel reaches, shall be delineated throughout the Vineyard Property. All channel reaches shall be classified and delineated as confined, moderately confined (alluvial), and unconfined (alluvial). Channel condition within moderately confined alluvial channel reaches and unconfined alluvial channel reaches[16] shall be assessed to describe the active channel including:

- Active channel width,
- Bars, pools, and riffles,
- Large woody debris,
- Summer baseflow,
- Flood levels,
- Bank heights,

[16] Channel confinement defines the ratio of the valley width (VW) to the channel width (CW). Where VW < 2CW a channel is classified as confined. Where VW > 4CW, a channel is classified as unconfined. Moderately confined channels are where CW < VW < 4CW. Within the Napa River and Sonoma Creek watersheds, unconfined alluvial channel reaches are where the adverse impacts of channel incision on habitat complexity and floodplain connectivity are most pronounced. Examples of unconfined alluvial channel reaches include: a) almost the entire length of the Napa River and Sonoma Creek; and b) also along their tributaries where they exit canyons to traverse alluvial fans or valleys. Unconfined alluvial channel reaches provide essential habitat for: a) exceptionally diverse assemblages of native fishes; b) all of the potential habitat for Chinook salmon; and c) much of the potential habitat for steelhead. The steeper and more confined tributary channel reaches, with step-pool and/or cascade bedform types, that also provide part of the habitat network for steelhead, are classic sediment transport reaches that are much less sensitive to incision. However, substantial changes in large woody debris loading in these reaches can change reach scale habitat structure and complexity.

- Bank erosion areas,
- Riparian corridor width and proximity to the Farm Area,
- Description of the vegetation types and sizes within the riparian corridor including the extent of non-native/invasive species,
- Observations of fish and wildlife,
- Locations of roads, on- or off-channel reservoirs, and/or other features upstream or downstream (e.g., grade control structures, bank stabilization structures, road crossings) that may affect bed and bank erosion locally or at reach scale, and
- Description of the management regime for the channel and/or corridor management.

Consistent with U.S. EPA's Section 404(b)(1) Guidelines for Dredge and Fill Material, in determining the circumstances under which stream or wetland filling may be permitted, in general, it is preferable to avoid disturbance. When this is not possible, disturbance should be minimized. Mitigation for lost stream or wetland acreage and habitat values through restoration or creation should only be considered after disturbance has been minimized. Marin RCD (2007) and Cramer, et al. (2012) provide useful guidance with regard to streambank stabilization techniques for stream channels that are consistent with the protection of ecological and geomorphic functions. Fischenich (2001) provides useful information regarding stability thresholds for bioengineering techniques. An example of an acceptable approach, with regard to level of detail[17] is as described in Sonoma County RCD, et al. (2016).

Stream and Riparian Habitats Performance Standard[18]

Vineyard Properties that have a Verified Farm Plan that is fully implemented and that have attained the Performance Standard for Stream and Riparian Habitats, as applicable, are eligible for enrollment under Tier 1. Table 2 presents the relationship between bankfull channel width and watershed area within the permit area.

Water quality controls for reservoirs that receive recycled wastewater and which may discharge to surface waters of the State[19] (only as applicable)

The Farm Plan shall describe the BMPs that are in-place and/or that will be implemented to protect water quality in downstream water bodies located on parcels under the same ownership as the Discharger, as related to operation and maintenance of reservoirs that receive recycled water, and which may discharge to surface waters of the State. This element shall detail operation and maintenance activities of these reservoirs, design overflow conditions, and the drainage location(s) during overflow and/or maintenance. The Discharger shall consider the

[17] Please note that LandSmart is revising the Farm Plan Template (Version 3.0) to include information regarding summer baseflow and also flood levels.

[18] This Performance Standard for stream and riparian habitats is not applicable at Vineyard Properties that do not include unconfined alluvial channels. Such properties also qualify for enrollment under Tier 1 upon full implementation of a Verified Farm Plan that attains applicable Performance Standards for discharge (as defined in Section 3 of this Attachment).

[19] These include reservoirs constructed on-channel and/or off-channel reservoirs that include spillways where subsequent to overflow there would be a discharge to surface waters of the State.

timing, magnitude, and duration of water released from these reservoir(s) to downstream waterbodies including minimizing the discharge of recycled water. The Discharger shall implement erosion and sediment control BMPs to prevent potential erosion impacts to creeks at the point of discharge and downstream of the discharge. The Discharger shall take measures to enhance downstream riparian areas including as applicable eradicating non-native species in downstream riparian areas within the Vineyard Property, augmenting gravel and wood supply to downstream channel reaches, and/or riparian habitat enhancement. The Farm Plan also shall include appended Water Rights permits or licenses that apply to the reservoir and describe management measures and reporting measures to ensure compliance with any bypass requirements and ensure net environment benefit associated with the use and storage of recycled water.

Photo point monitoring

The Farm Plan shall include photo point monitoring data as specified in Attachment E (Monitoring and Reporting).

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Table 1. Summary of Deadlines for Compliance

Existing Vineyard Property			New Vineyard Property	
Farm Plan: completed and Verified [20]	Within **three years of adoption of this Order**		**Farm Plan**: completed and Verified	By **completion of vineyard construction or** within **three years of adoption of this Order** (whichever date is later)
Performance Standards for new roads	By **completion of construction**		**Performance Standards** for new roads	By **completion of vineyard construction**
Performance Standards for Soil erosion in the Farm Area, Pesticide Management, and Nutrient Management	Within **three years of adoption of this Order**		**Performance Standards** for Soil erosion in the Farm Area, Pesticide Management, and Nutrient Management	By **completion of vineyard construction**
Performance Standards for Bed and Bank Erosion	Within **six years of adoption of this Order** (see note below)		**Performance Standards** for Bed and Bank Erosion	Within **six years of vineyard construction** (see note below)
Performance Standards for Peak Runoff	(see note below)		**Performance Standards** For Peak Runoff	Assessed via modeling By **completion of vineyard construction** (see note below)
Performance Standards for existing unpaved roads	Within **ten years of adoption of this Order**		**Performance Standards** for existing unpaved roads	Within **ten years of completion of vineyard construction**

Note 1: The effectiveness of BMPs implemented to attain Performance Standards for storm runoff from Hillslope Vineyards also shall be validated via required monitoring (see Attachment E).

Note 2: The Performance Standards listed in Table 1 are abbreviated from Section 3 (Performance Standards for Discharge) beginning on p. A-3.The Performance Standards for new roads are described on p. A-4 (see Storm-Proofed Roads); the Performance Standards for Bed and Bank Erosion are described on p. A-5 (see Bed and Bank Erosion); the Performance Standards for Peak Runoff are described on p. A-4 (see Peak Storm Runoff); the Performance Standards for soil erosion in the Farm Area, Pesticide management, and Nutrient management on p. A-3; and the Performance Standards for existing unpaved road are described on p. A-3.

[20]**If a Discharger chooses to develop the Farm Plan independently, the Farm Plan must be submitted to the Water Board for review/approval**. For an existing Vineyard Property, the deadline for submittal is within two years of adoption of this Order. For a new Vineyard Property, the deadline for submittal is within two years of adoption of this Order or at the time of vineyard construction, whichever date is later.

Table 2. Relationship between Bankfull Channel Width and Watershed Area (Marcus, 2015)

(Bankfull Width in feet = 13.03 * [Watershed Area, mi^2]$^{0.494}$; R^2 = 0.76; N = 50 sites)

Watershed Area (mi^2)	Estimated Bankfull Channel Width (ft)
0.1	4
0.2	6
0.5	9
1	13
2	18.5
3	23
4	26
5	29
8	37
10	41
15	50
20	59
50	93
100	131

ATTACHMENT B

Notice of Intent Form

Posted at:

www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/vineyard/index.shtml

ATTACHMENT C

California Regional Water Quality Control Board
San Francisco Bay Region

General Waste Discharge Requirements
Order No. R2-2017-0033

Agricultural Third-Party Program
Roles, Responsibilities, and Approval Process

The Water Board encourages Dischargers to work with Third-Party Programs[1] in the development and implementation of Farm Plans.

This document explains the roles, responsibilities, and prerequisite qualifications of Third-Party Programs and provides guidance on the types of information needed for Water Board approval of Third-Party Programs.

1. What are the roles of a Third-Party Program?

Third-Party Programs provide technical assistance/expertise to help Dischargers comply with requirements of this Order. Third-Party Programs must fulfill all of the following roles:

- Assist Dischargers with development of Farm Plans as needed to achieve the Performance Standards in this Order;
- Verify that a Farm Plan prepared under your program, or professional oversight, is complete and that upon full implementation it will achieve all applicable Performance Standards for discharge, as described in this Order. Verified Farm Plans receive a technical review by a Qualified Professional who signs - the Farm Plan, a verification form, or a letter - to indicate that she/he concurs that upon full implementation, the Farm Plan would achieve all applicable Performance Standards for sediment and storm runoff control. A "Qualified Professional" is defined to include a California registered professional in a discipline associated with erosion and sediment control, for example, a professional engineer, licensed geologist, or certified professional in erosion or sediment control. Subject to review and approval by the Executive Officer, other individuals also may be designated as Qualified Professionals.

