

Attachment 3

Preliminary Draft Report Staff Recommendations For Agricultural Order

PRELIMINARY DRAFT AGRICULTURAL ORDER NO. R3-2010-00XX

CONDITIONAL WAIVER FOR IRRIGATED AGRICULTURE OF WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES FROM IRRIGATED LANDS

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GENERAL FINDINGS

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

I. BACKGROUND AND PURPOSE

1. The State Water Resources Control Board (State Water Board) and Regional Water Quality Control Boards (Regional Water Boards) are the principal state agencies with primary responsibility for the coordination and control of water quality pursuant to the Porter-Cologne Water Quality Control Act (Porter-Cologne Act, codified in Water Code Division 7). The legislature, in the Porter-Cologne Act, directed the Water Board to exercise its full power and jurisdiction to protect the quality of the waters in the State from degradation, considering precipitation, topography, population, recreation, agriculture, industry, and economic development. (Water Code § 13000)
2. On July 9, 2004, the Central Coast Regional Water Quality Control Board (Central Coast Water Board) adopted Resolution No. R3-2004-0117 establishing a *Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands* (2004 Conditional Waiver). In the 2004 Conditional Waiver, the Central Coast Water Board found that the discharge of waste from irrigated lands has degraded and polluted the waters of the State and of the United States within the Central Coast Region, has impaired the beneficial uses, and has caused nuisance. Since the adoption of the 2004 Conditional Waiver, the Central Coast Water Board has documented that discharges of waste from irrigated lands continue to degrade water quality and impair beneficial uses. Such wastes include nutrients, toxic compounds, and other constituents found in fertilizers, pesticides, and sediment. Activities that have resulted in the discharges of waste that degrade water quality and impair beneficial uses include farm management practices and removal and degradation of riparian and wetland habitat. The 2004 Conditional Waiver expired on July 9, 2009 and the Central Coast Water Board renewed it for a term of one year until July 10, 2010. This Order No. R3-2010-00XX (Order) revises the 2004 Conditional Waiver as set forth herein.
3. Water Code Section 13260(a) requires that any person discharging waste or proposing to discharge waste within any region that could affect the quality of the waters of the State, other than into a community sewer system, shall file with the appropriate Regional Board a report of waste discharge (ROWD) containing such information and data as may be required by the Central Coast Water Board, unless the Central Coast Water Board waives such requirement.

4. Water Code Section 13263 requires the Central Coast Water Board to prescribe waste discharge requirements (WDRs), or waive WDRs, for the discharge. The WDRs must implement relevant water quality control plans and the Water Code.
5. Water Code Section 13269(a) provides that the Central Coast Water Board may waive the requirements to submit a ROWD and to obtain WDRs for a specific discharge or specific type of discharge, if the Central Coast Water Board determines that the waiver is consistent with any applicable water quality control plan and such waiver is in the public interest, provided that any such waiver of WDRs is conditional, includes monitoring requirements unless waived, does not exceed five years in duration, and may be terminated at any time by the Central Coast Water Board.
6. As authorized by Water Code Section 13269, this Order conditionally waives the requirement to file ROWDs and obtain WDRs for Dischargers who comply with the terms of this Order.
7. This Order directly addresses discharges of waste¹ from irrigated lands by requiring Dischargers to comply with the terms and conditions set forth in Attachment B, which is hereby incorporated into this Order, including compliance schedules to:
 - a. Reduce nutrient discharges to surface waters and groundwater to meet applicable nutrient and biostimulatory water quality standards, and maintain existing high quality water;
 - b. Reduce toxic discharges of agricultural pesticides to surface waters and groundwater to meet applicable toxicity water quality standards, and maintain existing high quality water;
 - c. Reduce sediment discharges from agriculture lands to meet applicable standards, including turbidity and sediment water quality standards, and maintain existing high quality water;
 - d. Protect aquatic habitat (riparian areas and wetlands) and meet applicable water quality standards including, but not limited to, temperature, turbidity, and dissolved oxygen, and maintain existing high quality water;
8. The Central Coast Water Board recognizes that Dischargers may not achieve immediate compliance with all requirements. Thus, this Order provides reasonable schedules for Dischargers to reach full compliance over many years by implementing management measures and monitoring and reporting programs that demonstrate and verify measurable progress annually. This Order includes specific dates to achieve water quality objectives in irrigation runoff and discharge to groundwater, and anticipates timeframes beyond the term of this Order to achieve water quality objectives in receiving water.

¹ This Order regulates discharge of “waste” as defined in Water Code section 13050 and “pollutants” as defined in the Clean Water Act. For simplicity, the term “waste” or “wastes” is used throughout. The term “waste” is very broad and includes “pollutants” as defined in the Clean Water Act.

9. The Central Coast Water Board is focusing on the highest water quality priorities and maximizing water quality protection to ensure the long-term reliability and availability of water resources of sufficient supply and quality for all present and future beneficial uses, including drinking water and aquatic life. Given the magnitude and severity of water quality impairment and impacts to beneficial uses caused by irrigated agriculture, and the significant cost to the public, the Central Coast Water Board finds it is reasonable and necessary to require specific actions to protect water quality.
10. Compliance with the 2004 Conditional Waiver has resulted in significant achievements, including a high percentage of Discharger enrollment in the 2004 Conditional Waiver, implementation and participation in education and outreach programs, Discharger development and implementation of Farm Water Quality Management Plans (Farm Plans), and implementation of cooperative water quality monitoring at the watershed scale. The 2004 Conditional Waiver did not emphasize compliance with water quality standards and did not include monitoring to measure and assure restoration of water quality and protection of beneficial uses.
11. This Order regulates discharges from irrigated lands to ensure that such discharges do not cause or contribute to the exceedance of any Regional, State, or Federal numeric or narrative water quality standard in waters of the State and of the United States.
12. According to Water Code Section 13263(g), the discharge of waste to waters of the State is a privilege, not a right. It is the responsibility of dischargers of waste from irrigated lands to comply with the Water Code by seeking WDRs or by complying with a waiver of WDRs. This Order waiving the requirement to submit a ROWD and the requirement to obtain WDRs provides a mechanism for dischargers of waste from irrigated lands to meet their responsibility to comply with the Water Code and to prevent degradation of waters of the State, prevent nuisance, and to protect the beneficial uses. Dischargers are responsible for the quality of surface waters and ground waters that have received discharges of waste from their irrigated lands.

Agricultural and Water Resources in the Central Coast Region

13. The Central Coast Region has more than 17,000 miles of surface waters (linear streams/rivers) and approximately 4000 square miles of groundwater basins.
14. In the Central Coast Region, nearly all agricultural, municipal, industrial, and domestic water supply comes from groundwater. Groundwater supplies approximately 90 percent of the drinking water on the Central Coast. Currently, more than 700 municipal public supply wells in the Central Coast Region provide drinking water served to the public by cities, counties, and local water agencies. In addition, based on 1990 census data, there are more than 40,000 permitted private wells, most providing domestic drinking water to rural households and communities

from shallow sources. The number of private domestic has likely significantly increased in the past 20 years.

15. In the Salinas, Pajaro, and Santa Maria groundwater basins, agriculture accounts for approximately 80 to 90 percent of groundwater pumping.
16. The Central Coast Region supports some of the most significant biodiversity of any temperate region in the world and is home to the last remaining population of the California Sea Otter, three sub-species of threatened or endangered Steelhead (*Oncorhynchus mykiss*) and one sub-species of endangered Coho Salmon (*Oncorhynchus kisutch*). The endangered marsh sandwort (*Arenaria paludicola*), Gambel's watercress (*Nasturtium rorippa gambelii*), California least tern (*Sterna antillarum browni*), and threatened red-legged frog (*Rana aurora*) are present in the region.
17. Several watersheds drain into Monterey Bay National Marine Sanctuary, one of the largest marine sanctuaries in the world. Elkhorn Slough, is one of the largest remaining tidal wetlands in the United States and one of the National Oceanic and Atmospheric Administration (NOAA) designated National Estuarine Research Reserves. The southern portion includes the Morro Bay National Estuary and extensive salt marsh habitat.
18. The two endangered plants, marsh sandwort and Gambel's watercress are critically imperiled and their survival depends upon the health of the Oso Flaco watershed. The last remaining known population of marsh sandwort and one of the last two remaining known populations of Gambel's watercress occur in Oso Flaco Lake.
19. The Central Coast of California is one of the most productive and profitable agricultural regions in the nation, reflecting a gross production value of more than six billion dollars in 2008, contributing more than 14 percent of California's agricultural economy. The region produces many high value specialty crops including lettuce, strawberries, raspberries, artichokes, asparagus, broccoli, carrots, cauliflower, celery, fresh herbs, mushrooms, onions, peas, spinach, wine grapes, tree fruit and nuts. An adequate water supply of sufficient quality is critical to supporting the agricultural industry on the Central Coast.
20. The Central Coast Region has approximately 435,000 acres of irrigated land and more than 3000 agricultural operations. Substantial empirical data show that agricultural discharges and land use practices are adversely affecting the quality of waters of the State and degrading designated beneficial uses. Water Code Section 13050 defines waters of the State to be any surface water or groundwater within the boundaries of the State.
21. Existing and potential water quality impairment from agricultural discharges takes on added significance and urgency, given the impacts on public health, limited

sources of drinking water supplies and proximity of the region's agricultural lands to critical habitat for species of concern.

II. SCOPE OF ORDER NO. R3-2010-00XX

Irrigated Lands and Agricultural Discharges Regulated Under this Order

22. This Order regulates discharges of waste from irrigated lands where water is applied for producing commercial crops and includes, but is not limited to, land planted to row, vineyard, field and tree crops. This Order also regulates discharges of waste from commercial nurseries, nursery stock production and greenhouse operations with soil floors that do not have point-source type discharges, and are not currently operating under individual WDRs. Lands that are planted to commercial crops that are not yet marketable, such as vineyards and tree crops, must also obtain coverage under this Order.
23. Discharges from irrigated lands regulated by this Order include discharges of waste to surface water and groundwater, such as irrigation return flows, tailwater, drainage water, subsurface drainage generated by irrigating crop land or by installing and operating drainage systems to lower the water table below irrigated lands (tile drains), stormwater runoff flowing from irrigated lands, stormwater runoff conveyed in channels or canals resulting from the discharge from irrigated lands, runoff resulting from frost control, and/or operational spills. These discharges can contain wastes that could affect the quality of waters of the State and degrade beneficial uses.

Dischargers Regulated Under this Order

24. This Order regulates both landowners and operators (Dischargers) of irrigated lands on or from which there are discharges of waste that could affect the quality of any surface water or groundwater. Dischargers are responsible for complying with the requirements of this Order. The Central Coast Water Board will hold both the landowner and the operator liable for noncompliance with this Order.
25. Dischargers must submit to the Central Coast Water Board a completed Notice of Intent (NOI) to comply with the conditions of this Order and receive a Notice of Enrollment from the Executive Officer of the Central Coast Water Board to be considered in compliance with the Water Code.
26. Landowners and operators of irrigated lands who obtain a pesticide use permit from a local County Agricultural Commissioner may have a discharge of waste that could affect surface water and groundwater and therefore must submit to the Central Coast Water Board a completed NOI to comply with the conditions of this Order and

receive a Notice of Enrollment from the Executive Officer of the Central Coast Water Board to be considered in compliance with the Water Code.

Agricultural Discharges Not Covered Under this Order and Who Must Apply for Individual Waste Discharge Requirements

27. This Order does not waive WDRs for commercial nurseries, nursery stock production and greenhouse operations that have point-source type discharges, and fully contained greenhouse operations (those that have no groundwater discharge due to impervious floors). These operations must eliminate all such discharges of wastes or submit a ROWD to apply for individual WDRs.

III. LEGAL AND REGULATORY CONSIDERATIONS

28. Attachment A to this Order identifies applicable plans and policies adopted by the State Water Board and the Central Coast Water Board that contain regulatory requirements that apply to the discharge of waste from irrigated lands. Attachment A provides definitions of terms for purposes of this Order.

29. The Porter-Cologne Act grants authority to the State Water Board with respect to State water rights and water quality regulations and policy, and establishes nine Regional Water Boards with authority to regulate discharges of waste that could affect the quality of waters of the State and to adopt water quality regulations and policy.

