CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. R2-2016-00XX

WASTE DISCHARGE REQUIREMENTS AND WATER QUALITY CERTIFICATION FOR:

SONOMA COUNTY WATER AGENCY
STREAM MAINTENANCE PROGRAM
SONOMA COUNTY

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

1. The Sonoma County Water Agency (SCWA) has applied to the Regional Water Board for authorization to continue to implement its Stream Maintenance Program (SMP) for routine stream maintenance activities, including sediment management, vegetation management, bank stabilization, and a group of other maintenance activities in streams within its maintenance jurisdiction. The SMP maintenance activities will not only provide flood protection and maintain channel conveyance capacity, but will also enhance natural resources and recreational opportunities.

2. This Order applies to two watersheds within Sonoma County that drain to the San Pablo Bay Basin: the Petaluma River and Sonoma Creek watersheds, which are located within the jurisdiction of this Regional Water Board. Therefore all descriptions, findings and provisions in this Order apply only to stream maintenance activities within the Petaluma River and Sonoma Creek watersheds.

3. The SCWA developed a SMP Manual and appendices, dated September 2009 (to be updated in 2017; see Provision D.59), to guide implementation of the SMP. The SMP Manual describes flood control channel maintenance activities, impact avoidance measures, best management practices (BMPs), program mitigation, program oversight and management, program-area resources, and a characterization of channels to be maintained. In addition, the SMP Manual includes: Watershed Partnerships Program Memorandum of Agreement, Watershed Mitigation Project Descriptions, Vegetation Management Plan, and Outlines for Annual Reports.

4. The SMP Manual and associated attachments are considered a “living document” that allows for minor updates and revisions in order to incorporate maintenance techniques and methods that are more protective of the environment or to improve the SMP. Any proposed minor changes shall be submitted via the Annual Notification Report or the Annual Post-maintenance Report for review and approval. All other changes to the SMP Manual or the associated attachments must comply with all terms and conditions of this Order and be approved in writing by the Executive Officer.

5. The SCWA previously conducted stream maintenance activities under Waste Discharge Requirements (WDRs) and Water Quality Certification (amended Order No. R2-2011-0020) issued by the Regional Water Board on April 15, 2011, and amended on December 6, 2012, and April 19, 2013. The amendments to the WDRs revised the Order’s Monitoring and Reporting Program Section D: Monitoring Requirements, Part 4: Sediment Monitoring, and

SMP Manual, Appendix B: Sediment Sampling and Analysis Guidelines. The amendments resulted in sampling and analysis requirements consistent with other programs in the entire county of Sonoma in the jurisdictions of both the San Francisco Bay and North Coast Regional Water Boards. The Executive Officer approved changes to the Monitoring and Reporting Program pursuant to California Water Code (CWC) section 13330 and Title 23 of the California Code of Regulations, section 3855 on December 6, 2012, and April 19, 2013.

6. The SCWA is currently conducting stream maintenance activities under a U.S. Army Corps of Engineers (Corps) ten-year individual permit (Permit No. 2009-00136N, Zones 2A, 3A) under Clean Water Act (CWA) section 404 (33 U.S.C. § 1344). On February 10, 2016, the SCWA filed an application for Water Quality Certification and Waste Discharge Requirements (WDRs) with the Regional Water Board.

SMP Description, Impacts, and Mitigation

7. The SMP Manual covers three primary maintenance activities: sediment removal, vegetation management, and bank stabilization. These primary maintenance activities occur mainly in engineered channels, but may also occur in natural and modified channels and other facilities on an as-needed basis. In addition to the primary maintenance activities, the SMP Manual also addresses other maintenance activities, such as: maintaining roads for accessibility and drainage; removing debris and trash; removing Himalayan blackberry; removing sediment around reservoir inlet structures; repairing fences along the channels; and removing or covering graffiti. The SMP Manual also covers the transport and disposal of removed sediment and vegetation.

8. Natural channels are those channels that have not been engineered nor modified (see Figures 1-3 and 1-4 of the SMP Manual). Natural channels are not SCWA-designated flood control channels.

9. Modified channels are channels that were natural channels but have been modified or degraded over time (see Figures 1-3 and 1-4 of the SMP Manual). Modified channels are not SCWA-designated flood control channels. Modified channels are those that have been graded, realigned, or significantly altered due to reach scale sediment, vegetation, or debris removal activities.

10. Engineered channels are those channels that were built and designed to convey a specific discharge (see Figures 1-3 and 1-4 of the SMP Manual). They are typically trapezoidal channels.

11. Pursuant to the SMP Manual, the SCWA only conducts routine maintenance in engineered channels. Activities in modified and natural channels are limited to clearing impediments to flow causing an imminent public safety threat and require additional documentation in the form of submittal of a Project Specific Notification, per Provisions D.52–54.

12. Sediment removal from channels maintained by the SCWA occurs when sediment accumulates and significantly reduces the capacity of the channel or prevents facilities or appurtenant structures from functioning as designed to control flood waters. The number of sediment removal projects undertaken annually and the quantity of sediment removed in a given year depends on past weather and hydrologic conditions, as well as the frequency and extent of past maintenance activities. For most sediment removal projects, excavators are used from the top-of-bank. For projects where the use of excavators from the top-of-bank is not

possible, or would cause major vegetation impacts, sediment removal equipment may be used within the channel. For larger equipment, this may require the construction of temporary access ramps.

13. Targeted sediment removal projects remove sediment from specific areas (< 100 linear channel feet[1]) in engineered channels where sediment often accumulates. Conducting targeted sediment removal projects in channels that chronically accumulate sediment reduces the need to conduct reach scale (1,000–3,000 linear feet of the channel) sediment removal downstream of the target area. Areas identified as targeted sediment removal areas will be dredged on an on-going basis to reduce sedimentation further downstream and stabilize the channel. The SMP Manual discusses this approach in its Chapter 6 (Section 6.3.2 Reach Scale Sediment Removal – Targeted Sediment Removal Areas).

14. Localized sediment removal projects remove sediment from within and adjacent to culverts and crossings located in engineered channels. These projects typically involve removing sediment immediately upstream, downstream, or from within a culvert or crossing that chronically accumulates sediment because of grade changes and/or backwatering effects. This approach reduces, but does not eliminate, the need for larger reach level sediment projects. Localized sediment removal projects typically impact 100–200 linear feet or less of the channel. The SMP Manual discusses this approach in its Chapter 6 (Section 6.3.3 Localized Sediment Removal).

15. Intermediate sediment removal projects remove sediment from within flood channels and typically include activities such as individual bar grading, lowering aggraded linear benches, or geomorphic shaping activities to remove sediment, reduce flow deflection, and enhance channel habitat features in flood channels. Intermediate sediment removal projects typically impact 100–750 linear feet or less of the channel. The SMP Manual discusses this approach in its Chapter 6 (Section 6.3.4 Intermediate Sediment Removal).

16. The SMP Manual, Appendix B, contains Sediment Sampling and Analysis Guidelines. These guidelines set forth requirements for sampling, analysis, and characterization and disposal of sediment removed as part of SMP activities. Sediment disposal options are based on the chemical quality of the sediment removed.

17. The SCWA removes sediment and vegetation from non-channel areas such as reservoirs, sediment basins, and in-channel engineered concrete structures (not including culverts and/or crossings). The SMP Manual discusses these infrastructure projects in its Chapter 6 (Section 6.3.5 Sediment Management at Other Facilities).

18. Vegetation management refers to maintaining, trimming, mowing, and removal of vegetation that constricts flows within the flood control channels and other constructed facilities. Vegetation management techniques include removal using small hand tools and hand-held equipment, mechanical removal using heavy equipment such as a flail mower attached to an excavator, and spot chemical control on tree stumps and along access roads. Vegetation management activities are conducted to maintain conveyance capacity for a range of flows, establish a canopy of native riparian trees and native understory plants, and control invasive vegetation. Vegetation management and removal activities are relatively consistent from year

[1] The Adobe Creek Sediment Basin located upstream of South McDowell Boulevard is the one targeted sediment removal area larger than 100 linear channel feet (measuring 380 linear feet).

to year, though locations change depending on recent growth and blockages. Vegetation management also includes planting of new trees and shrubs in engineered channels and application of approved herbicides. Vegetation management activities utilize reach specific channel form templates that dictate minimum and maximum density and spacing of woody vegetation below the top of bank based on the width, depth and predicted conveyance of 10, 25, 50, 75 or 100 year storm events. These templates represent "allowable roughness" and will guide channel assessments and vegetation thinning by establishing the annual deviation from maintenance conditions, which will be used to prioritize work locations and define the level of clearance needed. The SCWA's vegetation management activities are covered by this Order, as these activities may have impacts to waters of the State. The SCWA will follow the Vegetation Management Plan, included as Appendix E in the SMP Manual.

19. Bank stabilization involves repairing stream or reservoir banks when a weakened, unstable, or failing bank causes or threatens to cause damage to an adjacent property; excessive erosion; riparian habitat or other natural resource values impacts; increases in flood hazard; a public safety concern; or problems with roads, transportation, or access. These activities occur in engineered channels and other facilities, including culvert outlets. Bank stabilization techniques defined in the SMP Manual utilize bioengineering techniques to the maximum extent possible while discouraging the practice of bank hardening.

20. The SCWA performs maintenance on channels on private property. At the request of a private landowner, the SCWA evaluates the potential for flooding and considers necessary maintenance consistent with the requirements of this Order. Although the SCWA conducts maintenance for landowners, it is not obligated to do so, or to maintain any specific level of hydraulic capacity. SCWA only performs debris and vegetation removal necessary to prevent flooding or property damage and stream bank erosion protection using soil bioengineering methods. The SCWA does not conduct instream sediment removal, bank armament with riprap, or any maintenance for private landowners that would result in unavoidable impacts to threatened and endangered species.