Optional roles may also include:

- Assist Dischargers with the filing of Notice of Intent and/or other required paperwork;
- Assisting Dischargers in securing the necessary permits for projects implemented to comply with this Order;
- Assisting Dischargers with monitoring and reporting;

[1] Third-Party Programs provide technical assistance/expertise to help Dischargers comply with requirements of this Order.

- Assisting Dischargers with preparation and/or submittal of annual reports;
- Assisting Dischargers with applications for grants or other financial assistance;
- Conducting monitoring; and/or
- Managing fee collection and payment to the State Water Board.

2. Who can qualify to be an approved Third-Party Program?

To be eligible for approval, Third-Party Programs must demonstrate that they have experience working with Vineyard Property owners and/or managers and technical expertise and experience in developing and implementing non-point source pollution control programs. Third-Party Programs providing technical assistance must provide objective input.

Groups that may apply for approval

- Local public agencies
- Resource Conservation Districts
- UC Cooperative Extension
- Non-profit organizations
- Water quality coalitions or other watershed groups

Groups and Individuals that will not be approved

- Entities that own or operate a Vineyard Property regulated by the Water Board (except in those cases where the vineyard is operated primarily for public education, research, or demonstration purposes).
- Entities or individuals that have a conflict of interest. A conflict of interest is a situation in which financial or other personal considerations have the potential to compromise or bias professional judgment and objectivity in verifying that a Farm Plan is complete and/or upon full implementation that it would attain the Performance Standards for discharge (as applicable) that are contained in this Order. An individual is considered to have a financial conflict of interest if they have a financial stake/interest in the facility for which they are providing technical assistance. Entities that collect fees from program participants to sustain or administer Third-Party Programs or assist with State Water Board fee collection are not considered to have a financial conflict of interest.

3. What is documentation is required of a Program seeking Water Board Approval?

Third-Party Programs seeking Executive Officer approval must submit the information below:

a. Provide a description of the methods that will be used to maintain records of: the Dischargers/Vineyard Properties enrolled in your program and also of the Dischargers/Vineyard Properties that have Farm Plans that are Verified (as complete and that upon full implementation will attain Performance Standards for discharge).

b. Demonstrate that Farm Plan assistance materials (e.g., templates, work books, guides) were developed with input from Water Board staff, other agency staff, technical experts, and/or academics and growers who have experience and knowledge of agricultural management

practices and road management to control erosion. Materials must be sufficiently comprehensive to ensure that full implementation of the Farm Plans will achieve the Performance Standards of this Order.

c. Describe the process (e.g., workshops/training, site visits, outreach) to be used to assist Dischargers in developing complete and accurate Farm Plans.

d. Demonstrate that the Third-Party Program has the qualified staff, or access to contractors, who have the appropriate professional licenses or certifications, technical expertise, or academic training in disciplines associated with preparing and implementing Farm Plans.

e. Describe the process that will be used to verify that a Farm Plan is complete and that upon its full implementation will achieve the Performance Standards for discharge specified in this Order. Where the Farm Plan is verified independently, that is by professionals not employed by the Third-Party Program, the Third-Party Program should submit a list of Qualified Professionals, one-or-more of whom would provide technical review to verify Farm Plans.

Third-Party Programs interested in providing assistance with fee collection also must submit:

f. Group Fee Collection: Describe the process and procedures that will be used to track and manage group fee collection. If a Discharger is a member of a group that has been approved by the State Water Board to manage fee collection and payment, there is a discounted fee assessed per acre.

4. How to request Water Board Approval?

Interested Third-Party Programs seeking Water Board approval should submit written requests that include items 3a through 3e, listed above, and/or item 3f (as applicable). The Water Board's Executive Officer will review each request and will either:

- Approve the request
- Request additional information if the application package is incomplete and additional information is needed to complete the submittal, or
- Disapprove the request if items 3a-3f cannot be adequately addressed.

Following Executive Officer approval of the request, electronic copies of the Executive Officer-approved Third-Party Program's Farm Plan templates and assistance materials will be made available to the public upon request.

A request for approval must be submitted electronically to [*electronic mailbox to be provided*]. An initial list of approved Third-Party Programs will be posted by January 12, 2018 (six months following Adoption of this Order). In order to be included on the initial list, a complete application must be submitted by October 12, 2017 (three months following adoption of this Order), and the interested Third-Party Program must be approved by the Executive Officer.

5. How will the Water Board review and evaluate Third-Party Program performance?

Water Board staff will periodically review and evaluate the performance of approved Third-Party Programs to ensure that the program and services provided meet the requirements specified above, that any required documentation is complete, submittals for group reporting and fee collection (optional) are accurate and timely, and that adequate Farm Plans are consistently being

prepared by the group's regulated entities. The Executive Officer may terminate its approval of a Third-Party Program if it is determined that the Water Board's requirements are not being met.

Nonpoint Source Policy

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.

The NPS Policy specifically allows for Third-Party Programs or coalitions of dischargers to work collaboratively to improve water quality and allows the Water Board to evaluate Third-Party Program performance. Each proposed program will be judged individually on its merits.

ATTACHMENT D

California Regional Water Quality Control Board
San Francisco Bay Region

General Waste Discharge Requirements
Order No. R2-2017-0033

NOTICE OF TERMINATION

Signed forms must be submitted to:

San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
ATTN: Vineyard Program

SECTION I. FACILITY OPERATOR INFORMATION

Name:		Contact E-mail:
Mailing Address:		
City:	State: CA	Zip Code:
Name of Contact Person:		Contact Phone:

SECTION II. LANDOWNER INFORMATION (IF OPERATOR IS NOT THE OWNER)

Name:		Contact E-mail:
Mailing Address:		
City:	State:	Zip Code:
Name of Contact Person:		Contact Phone:

SECTION III. FACILITY INFORMATION

A. Facility Name		County:
Mailing Address:		Contact E-mail:
City:	State: CA	Zip Code:

Name of the Contact Person for the Vineyard Property : _____ _____ _____ _____	Contact Phone: Email:
Facility County Assessor's Parcel Number	
A. Total Vineyard Property Parcel(s) Size: _____ acres B. Total area planted in grapes: _____ acres	

SECTION IV. BASIS OF TERMINATION

A. CHANGE OF VINEYARD PROPERTY OWNERSHIP or CHANGE IN CONTROL OF VINEYARD PROPERTY (check if true)

[ ] The control or ownership of this **Vineyard Property** changed on the following date: _____

The contact information for the succeeding **Vineyard Owner or Operator** is :

_____
_____
_____
_____

B. VINEYARD PROPERTY CLOSURE or CHANGE IN LAND USE

[ ] The use of the **Vineyard Property** changed and the **Vineyard Property** no longer meets the eligibility requirements of the General Waste Discharge Requirements for the following reasons:

_____
_____
_____
_____
_____

as of the following date: _____

SECTION V. LANDOWNER NOTIFICATION

If the facility is leased or operated by someone other than the owner, this section must be signed by the operator.

I certify that the owner of the facility has been notified of these General Waste Discharge Requirements and that I have been designated by the owner as the "Authorized Representative."

Operator's Printed Name:_____ Signature:_____

Title: _____ Date: _____

SECTION VI. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Owner or Authorized Representative Printed Name:_____

Owner or Authorized Representative Signature:_____ _____

Date:_____

Telephone Number:_____Email:_____

ATTACHMENT E

California Regional Water Quality Control Board
San Francisco Bay Region

General Waste Discharge Requirements
Order No. R2-2017-0033

MONITORING AND REPORTING REQUIREMENTS

This Monitoring and Reporting Program (MRP) is issued pursuant to Order No. R2-2017-0033 (Order) and California Water Code (CWC) section 13267. The Discharger shall not implement any changes to this MRP unless, and until, a revised MRP is approved by the Executive Officer. To allow the Water Board to evaluate compliance with the terms and conditions of the Order, this MRP requires that monitoring, sampling, and record-keeping be conducted by Vineyard Property owners and operators (hereinafter, Dischargers). The Executive Officer may modify Attachment E as necessary or appropriate. Public Notice of the modification of Attachment E would be provided, and revised requirements would be posted on the Water Board website.

This MRP requires that Tier 2 and Tier 3 Dischargers prepare an Annual Report of compliance (Table E-1), to be submitted to the Water Board by December 15 of each year. The Annual Report shall document: a) status of the Farm Plan (e.g., as applicable, completed, "Verified"); b) property inspections; and c) progress toward attainment of applicable Performance Standards for discharge (e.g., miles of unpaved roads and percent length hydrologically connected). Per the time schedule and specifications, defined as follows herein, Tier 2 and Tier 3 Dischargers also are required to submit a Monitoring Plan and a Monitoring Results Report to evaluate Streambed Conditions and BMP effectiveness.