30. As further described in this Order, discharges from irrigated lands affect the quality of the waters of the State depending on the quantity of the discharge, quantity of the waste, the quality of the waste, the extent of treatment, soil characteristics, distance to surface water, depth to groundwater, crop type, implementation of management practices and other site-specific factors. Discharges from irrigated lands have impaired and will continue to impair the quality of the waters of the State within the Central Coast Region if such discharges are not controlled.

31. Water Code Section 13260(a) requires that any person discharging waste or proposing to discharge waste within any region that could affect the quality of the waters of the State, other than into a community sewer system, shall file with the appropriate Regional Board a ROWD containing such information and data as may be required by the Central Coast Water Board, unless the Central Coast Water Board waives such requirement.

32. Water Code Section 13263 requires the Central Coast Water Board to prescribe WDRs, or waive WDRs, for the discharge. The WDRs must implement applicable water quality control plans and the Water Code.

33. Water Code Section 13267(b)(1) authorizes the Central Coast Water Board to require dischargers to submit technical reports necessary to evaluate Discharger compliance with the terms and conditions of this Order and to assure protection of waters of the State.
34. Water Code Section 13269(a) provides that the Central Coast Water Board may waive the requirements to submit a ROWD and to obtain WDRs for a specific discharge or specific type of discharge, if the Central Coast Water Board determines that the waiver is consistent with any applicable water quality control plan and such waiver is in the public interest.
35. Water Code Section 13269 further provides that any such waiver of WDRs shall be conditional, must include monitoring requirements unless waived, may not exceed five years in duration, and may be terminated at any time by the Central Coast Water Board or Executive Officer.
36. Water Code Section 13269(a)(4)(A) authorizes the Central Coast Water Board to include as a condition of a Conditional Waiver the payment of an annual fee established by the State Water Board. California Code of Regulations, Title 23, Division 3, Chapter 9, Article 1, and Section 2200.3 sets forth the applicable fees. This Order requires each Discharger to pay an annual fee to the State Water Board in compliance with the fee schedule in Title 23 of the California Code of Regulations Section 2200.3.
37. The Water Quality Control Plan for the Central Coast Basin (Basin Plan) designates beneficial uses, establishes water quality objectives, contains programs of implementation needed to achieve water quality objectives, and references the plans and policies adopted by the State Water Board. The water quality objectives are required to protect the beneficial uses of waters of the State identified in Attachment A.
38. This Order is consistent with the Basin Plan because it requires Dischargers to comply with applicable water quality standards, as defined in Attachment A, and requires terms and conditions, including implementation of management practices as defined in Attachment B. The Order also requires monitoring and reporting as defined in Monitoring and Reporting Program (MRP) No. R3-2010-00XX to determine the effects of discharges of waste from irrigated lands on water quality, verify the adequacy and effectiveness of this Order's terms and conditions, and to evaluate individual Discharger's compliance with this Order.
39. Water Code Section 13246 requires boards, in carrying out activities that affect water quality to comply with State Water Board policy for water quality control. This Order requires compliance with applicable State Water Board policies for water quality control.

40. This Order implements and complies with the requirements of the *Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program* (NPS Policy) adopted by the State Water Board in May 2004. The NPS Policy requires, among other key elements, that an NPS control implementation program's ultimate purpose shall be explicitly stated, and that the implementation program must, at a minimum, address NPS pollution in a manner that achieves and maintains water quality objectives and beneficial uses, including any applicable anti-degradation requirements. The NPS Policy improves the State's ability to effectively manage NPS pollution and conform to the requirements of the Federal Clean Water Act and the Federal Coastal Zone Act Reauthorization Amendments of 1990. The NPS Policy provides a bridge between the State Water Board's January 2000 *NPS Program Plan* and its 2002 *Water Quality Enforcement Policy*. The NPS Policy's five key elements are:

- a. Key Element #1 - Addresses NPS pollution in a manner that achieves and maintains water quality objectives and beneficial uses
- b. Key Element #2 - Includes an implementation program with descriptions of the Management Practices (MPs) and other program elements and the process to be used to ensure and verify proper MP implementation
- c. Key Element #3 - Includes a specific time schedule, and corresponding quantifiable milestones designed to measure progress toward reaching the specified requirements
- d. Key Element #4 - Contains monitoring and reporting requirements that allow the Water Board, dischargers, and the public to determine that the program is achieving its stated purpose(s) and/or whether additional or different MPs or other actions are required
- e. Key Element #5 - Clearly discusses the potential consequences for failure to achieve an NPS control implementation program's stated purposes

41. This Order requires Dischargers to maintain the high quality waters of the State and does not authorize further degradation of waters of the State, consistent with State Water Board Resolution No. 68-16 *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (Resolution No. 68-16). Resolution No. 68-16 requires Regional Water Boards, in regulating the discharge of waste, to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in a Regional Water Board's policies (e.g., quality that exceeds applicable water quality standards). The Regional Water Boards must require discharges to be subject to best practicable treatment or control of the discharge necessary to avoid pollution or nuisance and to maintain the highest water quality consistent with maximum benefit to the people of the State.

42. This Order is consistent with State Water Board Resolution 68-16. This Order requires Dischargers to 1) implement and evaluate management practices that will

result in achieving compliance with the terms and conditions of this Order and applicable water quality standards in the waters of the State; 2) to develop and implement a Farm Plan, as described in Attachment B, when discharges are causing or contributing to exceedances of applicable water quality standards; 3) conduct activities in a manner to prevent nuisance, and 4) conduct activities required by MRP Order No. R3-2010-00XX and revisions thereto.

IV. RATIONALE FOR THIS ORDER

43. On April 15, 1983, the Central Coast Water Board approved a policy allowing waivers of WDRs for 26 categories of discharges, including irrigation return flows and non-NPDES stormwater runoff. Pursuant to Water Code Section 13269, these waivers terminated on January 1, 2003.
44. On July 9, 2004, the Central Coast Water Board adopted Resolution No. R3-2004-0117 establishing the 2004 Conditional Waiver.
45. Dischargers enrolled in the 2004 Conditional Waiver established the Cooperative Monitoring Program (CMP) in compliance with monitoring requirements. The CMP collected and analyzed data for 15 to 20 parameters from 50 sites in multiple watersheds and identified severe surface water quality impairments resulting from agricultural land uses and discharges. CMP did not attempt to identify the individual farm operations that are causing the surface water quality impairments. The lack of discharge monitoring and reporting, the lack of verification of on-farm water quality improvements, and the lack of public transparency regarding on-farm discharges, are critical problems, especially given the scale and severity of the surface water and groundwater impacts and the resulting costs to society. These problems are addressed in this Order.
46. The 2004 Conditional Waiver expired on July 9, 2009. The Central Coast Water Board extended the 2004 Conditional Waiver to July 10, 2010 as documented in Order No. R3-2009-0050.
47. The Central Coast Water Board reviewed all available data, including information collected in compliance with the 2004 Conditional Waiver, and determines that discharges of waste from irrigated lands continue to result in degradation and pollution of surface water and groundwater, and impairment of beneficial uses, including drinking water and aquatic habitat, and determines that additional conditions are necessary to assure protection of water quality and to measure progress towards water quality improvement.
48. The Central Coast Water Board finds that it is appropriate to adopt a waiver of ROWDs and WDRs for this category of discharges because, as a group, the discharges have the same or similar waste from the same or similar operations and

use the same or similar treatment methods and management practices (e.g., source control, reduced agricultural surface runoff, reduced chemical use, holding times, cover crops, etc.).

49. The Central Coast Water Board finds that it is appropriate to regulate discharges of waste from irrigated lands under a Conditional Waiver rather than individual WDRs in order to simplify and streamline the regulatory process. Water Board staff estimate that there are more than 2500 individual owners and/or operators of irrigated lands who discharge waste from irrigated lands; therefore, it is not an efficient use of resources to adopt individual WDRs for all Dischargers within a reasonable time.

50. This Order is in the public interest because:

- a. The Order was adopted in compliance with Water Code Sections 13260, 13263, and 13269 and other applicable law;
- b. The Order requires compliance with water quality standards;
- c. The Order includes conditions that are intended to eliminate, reduce and prevent pollution and nuisance and protect the beneficial uses of the waters of the State;
- d. The Order contains more specific and more stringent conditions for protection of water quality compared to the 2004 Conditional Waiver;
- e. The Order contains conditions that are similar to the conditions of municipal stormwater NPDES permits, including evaluation and implementation of management practices to meet applicable water quality standards and a more specific MRP;
- f. The Order focuses on the highest priority water quality issues and most severely impaired waters;
- g. The Order provides for an efficient and effective use of Central Coast Water Board resources, given the magnitude of the discharges and number of persons who discharge waste from irrigated lands;
- h. The Order provides reasonable flexibility for the Dischargers who seek coverage under this Order by providing them with a reasonable time schedule and options for complying with the Water Code.

51. This Order waives the requirement to submit ROWDs and to obtain WDRs for discharges of waste from irrigated lands. This Order is conditional; may be terminated at any time; does not permit any illegal activity; does not preclude the need for permits that may be required by other State or local government agencies; and does not preclude the Central Coast Water Board from administering enforcement remedies (including civil liability) pursuant to the Water Code.

52. The Central Coast Water Board may consider issuing some individual WDRs to some Dischargers because of their actual or potential contribution to water quality impairments, history of violations, or other factors.

V. IMPACTS TO WATER QUALITY FROM AGRICULTURAL DISCHARGES

Impacts to Surface Water

53. The 2008 Clean Water Act Section 303(d) List of Impaired Waterbodies for the Central Coast Region adopted by the Central Coast Water Board in July 2009 (Impaired Waters List) identified surface water impairments for approximately 700 waterbodies related to a variety of pollutants (e.g. salts, nutrients, pesticides/toxicity, and sediment/turbidity). Sixty percent of the surface water listings identified agriculture as one of the potential sources of water quality impairment.
54. The impact from agricultural discharges on surface water quality is or has been monitored by various monitoring programs, including:
- a. The Central Coast Water Board's Ambient Monitoring Program: Over the past 10 years, the Central Coast Ambient Monitoring Program (CCAMP) has collected and analyzed water quality data to address 25 conventional water quality parameters from 185 sites across the Central Coast Region to assess surface water quality. To support analysis of conventional water quality data CCAMP has collected bioassessment data from 100 of the 185 sites, water toxicity data from 134 of the 185 sites, and sediment toxicity from 57 of the 185 sites. CCAMP data show widespread toxicity and pollution from agricultural discharges.
 - b. Cooperative Monitoring Program (CMP): Over the last 5 years, the CMP has focused on assessing agricultural water quality for the 2004 Conditional Waiver, and collected and analyzed data for 15 to 20 parameters from 50 sites in multiple watersheds. CMP data show widespread toxicity and pollution from agricultural discharges.
55. Data from CCAMP and CMP indicate that agricultural discharges most severely impact surface waterbodies in the lower Salinas and Santa Maria watersheds due to the intensive agricultural activity in these areas, and water quality in these areas are the most severely impaired in the Central Coast Region.

Impacts to Surface Water – Nutrients

56. Nitrate pollution in surface water is widespread in the Central Coast Region, with 46 waterbodies listed as impaired for this pollutant on Impaired Waters List. Seventy percent of all nitrate listings occur in the three major agricultural watersheds: Salinas River (15 waterbodies), Pajaro River (5 waterbodies) and Santa Maria River (12 waterbodies). Other significant nitrate listings fall in small drainages in areas of intensive agriculture or greenhouse activity along the south coast, including Arroyo Paredon, Franklin Creek, Bell Creek, Los Carneros and Glen Annie creeks.