21. The following activities are not included in the SMP Manual and therefore are not covered in this Order: capital improvement projects, projects that would alter the designed flood conveyance capacity of a channel, and emergency activities and procedures. A situation is considered an "emergency" if it is a sudden, unexpected occurrence involving a clear and imminent danger that demands immediate action to prevent or mitigate loss of or damage to life, health, property, or essential public services. Emergencies include such occurrences as fire, flood, earthquake or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage (California Public Resources Code § 21060.3).

22. Ground-disturbing maintenance activities that occur in the channel below top-of-bank (including sediment removal, bank stabilization, and some vegetation management) will take place during the low-flow or dry season (herein defined as June 15–October 31), unless an exception is granted. In particularly dry years, when channels remain dry earlier than June 15 or later than October 31, SCWA may request approval to conduct ground-disturbing maintenance activities prior to June 15 or later than October 31. Exceptions may be made on a project-by-project basis with advance approval by the Executive Officer and federal and State regulatory agencies as appropriate. The Executive Officer will consider any forecasted rainfall and any species habitat needs when approving or denying a work window exception.

23. Non-ground disturbing work may be conducted in the channel zone, but outside the low-flow channel, at any time. This includes pruning and removing select non-native invasive plant

species, maintaining channel access roads for drainage and accessibility, conducting minor repairs of culverts, and repairing fences (along either side of access roads, including the upper portion of stream banks where access is from the service road). These maintenance activities may be done at any time, provided there is no discharge of waste that may adversely impact water quality. Planting of riparian vegetation may be done at any time. Debris removal immediately necessary to prevent flooding may be done at any time.

24. The SMP Manual includes an inventory and assessment of each stream reach in the SMP area that describes water quality, geomorphology, and habitat. Assessments will be updated periodically to reflect changes and progress in achieving the goals of the SMP. Understanding stream resources, their locations, and interactions is fundamental to the SMP's approach to avoid, minimize, and mitigate environmental impacts of routine maintenance activities. With input from staff of the Regional Water Board and other regulatory agencies, the SCWA developed these channel characterizations to provide enough detail and photo documentation to support the review and approval of annual maintenance projects.

25. The SMP Manual includes planning guidelines or principles to determine how, where, and when routine maintenance activities should occur. These principles will be used in the development of each year's maintenance workplan. These principles consider the natural function of the system, provide an understanding of local physical constraints, identify sensitive habitats, consider watershed processes, determine when action is needed, identify maintenance activities needed, and strive to recognize and implement solutions to minimize the on-going need for maintenance activities.

26. The SMP has been crafted to minimize detrimental impacts to beneficial uses. The SMP Manual proposes activities that, when compared with past practices, should result in long-term beneficial effects on riparian and aquatic habitat for a suite of fish and wildlife species. Strategic sediment reduction activities, such as stabilization of slide-prone areas and improved land use practices in upper watersheds and along reaches currently delivering sediment, will reduce the amount of sediment delivered to maintained channels. These benefits will be realized through the reduction of maintenance over time, the reduction in the need to conduct reach-scale sediment removal in creeks, the removal of migratory barriers or impediments, and the creation of more natural stream channels and stream corridors. When considered collectively, the beneficial effects achieved through implementation of the SMP will help build a healthier and more naturally functional stream network and watershed.

27. Impacts on beneficial uses from SMP activities that cannot be entirely avoided through pre-maintenance planning will be mitigated through implementation of the mitigation measures and BMPs described within the SMP Manual.

28. The SCWA will implement onsite and offsite mitigation to mitigate for permanent and temporary impacts from stream maintenance activities covered under this Order. The mitigation approach is broken down into three tiers. Tier 1 includes onsite in-kind mitigation that will mitigate for the loss of stream functions and riparian habitat from sediment removal and bank stabilization projects as described in the SMP Manual. Onsite in-kind mitigation may include planting of riparian trees, understory shrubs, and aquatic plants; removal of exotic and invasive species and corresponding riparian planting; construction of low-flow channels and other geomorphic features to enhance instream habitat and hydrologic function; and removal of migration barriers. Additionally, if onsite in-kind mitigation is not possible, then offsite in-kind (Tier 2) mitigation will be implemented at a location within the SMP area that would benefit from this type of mitigation. Temporal impacts will be mitigated by restoring or

enhancing habitat and stabilizing eroded areas within the same watershed. Tier 3 mitigation is off-site mitigation outside of the SMP area and includes funding local watershed restoration projects within the impacted watershed that increase or enhance riparian habitat and reduce the overall need for channel maintenance. The SCWA will set aside 10% of each project's costs for sediment removal and bank stabilization maintenance activities to fund specific watershed restoration projects.

29. Impacts from maintenance projects for private landowners will be mitigated through implementation of the best management practices described in the SMP Manual.

30. SMP mitigation activities accomplish the goal of the California Wetlands Conservation Policy (Executive Order W-59-93; No Net Loss Policy) to "ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property." The implementation of the SMP will result in the protection of, and over time the restoration of, existing and potential beneficial uses.

31. This Order requires submittal of an Annual Notification Report (ANR) acceptable to the Executive Officer by April 30 of each year. The ANR will describe the channel maintenance activities to be conducted during the upcoming maintenance season and the proposed mitigation and monitoring projects that would compensate for any unavoidable adverse impacts, as outlined in the SMP Manual and the SMP's Final Environmental Impact Report. The ANR will also describe maintenance work to be conducted for private landowners.

32. This Order requires submittal of a Sediment Sampling Report (SSR) acceptable to the Executive Officer by May 15 of each year. The SSR will describe the sediment disposal locations, site specific disposal criteria, and the test results from sampling soils from proposed sediment removal projects. The SMP Manual Appendix B and Attachment A: Monitoring and Reporting Program of this Order includes the sediment sampling and analysis protocols.

33. This Order requires submittal of Annual Post-maintenance Report (APR) acceptable to the Executive Officer by January 31 of the year following the year in which maintenance was completed. The APR will describe channel maintenance activities conducted, including the maintenance work conducted for private landowners, descriptions of mitigation implemented, and monitoring results. The APR will include any lessons learned and recommendations to update BMPs identified in the SMP Manual, if needed.

34. This Order requires that, after each maintenance season, the SCWA and Regional Water Board staff meet to discuss the performance of the SMP, review lessons learned from the prior construction season, and determine the need to improve stream maintenance techniques and BMPs. The SCWA shall implement all stream maintenance techniques and BMPs deemed necessary to protect beneficial uses and meet applicable water quality standards by the Executive Officer in connection with such review.

35. The SCWA developed a Low Impact Development (LID) manual "Water Smart Development Guidebook" (2013) and will incorporate LID principles and techniques into its SMP activities to the maximum extent practicable. Applicable LID activities may include installing/retrofitting stormwater/flood control basins and implementing stormwater treatment BMPs.

36. The SCWA is updating its Flood Control Design Criteria consistent with the SMP principles.

37. A discharge of wastewater (also called effluent) into the channel, stream, or groundwater resulting from the handling and placement of removed sediment at a temporary stockpile site (if used) is not authorized by this Order.

38. This Order is effective only if the SCWA pays all fees required under Title 23, California Code of Regulations (23 CCR).

39. It has been determined through regional, State, and national studies that tracking of mitigation/restoration projects must be improved to better assess project performance. In addition, to effectively carry out the State's Wetlands Conservation Policy of no net loss to wetlands, the State needs to closely track both wetland losses and mitigation/restoration project success. Therefore, the SCWA will use the California Wetlands Form to provide project information related to impacts and mitigation/restoration measures (see Provision D.50 of this Order). An electronic copy of the form and instructions can be downloaded at: http://www.waterboards.ca.gov/sanfranciscobay/certs.shtml. Project information concerning impacts and mitigation/restoration will be made available at the web link: http://ecoatlas.org.

Regulatory Framework

40. The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Regional Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes implementation plans to achieve water quality objectives. The Basin Plan was duly adopted by the Regional Water Board and approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law, and U.S. EPA, where required.

41. The Basin Plan lists the following existing and potential beneficial uses for surfaces waters within the Petaluma River and Sonoma Creek watersheds:

    a) Navigation (NAV)
    b) Water Contact Recreation (REC-1)
    c) Non-contact Water Recreation (REC-2)
    d) Warm Freshwater Habitat (WARM)
    e) Cold Freshwater Habitat (COLD)
    f) Wildlife Habitat (WILD)
    g) Estuarine Habitat (EST)
    h) Preservation of Rare and Endangered Species (RARE)
    i) Fish Migration (MIGR)
    j) Fish Spawning (SPWN)

    The SCWA conducts maintenance activities on the Petaluma River and eleven creeks within the Petaluma River watershed: Lichau, Corona, Capri, Washington, McDowell, Adobe, Jessie Lane, East Washington, Lynch, Ellis, and Thompson creeks. Within the Sonoma Creek watershed, the SCWA conducts maintenance on Fryer, Rodgers, Lawndale, and Verano creeks, and the Nathanson Bypass. Sediment management, vegetation management, and bank stabilization activities covered by this Order may temporarily impact the beneficial uses identified above.

42. The Petaluma Valley, Napa-Sonoma Valley, Wilson Grove Formation, Highlands, Kenwood Valley, and Napa-Sonoma Volcanic Highlands groundwater basins are located in the Petaluma River and Sonoma Creek watershed areas and support the beneficial uses listed below:

    a) Agricultural Supply (AGR)
    b) Industrial Service Supply (IND)
    c) Industrial Process Supply (PROC)
    d) Municipal and Domestic Supply (MUN)

43. The Petaluma River and San Antonio Creek are identified as impaired on the CWA section 303(d) list. These water bodies are listed as impaired by diazinon, nutrients, pathogens, sedimentation/siltation, and trash. The tidal portion of the Petaluma River is listed for nickel.