SUMMARY OF MONITORING AND REPORTING REQUIREMENTS:

Tier 1:
Verification Letter
BMP Implementation Monitoring

Tiers 2 and Tier 3*:
BMP Implementation Monitoring
Stream Monitoring
BMP Effectiveness Monitoring
Annual Compliance Report
Monitoring Plan (per BMP Effectiveness and Streambed Monitoring)
Monitoring Results Report (per BMP Effectiveness and Streambed Monitoring)

*Tier 3 Dischargers must submit their Farm Plan to the Water Board for review/approval.

MONITORING AND REPORTING BASED ON TIERS

Three tiers for enrollment are defined under this Order and the MRP that are related to the relative level of threat to water quality presented by pollutant discharges at an individual Vineyard Property. Tier 1 sites are expected to present the lowest level of threat, Tier 2 an intermediate level, and Tier 3 the highest potential threat. Required monitoring and reporting, as related to enrollment tier, is as presented below:

A. Tier 1 (Stewardship Tier): Water Quality Monitoring and Reporting Requirements

Tier 1 Dischargers are required to submit a Verification Letter and to conduct BMP Implementation Monitoring, as specified immediately below. Attachment A specifies requirements for enrollment in Tier 1 (Stewardship Tier). In summary, these include having fully implemented a "Verified" Farm Plan to meet all applicable Performance Standards (which are as specified in Attachment A).

Verification Letter (Confirming Attainment of Performance Standards)

At the time of enrollment in Tier 1, the permittee shall submit a letter signed by a representative of an approved Third-Party Program confirming that: a) the Farm Plan has been "verified" and has been fully implemented; and b) as applicable, that the Performance Standard for Stream and Riparian Habitats has been attained (as defined in Attachment A). Once every five years thereafter, a verification letter must be submitted to the Water Board verifying that the Farm Plan remains fully implemented in order for the permittee to retain its Tier 1 status.

BMP Implementation Monitoring

Photo-points provide a qualitative indication of BMP performance and habitat and water quality conditions in receiving waters. Photo-points shall be established and monitored each year to document winter readiness, demonstrate annual maintenance practices and BMP implementation, and to document habitat and water quality conditions in receiving waters at and/or near points of discharge. Photo-points shall be numbered and depicted on maps contained in the Farm Plan (requirements and specifications for the Farm Plan are included in Attachment A). Photo-point records and field notes shall be appended to the Farm Plan. Guidance regarding establishment and protocols for photo-point monitoring are provided in OWEB (2007) and NRCS (2009).

B. Tier 2 and 3 Dischargers: Water Quality Monitoring and Reporting Requirements

Introduction

Tier 2 and Tier 3 Dischargers are required to conduct BMP Implementation Monitoring, Streambed Monitoring (as applicable), and BMP Effectiveness Monitoring and also submit an Annual Compliance Report (Table E-1). The required Streambed and BMP effectiveness monitoring may be satisfied either through participation in a watershed-based group effort or through individual property-specific monitoring. Following permit adoption, in State fiscal year 2017-18, Water Board staff intends to work with Third-Party Programs, and/or establish a technical advisory committee, to provide additional guidance with regard to BMP effectiveness monitoring and streambed monitoring and reporting.

BMP Implementation Monitoring

Photo-points provide a qualitative indication of BMP performance and habitat and water quality conditions in receiving waters. Photo-points shall be established and monitored each year to document winter readiness, demonstrate annual maintenance practices and BMP implementation, and document habitat and water quality conditions in receiving waters at and/or near points of discharge. Photo-points shall be numbered and depicted on maps contained in the Farm Plan (requirements and specifications for the Farm Plan are included in Attachment A). Photo-point records and field notes shall be appended to the Farm Plan. Guidance regarding establishment and protocols for photo-point monitoring are provided in OWEB (2007) and NRCS (2009).

Specification of Streambed and BMP Effectiveness Monitoring Option

This MRP allows Tier 2 and 3 Dischargers to conduct stream monitoring and BMP effectiveness monitoring either through individual or watershed-based group monitoring. We strongly encourage Dischargers to participate in a watershed-based group monitoring program. Dischargers who do not elect to participate in a group monitoring program must submit their individual monitoring plans to the Executive Officer for review and approval and conduct individual, property-specific surface water quality monitoring that achieves the same purpose as the group program. At the time of enrollment, Tier 2 and Tier 3 Dischargers must elect a surface water quality monitoring option, either:

a) **Napa River and/or Sonoma Creek Watershed-Based Group Monitoring**; or
b) **Individual Property-Specific Monitoring**,

in order to comply with the monitoring requirements specified in this Order.

For all existing Vineyard Properties, regardless of the monitoring option Tier 2 and 3 Dischargers elect, **by July 15, 2019**, a surface water quality monitoring plan (monitoring plan) shall be submitted to the Executive Officer for review and approval. **By July 15, 2022**, a report that presents and analyzes monitoring results (monitoring report) shall be submitted for review and approval by the Executive Officer. The scope of the monitoring plan and monitoring report shall include BMP effectiveness and streambed monitoring as described below. As indicated earlier, the Executive Officer may modify Attachment E, as necessary or appropriate at a future date.

For new Vineyard Properties, those that are developed subsequent to adoption of this Order, that elect the Group Monitoring option, the monitoring plan and report requirements are satisfied subject to meeting the terms of enrollment in the group (i.e., if the new Vineyard Property enrolls in a group that has previously submitted a monitoring plan and report that were approved by the Executive Officer, these reporting requirements are satisfied). For new Vineyard Properties that elect the Individual Property-Specific Monitoring option, the requirements are the same; however, the deadline for the monitoring plan submittal is by two-years following vineyard development and for the monitoring report by five-years following vineyard development.

Streambed Monitoring

Streambed substrate conditions shall be monitored in channel reaches that provide existing and/or potential spawning habitat for steelhead and/or salmon to evaluate attainment of TMDL numeric targets for sedimentation in the Napa River and Sonoma Creek watersheds (Water Board 2008b, Table 1; Water Board 2009b, Table 1). The requirement to monitor streambed substrate conditions may be satisfied through participation in a Watershed-Based Group Monitoring program or by

Individual Property-Specific Monitoring, which is applicable, if a Vineyard Property includes channel reaches that provide existing and/or potential spawning habitat for steelhead or salmon. Potential spawning sites are as defined in Water Board, 2009b, Table 1, which is included immediately below. A Watershed-Based Group Monitoring program for streambed monitoring already has been developed for the Napa River watershed that could be implemented to satisfy this requirement as defined in Stillwater Sciences (2013) and/or with refinements. Field sampling protocols for: a) spawning gravel permeability are defined in Barnard and McBain (1994) and/or in Stillwater Sciences (2013); b) streambed scour as defined in Nawa and Frissell (1993), Schuett-Hames, et al. (1999), and/or in Stillwater Sciences (2013); c) substrate composition percent fines, are defined in Valentine (1995); and d) v-star are defined in Hilton and Lisle (1993).

TMDL sediment targets [streambed conditions] for the Napa River and its Tributaries (Table 1, Water Board, 2009b).

Spawning gravel permeability	Median value ≥ 7000 cm/hr[a]
Streambed scour	Mean depth of scour ≤ 15 cm[b]

[a] Target applies to all potential spawning sites for steelhead and salmon in the Napa River and its tributaries, excluding those upstream of municipal water supply reservoirs.

[b] Target applies to the response of the streambed to peak flows less than the bankfull event at all potential spawning sites for salmon in gravel-bedded reaches of: 1) mainstem Napa River; and 2) alluvial reaches of tributaries where streambed slope is between 0.001 and 0.02. Potential spawning sites can be identified based on the following: 1) dominant substrate size in the streambed surface layer is between 8 and 128 mm; 2) minimum surface area of gravel deposit is 0.2 square meters in tributaries and 1.0 square meter in mainstem Napa River; or 3) located within mainstem Napa River at a riffle head, pool tail, and/or pool margin or in tributary reaches where streambed slope < 0.03, or in tributary reaches where streambed slope > 0.03 in pool tails, backwater pools, and/or in gravel deposits associated with flow obstructions (e.g., woody debris, boulders, banks).

TMDL sediment targets [streambed conditions] for Sonoma Creek and its Tributaries (Table 1, Water Board, 2008b).

Spawning gravel permeability	Median value ≥ 7000 cm/hr[a]
Pool filling	Decreasing trend in the volume of fine sediment deposited in pools
Substrate Composition- Percent Fines	Percent of fine sediment less than 0.85 mm in diameter is less than or equal to 14 percent of the total bulk core sample (<14% fines < 0.85 mm)[b]
	Percent of fine sediment less than 6.40 mm in diameter is less than or equal to 30 percent of the total bulk core sample (<30% fines < 6.40 mm)[b]

[a] Target applies to all potential spawning sites for steelhead and salmon in Sonoma Creek and its tributaries.