57. The California Department of Public Health (CDPH) drinking water standard is 10 mg/L nitrate. The drinking water standard is not intended to protect aquatic life and Water Board staff estimates that 1 mg/L nitrate is necessary to protect aquatic life beneficial uses from biostimulation based on an evaluation of CCAMP data. Water Board staff used this criteria to evaluate surface water quality impairment to aquatic life beneficial uses in the Impaired Waters List adopted by the Central Coast Water Board in July 2009.
58. In a broadly scaled analysis of land uses, nitrate pollution is associated with row crop agriculture. In addition, discharge from even a single agricultural operation can result in adjacent creek concentrations exceeding the drinking water standard and the much lower limits necessary to protect aquatic life.
59. Agricultural discharges result in significant nitrate pollution in the major agricultural areas of the Central Coast Region. Thirty percent of all sites from CCAMP and CMP combined datasets have average nitrate concentrations that exceed the drinking water standard and limits necessary to protect aquatic life. Several of these water bodies have average nitrate concentrations that exceed the drinking water standard by five-fold or more. Some of the most seriously polluted waterbodies include the following:
- a. Tembladero Slough system (including Old Salinas River, Alisal Creek, Alisal Slough, Espinosa Slough, Gabilan Creek and Natividad Creek),
 - b. Pajaro River (including Llagas Creek, San Juan Creek, and Furlong Creek),
 - c. Lower Salinas River (including Quail Creek, Chualar Creek and Blanco Drain),
 - d. Lower Santa Maria River (including Orcutt-Soloman Creek, Green Valley Creek, and Bradley Channel),
 - e. Oso Flaco watershed (including Oso Flaco Lake, Oso Flaco Creek, and Little Oso Flaco Creek).
60. Dry season flows decreased over the last 5 years in some agricultural areas that have large amounts of tailwater runoff. Detailed flow analysis by the CMP showed that 18 of 27 sites in the lower Salinas and Santa Maria watersheds had statistically significant decreases in dry season flow over the first five years of the program. Some sites that show increasing concentrations of nitrate have coincident declining trends in flow, possibly due to reductions in tailwater. CCAMP monitoring has detected declining flows at other sites elsewhere in the Region, likely because of drought.
61. Some statistically significant changes in nitrate concentration are evident in CCAMP and CMP data. Several drainages are improving in water quality in the Santa Barbara area (such as Bell Creek, which supports agricultural activities) and on Pacheco Creek in the Pajaro watershed. However, in some of the most polluted

waters, nitrate concentrations are getting worse at many sites. In the lower Salinas and Santa Maria watersheds, flow volumes are declining at some sites, so at these locations nitrate loads are not necessarily getting worse in spite of trends in concentrations.

62. Nitrate concentrations in Oso Flaco Lake exceed the levels that support aquatic life beneficial uses, threatening remaining populations of two endangered plants, marsh sandwort and Gambel's watercress. In 25 water samples taken from Oso Flaco Lake in 2000-2001 and 2007, levels of Nitrate/Nitrite (as N) averaged 30.51 mg/L with a minimum of 22.00 mg/L and a maximum of 37.10 mg/L. Biostimulation in Oso Flaco Lake has caused the rapid and extreme growth of common wetland species, which are now crowding out sensitive species that have not become similarly vigorous.
63. Agricultural discharges result in un-ionized ammonia concentrations at levels that are toxic to salmonids at some sites in areas dominated by agricultural activity. The waterbodies where these sites are located have been placed on the Impaired Waters List due to un-ionized ammonia, particularly in the lower Salinas and Santa Maria river areas.

Impacts to Surface Water – Toxicity

64. Agricultural use of pesticides in the Central Coast Region and associated toxicity is among the highest in the State. In a statewide study of four agricultural areas conducted by the Department of Pesticide Regulation (DPR), the Salinas study area had the highest percent of surface water sites with pyrethroid pesticides detected (85 percent), the highest percent of sites that exceeded levels expected to be toxic and lethal to aquatic life (42 percent), and the highest rate (by three-fold) of active ingredients applied (113 lbs/acre).
65. Agriculture-related toxicity studies conducted on the Central Coast since 1999 indicated that toxicity resulting from agricultural discharges of pesticides has caused declining aquatic insect and macroinvertebrate populations in Central Coast streams.
66. The lower Salinas and Santa Maria areas have more overall water column invertebrate toxicity than other parts of the Central Coast Region, with much of the toxicity explained by elevated diazinon and chlorpyrifos concentrations.
67. Some agricultural drains have shown toxicity every time the drains are sampled. Researchers collaborating with CCAMP have shown that these toxic discharges can cause toxic effects in river systems that damage benthic invertebrate communities.
68. The most consistently toxic sites occur in the lower Salinas and Santa Maria watersheds, areas dominated by agricultural land uses. Creek bottom sediment is

toxic at most sites sampled in the Region (70 percent of all sites have been toxic at least once).

69. Research has shown pyrethroid pesticides are a major source of sediment toxicity in agricultural areas of the Central Coast Region.

Impacts to Surface Water – Turbidity and Temperature

70. Agricultural discharges cause and contribute to sustained turbidity in surface waters. Surface water flows at many sampling sites that include significant agricultural discharges exceed 100 Nephelometric Turbidity Unit (NTUs) as a median value. Turbidity is a cloudy condition in water due to suspended silt or organic matter. Waters that exceed 25 NTUs can reduce feeding ability in trout (Sigler et al., 1984). Elevated turbidity during the dry season is an important measure of discharge across bare soil, and thus can serve as an indicator of systems with heavy irrigation runoff to surface waters. Most CCAMP sites have a median turbidity level of under 5 NTUs.
71. The Basin Plan requires that “Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.”
72. Agricultural discharges result in sustained turbidity throughout the dry season at many sampling sites dominated by agricultural activities. Resulting turbidity greatly exceeds levels that impact the ability of salmonids to feed. Many of these sites are located in the lower Santa Maria and Salinas-Tembladero watersheds. The CMP detected some declining trends in turbidity on the main stem of the Salinas River.
73. Agricultural discharges result in water temperatures that exceed levels that are necessary to support salmonids at some sites in areas dominated by agricultural activity. Several of these sites are in major river corridors that provide rearing and/or migration habitat for salmonids. These include the Salinas, Santa Maria, and Santa Ynez rivers.
74. Biological sampling shows that benthic biota are extremely impaired in the lower Salinas and Santa Maria watersheds, and also shows that several measures of habitat quality, such as in-stream substrate and canopy cover, are also very low compared to high quality streams in the Central Coast Region and in the upper watersheds.
75. Agricultural land use practices, such as removal of vegetation and stream channelization, and discharges from agricultural fields, cause the deposition of fine sediment and sand over stream bottom substrate. This problem is especially prevalent in areas dominated by agricultural activity (lower Salinas and Santa Maria rivers). This deposition of fine sediment and sand in streams causes major

degradation of aquatic life beneficial uses by degrading aquatic habitat and impacting biological communities.

Impacts to the Marine Environment

76. The marine environment in the Central Coast Region is impacted by runoff from irrigated agriculture and other sources. Legacy pesticides have impacted the marine environment and are still found in sediment and tissue at levels of concern today. Currently applied pesticides are persistent in the aquatic environment, but initial testing has not found them in offshore areas of Monterey Bay. However, two Marine Protected Areas (MPAs), Elkhorn Slough and Moro Cojo Slough, are heavily impacted by agricultural chemicals and activities because they are located at the downstream terminus of the Salinas River and Carneros Creek watersheds, and these watersheds are dominated by agricultural land use. The Elkhorn Slough and Moro Cojo Slough MPAs are at very high to extremely high risk for additional degradation of beneficial uses. Other MPAs that are relatively near shore in agricultural areas are at medium risk for degradation of beneficial uses; these include the South Santa Ynez River MPA, and the two Monterey Bay MPAs. Other MPAs that are not near agricultural areas are at medium to low risk from agricultural discharges.

Impacts to Groundwater – Drinking Water

77. Nitrate contamination of drinking water supplies is a critical problem throughout the Central Coast Region. Studies indicate that fertilizer from irrigated agriculture is the primary source of nitrate contamination of drinking water wells and that significant loading of nitrate continues as a result of agricultural fertilizer practices.

78. Groundwater contamination from nitrate severely impacts public drinking water supplies in the Central Coast Region. A Department of Water Resources (DWR) survey of groundwater quality data collected between 1994 and 2000 from 711 public supply wells in the Central Coast Region found that 17 percent of the wells (121 wells) detected a constituent at concentrations above one or more CDPH drinking water standards or primary maximum contaminant levels (MCLs). Nitrate caused the most frequent MCL exceedances (45 mg/L nitrate as nitrate or 10 mg/L nitrate as nitrogen), with approximately 9 percent of the wells (64 wells) exceeding the drinking water standard for nitrate. According to data reported by the State Water Board's Groundwater Ambient Monitoring and Assessment Program (GAMA), recent impacts to public supply wells are greatest in portions of the Salinas Valley (up to 20 percent of wells impacted) and Santa Maria (approximately 17 percent) groundwater basins. In the Gilroy-Hollister Groundwater Basin, 11 percent are impacted, and the CDPH identified over half of the drinking water supply wells as vulnerable to discharges from agricultural-related activities. This information is readily tracked and evaluated because data is collected on a regular frequency,

made publicly available, and public drinking water supplies are regulated by CDPH as required by California law.

79. Groundwater contamination from nitrate severely impacts shallow domestic wells in the Central Coast Region resulting in unsafe drinking water in rural communities. Domestic wells (wells supplying one to several households) are typically drilled in relatively shallow groundwater, and as a result exhibit higher nitrate concentrations than deeper public supply wells. Water quality monitoring of domestic wells is not generally required and water quality information is not readily available; however, based on the limited data available, the number of domestic wells that exceed the nitrate drinking water standard is likely in the range of several hundreds or more. Private domestic well water quality is not regulated and it is estimated that thousands of rural residents drink water from these impaired sources without knowing the quality of drinking water and without treatment.
80. In the northern Salinas Valley, 25 percent of 352 wells sampled (88 wells) had concentrations above the nitrate drinking water standard. In other portions of the Salinas Valley, up to approximately 50 percent of the wells surveyed had concentrations above the nitrate drinking water standard, with average concentrations nearly double the drinking water standard and the highest concentration of nitrate approximately nine times the drinking water standard. Nitrate exceedances in the Gilroy-Hollister and Pajaro groundwater basins reflect similar severe impairment, as reported by local water agencies/districts for those basins.
81. In the Pajaro River watershed, the highest recent nitrate concentration (over 650 mg/L nitrate, more than 14 times the drinking water standard) occurred in shallow wells in the eastern San Juan subbasin under intense agricultural production. High values of nitrate concentration in groundwater (greater than 500 mg/L nitrate) have also been reported in the Llagas subbasin and the lower Pajaro coastal aquifer.
82. The costs of groundwater pollution and impacts to beneficial uses caused by irrigated agriculture are transferred to the public. Public drinking water systems expend millions of dollars in treatment and replacement costs and private well owners must invest in expensive treatment options or find new sources. Rural communities, those least able to buy alternative water sources, have few options to replace the contaminated water in their homes. This Order addresses groundwater pollution to ensure protection of beneficial uses and public health.

Impacts to Groundwater – Human Health

83. Excessive concentrations of nitrate-nitrogen or nitrite-nitrogen in drinking water are hazardous to human health, especially for infants and pregnant women. The United States Environmental Protection Agency (USEPA) established a nitrate drinking water standard of 45 mg/L nitrate as nitrate (10 mg/L nitrate as nitrogen). While

acute health effects from excessive nitrate levels in drinking water are primarily limited to infants (methemoglobinemia or "blue baby syndrome"), research evidence suggests there may be adverse health effects (i.e., increased risk of non-Hodgkin's, diabetes, Parkinson's disease, alzheimers, endocrine disruption, cancer of the organs) among adults as a result of long-term consumption exposure to nitrate.

84. Nitrogen compounds are known to cause cancer. University of Iowa research found that up to 20 percent of ingested nitrate is transformed in the body to nitrite, which can then undergo transformation in the stomach, colon, and bladder to form N-nitroso compounds that are known to cause cancer in a variety of organs in more than 40 animal species, including primates.
85. In many cases, whole communities that rely on groundwater for drinking water are threatened due to nitrate pollution, including the community of San Jerardo and other rural communities in the Salinas Valley. Local agencies and consumers have reported impacts to human health resulting from nitrate contaminated groundwater likely due to agricultural land uses, and spent significant financial resources to ensure proper drinking water treatment and reliable sources of safe drinking water for the long-term.
86. Current strategies for addressing nitrate in groundwater to achieve levels protective of human health typically include avoidance (abandoning impacted wells or re-drilling to a deeper zone), groundwater treatment to remove nitrate (i.e., dilution using blending, ion exchange, reverse osmosis, biological denitrification, and distillation), or developing additional water supplies (i.e., percolation ponds, surface water pipelines, reservoirs) to dilute nitrate-impacted sources.
87. The cost to treat and cleanup existing nitrate contamination to achieve levels that are protective of human health are very expensive to water users (e.g., farmers, municipalities, domestic well users). Research indicates that the cost to remove nitrate from groundwater can range from hundreds of thousands to millions of dollars annually for individual municipal or domestic wells. Wellhead treatment on a region wide scale would likely cost billions of dollars. Similarly, the cost to actively cleanup nitrate in groundwater on a region wide scale would also cost billions of dollars, and would be logistically difficult. If the nitrate loading due to agricultural activities is not significantly reduced, these costs are likely to increase significantly.
88. Many public water supply systems are required to provide well-head treatment or blending of drinking water sources, at significant cost, to treat nitrate before delivery to the drinking water consumer due to elevated concentrations of nitrate in groundwater. The community of San Jerardo (rural housing cooperative of primarily low-income farmworker families with approximately 250 residents) initially installed well-head treatment to treat contaminated groundwater with nitrate and other chemicals at significant cost and incurs on-going monthly treatment costs of approximately \$17,000. Monterey County public health officials determined that the

community of San Jerardo requires a new drinking water well to ensure safe drinking water quality protective of public health at an approximate cost of more than \$4 Million. The City of Morro Bay uses drinking water supplies from Morro and Chorro groundwater basins. Study results indicate that agricultural activities in these areas, predominantly over-application of fertilizer, have impacted drinking water supplies resulting in nitrate concentrations more than 4 times the drinking water standard. The City of Morro Bay must blend or provide well-head treatment to keep nitrate concentrations at levels safe for drinking water at significant cost. The City of Santa Maria public supply wells are also impacted by nitrate (in some areas nearly twice the drinking water standard) and must also blend sources to provide safe drinking water.