44. Sonoma Creek and Calabazas Creek are identified as impaired on the CWA section 303(d) list. These water bodies are listed as impaired by nutrients, pathogens, sediment, sedimentation/siltation, and diazinon. The Regional Water Board adopted a Resolution on February 12, 2014 to delist the non-tidal portions of Sonoma Creek as impaired by nutrients (Resolution No. R2-2014-0006).

45. The Petaluma River and Sonoma Creek drain into San Pablo Bay. San Pablo Bay is identified as impaired on the CWA section 303(d) list and is listed as impaired by chlordane, dichloro-diphenyl-trichloroethane (DDT), dieldrin, dioxin compounds, invasive species, furan compounds, mercury, polychlorinated biphenyls (PCBs), and selenium.

46. The California Environmental Quality Act (CEQA) requires all discretionary projects approved by public agencies to be in full compliance with CEQA, and requires a lead agency (in this case, the SCWA) to prepare an appropriate environmental document for such projects. The SCWA prepared and certified the Stream Maintenance Program Final Environmental Impact Report (FEIR) on June 23, 2009, State Clearinghouse No. 2005 082131. The FEIR found significant impacts that are under the purview and jurisdiction of the Regional Water Board: 1) aquatic species including habitat for special status species; 2) water quality; and 3) hazardous materials. The FEIR also found that the mitigation measures would mitigate all of these impacts to less than significant levels. The mitigation measures specified in the FEIR include a combination of compensatory mitigation and watershed-level project funding to mitigate for any temporary disturbance or loss of aquatic habitat and specific BMPs (see Chapter 7 of the SMP Manual) to mitigate for the remaining maintenance activity-related impacts.

47. The Regional Water Board, as a responsible agency under CEQA, has considered the FEIR, and finds that the significant environmental impacts of the proposed activities, which are within the Regional Water Board's purview and jurisdiction, have been identified and mitigated to less than significant levels. Specifically, significant impacts to aquatic species, water quality, and hazardous materials will be mitigated through implementation of the mitigation measures set forth in the FEIR and the mitigation identified in Finding 28 noted above and required by this Order.

48. The SCWA prepared and certified an Initial Study and Negative Declaration of Environmental Impacts for the Zones 2A and 3A Natural Channels Maintenance Project on February 9, 2016, State Clearinghouse No. 2015 122066. The Negative Declaration evaluated maintenance activities in natural channel easements within the Petaluma River and Sonoma Creek

watersheds. The Project incorporates Best Management Practices identified in the SMP Manual and avoids significant impacts to the environment. The Regional Water Board, as a responsible agency under CEQA, has considered the Negative Declaration and finds that environmental impacts of the proposed activities, which are within the Regional Water Board's purview and jurisdiction, have been identified and no significant impacts to the environment would result from maintenance activities in natural channels as proposed by SCWA and conditioned by these WDRs.

49. Pursuant to 23 CCR sections 3857 and 3859, the Regional Water Board is issuing WDRs and Water Quality Certification for the activities proposed in the SMP and the SMP Manual.

50. 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 discharges to meet discharge levels designed to protect human health and ensure that water is safe for domestic use.

51. The Regional Water Board provided public notice of the application pursuant to title 23, CCR, section 3858 on February 17, 2016, and posted information describing the project on the Regional Water Board's website. The Regional Water Board has notified the SCWA and interested parties of its intent to issue WDRs and Water Quality Certification for the activities proposed in the SMP.

52. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to this Order.

53. The CWA (33 U.S.C. §§ 1251-1387) was enacted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" (33 U.S.C. § 1251(a). Section 401 of the CWA (33 U.S.C. § 1341) requires every applicant for a federal license or permit that may result in a discharge into navigable waters to provide the licensing or permitting federal agency with certification that the project will be in compliance with specified provisions of the CWA, including water quality standards and implementation plans promulgated pursuant to CWA section 303 (33 U.S.C. § 1313). CWA section 401 directs the agency responsible for certification to prescribe effluent limitations and other limitations necessary to ensure compliance with the CWA and with any other appropriate requirement of state law. CWA section 401 further provides that state certification conditions shall become conditions of any federal license or permit for the project. These discharges are also regulated under CWC section 13263 and CCR title 23. This Order covers discharges associated with routine stream maintenance activities, including sediment management, vegetation management, bank stabilization, and a group of other maintenance activities in streams within SCWA's maintenance jurisdiction.

IT IS HEREBY ORDERED that the Regional Water Board certifies that the Stream Maintenance Program described herein complies with sections 301, 302, 303, 306, 307, and 401 of the CWA, and with applicable provisions of State law, provided that the SCWA complies with the following terms and conditions:

A. Discharge Prohibitions

1. The direct or indirect discharge of wastes, as defined in section 13050(d) of the CWC, within or outside of the active project site, to surface waters or surface water drainage courses is prohibited, except as authorized in this Order.

2. The discharge shall not cause degradation of any water supply.

3. All vegetation management activities that could result in the runoff of pesticides, which are not registered for aquatic use, into waters of the State are prohibited.

4. Vegetation management activities (including downed tree management) that could result in longer-term adverse impacts such as destabilization of stream banks or a deleterious increase in sediment input into waters of the State are prohibited.

5. Excavated sediment shall remain within designated disposal areas at all times. The designated disposal areas are: a) any offsite, authorized temporary or permanent location maintained in compliance with federal and State regulations, b) any onsite, authorized temporary or permanent location, provided material shall be isolated and contained to prevent impacts to waters of the State and their beneficial uses, or c) a permitted landfill.

6. The discharge of sediment and runoff or decant water from excavated materials disposed of at any temporary or permanent disposal site, to waters of the State, is prohibited.

7. Habitat protection and enhancement activities that could result in longer-term adverse impacts such as destabilization of stream banks or a deleterious increase in sediment input into waters of the State are prohibited.

8. Maintenance activities subject to these requirements shall not cause a condition of pollution or nuisance as defined in CWC sections 13050 (l) and (m), respectively.

9. Groundwater beneficial uses shall not be degraded as a result of the SCWA's activities conducted under this Order.

10. No debris, soil, silt, sand, cement, concrete, or washings thereof, or other construction-related materials or wastes, oil or petroleum products, or other organic or earthen material shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the State. When operations are completed, any excess material shall be removed from the work area and any areas adjacent to the work area where such material may be washed into waters of the State.

B. Discharge Specifications

1. Appropriate soil erosion control measures shall be undertaken and maintained to prevent discharge of sediment to surface waters or surface water drainage courses.

2. Excavated material shall be fully contained to prevent any wind transport, surface runoff, or erosion into waters of the State. At no point within the containment area shall the elevation of sediment exceed that of the containment levees.
3. In accordance with CWC section 13260, the SCWA shall file with the Regional Water Board a report of any material change in the character, location, or quantity of this waste discharge that is beyond the scope of this Order. Any proposed material change in the discharge or SMP requires approval by the Regional Water Board after a hearing under CWC section 13263.
4. The SCWA shall immediately, and in no case no more than 24 hours, notify the Regional Board staff by telephone or email whenever an adverse condition occurs as a result of this discharge. An adverse condition includes, but is not limited to, a violation or threatened violation of the conditions of this Order, spill of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance. A written notification of the adverse condition shall be submitted to the Regional Water Board within five days of occurrence. The written notification shall identify the adverse condition, describe the actions necessary to remedy the condition, and specify a timetable, subject to approval by the Executive Officer, for the remedial actions.

C. Receiving Water Limitations

1. SMP activities shall not cause the following conditions to exist in waters of the State at any place:

   a. Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.

   b. Waters shall not contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.

   c. Waters shall not contain biostimulatory substances in concentration that promote aquatic growth to the extent that such growth cause nuisance or adversely affect beneficial uses.

   d. Waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.

   e. The natural receiving water temperature of inland surface waters shall not be altered unless it can be demonstrated to the satisfaction of the Executive Officer that such alteration in temperature does not adversely affect beneficial uses.

   f. The temperature of any cold or warm freshwater habitat shall not be increased by more than 5°F (2.8°C) above natural receiving water temperature.

2. SMP activities shall not cause the following limits to be exceeded in waters of the State at any point:

   a. Dissolved Oxygen: 5.0 (WARM) or 7.0 (COLD) mg/l minimum. When natural factors cause lesser concentrations, then discharges under this Order shall not cause further reduction in the concentration of dissolved oxygen.

b. Dissolved Sulfide:	All water shall be free from dissolved sulfide concentrations above natural background levels. Concentrations of only a few hundredths of a milligram per liter can cause a noticeable odor or be toxic to aquatic life. Violation of the sulfide objective will reflect violation of dissolved oxygen objectives as sulfides cannot exist to a significant degree in an oxygenated environment.
c. pH:	A variation of natural ambient pH by more than 0.5 pH units.
d. Toxicity:	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.
e. Un-ionized Ammonia:	0.025 mg/L as N, annual median; and 0.16 mg/L as N, maximum.
f. Salinity:	The project shall not increase total dissolved solids or salinity to a degree that the increase adversely affect beneficial uses.
g. Turbidity	Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases from normal background light penetration or turbidity relatable to waste discharge shall not be greater than 10 percent in areas where natural turbidity is greater than 50 NTU.

3. SMP activities shall not cause a violation of any particular water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board as required by the CWA and regulations adopted there under. If more stringent applicable water quality standards are promulgated or approved pursuant to CWA section 303, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. The SCWA shall implement all mitigation measures identified in the SMP Manual relating to aquatic species, water quality, and hazardous materials. In addition, the SCWA shall comply with the Monitoring and Reporting Program attached to this Order, and the SMP Manual and its maintenance-related appendices. Any proposed minor changes to the SMP Manual or appendices shall be submitted via the ANR or the APR for review and approval. All other changes to the SMP Manual or appendices must comply with all terms and conditions of this Order and be approved in writing by the Executive Officer.