[b] Target applies to wadeable streams and rivers with gradient less than 3 percent. A wadeable stream is one which an average human can safely cross on foot during the summer, low flow season while wearing chest waders.

BMP Effectiveness Monitoring

BMP Effectiveness Monitoring shall be conducted to evaluate attainment of the Performance Standards for sediment discharge and storm runoff, specified by this Order. As described in the introduction to Section B, all aspects of required BMP effectiveness monitoring may be performed as part of a Group Monitoring plan (where a stratified sample of sites is monitored) or may be performed as part of an Individual Property-Specific Monitoring plan. In summary:

a) All vineyards must perform a **ground cover survey** to evaluate attainment of the Performance Standard for soil erosion in the farm area; and

b) Hillslope Vineyard Properties also must perform **road inventories** to evaluate attainment of the Performance Standard for sediment delivery from existing unpaved roads, and **bed and bank erosion monitoring** (cross-sectional profiles), as applicable, to evaluate attainment of the Performance Standard for bed and bank erosion[1].

Ground Cover Survey: At all Vineyard Properties, annually during the month of November, percent ground cover shall be estimated based on a weighted average value of samples collected to characterize vineyard rows, inter-rows, and vineyard avenues. Examples of acceptable approaches for ground cover survey and estimation are presented in US Department of Agriculture (1999). Alternative approaches (e.g., normalized difference vegetation index (NDVI)) for estimation of percent ground cover also may be proposed for review and approval of the Executive Officer. In the evaluation of ground cover survey data, submitted as part of the Monitoring Results Report (see above), a weighted average or weighted median value for ground cover (accounting for relative proportions of the Farm Area in inter-rows, rows, avenues, and for inter-annual variation) could be input into the universal soil loss equation (USLE) or the revised universal soil loss equation (RUSLE) model to evaluate attainment of the Performance Standard for soil erosion within the Farm Area, which corresponds to the soil loss rate being less than or equal to the tolerable soil loss rate as defined by the USDA Soil Conservation Service (1994). Other analytical approaches to evaluate attainment of the Performance Standard also may be proposed.

Road Inventory: At Hillslope Vineyard Properties, an inventory of unpaved roads shall be conducted after each winter and no later than May 15, to qualitatively evaluate road sediment discharge potential and BMP effectiveness. Sources of erosion and evidence of sediment transport to stream channels shall be documented on a road inventory form. An example of an acceptable approach to road inventory is provided by the California Department of Forestry and Fire Protection (2014). Other approaches also may be proposed for review and approval of the Executive Officer.

Bed and Bank Erosion (cross section profiles): This monitoring is applicable only at Hillslope Vineyard Properties. As specified in Attachment A (to evaluate attainment of the performance standard for bed and bank erosion), a field survey must be performed (as specified in Attachment A) to evaluate attainment of the Performance Standard. Based on conditions documented in the

[1] As specified in Attachment A, this Performance Standard applies only to Hillslope Vineyards. Where a Hillslope Vineyard discharges into an unstable area (e.g., an actively eroding gully, landslide, and/or a down-cutting or head-cutting channel), in addition to the required channel reconnaissance and photo-points, bed and bank erosion monitoring would include cross-sectional surveys to evaluate effectiveness of additional BMPs implemented to attenuate storm runoff and soil bioengineering practices implemented to control erosion in the unstable area.

required field survey[2], where a Hillslope Vineyard discharges into an unstable area (e.g., an actively eroding gully, a landslide, and/or a head-cutting and/or down-cutting channel), additional BMPs must be implemented (as feasible) to attenuate storm runoff and to control erosion in the unstable area. The required cross-section and photo-point monitoring (where a Hillslope Vineyard discharges into an unstable area) is to evaluate erosional volume and response to BMP implementation and other factors, and shall be presented and evaluated in the Monitoring Results Report (see above). Other approaches to monitoring may be proposed in the required Monitoring Plan.

Annual Compliance Report

Following permit adoption, each year by December 15, all Tier 2 and Tier 3 Dischargers must submit an annual report that documents progress toward completion of the Farm Plan and progress toward attainment of the performance standards for discharge. The Annual Compliance Reporting Form is included as Table E-1 to this attachment.

Farm Plan Submittal

Tier 3 Dischargers also must submit a completed Farm Plan (as specified in Attachment A) to the Water Board for review and approval in conformance with the schedule for compliance specified in Attachment A. Upon approval, such a Farm Plan is defined as Verified, and the Vineyard Property would qualify for enrollment in Tier 2 or Tier 1, as applicable.

[2] At a minimum, the field survey shall be conducted prior to submittal of the monitoring report, and at least once every five years thereafter, and/or following the occurrence of a 5-year or greater recurrence interval peak discharge, that is ≥ 10,000 cfs at the US Geological Survey Napa River near St. Helena gauge.

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TABLE E-1: ANNUAL COMPLIANCE REPORTING FORM

This Vineyard Property is in compliance with the General WDRs for Vineyard Properties in the Napa River and Sonoma Creek Watersheds (Order No. R2-2017-0033).

Vineyard Property Name:	Phone: Email:
Mailing Address or P.O. Box:	City, State, ZIP Code:
List all Assessor Parcel Numbers (APNs) or legal description (Township, Range, Sections) for the Vineyard Property included in this plan:	

Enrolled under: ☐Tier 2 ☐Tier 3

Farm Plan (check each box below, as applicable)

☐ Farm Plan has been completed[3].

☐ Farm Plan has been Verified[4] by: _____ Date: _____

Property Inspections (fill in dates when inspections were completed)

☐Representative photo-points have been established and are being monitored to document winter readiness, to demonstrate BMP implementation, and to document habitat and water quality conditions in receiving waters.

☐Inspections, prior to the wet season, were conducted in the Farm Area and on Vineyard Property access roads to ensure readiness. Date(s) of inspection(s): _____

☐Inspections, and as needed maintenance actions, were completed during the wet season to confirm that BMPs are functioning properly and/or to address problems. Date(s) of inspection(s): _____

If the Vineyard Property includes Hillslope Vineyard Blocks:

☐ Field surveys were conducted to assess compliance with the bed & bank erosion performance standard. Date(s) of field survey(s): _____

[3] All required elements of the Farm Plan have been prepared.

[4] "Verified" means that an approved Third-Party Program has coordinated a technical review of the Farm Plan by a Qualified Professional who has signed - the Farm Plan, a verification form, or a letter - to indicate that she/he concludes that, upon full implementation, the Farm Plan would achieve all applicable performance standards for sediment and storm runoff control. Although a Verified Farm Plan receives technical review, it remains the Discharger's responsibility to ensure the Farm Plan is implemented to achieve all applicable performance standards for discharge. Third-Party Program verification does not constitute an approval of the Farm Plan.

TABLE E-1 (CONTINUED): ANNUAL COMPLIANCE REPORTING FORM

Baseline Conditions as Related to Performance Standards

Farm Area
Acres in the Farm Area: _____

Acres under a County approved ECP: _____

Hillslope Vineyard Runoff (check boxes below as applicable)
☐The Vineyard Property includes Hillslope Vineyard blocks.

☐Hillslope Vineyard blocks drain into an unstable area (e.g., landslide, gully, or head-cutting or down-cutting channel).

☐The Farm Plan includes BMPs to achieve the performance standard for bed and bank erosion.

Unpaved Roads
Miles of unpaved roads: _____

Percent, by length, of unpaved roads that are hydrologically connected: _____

Number of stream crossings along unpaved roads: _____

Of these, number of crossings with diversion potential: _____

Number of stream crossings on unpaved roads that drain forested areas: _____

Of these, number of stream crossings with trash racks: _____

Farm Plan Submittal (applicable only to Tier 3 Dischargers)
Farm Plan completed: ☐Yes, the Farm Plan is attached or was previously submitted.

☐No, the Farm Plan has not been completed yet.

Note: Tier 3 Dischargers must submit the Farm Plan for review and approval. For an existing Vineyard Property, the Farm Plan must be submitted within two years of adoption of this Order. For a Vineyard Property developed subsequent to adoption of this Order, the Farm Plan must be submitted at or before the time that vineyard construction is completed.

TABLE E-1 (CONTINUED): ANNUAL COMPLIANCE REPORTING FORM

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Owner or Authorized Representative Printed Name*:_____

Owner or Authorized Representative Signature: _____

Date: _____

Telephone Number: _____ Email: _____

***** A duly authorized person designated by the owner of the Vineyard Property, as having responsibility for the overall operation of the regulated facility. The authorized representative may be the Vineyard Property operator or operator's duly authorized designee.

ATTACHMENT F

California Regional Water Quality Control Board
San Francisco Bay Region

General Waste Discharge Requirements
Order No. R2-2017-0033

CEQA Impacts and Mitigation Measures

Table F-1 provides a summary of impacts and mitigation measures, which are presented in detail in the Environmental Impact Report.