Impacts to Groundwater – Nitrate and Salts

89. Groundwater pollution due to salts is also one of the most significant and critical problems in the Central Coast Region. Agricultural activities are a significant cause of salt pollution, primarily due to the following:
- a. Seawater intrusion within the coastal basins (e.g., Salinas and Pajaro groundwater basins) caused by excessive agricultural pumping.
 - b. Agricultural pumping/recycling of groundwater that concentrates salts in the aquifers.
 - c. Agricultural leaching of salts from the root zone.
 - d. The importation of salts into the basin from agricultural soil amendments and domestic/municipal wastewater discharges.
90. Agricultural pumping of groundwater contributes to saltwater intrusion into the Salinas and Pajaro groundwater basins, which is causing increasing portions of the groundwater basins to be unusable for agriculture and municipal supply.
91. Agricultural activities contribute significant loading of nitrates into groundwater from the following sources:
- a. Intensive fertilizer applications on permeable soils.
 - b. High-nitrate tailwater discharging to creek recharge areas.
 - c. Liquid fertilizer hookups on well pump discharge lines lacking backflow prevention devices.
 - d. Groundwater wells that are screened through multiple aquifers, thereby acting as conduits for pollution transport into deeper groundwater.
 - e. Spills and/or uncontrolled wash water or runoff from fertilizer handling and storage operations.
 - f. Infiltration from leaky holding ponds.
92. Agricultural discharges contribute to pollution of groundwater basins most vulnerable to waste migration including major portions of the Santa Maria, Salinas, and Gilroy-Hollister groundwater basins. However, any groundwater basin, including those that

are confined (pressured), are susceptible to downward waste migration through improperly constructed, operated (e.g., fertigation or chemigation without backflow prevention), or abandoned wells. Additionally, land with permeable soils and shallow groundwater are susceptible to downward waste migration. Such areas of groundwater vulnerability often overlap with important recharge areas that serve to replenish drinking water supplies.

93. Agricultural discharges of fertilizer are the main source of nitrate pollution to shallow groundwater based on nitrate loading studies conducted in the Llagas subbasin and the lower Salinas groundwater basin. In 2007, the California Department of Food and Agriculture (CDFA) reported that approximately 56 million pounds of nitrogen was purchased as fertilizer in Monterey County. A 1990 Monterey County study of nitrate sources leaching to soil and potentially groundwater in Santa Cruz and Monterey Counties indicated that irrigated agriculture contributes approximately 78 percent of the nitrate loading to groundwater in these areas.

Impacts to Aquatic Habitat

94. California has lost an estimated 91 percent of its historic wetland acreage, the highest loss rate of any state. Similarly, California has lost between 85 and 98 percent of its historic riparian areas. Owners and operators of agricultural operations historically removed riparian and wetland areas to plant cultivated crops.
95. The 2004 Conditional Waiver required protection of beneficial uses including aquatic and wildlife habitat. This Order continues that requirement and ensures the protection of aquatic life beneficial uses and addresses water quality degradation that has occurred, in part, as a result of encroachment by agricultural land uses on riparian and wetland areas.
96. Riparian and wetland areas play an important role in protecting several of the beneficial uses designated in the Basin Plan. Agricultural activities have degraded, and threaten to degrade, these beneficial uses related to aquatic habitat, which include, but are not limited to:
- a. Ground Water Recharge;
 - b. Fresh Water Replenishment;
 - c. Warm Fresh Water Habitat;
 - d. Cold Fresh Water Habitat;
 - e. Inland Saline Water Habitat;
 - f. Estuarine Habitat;
 - g. Marine Habitat;
 - h. Wildlife Habitat;
 - i. Preservation of Biological Habitats of Special Significance;
 - j. Rare, Threatened or Endangered Species;
 - k. Migration of Aquatic Organisms;
 - l. Spawning, Reproduction and/or Early Development;

m. Areas of Special Biological Significance;

97. Riparian and wetland areas play an important role in achieving several water quality objectives established to protect specific beneficial uses. These include, but are not limited to those water quality objectives related to natural receiving water temperature, dissolved oxygen, suspended sediment load, settleable material concentrations, chemical constituents, and turbidity. In particular, seasonal and daily water temperatures are strongly influenced by the amount of solar radiation reaching the stream surface, which is influenced by riparian vegetation. Removal of vegetative canopy along surface waters threatens maintenance of temperature water quality objectives, which in turn negatively affects dissolved oxygen related water quality objectives, which in turn negatively affects the food web.
98. Riparian and wetland areas function to retain and recycle nutrients, thereby reducing nutrient loading directly to surface water or groundwater. Riparian and wetland areas trap and filter sediment and other wastes contained in agricultural runoff, and reduce turbidity. Riparian and wetland areas temper physical hydrologic functions, protecting aquatic habitat by dissipating stream energy and temporarily allowing the storage of floodwaters, and by maintaining surface water flow during dry periods. Riparian and wetland areas regulate water temperature and dissolved oxygen, which must be maintained within healthy ranges to protect aquatic life. In the absence of human alteration, riparian areas stabilize banks and supply woody debris, having a positive influence on channel complexity and in-stream habitat features for fish and other aquatic organisms.
99. Riparian areas are critical to the quality of in-stream habitat. Riparian vegetation provides woody debris, shade, food, nutrients and habitat important for fish, amphibians and aquatic insects. Riparian areas help to sustain broadly based food webs that help support a diverse assemblage of wildlife. More than 225 species of birds, mammals, reptiles, and amphibians depend on California's riparian habitats.
100. Up to 43 percent of the federally threatened and endangered species rely directly or indirectly on wetlands for their survival. Of all the states, California has the greatest number of at-risk animal species (15) and, by far, the greatest number of at-risk plant species (104) occurring within isolated wetlands.
101. The California Wetlands Conservation Policy, also known as "the No Net Loss Policy," adopted by Governor Wilson in 1993, established the State's intent to develop and adopt a policy framework and strategy to protect California's unique wetland ecosystems. One of the goals of this policy is 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.

102. The Basin Plan contains requirements to protect aquatic habitat, includes, but is not limited to, Chapter 5, Page V-13, V.G. Erosion and Sedimentation :A filter strip of appropriate width, and consisting of undisturbed soil and riparian vegetation or its equivalent, shall be maintained, wherever possible, between significant land disturbance activities and watercourses, lakes, bays, estuaries, marshes, and other water bodies. For construction activities, minimum width of the filter strip shall be thirty feet, wherever possible as measured along the ground surface to the highest anticipated water line.
103. Real and/or perceived incompatible demands between food safety and environmental protection are a major issue in the Central Coast Region. Dischargers have removed vegetated management practices (in some cases, after receiving substantial public funds to install the vegetated management practices) and have removed riparian vegetation, both of which increase waste loading to waters of the State and impair beneficial uses.
104. According to a spring 2007 survey by the Resource Conservation District of Monterey County (RCDMC), 19 percent of 181 respondents said that their buyers or auditors had suggested they remove non-crop vegetation from their ranches to prevent contamination from pathogens such as the 0157:H7 bacteria. In response to pressures by auditors and/or buyers, approximately 15 percent of all growers surveyed indicated that they had removed or discontinued use of previously adopted management practices used for water quality protection. Grassed waterways, filter or buffer strips, and trees or shrubs were among the management practices removed (RCDMC, 2007). According to a follow-up spring 2009 survey by the Resource Conservation District of Monterey County, growers are being told by their auditors and/or buyers that wetland or riparian plants are a risk to food safety (RCDMC, 2009).
105. Riparian vegetation and vegetated buffer zones are critically important to prevent the transport of sediment and bacteria, including the downstream transport of 0157:H7 bacteria. Data indicated that the major sources of 0157:H7 bacteria are domestic pigs and cattle, not wildlife. In many agricultural areas of the Central Coast Region, cattle and pig operations are located upstream of irrigated agricultural fields. Therefore, the removal of riparian and wetland vegetation and their buffer zones increases the transport of pathogens such as 0157:H7 and the risk of food contamination. Also, the 2006 outbreak of 0157:H7 contamination occurred in packaged leafy greens, and the bacteria was not determined to be from wildlife. The removal of riparian and wetland vegetation and their buffer zones for food safety purposes is not warranted, is not supported by the literature, and may increase the risk of food contamination.
106. Vegetated riparian areas provide greater environmental value than unvegetated floodplains or cropped fields. Riparian forests provide as much as 40 times the water storage of a cropped field and 15 times that of grass turf. Agricultural floodplains are

approximately 80 to 150 percent more erodible than riparian forest floodplains and riparian forest floodplains serve a valuable function by trapping sediment from agricultural fields.

107. Riparian vegetation may play a role in integrated pest management by reducing the amount of chemicals and pesticides needed on agricultural lands and protecting water quality as a result. For example, cavity nesting riparian bird species prey on rodents and pest insects in agricultural fields.
108. Riparian and wetland areas are an effective tool in improving agricultural land management. Wide riparian areas act as buffers to debris that may wash onto fields during floods, thereby offsetting damage to agricultural fields and improving water quality.
109. Exotic plant species exclude native riparian and wetland vegetation by out-competing native species for habitat. Additionally, exotic plants do not support the same diversity of wildlife native to riparian forests, often use large amounts of water, and can exist as monocultural stands of grass. Grass habitat is very different from the complex habitat structure provided by a diversity of riparian trees and shrubs, and results in habitat changes that affect the aquatic based food web.

VI. AGRICULTURAL REGULATORY PROGRAM

Agricultural Regulatory Program Implementation

110. The Central Coast Water Board is maximizing regulatory effectiveness by identifying and prioritizing actions that address the most significant agricultural water quality problems in the Central Coast Region, including the discharge of waste in agricultural tailwater, nitrate in groundwater from fertilizer, surface water toxicity resulting from pesticides, surface water nutrients from fertilizer, increasing salinity, sediment discharge and degradation of aquatic habitat.
111. The Central Coast Water Board is addressing priority agricultural water quality issues, on a watershed basis in coordination with other Water Board programs and efforts, focused in the most intensive agricultural areas of the region including the Salinas, Pajaro, and Santa Maria watersheds. In addition, Central Coast Water Board staff will assess and track progress towards specific measures of water quality improvement, and adapt to the feedback the tracking provides.
112. The Central Coast Water Board will evaluate compliance of individual Dischargers with the terms and conditions of this Order based on enrollment information, risk of water quality impairment, content of technical reports (including Farm Plan), prioritized inspections, and water quality monitoring data. In addition to the determination of noncompliance and water quality impairment, the Central Coast

Water Board will enforce the conditions of this Order in a manner similar to enforcement of WDRs and consistent with the State Water Board's Enforcement Policy, focusing on the highest priority water quality issues and most severely impaired waters.

113. The Central Coast Water Board will consider the history of compliance and violations, and progress made toward compliance and water quality improvement demonstrated by individual Dischargers when determining potential enforcement actions. In some cases, the Central Coast Water Board may terminate coverage under this Order and require the Discharger to submit a ROWD and comply with the Water Code pursuant to individual WDRs.