Management of Removed Sediment

2. The SCWA shall implement the Sediment Sampling and Analysis Guidelines in the SMP Manual.

3. The SCWA may temporarily stockpile excavated sediment prior to disposal or reuse, provided that appropriate State and federal regulations are met and BMPs are implemented to protect water quality and beneficial uses. The excavated sediment may be stockpiled onsite so that it can be loaded into trucks for offsite disposal within three working days. The excavated sediment may also be temporarily stockpiled at an offsite location. Runoff, sediment, or decant water from the excavated materials shall not discharge to waters of the State, nor shall it discharge from trucks during transport.

4. Sediment removed as part of maintenance activities must be properly characterized through laboratory analytical testing, as described in the Sediment Sampling and Analysis Guidelines, Appendix B of the SMP Manual, and be hauled offsite to an approved suitable upland disposal site, to a landfill approved to accept the sediment as characterized, or to another approved location. Proposed disposal locations shall be submitted by SCWA annually in the SSR, and are subject to acceptance by the Executive Officer. Removed sediment shall only be discharged to disposal sites approved by the Executive Officer.

5. The SCWA shall have equipment and supplies onsite (or readily available nearby) that could be quickly deployed to provide additional filtration if turbidity is observed.

6. All staging shall occur on adjacent access roads or previously disturbed areas. Soil and riprap shall be staged in areas that have been previously disturbed (e.g., service roads and turn-outs). If repair activities affect the active channel, the work area shall be isolated from flowing stream segments using silt fences, wattles, or cofferdams, and restored to pre-project conditions after maintenance is complete.

7. The disposal of any hazardous, designated, or non-hazardous waste as defined in Title 27, CCR, Division 2, Subdivision 1, Chapter 2 shall be conducted in accordance with applicable State and federal regulations.

8. The SCWA shall clean up, remove, and relocate any wastes that are discharged in violation of this Order.

9. The SCWA shall demonstrate compliance with all permitting and CEQA review requirements for offsite sediment disposal sites proposed for the SMP and for any alternative offsite sediment disposal sites. If requested by the Executive Officer, a delineation of existing jurisdictional waters of the State and United States at any temporary or permanent sediment disposal site, verified according to Corps' delineation standards, shall be conducted prior to the preparation for disposal and submitted for the Executive Officer's acceptance prior to the disposal of sediment.

Sediment and Vegetation Removal

10. Targeted and localized sediment removal in engineered channels shall occur in limited areas that do not exceed 500 linear feet of channel length. Targeted and localized vegetation removal areas shall not exceed 100 contiguous feet of channel length. Sediment removal and vegetation removal activities in excess of these size limits will require Project Specific Notification (see Provision D.54).

11. Each stream bank repair project implemented for private landowners shall only utilize soil bioengineering techniques and be limited to 10 cubic yards of excavated material and to a linear stream bank length of 200 feet. Vegetation removal projects along stream banks for private landowners shall not exceed 100 contiguous feet. SCWA will only perform debris and vegetation removal necessary to prevent flooding or property damage. Although the exact number of maintenance activities for private landowners is dependent on requests from the public, the total project impact for this five-year permit term shall not exceed 100 cubic yards of material along 3,000 feet of stream bank. Consistent with the No Net Loss Policy, maintenance activities for private landowners must result in no net loss and a long-term net

gain in the extent, functions, and beneficial uses of water of the State. There is no limit on the number of trash debris removal projects for private landowners.

12. For all proposed sediment and vegetation removal projects in reaches where channel objectives have been developed, SCWA shall include information regarding current channel conditions and how they compare to the maintenance channel objectives (as available) for that reach in the ANR. SCWA's selection and prioritization of maintenance activities shall consider channel capacity conditions, hydraulic constrictions, and sediment, channel dimension, and roughness objectives. Reach specific vegetation templates will be developed for channels according to Provision D.29. In identifying and prioritizing maintenance activities, SCWA will evaluate how vegetation management or sediment removal activities will address short-term flood management needs; and whether there are longer-term habitat and water quality benefits of the proposed maintenance activities consistent and supportive of the maintenance strategy for that reach. SCWA identifies and prioritizes stream maintenance activities based on conveyance capacity and flood management as well as other factors including the consideration of public safety and land management responsibilities such as visibility, access, and fire management. SCWA will describe its rationale for conducting proposed maintenance, based on a combination of potential information sources including the quantitative channel objectives, vegetation management templates, and other public safety and land management factors in the ANR.

13. In-stream depositional features (e.g., bars and other depositional features) shall be preserved in their location unless they must be removed to provide conveyance capacity. During removal of bars or other depositional features, the SCWA shall minimize impacts and preserve habitat functions to the extent practicable to protect beneficial uses.

14. After sediment removal, the SCWA shall grade the channel so that the transition between the existing channel both upstream and downstream is smooth and continuous between the maintained and non-maintained areas and does not present a "wall" of sediment or other blockage that could erode or cause erosion once flows are restored.

15. Sediment removal activities that involve "geomorphic shaping activities" will require Project Specific Notification to the Regional Water Board. The SCWA is required to submit a grading plan that includes, at a minimum, information on steps taken towards achieving a dynamic equilibrium channel, including project design details with a channel form (e.g., channel shape, width/depth ratio, etc.) consistent with channel dimension objectives. Regional Water Board staff will consult with an interagency team that includes staff of the California Department of Fish and Wildlife (CDFW) and the National Marine Fisheries Service (NMFS) before grading plan approval.

Pesticides and Herbicides

16. The SCWA shall continue coverage under and comply with the State Water Board's General National Pollutant Discharge Elimination System Permit for the Discharge of Aquatic Pesticides for Aquatic Weed Control in Waters of the United States General Permit No. CAG990005.

17. The SCWA shall maintain coverage under and comply with the State Water Board's National Pollutant Discharge Elimination System General Permit and Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (Order No. 2013-0001-DWQ).

Vegetation Management

18. Vegetation management activities that could result in the adverse destabilization of stream banks or increase sediment input into waters of the State are prohibited.

19. Vegetation management and replanting shall be conducted using a strategy that maximizes the functions of the vegetation to shade the active channel, stabilize active channel banks, and provide instream habitat while addressing public safety and land management responsibilities including visibility, access, and fire management.

20. The SCWA shall follow the vegetation removal and management guidelines described in the Vegetation Management Plan, Appendix E of the SMP Manual, except as required under Provision D.18.

21. Vegetation management activities shall not adversely impact the riparian zone, shade, canopy coverage, or habitat.

22. Overall impacts of vegetation management activities shall improve beneficial uses.

Bank Stabilization

23. The SCWA shall use the bank stabilization methods described in the SMP Manual. Any changes to the bank repair methods shall be proposed in the ANR, or equivalent document, and be approved in writing by the Executive Officer before implementation. Proposed changes to the bank repair methods must be consistent with Provision D.24 demonstrate to the satisfaction of the Executive Officer that the change does not adversely affect beneficial uses and will result in no net loss and a long-term net gain in the extent, functions, and beneficial uses of water of the State..

24. The use of soil bioengineering systems as presented in the Natural Resource Conservation Service (NRCS) manual[2] shall be used as the first and primary strategy for stream bank stabilization projects. Rock and riprap installation shall be limited to only those areas experiencing shear stresses that exceed the performance of vegetation-based soil bioengineering systems as designated in NRCS and Corps shear stress tables.[3]

25. Where bank stabilization activities may result in modifications to channel cross-sections and/or profiles, the banks shall be re-contoured to match the adjacent bank slope.

Other Maintenance Activities

26. The SCWA shall follow the other minor maintenance activities guidelines described in the SMP Manual.

[2] Bentrup, G. and J.C. Hoag. 1998. The Practical Streambank Bioengineering Guide, User's Guide for Natural Streambank Stabilization Techniques in the Arid and Semi-Arid Great Basin and Intermountain West. U.S. Department of Agriculture, Natural Resources Conservation Service.

[3] Fischenich, C. 2001. Stability Thresholds for Stream Restoration Materials. EMRRP Technical Notes Collection (ERDC TN-EMRRP-SR-29). U.S. Army Engineer Research and Development Center, U.S. Army Corps of Engineers, Vicksburg, MS.

National Resource Conservation Service (NRCS). 2007. Part 654 National Engineering Handbook Stream Restoration Design.

27. Other stream maintenance activities shall not result in direct or cumulative significant impacts to water quality or beneficial uses of waters of the State.

28. Maintenance activities that may result in modifications to stream cross-sections and or profiles shall be implemented to achieve sustainable and appropriate channel geometries.

Quantitative Assessments

29. The SCWA shall develop a workplan for the continued development and refinement of channel roughness and channel dimension objectives and estimates of flood stage-discharge relationships so that quantifiable information will aid in determining when maintenance is needed. Initial draft channel objectives were developed under amended Order No. R2-2011-0020. The SCWA will develop a workplan to further refine the draft channel objectives. The workplan shall include a description of data collection activities to be conducted and a 5-year implementation schedule. The workplan to refine the draft channel objectives and improve their applicability may include activities to: (1) further develop reach specific vegetation management templates including roughness guidelines; (2) further collecting field-based flow data to refine existing channel objectives or develop additional channel objectives; and (3) developing a demonstration reach where detailed pre- and post-maintenance analysis of channel conditions occurs to help inform maintenance practices at other locations. The workplan shall be submitted to the Executive Officer by July 31, 2016. Any changes to the workplan must be approved in writing by the Executive Officer.