Table F-1: Summary of CEQA Impacts and Mitigation Measures

Category: Air Quality and Greenhouse Gases		
EIR Impact No.	Impact Summary	General Order Mitigation Measures
Impact 5.1	Compliance actions (e.g., construction of BMPs that involve earth moving) completed at Vineyard Properties throughout the project area could conflict with implementation of an applicable air quality plan. The primary pollutant of concern is fine particulate matter.	Where compliance actions are subject to the requirement to obtain a discretionary permit from the local land-use authority and/or from another State or federal agency, as applicable, the Discharger shall implement Mitigation Measures AQ-1 through AQ-4.
Impact 5.2	Compliance actions (e.g., construction of BMPs that involve earth moving) completed at Vineyard Properties throughout the project area could violate air quality standards or contribute substantially to an existing or projected air quality violation. The primary pollutant of concern is fine particulate matter.	Where compliance actions are subject to the requirement to obtain a discretionary permit from the local land-use authority and/or from another State or federal agency, as applicable, the Discharger shall implement Mitigation Measures AQ-1 through AQ-4.
Impact 5.4	Compliance actions (e.g., construction of BMPs that involve earth moving) completed at Vineyard Properties throughout the project area may have the potential to expose sensitive receptors to substantial pollutant concentrations. The primary pollutant of concern is fine particulate matter.	Where compliance actions are subject to the requirement to obtain a discretionary permit from the local land-use authority and/or from another State or federal agency, as applicable, the Discharger shall implement Mitigation Measures AQ-1 through AQ-4.
Impact 5.6	Compliance actions (e.g., construction of BMPs that involve earth moving) completed at Vineyard Properties throughout the project area may generate significant GHG emissions.	Where compliance actions are subject to the requirement to obtain a discretionary permit from the local land-use authority and/or from another State or federal agency, as applicable, the Discharger shall implement Mitigation Measure GHG-1.

Table F-1 (Cont.): Summary of CEQA Impacts and Mitigation Measures

Category: Biological Resources		
EIR Impact No.	Impact Summary	General Order Mitigation Measures
Impact 6.1b	Short-term increases in sedimentation associated with BMP construction in some cases may have the potential to adversely affect special-status aquatic species.	As identified in the EIR, and as applicable to the actions taken to comply with this Order, the Discharger shall implement mitigation measures BR-1 through BR-8.
Impact 6.2	BMP construction and/or maintenance, in some cases may have the potential to adversely affect riparian habitats and/or special-status species therein.	As identified in the EIR, and as applicable to the actions taken to comply with this Order, the Discharger shall implement mitigation measures BR-1 through BR-8.
Impact 6.3	Noise generated by heavy equipment used to construct BMPs could in some cases disrupt breeding or nesting by special-status bird species.	As identified in the EIR, and as applicable to the actions taken to comply with this Order, the Discharger shall implement mitigation measures BR-1 through BR-8. Also, where compliance actions are subject to the requirement to obtain a discretionary permit from the local land-use authority and/or from another State or federal agency, as applicable, the Discharger shall implement Mitigation Measures BR-9 and BR-10.
Impact 6.4	Detention basins and/or new storm-proofed roads could be sited in upland areas (i.e., areas upslope of waters and wetlands of the State) outside of the developed footprint of the Vineyard Property that in some cases may provide habitat for special-status species and/or are defined as Sensitive Natural Communities. In such cases, impacts to these biological resources could be significant.	As identified in the EIR, and as applicable to the actions taken to comply with this Order, the Discharger shall implement mitigation measures BR-1 through BR-8. Also, where compliance actions are subject to the requirement to obtain a discretionary permit from the local land-use authority and/or from another State or federal agency, as applicable, the Discharger shall implement Mitigation Measures BR-9 through BR-11.

Table F-1 (continued): Summary of CEQA Impacts and Mitigation Measures

Category: Cultural Resources		
EIR Impact No.	Impact Summary	General Order Mitigation Measures
Impact 7.2	Compliance actions (e.g., construction of BMPs that involve earth moving) may have the potential at some Vineyard Properties to cause a substantial adverse change in the significance of an archeological resource.	Where compliance actions are subject to the requirement to obtain a discretionary permit from the local land-use authority and/or from another State or federal agency, as applicable, the Discharger shall implement Mitigation Measure CR 7-2.
Impact 7.3	Compliance actions (e.g., construction of BMPs that involve earth moving) may have the potential at some Vineyard Properties to directly or indirectly destroy a unique paleontological or geologic feature.	Where compliance actions are subject to the requirement to obtain a discretionary permit from the local land-use authority and/or from another State or federal agency, as applicable, the Discharger shall implement Mitigation Measure CR 7-2.
Impact 7.4	Compliance actions (e.g., construction of BMPs that involve earth moving) may have the potential at some Vineyard Properties to disturb human remains including those interred outside of formal cemeteries.	Where compliance actions are subject to the requirement to obtain a discretionary permit from the local land-use authority and/or from another State or federal agency, as applicable, the Discharger shall implement Mitigation Measure CR 7-2.
Category: Hydrology and Water Quality		
EIR Impact No.	Impact Summary	General Order Mitigation Measures
Impact 8.4b	Construction activities on unpaved roads and/or outside of the developed footprint of the vineyard that would occur in order to comply with the general WDRs, which could result in temporary increases in fine sediment delivery to stream channels, and resultant sedimentation.	As identified in the EIR, and as applicable to the actions taken to comply with this Order, the Discharger shall implement mitigation measures BR-1 through BR-8. In Sensitive Water Supply Drainages, as defined by the County of Napa, where compliance actions are subject to the requirement to obtain a discretionary permit, as applicable, the Discharger shall comply with Mitigation Measures HY-1 and/or HY-2.

Note: all compliance actions listed above that are subject to the requirement to obtain a discretionary permit from the local land-use authority and/or from another State or federal agency, as applicable, can and should be adopted by other agencies as part of their respective approval processes (See CEQA Guideline 15091 and 15126.4.).

The following mitigation measures identified in the Environmental Impact Report for these General WDRs shall be implemented by the Discharger, as applicable to actions taken to comply with this Order:

A. Biological Resources

Mitigation Measure BR-1: Requirement to Obtain and Comply with CWA 401 permits

Where BMP construction overlaps with and/or disturbs a stream channel, riparian area, and/or other wetlands or waters of the United States, the Water Board would require the project proponent to comply with Mitigation Measure BR-1: to apply for a Clean Water Act (CWA) section 401 permit.

Projects subject to CWA section 401 permits also are subject to CWA section 404 permits issued by the U.S. Army Corps of Engineers and also to Endangered Species Act Section 7 Consultations where species listed under the federal Endangered Species Act have the potential to occur. Where BMP construction activities overlap at all with aquatic and/or riparian habitats, they also are subject to Streambed Alteration Agreements issued by the California Department of Fish and Wildlife (CDFW).

Mitigation Measures BR-2 through BR-8: Construction Activity Controls

To avoid significant increases in sediment delivery to channels (and resultant sedimentation) that could arise from any construction activities undertaken to comply with the General WDRs, the Discharger shall incorporate a suite of Construction Activity Controls (Mitigation Measures BR-2 through BR-8), shown below, to avoid and minimize potential pollutant discharges that may be associated with construction activities and/or post-construction erosion in areas that were disturbed.

Mitigation Measure BR-2: Temporal Limitations on Construction

1. The timing of construction activities will take into consideration fisheries and other aquatic wildlife usage in the project area. Construction activities will occur in the period between June 1 and October 15, unless (as applicable[36]) CDFW, U.S. Fish & Wildlife Service (USFWS), and/or NOAA Fisheries define an alternative work window to avoid site specific impacts on special-status species. Work in and around streams that support anadromous fish populations or California freshwater shrimp may not begin until June 15. Work beyond October 15 may be authorized on a site-specific basis with approval (as applicable) from the Water Board, CDFW, USFWS, and/or NOAA Fisheries and provided the work would be completed prior to first winter rains. Planting may occur after October 15, if success of vegetation establishment is increased due to more favorable environmental conditions. Planting above the ordinary high water line may occur at any time of the year.
2. Excavation and grading activities shall occur only in dry weather periods. Upon completion of grading, slope protection of all disturbed sites will be installed prior to the onset of rain.
3. Construction within 75 feet of established riparian vegetation shall be avoided during the migratory bird nesting season (February 15 to August 15). If work must occur during this period,

[36] In describing requirements under Mitigation Measures BR-2 through BR-8, "as applicable" refers to all projects (BMP construction/maintenance actions) that are subject to the requirement to obtain a permit from the agency that is indicated in the text that follows.

a qualified biologist or individual approved by CDFW will conduct a pre-construction survey for bird nests or nesting activity in the project area. If active nests or nesting behavior are observed (for any species other than starlings and house sparrows) an exclusion zone of 75 feet will be established to protect the nesting birds. If any listed or sensitive bird species are identified, CDFW must be notified prior to further action. Take of active bird nests is prohibited.