114. The Central Coast Water Board considers certain types of discharges to be "low risk" discharges, including those where Dischargers effectively implement certain management practices that have been demonstrated to result in a significantly lower risk of causing or contributing to degradation of water quality or impairment of beneficial uses. "Low Risk" discharges include vineyard operations certified by the Central Coast Vineyard Team as Sustainable in Practice (SIP) and operations where the Discharger demonstrates effective implementation of the following practices:

- a. Eliminates all tailwater;
- b. Does not farm adjacent to or in close proximity (within 1000 feet) to an impaired surface waterbody identified on the Impaired Waters List;
- c. Uses integrated pest management techniques and does not use pesticides identified in Attachment A (or otherwise identified in pesticide use regulation) as having a high potential to degrade/pollute surface water;
- d. Implements a nutrient management plan certified by a XXX *{Note: Appropriate professional certification, such as Certified Crop Advisor (CCA) or other certification with similar expertise and experience}* to be protective of water quality (e.g. will not contribute to an exceedance of water quality standards); and
- e. Implements stormwater control measures to minimize erosion and sediment deposition using best practicable treatment or control.

The Central Coast Water Board considers these "low-risk discharges" to be lowest priority for any regulatory action, unless information is available to demonstrate otherwise. This Order specifies that demonstrated "low-risk discharges" will not be subject to individual water quality monitoring and reporting requirements included in this Order, unless otherwise specified. The Executive Officer will determine whether a Discharger fits within this "low risk" category based on the Discharger's demonstration that it is CCVT SIP certified or effectively implements the specified practices.

Management Practice Implementation

115. Commercial agriculture is an intensive land use. Relatively sophisticated agronomic and engineering approaches are available and necessary to minimize the discharge of waste from irrigated lands, including sediment, nutrients and pesticides that impact water quality and beneficial uses of waters of the State. Traditionally, conservation practices available to Dischargers were developed for irrigation efficiency or for erosion control, and not necessarily for water quality protection. To achieve water quality protection and improvement, Dischargers must take responsibility for selecting and effectively implementing management strategies to resolve priority water quality problems associated with the specific operation and watershed, utilize proper management practice design and maintenance, and implement effectiveness monitoring and adaptive management.
116. Dischargers must effectively implement a broad array of management measures to achieve water quality improvement, including practices and projects at the scale of a single farm, or cooperatively among multiple farms in a watershed or sub watershed.
117. The Farm Plan is an effective tool to identify the management practices that will be implemented to protect and improve water quality and verify compliance with this Order. Elements of the Farm Plan include irrigation management, pesticide management, nutrient management, salinity management, sediment and erosion control, and aquatic habitat protection. Farm Plans also contain a schedule for implementation of practices and an evaluation of progress towards water quality improvement. The development and implementation of Farm Plans was a requirement of the 2004 Order. This Order extends and builds upon that requirement by requiring the submittal of the Farm Plan, upon notice by the Executive Officer, to verify the implementation of management practices focused on priority water quality issues, and by requiring individual monitoring to verify the effective implementation of management practices.
118. Individual on-farm water quality monitoring is critical to adaptively manage and effectively implement practices to protect water quality. The data and reporting will inform the Discharger, the Water Board, and the public regarding compliance with this Order, and increases the potential success in adapting management practices to address priority water quality issues. Dischargers participating in on-farm water quality monitoring have reported, in some cases, significant reduction or elimination of their discharge of waste through effective and adaptive management practice implementation.
119. Agricultural discharges, especially surface irrigation runoff, have the potential to transport sediments and associated waste constituents that exceed water quality standards. Eliminating irrigation runoff is an effective way to minimize and/or eliminate agricultural discharges of waste to waters of the State.
120. Agricultural water quality research identifies the importance of minimizing the amount of water runoff coming from farms. Irrigation runoff occurs when the

application rate of the irrigation system exceeds the infiltration rate of the soil due to numerous factors, including poor irrigation efficiency. The percent of applied water lost to runoff may start off low, and increase towards the end of longer irrigations, or with frequent irrigation where soil is saturated. Fields with soils susceptible to low infiltration rates may lose 5 percent to 30 percent or more of their applied water to runoff.

121. Applying fertilizer, soil amendments, or agricultural products directly through an irrigation system (fertigation) increases nitrate levels in irrigation water. Runoff from fertigations is likely to be extremely high in nitrate. Agricultural research conducted in the Pajaro Valley and Salinas Valley watersheds has identified nitrate values in agricultural tailwater and drainage ditches exceeding 100 mg/L nitrate in some cases (more than ten times the drinking water standard, and likely more than 100 times the level necessary to protect aquatic life).
122. Agricultural studies document the common over-application of fertilizers, and fertilizer and animal manure are the most dominant and widespread nitrate sources to groundwater. Effective nutrient management practices to reduce the concentration of nutrients in irrigation runoff, deep percolation, and stormwater, include but are not limited to, irrigation efficiency to reduce runoff and deep percolation, nutrient budgeting to optimize fertilizer application and eliminate excessive nutrient applications, and techniques to trap nutrients between crop growing seasons and during intense periods of rainfall.
123. Agricultural studies and practices demonstrate that minimizing the production of polluted tailwater through irrigation efficiency and nutrient management practices and keeping runoff from leaving the farm is cost effective. Improving irrigation water application according to real time soil moisture data has resulted in some of the lowest concentrations of nutrients in percolating waters, confirming that irrigation efficiency is a key factor in reducing leaching of nutrients.
124. Agricultural land uses can disrupt the natural vegetation-soil cycles and biota diversity, keeping the soil surface unprotected and vulnerable to erosive forces (wind and rain), which increases the amount of sediments dispersed and transported from agricultural lands into surface water.
125. Agricultural mechanization and tillage of soil and land for bed preparation, crop maintenance and pest control, can destroy the soil structure and degrade the land, which increases the amount of sediment and associated waste constituents discharged into surface water.
126. Stormwater runoff from irrigated lands often results in significant erosion and the discharge of sediment, nutrients, and pesticides. Effective erosion control and sediment control management practices include but are not limited to cover crops, filter strips, and furrow alignment to reduce runoff quantity and velocity, hold fine

particles in place, and increase filtration to minimize the impacts to water quality. Crops grown using impervious plastic can be particularly problematic as they often result in significantly increased irrigation runoff volumes and velocities in agricultural furrows and ditches that may drain to waters of the State.

127. Runoff from greenhouses and nurseries has a high potential for water quality impairment. CCAMP data from Franklin Creek (Santa Barbara County) indicated high levels of nutrients and toxicity. Many greenhouse operations successfully reduced these levels when the Central Coast Water Board required them to eliminate surface water discharges.

128. Irrigation runoff from large greenhouses and nurseries has been documented to be as much as 4,000,000 gallons per month. Greenhouse operations often leach crops to prevent salts build up in the root zone. Excessive leaching leads to greater runoff volumes and transport of waste.

129. Fertilizer usage in greenhouses and nurseries is intensive. A study conducted by University of California, Davis found that at least 60 percent of California greenhouses have more than 450 pounds of nitrogen per acre in the root zone at any given time. In many cases, more than half of the fertilizer nitrogen applied to ornamental crops is lost to leaching due, in part, to over application of fertilizers and poor irrigation efficiency, and is a significant source of surface water and groundwater pollution.

130. Pesticide use for ornamental plants grown in greenhouses and nurseries is also intensive. According to pesticide use reports submitted to DPR, the greatest pesticide use at nurseries is with outdoor container nurseries and field-grown plants. Heavy pesticide use, coupled with an intensive irrigation regime used by many nurseries may result in a discharge of waste and poses significant threat of pollution to surface water and groundwater from pesticides.

131. Dischargers can significantly reduce the potential impact from agricultural discharges by the effective implementation of management practices identified in Farm Plans focused on priority water quality issues related to the specific operation and watershed.

132. Education is an important component of an irrigated lands program that leads to the implementation of new effective management practices that protect and enhance water quality.

VII. PUBLIC INPUT AND STAKEHOLDER PROCESS

133. The Central Coast Water Board notified interested persons that the Central Coast Water Board will consider the adoption of this Order, which conditionally waives

individual WDRs and establishes conditions for the control of discharges of waste from irrigated lands to waters of the State, and provided multiple opportunities for a public input.

134. In December 2008, the Central Coast Water Board invited members of the public to participate in development of this Order and provide recommendations to Central Coast Water Board staff. In particular, the Central Water Board requested the assistance of an Agricultural Advisory Panel in developing appropriate milestones, timetables, and verification monitoring programs to resolve water quality problems and achieve compliance with the Basin Plan. The Agricultural Advisory Panel met from December 2008 to September 2009; however, the Panel disbanded and did not submit specific recommendations to the Water Board. Additionally, in early 2009, the Central Coast Water Board notified all water purveyors, water districts and municipalities that staff was developing recommendations for this Order.

135. In December 2009, the Central Coast Water Board encouraged any interested person who wanted to present alternative recommendations to this Order to provide those recommendations in writing by April 1, 2010.

136. On February 1, 2010, the Central Coast Water Board publicly released a preliminary report and preliminary draft order for the regulation of discharges from irrigated lands.

137. <Reserved for Public Workshop Description>

138. <Reserved for Public Comment Period Description>

139. <Reserved for Public Hearing Description>

VIII. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

140. For purposes of adoption of this Order, the Central Coast Water Board is the lead agency pursuant to the CEQA (Public Resources Code Sections 21100 et seq.).

141. <Reserved for CEQA description. This section will be completed in compliance with CEQA requirements.>

IT IS HEREBY ORDERED THAT:

1. Pursuant to Water Code Sections 13263, 13267, and 13269, each Discharger, as defined in Attachment A, must comply with the terms and conditions contained in Attachment B in order to meet the provisions contained in Water Code Division 7 and regulations and plans and policies adopted thereunder.

2. This Order shall not create a vested right to discharge, and all discharges of waste are a privilege, not a right, as provided for in Water Code Section 13263(g).
3. Dischargers may not discharge any waste not specifically regulated by this Order except in compliance with the Water Code.
4. The Discharger must comply with MRP Order No. R3-2010-00XX and any revisions thereto by the Executive Officer.
5. Pursuant to Water Code Section 13269, the Central Coast Water Board waives the requirement for Dischargers to submit a ROWD pursuant to Water Code Section 13260 and to obtain WDRs pursuant to Water Code Section 13263(a) for discharges of waste from irrigated lands if the Discharger complies with this Order, including Attachments, and MRP Order No. R3-2010-00XX.
6. The Executive Officer may propose individual WDRs to the Water Board for any Discharger at any time.
7. Pursuant to Water Code Section 13269, this action waiving the issuance of WDRs for certain specific types of discharges: 1) is conditional; 2) may be terminated by the Central Coast Water Board at any time; 3) may be superceded if the State Water Board or Central Coast Water Board adopts specific WDRs or general WDRs for this type of discharge; 4) does not permit any illegal activity; 5) does not preclude the need for permits which may be required by other local or governmental agencies; and 6) does not preclude the Central Coast Water Board from administering enforcement remedies (including civil liability) pursuant to the Water Code.
8. The Central Coast Water Board or the Executive Officer may, at any time, terminate applicability of this Order with respect to an individual Discharger upon written notice to the Discharger.
9. This Order becomes effective on **10 July 2010** and expires on **9 July 2015** unless rescinded or renewed by the Central Coast Water Board.

I, ROGER W. BRIGGS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order and Attachments adopted by the California Regional Water Quality Control Board, Central Coast Region, on 10 July 2010.

ROGER W. BRIGGS, Executive Officer

ATTACHMENT A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD CENTRAL COAST REGION

ORDER NO. R3-2010-00XX

APPLICABLE WATER QUALITY CONTROL PLANS AND DEFINITIONS FOR CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES FROM IRRIGATED LANDS

Order No. R3-2010-00XX requires Dischargers to comply with applicable state plans and policies and applicable state and federal water quality standards and to prevent nuisance. The water quality standards are set forth in state and federal plans, policies, and regulations. The California Regional Water Quality Control Board (Central Coast Water Board), Central Coast Region's Water Quality Control Plan contains specific water quality objectives, beneficial uses, and implementation plans that are applicable to discharges of waste and/or waterbodies that receive discharges of waste from irrigated lands. The State Water Resources Control Board (State Water Board) has adopted plans and policies that may be applicable to discharges of waste and/or surface waterbodies or groundwater that receive discharges of waste from irrigated lands. The United States Environmental Protection Agency (USEPA) has adopted the *National Toxics Rule* and the *California Toxics Rule*, which constitute water quality criteria that apply to waters of the United States.