30. The SCWA shall develop a workplan to consider funding additional watershed improvement projects. Example projects include, but are not limited to, projects that address erosion control, reduce peak storm runoff, improve infiltration and groundwater recharge, improve water quality, enhance habitats, control exotic and invasive species, or provide other watershed health functions. The goal of the workplan is to identify projects, in addition to those already required for mitigation, that may result in reducing routine maintenance needs and improving beneficial uses on SCWA maintained channels. The workplan shall include an evaluation of 3 projects and identify and project goals/objectives, potential project implementation partners, cost, and available budget for SCWA to implement the projects. The workplan shall be submitted to the Executive Officer by April 30, 2017.

Best Management Practices

31. The SCWA shall implement the BMPs contained within the SMP Manual and the FEIR (or alternative BMPs of comparable effectiveness) to prevent pollutants from draining, being washed, or otherwise discharged into waters of the State during SMP activities.

32. The SCWA shall follow the procedures and protocols in the Fishnet 4C Manual[4] when removing large woody debris for maintenance purposes. Large woody debris shall not be removed or be managed in a channel if it potentially functions as habitat for salmonids and or other threatened and endangered species. If the large woody debris poses a credible risk of blocking a culvert, bridge, or otherwise obstructing flow or causing structural damage it may be relocated, repositioned, and or cabled to a stream bank in a manner to protect existing habitat. For channels designated by the SMP Manual as not having potential salmonid or other threatened and endangered species habitat, large woody debris can be immediately

[4] Fishnet 4C. 2004. Guidelines for Protecting Aquatic Habitat and Salmon Fisheries for County Road Maintenance. December 2004.

removed or relocated to a more suitable location if the large woody debris is posing a significant and imminent threat to infrastructure or structures on adjacent properties.

33. The SCWA shall divert any flow at the site around the active maintenance site in a non-erosive manner.

34. The SCWA shall halt work activities if fish, amphibians or other aquatic organism are exhibiting stress or dead within 1,000 feet of work activity or discharge. The SCWA shall immediately assign a qualified environmental scientist to investigate the cause of the problem, to define an acceptable corrective action plan, and to determine if the cause is related to SMP activities. The SCWA shall immediately report all incidents involving dead or stressed aquatic organisms, as well as prescribed action plans to Regional Water Board and CDFW staff.

Compensatory Mitigation

35. The SCWA shall implement the Mitigation Monitoring and Reporting Program included in the SMP Manual.

36. The SCWA shall mitigate for both permanent and temporary impacts from its stream maintenance activities by implementing in-kind onsite mitigation (Tier 1 mitigation), and shall only implement in-kind offsite mitigation if there is no opportunity to mitigate onsite (Tier 2 mitigation).

37. The SCWA shall mitigate for the temporal loss of beneficial uses by funding offsite watershed-level projects (Tier 3 mitigation) that would address watershed-level issues such as erosion to reduce the overall need to conduct stream maintenance activities. The SCWA shall set aside 10% of each project's costs for sediment removal and bank stabilization maintenance activities to fund Tier 3 watershed restoration projects.

38. Tier 3 watershed mitigation projects may include such activities as headwater-area erosion control, revegetation of riparian corridors, invasive plant removal, or other stream restoration practices. Watershed-based mitigation shall provide restorative and mitigating watershed solutions by partnering with local non-profit agencies, municipalities, restoration organizations, creek groups, schools, and resource conservation districts. Post-construction stormwater treatment/LID projects that are not required by the State Water Board's Phase II Municipal Stormwater Permit and provide improvements to water quality may be considered as Tier 3 mitigation projects.

39. The SCWA shall implement Tier 3 mitigation to compensate for the impacts to engineered channels from targeted and localized sediment and vegetation removal projects.

40. To the maximum extent practicable, the SCWA shall implement compensatory mitigation projects in advance of, or concurrent with, the activity causing the permitted impacts. This is particularly true when offsite mitigation is pursued. Due to the nature of onsite mitigation, it is recognized that onsite mitigation activities will likely occur during or following the maintenance activities.

41. The SCWA shall submit proposed mitigation sites to the Executive Officer for approval as part of the ANR. In the event that a proposed mitigation activity is denied, or a site is withdrawn for any reason, an alternative mitigation proposal that provides comparable levels

of mitigation shall be submitted to the Executive Officer for concurrence no later than 90 days following denial or rescission. The SCWA shall implement those alternative mitigation proposals that the Executive Officer has approved.

42. The SCWA shall mitigate for impacts to water quality and beneficial uses from its vegetation management activities. Mitigation shall include revegetation with native vegetation, and other methods, as described in the Vegetation Management Plan, Appendix E of the SMP Manual.

43. If any of the mitigation sites have not developed in accordance with the performance criteria as described in the SMP Manual by year five (5) after completion of mitigation construction, the SCWA shall prepare and implement a revised mitigation plan, acceptable to the Executive Officer, addressing corrective action, outlining additional monitoring, or proposing new mitigation.

Monitoring and Reporting

44. The SCWA shall monitor all active project sites according to the Monitoring and Reporting Program attached to this Order. All self-monitoring reports shall be submitted annually to the Regional Water Board.

45. The SCWA shall submit the ANR with the information specified in SMP Manual Appendix F on the projects that will be conducted in the upcoming year. In addition, in the ANR, the SCWA shall determine if any of the proposed projects would impact any channels identified as functioning as potential habitat for threatened or endangered species, or providing habitat for different life cycles for salmonids (i.e., migration, spawning, rearing, or refugia).

46. The SCWA shall submit annual reports according to the requirements contained in the Annual Reporting Outlines, Appendix F of the SMP Manual.

47. All annual maintenance plans and the ANR shall be developed by an interdisciplinary team with expertise in fisheries biology, hydrology, and fluvial geomorphology. The team's expertise shall be documented in the ANR.

48. The ANR shall be submitted by April 30 of each year for the work proposed for completion that year. The Executive Officer will approve the ANR for that year's projects and provide a notice to proceed, or indicate needed modifications to the ANR.

49. The SSR shall be submitted by May 15 of each year for the work proposed for completion that year.

50. The APR shall be submitted by January 31 of the year following the year in which maintenance activities took place. The SCWA is required to use the California Wetlands Form to provide individual project information reported in the APR. The completed short form and map showing the project boundaries shall be submitted electronically to habitatdata@waterboards.ca.gov.

51. The following activities are exempt from annual notification requirements and may occur any time at the discretion of the SCWA and consistent with the SMP Manual: maintenance of existing access roads located along the top-of-bank where there will be no impact on waters of the State; maintenance of V-ditches along existing service roads where all work is

above the level of top-of-bank of the adjacent stream, and there will be no impact to waters of the State; and removal of debris (e.g., trash, shopping carts) accumulations using hand labor and not involving the removal of vegetation or large woody debris.

52. Maintenance activities on engineered channels that are identified as localized, targeted, or other facilities maintenance activities shall be reviewed during the ANR process and will not require Project Specific Notification to the Regional Water Board. All other activities in engineered channels require Project Specific Notification and Executive Officer approval before the work is initiated. See Provision D.54 for information about Project Specific Notification requirements.

53. For maintenance work in modified or natural channels, the SCWA shall submit the Project Specific Notification information and receive Executive Officer approval before the work is initiated. The Project Specific Notification must demonstrate to the satisfaction of the Executive Officer that the project does not adversely affect beneficial uses and meets the conditions of the Order. See Provision D.54 for information about Project Specific Notification requirements.

54. Project Specific Notification on all channels shall include photo documentation of existing conditions, a description of the project, an assessment of the need for the proposed maintenance activities, and measures taken to avoid and minimize impacts to beneficial uses. The SCWA shall also provide post-maintenance photo documentation. The SCWA shall establish a minimum of 6 photo-documentation points at the project site. These photo-documentation sites shall be selected to document channel and bank conditions immediately upstream and downstream of each project site, as well as the project reach. The SCWA shall determine if any of the proposed projects could impact any channels identified as functioning as potential habitat for threatened or endangered species, or providing habitat for different life cycles for salmonids (i.e., migration, spawning, rearing, or refugia) and describe what BMPs including the retention of instream habitat features will be taken.

55. This Order requires submittal of a Project Specific Notification Summary Report (PSN Report) acceptable to the Executive Officer by April 30 of the year following the year in which work was completed. The PSN Report shall describe activities conducted, descriptions of mitigation implemented, and monitoring results including post project photos to document BMP success. The PSN Report shall also include a description of any corrective actions planned to ensure success of BMPs and the results of any threatened or endangered species surveys conducted.

56. Before June 15 of each year, the SCWA shall organize a meeting and field tour with the agencies listed in Provision D.69, to discuss the projects scheduled for the upcoming maintenance season.

57. After each maintenance season, the SCWA and Regional Water Board staff shall meet to discuss the performance of the SMP, review lessons learned from the completed construction season, determine the need to implement improved stream maintenance techniques and BMPs, and assess the long-term maintenance approach for chronic maintenance sites. The SCWA shall implement all stream maintenance techniques and BMPs deemed necessary to protect beneficial uses by the Executive Officer in connection with such review.

58. The applicant shall submit, no later than June 1, 2016, a maintenance plan, acceptable to the Executive Officer, that describes criteria, or triggers, for when SCWA conducts maintenance

for public safety and fire fuel load reduction responsibilities including visibility, access, and fire management, and what maintenance will be completed once those criteria have been met. The maintenance triggers shall be based, in part, on local fire code requirements and shall result in the minimum maintenance necessary to accomplish public safety and fire fuel load reduction responsibilities while balancing the protection and restoration of beneficial uses.

59. The Applicant shall submit no later than July 31, 2017, an updated SMP Manual acceptable to the Executive Officer that includes, but is not limited to, updated Sediment Sampling and Analysis Guidelines, updated Vegetation Management Plan, California Freshwater Shrimp Management Plan, and Steelhead Management Plan.