4. To protect California red-legged frog (CRLF) and/or foothill yellow-legged frog, all construction within stream channels shall take place during daylight hours. If suitable habitat is present for CRLF or foothill yellow-legged frog, project activities will begin after July 1 to avoid impacts on breeding or egg masses.

Mitigation Measure BR-3: Construction Site Management Controls

1. As feasible, the Discharger shall use existing ingress or egress points. Placement of temporary access road, staging areas, and other facilities shall avoid or limit disturbance to habitat and will be restored to preconstruction conditions.
2. Disturbance to existing grades and vegetation shall be limited to the actual site of the conservation project and necessary access routes.
3. Trash, litter, construction debris, cigarette butts, etc., shall be stored in a designated portion of the construction site (that does not overlap with or impact natural habitat areas), and/or shall be removed from the site at the end of each working day. Upon completion of work, the Discharger is responsible for removing all trash, litter, construction debris, cigarette butts, etc.
4. All construction debris and sediments shall be taken to appropriate landfills or, in the case of sediments, disposed of in upland areas on- or offsite.
5. No petroleum products, chemicals, silt, fine soils, and any substances deleterious to fish, amphibian, plant, or bird life shall be allowed to pass into, or be placed where it can pass into the waters of the state.
6. Contractors shall have emergency spill cleanup gear (spill containment and absorption materials) and fire equipment available on site at all times.
7. The use or storage of petroleum-powered equipment shall be accomplished in a manner to prevent the potential release of petroleum materials into waters of the state (Fish and Game Code §5650).
8. All vehicles and equipment on the site must not leak any type of hazardous materials such as oil, hydraulic fluid, or fuel. Fueling shall take place outside of the riparian corridor.
9. As needed, a contained area located at least 50 feet from a watercourse shall be designated for equipment storage, short-term maintenance, and refueling. If possible, these activities will not take place on the project site.
10. Vehicles shall be inspected for leaks and repaired immediately. Leaks, drips, and other spill will be cleaned up immediately to avoid soil or groundwater contamination. Major vehicle maintenance and washing will be done off site. All spent fluids, including motor oil, radiator coolant, or other fluids, and used vehicle batteries will be collected, stored, and recycled as hazardous waste off site. Dry cleanup methods (i.e., absorbent materials, cat litter, and/or rags) will be available on site. Spilled dry materials will be swept up immediately

11. Best management practices for construction period runoff and erosion control shall be employed as described in Requirements for Erosion Control below.

Mitigation Measure BR-4: Erosion Control Requirements

1. Best management practices for construction period runoff and erosion control shall be employed.
2. Erosion control and/or sediment detention devices shall be incorporated into the project design and implemented at the time of construction. These devices will be in place prior to October 15 for the purposes of minimizing fine sediment input to flowing water. These devices will be placed at all locations where the likelihood of sediment input exists. Sediment collected in these devices will be disposed of away from the collection site and above the normal high water mark. These devices will be inspected regularly to ensure they are functioning properly.
3. The project site will be restored to pre-construction condition or better. Disturbed areas shall be re-vegetated prior to the onset of rain by live planting, native seed casting, or hydro-seeding. See also Limitations on Construction Equipment, Earthmoving, and Vegetation Removal sections below.
4. When implementing or maintaining a critical area planting[37] above the high water line, a filter fabric fence, biodegradable fiber rolls, gravel bars, and/or hay bales shall be utilized, if needed, to keep sediment from flowing into the adjacent waterbody. At the time vegetation is sufficiently mature to provide erosion control, it may be appropriate to remove the fence, fiber rolls and/or hay bales. Annual review by the vineyard owner/operator and/or their representative(s) will occur until the critical area planting is established to control erosion.
5. All debris, sediment, rubbish, vegetation, or other material removed from the channel banks, channel bottom, or sediment basins shall be removed to a location where they will not re-enter the waters of the state.
6. Soil exposed as a result of construction and soil above rock riprap shall be re-vegetated using native seed casting or by hydro-seeding prior to the onset of rain. In general, interstitial spaces between rocks will be planted with riparian vegetation such as willows rather than hydro-seeded.
7. Discharge of decant water from any onsite temporary sediment stockpile or storage areas or any other discharge of construction dewatering flows to surface waters, except as described in Limitations to Work in Streams and Permanently Ponded Areas below, outside of the active dredging site is prohibited.
8. Inspection of the performance of sediment control devices shall occur at least once each day during construction to ensure the devices are functioning properly.

Mitigation Measure BR-5: Limitations on Construction Equipment

1. As feasible, the Discharger shall use existing ingress or egress points, and work will be performed from the top of creek banks.
2. When heavy equipment is used, woody debris and vegetation on banks and in the channel shall not be disturbed if outside of the project's scope.

[37] A critical area planting involves establishing permanent vegetation on sites that have or are expected to have, high erosion rates.

3. Heavy equipment shall not be used in a flowing stream, creek, or ponded area, except to cross a stream or pond to access the work site.
4. Heavy equipment use in a streambed is only permissible when the streambed is dry. The amount of time heavy equipment is stationed, working, or traveling within the creek bed shall be minimized.
5. Use of heavy equipment shall be avoided in a channel bottom with rocky or cobbled substrate. If access to the work site requires heavy equipment to travel on a rocky or cobbled substrate, a rubber tire loader/backhoe is the preferred vehicle.

Mitigation Measure BR-6: Limitations on Earthmoving

1. Finished grades shall not exceed 2:1 side slopes.
2. Excavated material not used in the implementation of the BMP shall be removed out of the 100-year flood plain.
3. Placement of temporary access roads, staging areas, and other facilities shall avoid or limit disturbance to habitat and shall be restored to pre-construction conditions.
4. Road improvement projects shall be modeled on the "Handbook for Forest and Ranch Roads: A Guide for planning, designing, constructing, reconstructing, maintaining and closing wildland roads," (Weaver et al., 2014).
5. If the substrate of a seasonal pond, creek, stream or waterbody is altered during work activities, it shall be returned to approximate pre-construction conditions after the work is completed, unless (as applicable) NOAA Fisheries and/or CDFW determine that other measures should be implemented.
6. Overhanging banks within potential California freshwater shrimp habitat shall remain undisturbed.

Mitigation Measure BR-7: Limitations on Vegetation Removal and Replanting

1. The spread or introduction of exotic plant species shall be avoided to the maximum extent possible by avoiding areas with established native vegetation during project activities, restoring disturbed areas with native species where appropriate, and performing post-project monitoring and control of exotic species.
2. Removal of invasive exotic species is strongly recommended. Removal using hand tools, including chainsaws and weed-whackers, and hand pulling of exotics shall be done in preparation for establishment of native plantings. To the extent possible, re-vegetation will be implemented at the same time removal of exotic vegetation occurs. If giant reed (*Arundo donax*) is removed, cuttings will be disposed of in a manner that shall not allow reseeding to occur.
3. Disturbance of native shrubs or woody perennials or removal of trees from streambanks or stream channels will be avoided or minimized; if native riparian vegetation will be disturbed, it will be replaced with similar native species.
4. Except (as applicable) with approval from CDFW, there will be no cutting or removal of native trees 4" or greater diameter at breast height (DBH), except willows, for which there will be no cutting or removal of trees 6" or greater DBH. Exotic trees that are causing habitat damage or

hazardous situations may be removed with approval of the project biologist. Any exotic trees removed will be replaced with appropriate natives. For any permitted tree removal, the root structure will be left intact unless (as applicable) removal is authorized by CDFW.

5. If native trees over 6" DBH are to be removed (with approval from CDFW), they will be replaced at a 3:1 ratio.
6. Projects within potential California red-legged frog habitat will be designed to minimize disturbance to vegetation near or in permanent and seasonal pools of streams, marshes, ponds, or shorelines with extensive emergent or weedy vegetation.
7. Project activities in areas of potential California freshwater shrimp habitat will avoid removal of or damage to overhanging vegetation along stream channels.
8. Hand labor will be used to trim vegetation within the channel or on the bank. Handheld equipment such a weed-whackers and chainsaws are authorized.
9. Native plants characteristic of the local habitat type will be the preferred alternative when implementing and maintaining the BMPs in natural areas. When specified, as required by the regulatory agencies, only native plant species will be used. Under special circumstances, regulators may allow for the use of non-invasive, non-persistent grass species.
10. All areas disturbed by the project or in which vegetation was removed will be restored to a natural state with native trees, shrubs, and/or grasses. Barren areas will typically be planted with a combination of willow stakes, native shrubs, and trees and/or erosion control grass mixes.
11. For projects that have removed native vegetation, post-construction re-vegetation success shall be equivalent to or better than the pre-project conditions. If, after 5 years, that level of success has not been achieved, the vineyard owner/operator or their representative(s) shall consult with CDFW to develop and implement measures to achieve success.
12. If needed, an irrigation system shall be installed to ensure establishment of vegetation; when vegetation is sufficiently established, irrigation materials will be removed.
13. The project area shall be restored to pre-construction conditions or better.