The specific waste constituents to be monitored and the applicable water quality standards that protect identified beneficial uses for the receiving water are set forth in the Monitoring and Reporting Program Order No. R3-2010-00XX.

This Attachment A lists relevant plans, policies, regulations, and definitions of terms used in Order No. R3-2010-00XX.

WATER QUALITY CONTROL PLAN

The *Water Quality Control Plan for the Central Coast Region* (Basin Plan) was adopted by the Central Coast Water Board in 1975 and is periodically revised. The Basin Plan is available by contacting the Central Coast Water Board at (805) 549-3147 or by visiting the Central Coast Water Board's website at:

http://www.waterboards.ca.gov/centralcoast/publications_forms/publications/basin_plan/

OTHER RELEVANT PLANS, POLICIES, AND REGULATIONS

State Water Resources Control Board, Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*, October 1968.

State Water Resources Control Board, *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California*, June 1972.

State Water Resources Control Board, Resolution No. 74-43, *Water Quality Control Policy for the Enclosed Bays and Estuaries of California*, May 1974.

State Water Resources Control Board, Resolution No. 88-63, *Sources of Drinking Water Policy*, May 1988.

State Water Resources Control Board, *Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program*, May 2004.

State Water Resources Control Board, *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP)*, February 2005

State Water Resources Control Board, *Water Quality Control Plan for Ocean Waters of California (CA Ocean Plan)*, April 2005.

State Water Resources Control Board, *Water Quality Enforcement Policy*, February 19, 2002.

United States Environmental Protection Agency, *National Toxics Rule*, 40 CFR 131.36, 57 FR 60848, December 1992.

United States Environmental Protection Agency, *California Toxics Rule*, 40 CFR 131.38, 65 FR 31682, May 2000.

DEFINITIONS

The following definitions apply to Order No. R3-2010-00XX, and Monitoring and Reporting Program as related to discharges of waste from irrigated lands. The terms are arranged in alphabetical order. All other terms not explicitly defined for the purposes of this Order and Monitoring and Reporting Program shall have the same definitions as prescribed by California Water Code Division 7 or are explained within the Order or the Monitoring and Reporting Program documents.

1. Anti-degradation. The State Water Board established a policy to maintain high quality waters of the State - Resolution 68-16 "*Statement of Policy with Respect to Maintaining High Quality Waters in California.*" Resolution 68-16 requires existing high quality water to be maintained until it has been demonstrated that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of water, and will not result in water quality less than that prescribed in the policies. Regional Water Boards are required to ensure compliance with Resolution 68-16. The Central Coast Water Board must require discharges to be subject to *best practicable treatment or control* of the discharge necessary to avoid pollution or nuisance and to maintain the highest water quality consistent with maximum benefit to the people of the State. Resolution 68-16 has been approved by the USEPA to be consistent with the federal anti-degradation policy.

2. Aquatic Habitat. The physical, chemical and biological components and functions of riparian areas and wetlands and their buffer zones.

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

4. Beneficial Uses. The Basin Plan establishes the beneficial uses to be protected in the Central Coast Region. Beneficial uses for surface water and groundwater are divided into twenty-four standard categories identified below. The following beneficial uses apply to all waterbodies:
 - agricultural supply (AGR)
 - aquaculture (AQUA)
 - areas of special biological significance (ASBS)
 - cold freshwater habitat (COLD)
 - commercial and sportfishing (COMM)
 - estuarine habitat (EST)
 - freshwater replenishment (FRESH)
 - groundwater recharge (GWR)
 - hydropower generation (POW)
 - industrial process supply (PRO)
 - industrial service supply (IND)
 - inland saline water habitat (SAL)
 - marine habitat (MAR)
 - municipal and domestic supply (MUN)
 - migration of aquatic organisms (MIGR)
 - navigation (NAV)
 - non-contact recreation (REC2)
 - preservation of biological habitats of special significance (BIOL)
 - rare, threatened or endangered species (RARE)
 - shellfish harvesting (SHELL)
 - spawning, reproduction, and development (SPWN)
 - warm freshwater habitat (WARM)
 - water contact recreation (REC1)
 - wildlife habitat (WILD)

5. Concentration. The relative amount of a substance mixed with another substance. An example is 5 parts per million (ppm) of nitrogen in water or 5 mg/L.
6. Discharge. A release of a waste to waters of the State, either directly to surface waters or through percolation to groundwater. Wastes from irrigated agriculture include but are not limited to earthen materials (soil, silt, sand, clay, and rock), inorganic materials (metals, plastics, salts, boron, selenium, potassium, nitrogen, phosphorus, etc.) and organic materials such as pesticides and herbicides.
7. Discharger. The owner and operator of irrigated lands that discharge or have the potential to discharge waste that could directly or indirectly reach waters of the State and affect the quality of any surface water or groundwater.
8. Discharges of Waste from Irrigated Lands. Surface water and groundwater discharges, such as irrigation return flows, tailwater, drainage water, subsurface drainage generated by irrigating crop land or by installing and operating drainage systems to lower the water table below irrigated lands (tile drains), stormwater runoff flowing from irrigated lands, stormwater runoff conveyed in channels or canals resulting from the discharge from irrigated lands, runoff resulting from frost control, and/or operational spills containing waste.
9. Ephemeral Stream. A channel that holds water during and immediately after rain events.
10. Erosion. The wearing away of land surface by wind or water, intensified by land-clearing practices related to farming, residential or industrial development, road building, or logging.
11. Erosion and Sediment Control Practices. Practices used to prevent and reduce the amount of soil and sediment entering surface water in order to protect or improve water quality.
12. Exceedance. A reading using a field instrument or a detection by a California State-certified analytical laboratory where the detected result is above an applicable water quality standard for the parameter or constituent. For toxicity tests, an exceedance is a result that is statistically lower than the control sample test result.
13. Farm Water Quality Management Plan (Farm Plan). The Farm Plan is a document that contains, at a minimum, identification of management practices that are being or will be implemented to protect and improve water quality by addressing irrigation management, pesticide management, nutrient management, salinity management, sediment and erosion control, and aquatic habitat protection. Farm Plans also contain a schedule for the effective implementation of management practices and verification monitoring to determine compliance with the requirements of this Order

(schedules, milestones, effluent limits, etc.). Consistent with the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands adopted by the Board in July 2004 (Order No. R3-2004-0117), this Order requires Dischargers to develop and implement a Farm Plan focused on the priority water quality issues associated with a specific operation and the priority water quality issues associated with a specific watershed or subwatershed.

14. Groundwater. The supply of water found beneath the earth's surface, usually in aquifers, which supply wells and springs.
15. Groundwater Protection Practices. Management practices designed to reduce or eliminate transport of nitrogen, pesticides, and other waste constituents into groundwater.
16. Integrated Pest Management Program (IPM). A pest management strategy that focuses on long-term prevention or suppression of pest problems through a combination of techniques such as encouraging biological control, use of resistant varieties, or adoption of alternative cultivating, pruning, or fertilizing practices or modification of habitat to make it incompatible with pest development. Pesticides are used only when careful field monitoring indicates they are needed according to pre-established guidelines or treatment thresholds.
17. Intermittent Stream. A stream that holds water during wet portions of the year.
18. Irrigated Lands. For the purpose of this Order, irrigated lands include lands where water is applied for the purpose of producing commercial crops and include, but are not limited to, land planted to row, vineyard, field and tree crops as well as commercial nurseries, nursery stock production and greenhouse operations with soil floors, that do not have point-source type discharges, and are not currently operating under individual Waste Discharge Requirements (WDRs). Lands that are planted to commercial crops that are not yet marketable, such as vineyards and tree crops, must also obtain coverage under this Order.
19. Irrigation. Applying water to land areas to supply the water and nutrient needs of plants.
20. Irrigation Management Practices. Management practices designed to improve irrigation efficiency and reduce the amount of irrigation return flow or tailwater, and associated degradation or pollution of surface and groundwater caused by discharges of waste associated with irrigated lands.
21. Irrigation Runoff or Return Flow. Surface and subsurface water that leaves the field following application of irrigation water. See also, Tailwater.

22. Irrigation System Distribution Uniformity. Irrigation System Distribution Uniformity is a measure of how uniformly irrigation water is applied to the cropping area, expressed as a percentage. A nonuniform distribution can deprive portions of the crop of sufficient irrigation water, and can result in the excessive irrigation leading to water-logging, plant injury, salinization, irrigation runoff and transport of chemicals to surface water and groundwater.
23. Load. The concentration or mass of a substance discharged over a given amount of time, for example 10 mg/L/day or 5 Kg/day, respectively.
24. Low-Risk Discharge. Low-Risk Discharges are those discharges where Dischargers demonstrate low-risk by submitting information in their Notice of Intent for approval by the Executive Officer that they are 1) a vineyard operation certified by the Central Coast Vineyard Team (CCVT) as Sustainable in Practice (SIP); or 2) an operation that meets all of the following criteria:
- a. Eliminates all tailwater;
 - b. Does not farm adjacent to or in close proximity (within 1000 feet) to an impaired surface waterbody identified on the Impaired Waters List;
 - c. Demonstrates effective use of integrated pest management techniques and does not use pesticides identified in Attachment A (or elsewhere) as having a high potential to degrade/pollute surface water;
 - d. Demonstrates effective use of a nutrient management plan certified by a XXX *{Note: Appropriate professional certification, such as Certified Crop Advisor (CCA) or other certification with similar expertise and experience}* to be protective of water quality (e.g. will not contribute to an exceedance of water quality standards); and
 - e. Demonstrates effective use of stormwater control measures to minimize erosion and sediment deposition using best practicable treatment or control.
25. Monitoring. Sampling and analysis of receiving water quality conditions, discharge water quality, aquatic habitat conditions, effectiveness of management practices, and other factors that may affect water quality conditions to determine compliance with this Order or other regulatory requirements. Monitoring includes but is not limited to: surface water or groundwater sampling, on-farm water quality monitoring undertaken in connection with agricultural activities, monitoring to identify short and long-term trends in in-stream water quality or discharges from sites, inspections of operations, management practice implementation and effectiveness monitoring, maintenance of on-site records and management practice reporting.
26. Nitrate Hazard Index. In 1995, the University of California Center for Water Resources (WRC) developed the Nitrate Groundwater Pollution Hazard Index (Nitrate Hazard Index). The purpose of the Nitrate Hazard Index is to identify agricultural fields with the highest vulnerability for nitrate contamination to groundwater, based on soil, crop, and irrigation practices. The hazard index number

can range from 1 through 80 with the hazard increasing with increasing hazard index number. The WRC states that an index number greater than 20 indicates greater risk for nitrate contamination to groundwater and should receive careful attention. http://www.lib.berkeley.edu/WRC/WRC/wgp_hazard.html

- 27. Non-point Source Pollution (NPS). Diffuse pollution sources that are generally not subject to NPDES permitting. The wastes are generally carried off the land by runoff. Common non-point sources are activities associated with agriculture, timber harvest, certain mining, dams, and saltwater intrusion.
- 28. Non-Point Source Management Measures. To combat NPS pollution, the State Water Board NPS Program adopted management measures as goals for the reduction of polluted runoff generated from five major categories, including agriculture. Management measures address the following components for agriculture: Erosion and sediment control; facility wastewater and runoff from confined animal facilities; nutrient management; pesticide management; irrigation water management; grazing management, and groundwater protection.
- 29. Non-Point Source Management Practices. Methods or practices selected by entities managing land and water to achieve the most effective, practical means of preventing or reducing pollution from diffuse sources, such as wastes carried off the landscape via urban runoff, excessive hill, slope or streambed and bank erosion, etc. Management Practices include, but are not limited to, structural and nonstructural controls and operation and maintenance procedures. Management Practices can be applied before, during, and after pollution-causing activities to prevent, reduce, or eliminate the introduction of wastes into receiving waters.
- 30. Nutrient. Any substance assimilated by living things that promotes growth.
- 31. Nutrient Management Practices. Management practices designed to reduce the nutrient loss from agricultural lands, which occur through edge-of-field runoff or leaching from the root zone.
- 32. Operational Spill. Irrigation water that is diverted from a source such as an irrigation well or river, but is discharged without being delivered to or used on an individual field.
- 33. Perennial Stream. A stream that holds water throughout the year.
- 34. Pesticides with a High Potential to Degrade/Pollute Surface Water. The following pesticides have an increased potential to degrade/pollute surface water (University of California, Agriculture and Natural Resources (UC-ANR) Publication 8161):