60. After five years of SMP implementation, staff of the SCWA and Regional Water Board, along with other regulatory agencies, shall review the SMP to evaluate its overall effectiveness, and the Regional Water Board shall consider issuing Water Quality Certification and WDRs for an additional five years to allow continuation of SMP implementation. The review shall include an assessment of maintenance activities conducted to date, BMPs, adequacy of the SMP mitigation program, data management, adaptive updates and revisions of the SMP Manual, and overall program coordination and communication between the SCWA and the regulatory agencies. The SMP Manual, the Water Quality Certification, and the WDRs may be revised or updated based on this review.

Fees

61. This Order combines WDRs and Water Quality Certification provisions. The annual fee shall reflect this, and consist of the following:

    The fee amount for the WDRs portion shall be in accordance with the current fee schedule, per 23 CCR, Division 3, Chapter 9, Article 1, section 2200(a)(1), based on the discharge's Threat to Water Quality and Complexity rating of the Discharge to Land or Surface Waters, plus applicable surcharge(s). The Threat and Complexity rating shall be rated as 3B, and shall remain at this level throughout the period of this Order. After the initial year, this portion of the fee shall be billed annually to the SCWA and shall be paid separately from the Water Quality Certification portion. The fee payment shall indicate the Order number, WDID number (2-494092003), and the applicable season.

Records Provisions

62. The SCWA shall maintain a data management system to monitor stream maintenance activities, natural resources in the SMP area, permitting requirements, and mitigation efforts.

63. The Executive Officer may request that data be provided to the Regional Water Board at times outside of the reporting requirements specified in this Order.

64. The SCWA shall retain records of all monitoring information, including all calibration and maintenance records, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by request of the Executive Officer at any time.

65. The SCWA shall submit electronic versions of any submitted reports or documents.

General Provisions

66. All provisions in this Order apply to all channels and activities identified in the SMP Manual.

67. The following activities are not included in the SMP Manual and, therefore, are not covered in this Order: capital improvement projects; discharge of decant water from dredged sediments back to receiving waters; projects that would alter the designed flood conveyance capacity of a channel; and emergency activities and procedures. A situation is considered an "emergency" if it is a sudden, unexpected occurrence involving a clear and imminent danger that demands immediate action to prevent or mitigate loss of or damage to life, health, property, or essential public services. Emergency includes such occurrences as fire, flood, earthquake or other soil or geologic movements, as well as such occurrences as riot, accident or sabotage (California Public Resources Code § 21060.3).

68. The SCWA shall comply with all the Prohibitions, Discharge Specifications, Receiving Water Limitations, and Provisions of this Order immediately upon adoption of the Order or as provided in the Order.

69. The SCWA shall comply with all necessary approvals or permits for the SMP and its mitigation projects from applicable government agencies, including, but not limited to, the Regional Water Board, CDFW, the Corps, USFWS, NMFS, and local agencies. The SCWA shall submit copies of such approvals or permits to the Executive Officer prior to SMP implementation.

70. This Order does not allow for the take, or incidental take, of any special status species. The SCWA shall use the appropriate protocols, as approved by CDFW and USFWS, to ensure that project activities do not impact the beneficial use of the Preservation of Rare and Endangered Species.

71. The SCWA shall implement the SMP in accordance with the methods described in the SMP Manual and the requirements of this Order, and shall comply with all applicable water quality standards.

72. SMP activities occurring within the channel below the ordinary high water mark shall only occur from June 15 to October 31 or the first significant rainfall after October 15, whichever occurs first (significant rainfall is defined as 0.5 inch of rain in a 24-hour period). No new instream sediment removal or bank stabilization work shall start after October 15 of any year, but work already underway shall have until October 31 to be completed. In particularly dry years, when channels remain dry earlier than June 15 or later than October 31, SCWA may request approval to conduct ground-disturbing maintenance activities prior to June 15 or later than October 31. Exceptions may be made on a project-by-project basis with advance approval by the Executive Officer and federal and State regulatory agencies as appropriate. The Executive Officer will consider any forecasted rainfall and any species habitat needs when approving or denying a work window exception. Disturbed soil related to SMP activities shall be stabilized and winterized. Required planting shall be performed no later than the fall/winter planting season in the year following project installation.

73. If, at any time, an unauthorized discharge to surface water (including wetlands, rivers or streams) occurs, or any water quality problem arises, the associated SMP activities shall cease immediately until corrective actions have been implemented, including ensuring that

adequate BMPs are implemented to eliminate the discharge and clean up and remediate any recoverable pollutants. The Regional Water Board shall be notified promptly and in no case more than 24 hours after the unauthorized discharge or water quality problem arises.

74. All mitigation activities shall be completed as described in the Mitigation Monitoring and Reporting Program and the SMP Manual.

75. This Water Quality Certification and issuance of WDRs is subject to modification or revocation upon administrative or judicial review, including review and/or reconsideration pursuant to CWC section 13330 and 23 CCR section 3867.

76. This Water Quality Certification is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23 CCR, section 3855, Subdivision (b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

77. The Regional Water Board may add to or modify the conditions of this Order, as appropriate, to implement any new or revised water quality standards and implementation plans, such as new or revised total maximum daily load requirements adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or CWA section 303.

78. The SCWA shall maintain a copy of this Order and all relevant plans and BMPs at SMP work sites, so as to be available at all times to site operating personnel.

79. The SCWA shall correct any and all problems that arise from an SMP activity, including a failure to meet the conditions of this Order that results in an unauthorized release of pollutants, including sediment.

80. The SCWA shall permit the Regional Water Board staff or its authorized representative, upon presentation of credentials:

    a. Entry on to the premises on which maintenance activities are planned or underway, wastes are located, or in which records are kept.
    b. Access to copy any records required to be kept under the terms and conditions of this Order.
    c. Access to inspect any treatment equipment, monitoring equipment or monitoring method required by this Order.
    d. Access to sample any discharge or surface water covered by this Order.

81. In the event of any violation or threatened violation of the conditions of this Order, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under applicable State or federal law. For the purposes of CWA section 401(d), the applicability of any State law authorizing remedies, penalties, process or sanctions constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Order. In response to a suspected violation of any condition of this Order, the Regional Water Board may require the holder of any federal permit or license subject to this Order to furnish, under penalty of perjury, any technical or monitoring reports the Regional Water Board deems appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship

to the need for the reports and the benefits to be obtained from the reports. In response to any violation of the conditions of this Order, the Regional Water Board may add to or modify the conditions of this Order as appropriate to ensure compliance.

82. This Order is not transferable.

83. The authorization of this Order for SMP activities expires on April 13, 2021. Mitigation and monitoring requirements that extend beyond the term of this Order are not subject to the expiration date outlined above, and remain in full effect and are enforceable.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, complete and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on _____.

_____
Bruce H. Wolfe
Executive Officer

Attachment A: Monitoring and Reporting Program
Attachment B: Stream Maintenance Program Manual
Attachment C: Appendices to Stream Maintenance Program Manual

Attachment A
Monitoring and Reporting Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

MONITORING AND REPORTING PROGRAM
FOR

SONOMA COUNTY WATER AGENCY

STREAM MAINTENANCE PROGRAM

SONOMA COUNTY

ORDER NO. R2-2016-00XX

A. GENERAL

1. This Monitoring and Reporting Program (MRP) is issued in accordance with Provision D.44 of Regional Water Board Order No. R2-2016-00XX (Order) and pursuant to CWC sections 13263 and 13267(b).
2. The MRP is necessary to: 1) document compliance with waste discharge requirements and prohibitions established by the Regional Water Board, 2) facilitate self-policing by the Sonoma County Water Agency (SCWA) in the prevention and abatement of pollution arising from waste discharge, 3) evaluate the effectiveness of the Stream Maintenance Program (SMP), including assessment of best management practices (BMPs) and mitigation measures, and 4) assist the SCWA in complying with State requirements and policies. The evidence supporting this MRP is in the public file for this matter.
3. The MRP includes monitoring requirements for maintenance and restoration activities including the following monitoring elements: receiving water monitoring for the types of pollutants and conditions listed under the Standard Observations section; surface water monitoring during active water diversions; sediment monitoring from sediment removal projects; erosion and sediment control monitoring for bank stabilization projects; monitoring of revegetation projects and biotechnical bank stabilization projects to determine if plant establishment success criteria have been met; and monitoring BMPs to assess their effectiveness.
4. For monitoring, the SCWA shall follow requirements contained in this MRP and any additional requirements listed in the Sediment Sampling and Analysis Guidelines, Appendix B of the SMP Manual.

B. SAMPLING AND ANALYTICAL METHODS

1. Sample collection, storage, and analyses shall be performed according to the most recent version of U.S. EPA Standard Methods for the Analysis of Water and Wastewater.
2. Water and sediment analysis shall be performed by a laboratory certified for these analyses by the State of California.
3. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. DEFINITION OF TERMS

1. A **grab sample** is a discrete sample collected at any time.
2. A **composite sample** is a discrete sample comprised of two or more grab samples collected at any time from a defined project area.
3. **Receiving waters** refers to any water body that actually or potentially receives surface or groundwater, which passes over, through, or under dredged sediment during placement, dewatering, settling/consolidation, and excavation/removal activities.
4. A rehandling/disposal site operational **episode** consists of continuous dredged material slurry placement on the disposal site that stops for no more than 30 consecutive days. If placement stops for more than 30 consecutive days and then starts up again, the date of

startup will be considered the beginning of a new operational episode for monitoring purposes.

5. **Receiving Waters Standard Observations** refer to:

   a. Evidence of floating and suspended materials as recorded by visual observations.
   b. Discoloration and turbidity: description of color, source, and size of affected area.
   c. Evidence of odors, presence or absence, characterization, source, and distance of travel from source.