Mitigation Measure BR-8: Limitations on Work in Streams and Permanently Ponded Areas

In specific cases where it is deemed necessary to work in a flowing stream/creek, the work area shall be isolated, and all flowing water shall be temporarily diverted around the work site to maintain downstream flows during construction. A qualified biologist shall prepare a species protection and dewatering plan and be present for all dewatering and re-watering events. The plan shall be prepared with guidance (as applicable) from NOAA Fisheries and/or CDFW. When construction is completed, the flow diversion structure shall be removed in a manner that will allow flow to resume with the least disturbance to the substrate and water quality.

Hydrology and Water Quality

Dischargers shall comply with Mitigation Measures BR-2 through BR-8 (described above) that address potential short-term construction-related increases in erosion and sedimentation impacts. These include:

- Temporal limits on construction activities (BR-2)
- Construction site management actions (BR-3)
- Requirements for erosion control (BR-4)
- Limitations on heavy-equipment use (BR-5)
- Limitations on earth moving/grading (BR-6)
- Limitations on vegetation removal and requirements for replanting (BR-7), and
- Limitations on work in streams and/or ponded areas (BR-8).

In Sensitive Water Supply Drainages, as defined by the County of Napa, where compliance actions are subject to the requirement to obtain a discretionary permit, as applicable, the Discharger shall comply with Mitigation Measures HY-1 and/or HY-2.

Hydrology-1: Restriction on the Timing of Grading and Earthmoving Activities in Sensitive Water Supply Drainages:

> Grading and earthmoving activities undertaken to comply with this Order that are subject to Napa County's requirements are restricted to the period between April 1 and September 1, unless a grading extension is otherwise granted by Napa County.

Hydrology-2: Sensitive Water Supply Drainage Requirements:

> Except as specified under the performance standard for storm-proofing of new roads, drainage facilities and outfalls constructed in a sensitive domestic water supply drainage (as defined by Napa County) that are constructed to comply with this Order shall be sized to handle runoff from a 100-year storm event (i.e., a 24-hour duration rainfall event that has a 100-year recurrence frequency).

Where compliance actions are subject to the requirement to obtain a discretionary permit from the local land-use authority and/or from another State or federal agency, the following mitigation measures **(AQ-1** through **AQ-4**, **GHG-1**, **BR-9** through **BR-**11, and **CR-**1) shall be implemented by the Discharger, as applicable. These mitigation measures can and should be adopted by other agencies as part of their respective approval processes (See CEQA Guideline 15091 and 15126.4.).

B. Air Resources - Mitigation Measures

For implementation of BMPs with a construction site size of four acres or less, implementation of the Basic Measures (mitigation measure **AQ-1**) described below would reduce this impact to a less than significant level. For implementation of BMPs with a construction site size greater than four acres, implementation of the Enhanced Measures (mitigation measure **AQ-2**) described below would reduce this impact to a less than significant level. For implementation of BMPs that are large

in area, located near sensitive receptors, or which for other reasons may warrant additional emissions reductions, implementation of the Optional Measures (mitigation measure **AQ-3**) described below would reduce this impact to a less than significant level. Implementation of mitigation measure **AQ-4,** described below, is recommended in areas considered likely to contain naturally occurring asbestos (NOA).

The following are the Basic Measures from Table 2 of the 1999 BAAQMD CEQA Guidelines, which describes the measures as those that would be implemented at all construction sites, with **AQ-4** being implemented at sites likely to contain NOA. The following descriptions are directly from the BAAQMD CEQA Guidelines and describe measures for the wide range of land use and infrastructure projects that may not be applicable to all BMPs. However, because detailed information on implementation of specific BMPs to comply with these general WDRs is not available, the following list is cited to be as inclusive as possible.

Mitigation Measure AQ-1: Basic Criteria Pollutant Emission Controls

The following Basic Measures from Table 2 of the 1999 BAAQMD CEQA Guidelines shall be implemented during construction at sites 4 acres or less in size:

- Water all active construction areas at least twice daily.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.

Mitigation Measure AQ-2: Enhanced Criteria Pollutant Emission Controls

The following Enhanced Measures from Table 2 of the 1999 BAAQMD CEQA Guidelines shall be utilized at construction sites larger than 4 acres in size:

- All “Basic” control measures listed above.
- Hydro-seed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).
- Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.)
- Limit traffic speeds on unpaved roads to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.

Mitigation Measure AQ-3: Optional Criteria Pollutant Emission Controls

The following are the Optional Measures from Table 2 of the 1999 BAAQMD CEQA Guidelines, which describes the measures as those that are strongly encouraged at construction sites that are large in area, located near sensitive receptors or which for any reason may warrant additional emissions reductions:

- Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site.
- Install wind breaks, or plant trees/vegetative wind breaks at windward side(s) of construction areas.
- Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph.
- Limit the area subject to excavation, grading and other construction activity at any one time.

Mitigation Measure AQ-4: Naturally-Occurring Asbestos Emission Reduction Controls

The following mitigation measure shall be implemented at sites containing naturally occurring asbestos. Implementation of the following mitigation measure would reduce this impact to a less than significant level.

- Comply with the BAAQMD NOA program and ARB ATCM 93105. Complying with these regulations would reduce the potential for entraining NOA, and reduce this impact to a less than significant level.

C. Greenhouse Gas Emissions (GHG-1)

The following mitigation measures can reduce the amount of construction-related GHG emissions:

Mitigation Measure GHG-1: Greenhouse Gas Emissions Controls

- Use Newer Construction Equipment. Construction equipment with newer engine models is subject to stricter emissions standards, and would generate less GHG emissions.
- Use Equipment Powered by Electricity. Some types of equipment can be powered by either diesel fuel, electricity, or a hybrid. Use of equipment powered by electricity or a hybrid would generally generate less GHG emissions.
- Use Equipment Powered by Alternative Fuels. Some types of equipment can be powered by alternative fuels (i.e., not diesel fuel). Use of alternative fuels would generally generate less GHG emissions.

Mitigation Measure BR-9: Limitations on Work within ¼ mile of Douglas fir or Redwood Habitat

Wherever road erosion control BMPs and/or detention basins are constructed using heavy equipment, and these projects occur within ¼ -mile of Douglas fir or redwood forest habitat, construction activities shall be restricted to August 1st through October 15th to avoid overlapping with nesting periods of all special-status bird species including northern spotted owl; or if a protocol survey determines that suitable nesting habitat is unoccupied, construction activities may

occur throughout the standard work window for compliance actions under the general WDRs, which is June 15-October 15.

Mitigation Measure BR-10: Limitations on Work within ¼ mile of Mapped Sensitive Natural Community

Wherever road erosion control BMPs and/or detention basins are constructed using heavy equipment, and these projects occur within ¼-mile of any mapped sensitive natural community (that may provide potential breeding and/or nesting habitat for special-status birds) and/or there has been a documented occurrence of any special-status bird species, the work window for heavy equipment use shall be restricted to August 1st through October 15th to greatly reduce the potential for overlap with breeding and nesting periods of special-status bird species. Alternatively, if a protocol survey determines that potentially suitable nesting habitat is not present or unoccupied then construction activities may occur throughout the standard work window for compliance actions under the General WDRs, which corresponds to June 15-October 15.

Mitigation Measure BR-11: **Preparation of a Biological Inventory**

If protected species or their habitats are present at the project area, the Discharger, prior to any ground disturbance or construction, shall engage a qualified biologist to prepare biological inventory of site resources. If protected species or their habitats are present, the Discharger shall comply with applicable federal and State endangered species acts and regulations. The Discharger shall ensure that important fish or wildlife movement corridors or nursery sites are not impeded by project activities.

D. Cultural Resources

Mitigation Measure CR-1: Cultural Resources Survey and Consultations

Recognized and accepted measures that are routinely required before and during construction that involves earthmoving include:

1. Perform a cultural resources survey by a qualified archaeologist or cultural specialist that conforms to the U.S. Secretary of the Interior's Professional Qualifications Standards, as published in 36 Code of Federal Regulations.

2. Contact the State Historic Preservation Officer and federal lead agencies as appropriate for coordination of Nation-to-Nation consultations with the Native American Tribes.

3. Consult a qualified paleontological resources specialist to determine whether paleontological resources would likely be disturbed in a project area on the basis of the sedimentary context of the area and a records search for past paleontological finds in the area. The assessment may suggest areas of high or known potential for containing resources. If the assessment is inconclusive, a surface survey is recommended to determine the fossil potential and extent of the pertinent sedimentary units within the project site. If the site contains areas of high potential for significant paleontological resources and avoidance is not possible, prepare a paleontological resources mitigation plan.

4. Consult established archaeological and historical records and conduct a field survey of the project prior to construction. Survey records shall be filed with the appropriate archaeological or historical data centers.