(S)-CYPERMETHRIN	DIFLUBENZURON	METHYL PARATHION
2,4-D	DIMETHOATE	METHYL PARATHION, OTHER RELATED

2,4-D, 2-ETHYLHEXYL ESTER	DIQUAT DIBROMIDE	METRIBUZIN
2,4-D, ALKANOLAMINE SALTS (ETHANOL AND ISOPROPANOL AMINES)	DISULFOTON	MSMA
2,4-D, DIMETHYLAMINE SALT	DITHIOPYR	MYCLOBUTANIL
2,4-D, ISOOCTYL ESTER	DIURON	NALED
2,4-D, TRIISOPROPANOLAMINE SALT	ENDOSULFAN	NAPROPAMIDE
ABAMECTIN	ENDOTHALL, MONO [N,N-DIMETHYL ALKYLAMINE] SALT	NORFLURAZON
ACEPHATE	EPTC	ORYZALIN
ATRAZINE	ESFENVALERATE	OXADIAZON
AZINPHOS-METHYL	ETHOFUMESATE	OXAMYL
AZOXYSTROBIN	FENARIMOL	OXYDEMETON-METHYL
BENEFIN	FENBUTATIN-OXIDE	OXYFLUORFEN
BENSULIDE	FENPROPATHRIN	PARAQUAT DICHLORIDE
BENTAZON, SODIUM SALT	FIPRONIL	PARATHION
BETA-CYFLUTHRIN	FLUAZIFOP-P-BUTYL	PARATHION, OTHER RELATED
BIFENAZATE	FOSETYL-AL	PENDIMETHALIN
BIFENTHRIN	GAMMA-CYHALOTHRIN	PERMETHRIN
BROMACIL	GLUFOSINATE-AMMONIUM	PERMETHRIN, OTHER RELATED
CAPTAN	GLUTARALDEHYDE	PHORATE
CAPTAN, OTHER RELATED	GLYPHOSATE	PHOSMET
CARBARYL	GLYPHOSATE, DIAMMONIUM SALT	PRODIAMINE
CARBOFURAN	GLYPHOSATE, ISOPROPYLAMINE SALT	PROMETRYN
CARBOXIN	GLYPHOSATE, MONOAMMONIUM SALT	PROPICONAZOLE
CHLOROTHALONIL	GLYPHOSATE, POTASSIUM SALT	PROPYZAMIDE
CHLORPYRIFOS	HALOSULFURON-METHYL	PYRAZON
CLETHODIM	HEXAZINONE	PYRIDABEN
CLOFENTEZINE	HEXYTHIAZOX	RIMSULFURON
CLOPYRALID, MONOETHANOLAMINE SALT	IMAZAPYR, ISOPROPYLAMINE SALT	SETHOXYDIM
CLOPYRALID, TRIETHYLAMINE SALT	IMIDACLOPRID	SIMAZINE
COPPER SULFATE (BASIC)	IPRODIONE	S-METOLACHLOR
COPPER SULFATE (PENTAHYDRATE)	ISOXABEN	SPINOSAD
CYCLOATE	LAMBDA-CYHALOTHRIN	TEBUFENOZIDE

CYFLUTHRIN	LINURON	THIABENDAZOLE
CYMOXANIL	MALATHION	THIOPHANATE-METHYL
CYPERMETHRIN	MANCOZEB	THIRAM
CYPRODINIL	MANEB	TRIADIMEFON
DIAZINON	MCPA, DIMETHYLAMINE SALT	TRICLOPYR, BUTOXYETHYL ESTER
DICAMBA	MCPA, ISOOCTYL ESTER	TRICLOPYR, TRIETHYLAMINE SALT
DICAMBA, DIMETHYLAMINE SALT	MECOPROP-P	TRIFLUMIZOLE
DICAMBA, DIMETHYLAMINE SALT, OTHER RELATED	METAM-SODIUM	TRIFLURALIN
DICLORAN	METHIDATHION	VINCLOZOLIN
DICOFOL	METHOMYL	

35. Pesticide Management Practices. Management practices designed to reduce or eliminate pesticide runoff into surface water and groundwater.
36. Point Source. Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which wastes are or may be discharged.
37. Pollutant. The man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water, including dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.
38. Quality of the Water. The “chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water which affect its use” as defined in the California Water Code Sec. 13050(g).
39. Receiving Waters. Surface waters or groundwater that receive or have the potential to receive discharges of waste from irrigated lands.
40. Requirements of Applicable Water Quality Control Plans. Water quality objectives, prohibitions, Total Maximum Daily Load (TMDL) Implementation Plans, or other requirements contained in the Basin Plan, as adopted by the Central Coast Water Board and approved according to applicable law.
41. Riparian Area. Vegetation affected by the surface water or groundwater of adjacent perennial or intermittent streams, lakes or other waterbodies. Vegetation species are distinctly different from adjacent areas or are similar to adjacent areas but exhibit

more vigorous or robust growth forms indicative of increased soil moisture (Dall et. al. 1997, p.3) Dall, D.C., Elliot, and D. Peters. 1997. *A System for Mapping Riparian Areas in the Western United States*. U.S. Fish and Wildlife Service, National Wetlands Inventory. 15 pp.

42. Riparian Buffer. A protection zone surrounding perennial or intermittent channels with riparian vegetation and riparian functions that support beneficial uses and protect water quality.
43. Stormwater. Stormwater runoff, snow melt runoff, and surface runoff and drainage, as defined in 40 CFR 122.26(b)(13).
44. Subsurface Drainage. Water generated by installing drainage systems to lower the water table below irrigated lands. The drainage can be generated by subsurface drainage systems, deep open drainage ditches or drainage wells.
45. Surface Runoff. Precipitation, snow melt, or irrigation water in excess of what can infiltrate the soil surface and be stored in small surface depressions; a major transporter of non-point source wastes in rivers, streams, and lakes.
46. Sustainable Land Management. The use of land and water resources by humans, while ensuring the long-term productive potential of resources, and the maintenance of environmental functions. This definition of sustainable land management includes managing land to maintain ecological processes and biological diversity.
47. Tailwater. Runoff of irrigation water from the lower end of an irrigated field. See also, Irrigation Runoff or Return Flow.
48. Tile Drains. Subsurface drainage which removes excess water from the soil profile, usually through a network of perforated tile tubes installed 2 to 4 feet below the soil surface. This lowers the water table to the depth of the tile over the course of several days. Drain tiles allow excess water to leave the field. Once the water table has been lowered to the elevation of the tiles, no more water flows through the tiles.
49. Total Maximum Daily Load (TMDL). The condition of an impaired surface waterbody (on the Clean Water Act Sec. 303(d) list) that limits the amount of pollution that can enter the waterbody without adversely affecting its beneficial uses, usually expressed as a concentration (e.g., mg/L) or mass (e.g., kg); TMDLs are proportionally allocated among dischargers to the impaired surface waterbody.
50. Waste. "Includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal" as defined in the California Water Code Sec. 13050(d). "Waste" includes

irrigation return flows and drainage water from agricultural operations containing materials not present prior to use. Waste from irrigated agriculture includes *earthen materials* (such as soil, silt, sand, clay, rock), *inorganic materials* (such as metals, salts, boron, selenium, potassium, nitrogen, phosphorus), and *organic materials* such as pesticides.

51. Water Quality Control. The “regulation of any activity or factor which may affect the quality of the waters of the State and includes the prevention and correction of water pollution and nuisance” as defined in the California Water Code Sec. 13050(i).
52. Water Quality Criteria. Levels of water quality required under Sec. 303(c) of the Clean Water Act that are expected to render a body of water suitable for its designated uses. Criteria are based on specific levels of pollutants that would make the water harmful if used for drinking, swimming, farming, fish production, or industrial processes. The *California Toxics Rule* adopted by USEPA in April 2000, sets numeric Water Quality Criteria for non-ocean waters of California for a number of pollutants. See also, Water Quality Objectives.
53. Water Quality Objectives. “Limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specified area,” as defined in Sec. 13050(h) of the California Water Code. Water Quality Objectives may be either numerical or narrative and serve as Water Quality Criteria for purposes of Section 303 of the Clean Water Act. Specific Water Quality Objectives relevant to this Order are identified in Tables 1 and 2.
54. Water Quality Standard. Provisions of State or Federal law that consist of the beneficial designated uses or uses of a waterbody, the numeric and narrative water quality criteria that are necessary to protect the use or uses of that particular waterbody, and an anti-degradation statement. Water quality standards includes water quality objectives in the Central Coast Water Board’s Basin Plan, water quality criteria in the California Toxics Rule and National Toxics Rule adopted by USEPA, and/or water quality objectives in other applicable State Water Board plans and policies. Under Sec. 303 of the Clean Water Act, each State is required to adopt water quality standards.
55. Waters of the State. “Any surface water or groundwater, including saline waters, within the boundaries of the State” as defined in the California Water Code Sec. 13050(e), including all waters within the boundaries of the State, whether private or public, in natural or artificial channels, and waters in an irrigation system.
56. Wetland. An area is a wetland if, under normal circumstances, it (1) is saturated by groundwater or inundated by shallow surface water for a duration sufficient to cause anaerobic conditions within the upper substrate; (2) exhibits hydric substrate conditions indicative of such hydrology; and (3) either lacks vegetation or the

vegetation is dominated by hydrophytes. (TAT. 2009) *Technical Memorandum no. 2: Wetland Definition*, Final, Dated June 25, 2009. Produced by the San Francisco Estuary Institute for the Technical Advisory Team for the California Wetland and Riparian Area Protection Policy, California State Water Resources Control Board, Sacramento, CA).

Tables 1A and 1B.

Summary Of Narrative And Numeric Water Quality Objectives For Agricultural Discharges To Surface And Groundwater. Acronyms in the Table are defined in a list at the end of the Table. The water quality objectives indicated by a double asterisk (**) must be met in irrigation runoff per the compliance time schedule contained in the Preliminary Draft Agricultural Order, Part H and are included as individual discharge monitoring requirements (MRP Order No. R3-2010-00XX). All other water quality objectives must be met in receiving waters and generally are included in watershed monitoring requirements (MRP Order No. R3-2010-00XX). This Order anticipates timeframes beyond the term of this Order to achieve water quality objectives in receiving water.

Table 1A. Narrative And Numeric Water Quality Objectives For Surface Water.

SURFACE WATER QUALITY OBJECTIVE <i>(Source of WQO-Page in Basin Plan)</i> (Objectives are numeric unless labeled "narrative")	BENEFICIAL USE
TOXICITY	
Toxicity** <i>(BPGO, III-4)</i> <i>Narrative Objective:</i> All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in, human, plant, animal, or aquatic life. <i>Indicators of Narrative Objective:</i> Chemical concentrations in excess of toxic levels for aquatic life including but not limited to the following: Chlorpyrifos 0.025 ug/L Diazinon 0.14 ug/L <i>(Source: Sipmann and Finlayson 2000)</i>	All Surface Waters
TOXICANTS	
Nutrients	
Ammonia**, Total (N) <i>(BPSO, Table 3.3)</i> >30 mg/L NH4-N	AGR
Ammonia**, 	

<p align="center">SURFACE WATER QUALITY OBJECTIVE <i>(Source of WQO-Page in Basin Plan)</i> (Objectives are numeric unless labeled “narrative”)</p>	<p align="center">BENEFICIAL USE</p>
<p>Un-ionized <i>(BPGO, III-4)</i></p> <p>0.025 mg/L NH3 as N</p>	<p>All Surface Waters</p>
<p>Nitrate** <i>(a. BPSO, Table 3-2 b. BPSO, Table 3-3)</i></p> <p>a. 10 mg/L NO3-N b. >30 mg/L NO3-N</p>	<p>a. MUN b. AGR</p>
<p>Organics</p>	
<p>Chemical Constituents <i>(BPSO, III-5 and Table 3-2)</i></p> <p>Waters shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Article 4, Chapter 15, Section 64435, Tables 2 and 3 as listed in Table 3-2.</p>	<p>MUN</p>
<p>Chemical Constituents <i>(BPSO, III-5 and Table 3-3)</i></p> <p>Waters shall not contain concentrations of chemical constituents in amounts which adversely affect the agricultural beneficial use. Interpretation of adverse effect shall be as derived from the University of California Agricultural Extension Service guidelines provided in Table 3-3.</p> <p>In addition, waters used for irrigation and livestock watering shall not exceed concentrations for those chemicals listed in Table 3-4</p>	<p>AGR</p>
<p>Chemical Constituents <i>(BPSO, III-10, Table 3-5, Table 3-6)</i></p> <p>Waters shall not contain concentrations of chemical constituents known to be deleterious to fish or wildlife in excess of the limits listed in Table 3-5 or Table 3-6.</p>	<p>COLD, WARM, MAR</p>
<p>Oil and Grease <i>(BPGO, III-3)</i></p> <p><i>Narrative Objective:</i> Waters shall not contain oils, greases, waxes, or other similar 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.</p>	<p>All Surface Waters</p>