6. **Site Standard Observations** refer to visual inspection of:

   a. The overall condition of the sediment containment structure(s) and area and any BMPs to contain the excavated sediment.
   b. The location of placed material, distance to waters of the State, and whether any discharge of dredged sediments outside of the containment structures has occurred.
   c. The condition of the excavated material transport equipment along the entire length of the transport path from the sediment removal area to the point of discharge into the containment area.

D. MONITORING REQUIREMENTS

1. **Observations and Monitoring Schedule -** The schedule of observations and monitoring is provided in Table 1, below:

Table 1 - Observations and Monitoring Schedule for the Sediment Disposal Operations

Observation/Monitoring Frequency	Type	Location	Reporting Frequency
Twice daily (once in AM and once in PM) during operations	Receiving water standard observations	Receiving water within the project area	Annually
	Site standard observations	Along project area	Annually

2. **Standard Observations -** The following Standard Observations of the receiving water will be recorded on every day of operation on the field reporting form:

   a. Floating and suspended materials of waste origin (to include oil, grease, algae, and other macroscopic particulate matter): presence or absence, source, and size of affected area.

   b. Discoloration and turbidity: description of color, source, and size of affected area.

   c. Odor: presence or absence, characterization, source, distance of travel, and wind direction.

   d. Hydrographic condition including: time and height of corrected low and high tides and depth of water columns and sampling depths.

e. Weather condition including: air temperatures, wind direction and velocity, and precipitation.

3. **Active Water Diversion Monitoring** - For all activities involving an active diversion of a stream:

   a. The SCWA shall establish surface water monitoring stations, one representative of typical undisturbed conditions directly upstream of the active work area and the point of diversion, and one representative of surface water affected by the diversion that is directly downstream of the water diversion outlet.

   b. Baseline measurements shall be taken before installation of diversion structures at the established surface water monitoring stations identified above in 3.a.

   c. If for whatever reason work within that reach is interrupted for over one day, new baseline measurements shall be taken.

   d. Water diversion activity monitoring shall be in accordance with Table 2 below:

Table 2
Water Diversion Sampling and Analysis

Parameter	**Units**	**Sample Type**	**Minimum Analysis Frequency**
Dissolved Oxygen	mg/L	Grab	Once Daily at each monitoring station
pH	pH units	Grab	Once Daily at each monitoring station
Temperature	°F	Grab	Once Daily at each monitoring station
Turbidity	NTU	Grab	Once Daily at each monitoring station

   e. The daily sampling set shall be taken during work hours, but not within the first hour after maintenance activities have started each day.

   f. Samples shall be taken with accurately calibrated field measurement instrument(s) and the results shall be saved and logged.

   g. A Quality Assurance/Quality Control (QA/QC) plan equivalent to requirements of the Surface Water Ambient Monitoring Program shall be followed.

   h. The SCWA shall observe surface water conditions upstream and downstream of the active project area to visually detect impacts of the water diversion.

   i. Observations shall be conducted during sampling events at sampling locations for presence of bottom deposits, color, film or coating (from oil, grease, wax, etc.), floating material (including solids, liquids, foams, and scum), and odor. See the Standard Observations section for the complete list of observations that will be tracked. If any visual events occur, additional samples as detailed in Table 2 shall be taken, with results being saved, logged, and reported.

   j. The SCWA shall have equipment and supplies onsite (or readily available nearby) that could be quickly deployed to provide additional filtration if turbidity is

observed. These supplies may include: bladders for settling, filter bags and pumps, silt filter dams, or a silt barrier as appropriate depending on site conditions.

k. Surface water observations detecting exceedances of Discharge Specifications and Receiving Water Limitations are subject to "Reporting" requirements in Section F of this document.

l. During the installation and removal of diversion structures, the SCWA shall monitor surface monitoring stations as described in 3.a. above, and in accordance with Table 3 below:

Table 3
Diversion Structure Monitoring

Parameter	**Units**	**Sample Type**	**Minimum Analysis Frequency**
Turbidity	NTU	Grab	Twice Daily

4. **Sediment Monitoring**

a. Applicable Sediment Monitoring

All dredged material will be disposed in uplands at a permitted disposal facility or a non-wetland beneficial reuse site, such as construction fill, non-agricultural cover, or landfill daily cover. Dredged material disposal at an aquatic or wetland beneficial reuse site is not covered under the SMP Waste Discharge Requirements.

b. Sampling Frequency and Locations

i. For sediment removal projects and bank stabilization projects at creeks that have not been approved for reduced sampling frequency (per Provision D.4(b)v below), one sample will be collected and analyzed for every 500 cubic yards of sediment removed. Several grab samples may be composited into one sample to represent the bulk of sediment to be removed from the creek.

ii. For long channel reaches that are not particularly wide or deep with sediment, the SCWA will collect grab sediment samples for every 1000 feet of project length rather than per 500 cubic yards of sediment removal. The SCWA shall use whichever approach results in more samples in order to better characterize the variability along the entire length of the project site.

iii. For project sites that require more than one sample, grab sampling locations will be selected to represent overall reach conditions. Sampling sites will also specifically target conditions downstream of culvert crossings, culvert outfalls, and key stream confluences.

iv. In all cases, sampling locations shall be within the project area where there is the highest potential for detecting the maximum number of contaminants at the highest concentrations, and the sampling locations shall be the most representative of site conditions.

v. Upon approval by the Executive Officer, sampling frequencies may be reduced at locations where the review of readily available, existing information, including

all results of previously collected physical and chemical testing, have continually demonstrated attainment of the screening guidelines. SCWA may propose reduced sampling frequency for sites with a minimum of two years of data. Testing results must be below corresponding Tier I Environmental Screen Levels (ESLs) or commensurate with natural/anthropogenic background concentrations. For sites with reduced sampling frequency, Regional Water Board staff may still require sediment sampling and analysis when there is a suspected contamination source.

c. Sediment Sampling Methodology

This guidance applies to discrete (single) samples and composite samples.

i. All samples shall be collected in accordance with U.S. EPA Guidelines and sampling methodologies.

ii. The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than U.S. EPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and approved by the Executive Officer

iii. Sediment sampling methodology is described in the Sediment Sampling and Analysis Guidelines, Appendix B of the SMP Manual.

iv. For each sediment removal project, the SCWA shall characterize the sediment and summarize all sediment sampling analyses, prior to proposed sediment removal activities.

v. Every sediment sample location shall be sampled for the full list of parameters/analytes listed in Table 4. Sampling parameters/analytes listed in Table 4 may be modified after a history of sampling is obtained. This may result in not requiring monitoring for some of these contaminants under certain situations or at certain locations, or adding more parameters/analytes if deemed necessary by the Executive Officer.

5. **Post-Project Monitoring**

a. Bank Stabilization Erosion and Sediment Control Monitoring

i. For the first year following completion of a bank stabilization project, the SCWA shall inspect surface waters daily following larger storm events to determine if the project and the installed BMPs are adequately functioning to stabilize soil and prevent excessive erosion.

ii. Photos will be taken to document all site inspections.

iii. After the first year of monitoring, the project site shall be monitored once a year for a period of five years thereafter.

iv. The SCWA shall observe surface water upstream and downstream of the bank stabilization site for bottom deposits, color and floating material. Monitoring will include a visual observation of conditions 200 feet upstream and downstream of

the site, conditions of the bank stabilization repair, and conditions of any vegetation planting that was performed.

v. If the sites fails such that erosion or degradation is apparent or the appearance of surface water is degraded, the Regional Water Board will be immediately notified and corrective actions will be taken to resolve the problem.

vi. For bank stabilization sites that have failed more than twice in a five year period, the SCWA shall monitor creek flows (cfs) and water levels (stage) during two storm events per rainy season. These will be "high flow" events, typically a 1.5 to 5 year recurrence interval storm. Monitoring shall include photo documentation and explanation of visual inspections of: (1) conditions upstream and downstream of the site and (2) conditions of the bank stabilization repair. Information gathered during storm events may aid in determining the cause of the bank failure. The purpose of the investigations is to identify potential causes of bank failures. Many factors affect bank repair success. Assessing sites within or shortly after "high flow" events will provide value in assessing bank repair methods under different flow conditions.

b. Revegetation Monitoring, including Bank Revegetation

i. The SCWA shall monitor all revegetated sites annually for five years after planting, and for at least two years after supplemental watering is discontinued, to determine if supplemental watering, weed control, rodent control, and/or protection from vandalism are required to encourage plant establishment.

ii. The SCWA shall implement all vegetation management success criteria requirements contained within the SMP Manual including the Vegetation Management Plan, Appendix E of the SMP Manual.

c. Geomorphic Shaping Activities

i. The SCWA shall monitor all projects that require "geomorphic shaping activities" to determine the sustainability of the grading. These projects sites shall be monitored for a minimum of five years and all monitoring results shall be submitted to the Regional Water Board.

ii. For geomorphic shaping projects, post-project monitoring will include evaluating the following channel conditions: channel bank stability, bed scour, thalweg location, and any indications of excessive erosion, instability, or deposition in the channel. If signs of excessive erosion or deposition are observed and/or if the project reach is not geomorphically stable at the end of the five year monitoring period, the SCWA shall prepare an analysis of the cause of the instability and, if deemed necessary by staff of the Regional Water Board, remedial actions shall be implemented by the SCWA.

d. Maintenance Activities in Alluvial Fans

The SCWA shall monitor all maintenance projects located in or influenced by alluvial fan environments to determine if adaptive management of these areas will inform future management plans. These projects sites shall be monitored for a minimum of five years and all monitoring results shall be submitted to the Regional Water Board.