5. Consult with local Native American representatives as appropriate to obtain local knowledge of the project vicinity.

6. Prepare site development and grading plans that avoid disturbance of known cultural sites and/or documented sensitive areas. Project plans shall include appropriate measures to protect sensitive resources.

7. Retain a qualified archaeologist or Native American representative to monitor site development activities, particularly grading and trenching. If artifacts are observed during construction, require that construction be halted until a qualified archaeologist has been consulted.

8. Alert onsite workers to the possibility of encountering human remains during construction activities, and prepare appropriate procedures. It is usually required that all construction activities near the location of identified human skeletal remains are halted until proper consultation and mitigation is arranged.

ATTACHMENT G

California Regional Water Quality Control Board
San Francisco Bay Region

General Waste Discharge Requirements
Order No. R2-2017-0033

GLOSSARY OF TERMS

Annual Compliance Reporting Form	A form submitted to the Water Board annually, documenting progress with regard to development of a Verified Farm Plan, required monitoring, and water quality conditions as compared to Performance Standards.
Beneficial Use	The uses of water protected against degradation, such as: domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation and preservation of fish and wildlife, and other aquatic resources or preserves. Existing beneficial uses are uses that were attained in the surface or groundwater after Nov. 28, 1975, and potential beneficial uses are uses that would develop in the future through control measures.
Best Management Practice (BMP)	Methods or measures designed and selected to effectively control the discharge of pollutants from point and nonpoint source discharges.
California Environmental Quality Act (CEQA)	The California Environmental Quality Act (CEQA) establishes a duty for public agencies to avoid or minimize environmental damage where feasible, recognizing that a public agency has an obligation to balance a variety of public objectives. Passed into law in 1970, CEQA sets statewide policies that require both state and local agencies to consider the environmental consequences of decisions that involve changes to the environment. It applies to projects that require discretionary approval by a government agency.
Discharger	Landowner and operator of Vineyard Property discharging, or proposing to discharge waste from a Vineyard Property.
Erosion	The detachment and movement of soil and rock fragments by water or under the force of gravity, which result in the wearing away of the land. When water is the eroding agent, erosional processes include sheet and rill erosion, gully erosion, and channel erosion.
Farm Area	The area that includes the vineyard blocks, vineyard lanes, and avenues (i.e., the field roads along the edges and/or in between the vineyard blocks).
Farm Plan	The plan described in Attachment A of this Order documenting natural features, developed areas, and best management practices implemented to achieve applicable performance standards for discharge.

Hillslope Vineyard	A "Hillslope Vineyard" is defined by grapes planted on an average slope > 5 percent. The method for determining slope is as specified by Napa County: www.countyofnapa.org/WorkArea/DownloadAsset.aspx?id=4294967662. An "existing" Hillslope Vineyard is one that was planted prior to adoption of this Order.
Hydrologic Connectivity	Having a continuous surface flow path (road ditches, road surfaces, gullies, or other drainage structures or disturbed surfaces) to a natural stream channel during a storm runoff event.
Incision	The progressive lowering over time of streambed elevation, as a result of net erosion.
Infiltration	The movement of water into soil.
Infiltration capacity	The maximum rate at which the soil can absorb water.
Landowner	An owner or proprietor of land.
Monitoring and Reporting Program	The monitoring and reporting required by a Discharger enrolled under this Order.
Nonpoint Source	The Clean Water Act focuses on two possible sources of pollution: point and nonpoint. "Point" sources refer to discrete discharges, such as from a pipe. "Nonpoint" refers to everything else, including agricultural runoff.
Non-Point Source Policy	Adopted in 2004, the NPS Policy is designed to assist all responsible and/or interested parties in understanding how the State's NPS water quality control requirements will be implemented and enforced. The parties involved include the State Water Resources Control Board and the Regional Water Quality Control Boards, and also other federal, state and local agencies, individual dischargers, Third-Party Programs and any other stakeholders.
Notice of Intent (NOI)	A document that must be completed by the Discharger or their representative, as required to enroll a Vineyard Property into the General WDRs permit.
Operator	Person(s) responsible for management decisions made in the operation of the Vineyard Property.
Photo-point Monitoring	Photo monitoring is a qualitative tool for documenting the current management of a farm or ranch, as well as, conditions or events that may assist in its management. Monitoring is based on the establishment of permanent photo locations or photographs, which can be revisited at regular intervals to reflect changes that have occurred over time at the same location.
Peak Runoff	The instantaneous maximum value for discharge during a storm runoff event, usually expressed as cubic feet per second.
Performance Standards	Standards for pollutant discharge control that are specified as conditions

	for discharge under this Order.
Qualified Professional	California registered professional in a discipline associated with erosion and sediment control including, for example, a professional engineer, licensed geologist, registered landscape architect, or certified professional in erosion and sediment control.
Reach	A subdivision of a drainage system consisting of a discreet portion of a channel.
Report of Waste Discharge	The California Water Code Section 13260 states that persons discharging or proposing to discharge waste that could affect the quality of waters of the State, other than into a community sewer system, shall file a report of waste discharge (ROWD) with the appropriate Water Board, that completely characterizes the discharge. A complete characterization includes, but is not limited to, design and actual flows, a list of constituents and the discharge concentrations of each constituent, a list of other appropriate waste discharge characteristics, a description and schematic of all treatment processes, a description of best management practices used, and a description of disposal methods. The ROWD is used to start the application process for all waste discharge requirements except for general waste discharge requirements that use a Notice of Intent to satisfy the requirements of the ROWD.
Restoration	The returning of the natural/historic functions and values to a former or degraded site.
Ridgetop	A relatively flat topographic divide above divergent and descending slopes where one or more of the descending slopes has a natural slope steeper than fifty percent for more than fifty feet in slope length.
Riparian	Located along the edge of a channel, generally on the floodplain. Characterized by access to and influence of the channel, but not in it. A riparian zone or riparian area is the interface between land and a river system. Riparian habitat is composed of trees, and other vegetation and physical features normally found on the stream banks and flood plains associated with streams, lakes, or other bodies of water.
San Francisco Bay Basin Plan	The Water Board's master water quality control planning document, designating beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater.
Section 401 Water Quality Certifications	Water Quality Certifications are issued by the Water Board pursuant to Clean Water Act section 401 to certify that projects permitted by the U.S. Army Corps of Engineers pursuant to Clean Water Act section 404 meet State law, regulations, and policy.
Section 404	Refers to a section of the Clean Water Act establishing a permit program for the discharge of dredged or fill materials into waters of the United States.

Soil bioengineering	A method of bank stabilization emphasizing the incorporation of biological materials such as plants, plant parts (e.g., root wads), or a combination of vegetation and inert materials (e.g., brush mats/sills, wattles, fascines, or branch packing/layering).
Third-Party Program	An organization that provides technical assistance/expertise to help Dischargers to comply with requirements of this Order.
Tier 1	A Discharger qualifies for enrollment under Tier 1, if the Farm Plan has been Verified and is fully implemented to achieve all applicable performance standards for discharge, and where the Vineyard Property is located adjacent to an unconfined alluvial channel, the Vineyard Property also meets the performance standard for Stream and Riparian Habitats.
Tier 2	A Discharger qualifies for enrollment under Tier 2 if: a) it has developed a Verified Farm Plan; b) the Water Board has approved the Farm Plan; or c) it is working with an approved Third-Party Program to develop a Verified Farm Plan.
Tier 3	A Discharger who elects to develop a Farm Plan independently – without the Farm Plan being Verified – are required to enroll in Tier 3. These Dischargers must submit their Farm Plan to the Water Board for review and approval. Following Water Board approval of the Farm Plan, the Discharger, as applicable, could move into Tier 2 or Tier 1.
Total Maximum Daily Load	An evaluation of the condition of an impaired surface water on the Section 303(d) List that establishes limitations on the amount of pollution that water can be exposed to without adversely affecting its beneficial uses, and allocating proportions of the total limitation among dischargers to the impaired surface water.
Verified Farm Plan	This means that an approved Third-Party Program has coordinated a technical review of the Farm Plan by a Qualified Professional who has signed - the Farm Plan, a verification form, or a letter - to indicate that she/he concludes that upon full implementation the Farm Plan would achieve all applicable performance standards for sediment and storm runoff control. Although a Verified Farm Plan receives technical review, it remains the Discharger's responsibility to ensure the Farm Plan is implemented to achieve all applicable performance standards for discharge. Third-Party Program verification does not constitute an approval of the Farm Plan.
Vineyard Properties	A parcel or contiguous parcels under the same ownership, each of which is developed to include a vineyard.
Waste Discharge	The discharge of any waste, including 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.

Waste Discharge Requirement	State regulations pertaining to the treatment, storage, processing, or disposal of waste discharges.
Water Quality Objective	The limits or levels of water quality elements or biological characteristics established to reasonably protect the beneficial uses of water or the prevent problems within a specific area. Water quality objectives may be numeric or narrative.