6. **Best Management Practices Monitoring**

   a. The SCWA shall inspect temporary and permanent structural BMPs at active sites on an on-going basis and at least once each morning and once each afternoon that an activity is being implemented to determine if maintenance, repair, or replacement of BMPs is necessary.

   b. The SCWA shall maintain, repair, or replace BMPs as appropriate to prevent sediment discharge and reduce erosion.

   c. The SCWA shall document BMPs installations and inspections and enter all data in the BMPs inspection log.

   d. The SCWA shall document BMPs effectiveness, maintenance and repair, and corrective actions taken, and enter all data in the BMPs inspection log.

   e. The BMPs inspection log shall be kept onsite while the site is active, and shall be available to Regional Water Board staff upon request.

   f. At a minimum, BMPs at active project sites shall be inspected and maintained within 2 business days (48 hours) prior to each qualifying rain and within two business days (48 hours) after each qualifying rain event. For this requirement, a qualifying rain event is one producing precipitation of ½ inch or more of discharge.

E. QUALITY ASSURANCE AND QUALITY CONTROL

A QA/QC plan is an important component of a monitoring program involving extensive field sampling and laboratory analyses. The two objectives of the QA/QC plan are: 1) to provide a means of ongoing control and evaluation of the sampling and analysis procedures; and 2) to quantify data precision and accuracy for use in data interpretation. The QA/QC plan will be followed in all phases of the monitoring program including sampling, and data validation and reporting. QA/QC requirements are noted below.

a. The SCWA will utilize a sampling contractor or internal staff to use the field instruments and sampling equipment who will be responsible for managing all field sampling and analysis.

b. All equipment used for field sampling will be tested and calibrated before leaving the office and verified upon arrival at the site to ensure the instruments are in proper working condition.

F. REPORTING

1. **General Reporting Requirements**

   a. The SCWA shall comply with reporting dates and requirements within the SMP Manual.

b. All results of monitoring performed in compliance with this Order shall be made available to Regional Water Board staff upon request.

c. The SCWA shall submit a transmittal letter with all monitoring reports to demonstrate compliance status with the Order.

2. **Records to Be Maintained**

Written reports shall be maintained by the SCWA or its laboratory, and shall be retained for a minimum of five years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by staff of the Regional Water Board. Such records shall show the following for each sample:

a. Identity of sample and sample station number.

b. Date and time of sampling and the name of the person performing the sampling.

c. Date and time that analyses are started and completed, and name of the personnel performing the analyses.

d. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used.

e. Calculation and evaluation of results.

f. Results of analyses, and detection limits for each analysis.

3. **Reports to Be Filed With the Regional Water Board**

Written monitoring reports shall be filed with the Regional Water Board annually. The reporting requirements are noted below.

a. A letter transmitting the essential points in each report should accompany the Annual Post-maintenance Summary Report. Such a letter shall include:

i. A discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations. If the SCWA had previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory.

ii. If no violations have occurred in the last report period this shall be stated in the letter of transmittal.

iii. Monitoring reports and the letter transmitting the monitoring reports shall be signed by the duly authorized representative of the SCWA if such representative is responsible for the overall operation of the facility from which the discharge originates.

iv. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

b. The Annual Post-maintenance Summary Report shall contain the following:

i. A summary of site maintenance activities.

ii. Tabular and graphical summaries of the monitoring data obtained during the previous year, or a statement documenting that monitoring data has been collected, is on file at the SCWA, and will be provided for review upon request.

iii. A summary and certification of completion of all Standard Observations for the project site.

iv. A description of the compliance record and corrective actions taken or planned that may be needed to bring the SCWA into full compliance with Order No. R2-2016-00XX.

v. The SCWA shall submit an Annual Post-maintenance Summary Report to the Regional Water Board by January 31 of each year, covering the previous calendar year activities.

vi. For Each Sediment Removal Project:

1. Characterization of the sediment

2. A summary of all sediment sampling analyses.

vii. For Each Sediment Disposal Event

1. The quantity and locations of excavated material placed at the site and the source of the excavated material.

2. An estimate of the total volume of dried excavated material that was reused or disposed of offsite during the past year along with a description of the reuse or disposal location(s) where this material was sent.

3. A map or aerial photograph showing observation and monitoring stations.

c. Laboratory statements of results of analyses specified in the MRP must be included in each sediment removal and sediment disposal report. The laboratory reporting requirements are as follows.

i. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Water Board.

ii. Laboratory QA/QC information must be included in the monitoring report.

iii. The laboratory QA/QC information should include: the method; equipment and analytical detection limits; the recovery rates; an explanation for any recovery rate that is less than the recovery acceptance limits specified in the U.S. EPA method procedures or the laboratory's acceptance limits (if they are more stringent than those in the U.S. EPA method procedures); the results of equipment and method blanks; the results of spiked and surrogate samples; the frequency of quality control analysis; and the name and qualifications of the person(s) performing the analyses.

4. **Contingency Reporting**

A report to the Executive Officer and Regional Water Board case manager shall be made by telephone of any accidental discharge of whatever origin immediately after it is

discovered. A written report shall be filed with the Regional Water Board within five days thereafter. This report shall contain the following information:

i. A map showing the location(s) of discharge(s);

ii. Approximate flow rate;

iii. Nature of effects, i.e., all pertinent observations and analyses; and

iv. Corrective measures underway or proposed.

5. **Violation Reporting**

   a. Upon discovery of an exceedance, the SCWA shall identify the source of the exceedance, implement corrective action, and resample or make additional observations to determine whether or not the exceedance was corrected.

   b. A report to the Executive Officer and the Regional Water Board case manager shall be made by telephone of any accidental discharge of whatever origin immediately after it is discovered. A written report shall be filed with the Regional Water Board within five days thereafter.

   c. The SCWA shall stop all work at the site for violations lasting longer than two hours. The SCWA shall update Regional Water Board staff of site conditions and obtain verbal permission to resume work.

   d. The SCWA shall notify Regional Water Board staff in writing within five calendar days of all violations. Written reports shall include time and date of incident, duration, estimate of discharge or bypass volume, and documentation of sampling results/observations determining compliance status. The report shall also include detailed discussion of reasons for noncompliance, and specific steps that were or will be taken to correct the failure and prevent it from reoccurring.

G. MODIFICATION

Any part of this Monitoring and Reporting Program may be revised with the written approval of the Executive Officer.

I, Bruce H. Wolfe, Executive Officer, hereby certify that the foregoing Monitoring and Reporting and Program:

1. Has been developed in accordance with the procedure set forth in this Regional Water Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Order No. R2-2016-00XX;
2. Was adopted by the Regional Water Board on _____; and
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the SCWA, and revisions will be ordered by the Executive Officer or the Regional Water Board.

_____

Bruce H. Wolfe
Executive Officer

Table 4
Discrete Sediment Sampling and Analysis

EPA Test Method[1]	Analyte	Reporting Limit for Soil (dry weight mg/kg)	Analyte (cont.)	Reporting Limit for Soil (mg/kg)
	Conventional Parameters			
	Grain Size (%)	0.1		
9060	Total organic carbon (TOC) (%)	0.1		
	Total solids (%)	0.1		
6020	**Total Metals**			
	Arsenic	0.05	Mercury (total)	0.01
	Cadmium (total)	0.05	Nickel (total)	0.1
	Chromium (total)	0.1	Selenium (total)	0.1
	Copper (total)	0.1	Silver (total)	0.1
	Lead (total)	0.1	Zinc (total)	1.0
8081 or 8082A	**Organochlorine Pesticides**			
	Aldrin	0.02	Dieldrin	0.02
	α-HCH (hexachlorocyclohexane)	0.02	Endosulfan I	0.02
	β-HCH	0.02	Endosulfan II	0.02
	γ-HCH (Lindane)	0.02	Endosulfan sulfate	0.02
	δ-HCH	0.02	Endrin	0.02
	Chlordane (tech)	0.02	Endrin aldehyde	0.02
	2,4'-DDD	0.02	Heptachlor	0.02
	4,4'-DDD	0.02	Heptachlor epoxide	0.02
	2,4'-DDE	0.02	Toxaphene	0.02
	4,4'-DDE	0.02		
	2,4'-DDT	0.02		
	4,4'-DDT	0.02		
	Total DDT	NA		
8270C or 8270D[2]	**Poly Aromatic Hydrocarbons (PAHs)**			
	2-Methylnaphthalene	0.005	Chrysene	0.001
	Acenaphthene	0.001	Dibenz(a,h)anthracene	0.001
	Acenaphthylene	0.001	Fluoranthene	0.001
	Anthracene	0.001	Fluorene	0.001
	Benz(a)anthracene	0.001	Indeno(1,2,3-cd)pyrene	0.001
	Benzo(a)pyrene	0.001	Naphthalene	0.001
	Benzo(b)fluoranthene	0.001	Pyrene	0.001
	Benzo(k)fluoranthene	0.001	Phenanthrene	0.001
	High molecular weight PAHs, sum	NA	Low molecular weight PAHs, sum	NA
	PAHs, total	NA		

[1] The most recent version of EPA's Test Methods will be used.

The SCWA shall maintain records of field sampling in a log containing at least the following information:

- Date and time
- Site location

- Sample collector
- Sampling methods
- Sampling location
- Sampling depth
- Number of sampling containers
- Specific site conditions
- Analysis requested
- Other information describing the sampling event

Field sampling logs shall be made available to Regional Water Board staff upon request.

Attachment B
Stream Maintenance Program Manual

The Stream Maintenance Program Manual is part of this Order but is not physically attached due to volume. It is available on the Regional Water Board's website at: http://www.waterboards.ca.gov/sanfranciscobay/board_decisions/tentative_orders.shtml

Attachment C
Appendices to Stream Maintenance Program Manual

The appendices to the Stream Maintenance Program Manual are part of this Order but are not physically attached due to volume. They are available on the Regional Water Board's website at: http://www.waterboards.ca.gov/sanfranciscobay/board_decisions/tentative_orders.shtml