<p align="center">SURFACE WATER QUALITY OBJECTIVE <i>(Source of WQO-Page in Basin Plan)</i> (Objectives are numeric unless labeled “narrative”)</p>	<p align="center">BENEFICIAL USE</p>
<p>Organic Chemicals <i>(BPSO, III-5 and Table 3-1)</i></p> <p>All inland surface waters, enclosed bays, and estuaries shall not contain concentrations of organic chemicals in excess of the limiting concentrations set forth in California Code of Regulations, Title 22, Chapter 15, Article 5.5, Section 64444.5, Table 5 and listed in Table 3-1.</p>	<p>MUN</p>
<p>Other Organics <i>(BPGO, III-3)</i></p> <p>Phenol <i>(BPSO, III-5)</i></p> <p>Waters shall not contain organic substances in concentrations greater than the following:</p> <p>Methylene Blue Activated Substances < 0.2 mg/L Phenols < 0.1 mg/L Phenol (MUN) ≤ 1.0 µg/L PCB's < 0.3 µg/L Phthalate Esters < 0.002 µg/L</p>	<p>All Surface Waters</p>
<p>Metals</p>	
<p>Chromium <i>(BOSP, III-12)</i></p> <p>≤ 0.01 mg/L</p>	<p>SHELL</p>
<p>Cadmium <i>(BPGO, III-11)</i></p> <p>≤ 0.03 mg/L in hard water or ≤ 0.004 mg/L in soft water (Hard water is defined as water exceeding 100 mg/L CaCO₃).</p>	<p>COLD, WARM</p>
<p>Chromium <i>(BPGO, III-11)</i></p> <p>≤ 0.05 mg/L</p>	<p>COLD, WARM</p>
<p>Copper <i>(BPGO, III-11)</i></p> <p>≤ 0.03 mg/L in hard water or ≤ 0.01 mg/L in soft water (Hard water is defined as water exceeding 100 mg/L CaCO₃).</p>	<p>COLD, WARM</p>

<p align="center">SURFACE WATER QUALITY OBJECTIVE <i>(Source of WQO-Page in Basin Plan)</i> (Objectives are numeric unless labeled “narrative”)</p>	<p align="center">BENEFICIAL USE</p>
<p>Lead <i>(BPGO, III-11)</i> ≤ 0.03 mg/L</p>	<p align="center">COLD, WARM</p>
<p>Mercury <i>(BPGO, III-11)</i> ≤ 0.0002 mg/L</p>	<p align="center">COLD, WARM</p>
<p>Nickel <i>(BPGO, III-11)</i> ≤ 0.4 mg/L in hard water or ≤ 0.1 mg/L in soft water (Hard water is defined as water exceeding 100 mg/L CaCO₃).</p>	<p align="center">COLD, WARM</p>
<p>Zinc <i>(BPGO, III-11)</i> ≤ 0.2 mg/L in hard water or ≤ 0.004 mg/L in soft water (Hard water is defined as water exceeding 100 mg/L CaCO₃).</p>	<p align="center">COLD, WARM</p>
<p align="center">CONVENTIONALS</p>	
<p>Biostimulatory Substances <i>(BPGO, III-3)</i> <i>Narrative Objective:</i> Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses. <i>Indicators of Narrative Objective:</i> Indicators of biostimulation include chlorophyll-a, dissolved oxygen, phosphorous, and nitrate. Water Board staff estimates that 1 mg/L nitrate is necessary to protect aquatic life beneficial uses from biostimulation. <i>(Source: Central Coast Water Board. April 2009. Central Coast Ambient Monitoring Program Technical Paper: Interpreting Narrative Objectives for Biostimulatory Substances Using the Technical Approach for Developing California Nutrient Numeric Endpoints)</i></p>	<p align="center">All Surface Waters</p>
<p>Boron <i>(BPSO, III-13)</i> Waterbody specific. Median values, shown in Table 3-7 for surface waters. Sub-</p>	<p align="center">Specific Surface Waters</p>

<p style="text-align: center;">SURFACE WATER QUALITY OBJECTIVE <i>(Source of WQO-Page in Basin Plan)</i> (Objectives are numeric unless labeled “narrative”)</p>	<p style="text-align: center;">BENEFICIAL USE</p>
<p>Basins Objectives range from 0.2 – 0.5 mg/L.</p>	
<p>Chloride <i>(BPSO, III-13)</i></p> <p>Waterbody specific. Median values, shown in Table 3-7 for surface waters. Sub-Basins Objectives range from 150-1400 mg/L.</p>	<p>Specific Surface Waters</p>
<p>Color <i>(BPGO, III-3)</i></p> <p>Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses. Coloration attributable to materials of waste origin shall not be greater than 15 units or 10 percent above natural background color, whichever is greater.</p>	<p>All Surface Waters</p>
<p>Conductivity <i>(BPSO, III-8, Table 3-3)</i></p> <p>>3.0 mmho/cm</p>	<p>AGR</p>
<p>Dissolved Oxygen (DO) <i>(BPGO, III-2)</i></p> <p>Mean annual DO \geq 7.0 mg/L Minimum DO \geq 5.0 mg/L</p>	<p>All Ocean Waters</p>
<p>Dissolved Oxygen <i>(BPGO, III-4)</i></p> <p>For waters not mentioned by a specific beneficial use: DO \geq 5.0 mg/L DO Median values \geq 85 percent saturation</p>	<p>All Surface Waters</p>
<p>Dissolved Oxygen <i>(BPSO, III-10)</i></p> <p>DO \geq 7.0 mg/L</p>	<p>COLD, SPWN</p>
<p>Dissolved Oxygen <i>(BPSO, III-10)</i></p> <p>DO \geq 5.0 mg/L</p>	<p>WARM</p>
<p>Floating Material <i>(BPGO, III-3)</i></p> <p><i>Narrative Objective:</i></p>	<p>All Surface Waters</p>

<p style="text-align: center;">SURFACE WATER QUALITY OBJECTIVE <i>(Source of WQO-Page in Basin Plan)</i> (Objectives are numeric unless labeled “narrative”)</p>	<p style="text-align: center;">BENEFICIAL USE</p>
<p>Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.</p>	
<p>pH** <i>(BPSO, III-10)</i></p> <p>The pH value shall not be depressed below 7.0 nor above 8.5.</p> <p>Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters.</p>	<p>COLD, WARM,</p>
<p>pH** <i>(BPSO, III-10)</i></p> <p>The pH value shall not be depressed below 7.0 or raised above 8.5².</p> <p>Changes in normal ambient pH levels shall not exceed 0.2 units.</p>	<p>MAR</p>
<p>pH** <i>(BPSO, III-5)</i></p> <p>The pH value shall not be depressed below 6.5 nor above 8.3.</p>	<p>MUN, REC-1, REC-2, AGR</p>
<p>Settleable Material <i>(BPGO, III-3)</i></p> <p><i>Narrative Objective:</i> Waters shall not contain settleable material in concentrations that result in deposition of material that causes nuisance or adversely affects beneficial uses.</p>	<p>All Surface Waters</p>
<p>Sodium <i>(BPSO, III-13)</i></p> <p>Waterbody specific. Median values, shown in Table 3-7 for surface waters. Sub-Basins Objectives range from 20-250 mg/L.</p>	
<p>Sulfate <i>(BPSO, III-13)</i></p> <p>Waterbody specific. Median values, shown in Table 3-7 for surface waters. Sub-Basins Objectives range from 10-700 mg/L.</p>	
<p>Suspended Sediment <i>(BPGO, III-3)</i></p> <p><i>Narrative Criteria:</i> The suspended sediment load and suspended sediment discharge rate of</p>	<p>All Surface Waters</p>

<p align="center">SURFACE WATER QUALITY OBJECTIVE <i>(Source of WQO-Page in Basin Plan)</i> (Objectives are numeric unless labeled “narrative”)</p>	<p align="center">BENEFICIAL USE</p>
<p>surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.</p>	
<p>Suspended Material <i>(BPGO, III-3)</i> <i>Narrative Criteria:</i> Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.</p>	<p align="center">All Surface Waters</p>
<p>Taste and Odor <i>(BPGO, III-3)</i> <i>Narrative Criteria:</i> Waters shall not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.</p>	<p align="center">All Surface Waters</p>
<p>Temperature** <i>(BPGO, III-3)</i> <i>Narrative Criteria:</i> Natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses.</p>	<p align="center">All Surface Waters</p>
<p>Temperature** <i>(BPGO, III-4)</i> <i>Narrative Objective:</i> Natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses.</p> <p><i>a) Indicators of Narrative Objective for COLD Habitat:</i></p> <p>Coho December - April 48-54 °F 7-DAM³ 56-58 °F 1-DAM</p> <p>May – November 57-63 °F 7-DAM 68-70 °F 1-DAM</p> <p>Steelhead December - April 55-57 °F 7-DAM 56-58 °F 1-DAM</p>	<p align="center">All Surface Waters</p> <p>a) COLD</p>

<p style="text-align: center;">SURFACE WATER QUALITY OBJECTIVE <i>(Source of WQO-Page in Basin Plan)</i> (Objectives are numeric unless labeled “narrative”)</p>	<p style="text-align: center;">BENEFICIAL USE</p>
<p>May – November 56-63 °F 7-DAM 70-73 °F 1-DAM <i>(Source: Hicks 2000)</i></p> <p><i>b) Indicators of Narrative Objective for WARM Habitat:</i></p> <p><u>Stickleback</u> Upper optimal limit = 75 °F (This temperature is also the low end of the upper lethal limit for steelhead) <i>(Source: Moyle 1976)</i></p> <p>Note: 7-DAM refers to the rolling arithmetic average of seven consecutive daily maximum temperatures. 1-DAM refers to the highest daily maximum temperature.</p>	<p>b) WARM</p>
<p>Temperature** <i>(BPSO, III-10)</i></p> <p>At no time or place shall the temperature be increased by more than 5°F above natural receiving water temperature.</p>	<p>COLD, WARM</p>
<p>Total Dissolved Solids (TDS)** <i>(BPSO, III-13)</i></p> <p>Waterbody specific. Median values, shown in Table 3-7 for surface waters. Sub-Basins Objectives range from 10-250 mg/L.</p>	
<p>Turbidity** <i>(BPGO, III-3 and WDR R3-2006-0032)</i></p> <p>Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increase in turbidity attributable to controllable water quality factors shall not exceed the following limits in receiving water:</p> <ol style="list-style-type: none"> a. Five NTU, where natural turbidity is less than 25 NTU b. Twenty percent, where natural turbidity is between 25 and 50 NTU. c. Ten NTU, where natural turbidity is between 50 and 100 NTU. d. Ten percent, where natural turbidity is greater than 100 NTU. 	<p>All Surface Waters</p>
<p>PATHOGEN INDICATORS</p>	
<p>Fecal Coliform <i>(BOSP, III-5)</i></p> <p>Log mean 200 MPN/100mL. Max 400 MPN/100mL.</p>	<p>REC-1</p>

SURFACE WATER QUALITY OBJECTIVE <i>(Source of WQO-Page in Basin Plan)</i> (Objectives are numeric unless labeled “narrative”)	BENEFICIAL USE
Fecal Coliform <i>(BOSP, III-10)</i> Log mean 2000 MPN/100mL. Max 4000 MPN/100mL.	REC-2
<i>E. coli</i> <i>(USEPA)</i> Max 235 MPN/100 mL	REC-1
Total Coliform <i>(BOSP, III-12)</i> Median ≤ 70/100 MPN/100mL Max 230 MPN/100 mL	SHELL

Table 1B. Narrative And Numeric Water Quality Objectives For Groundwater.

GROUNDWATER QUALITY OBJECTIVE <i>(Source of WQO-Page in BP)</i> (Objectives are numeric unless labeled “narrative”)	BENEFICIAL USE
TOXICANTS	
Chemical Constituents <i>(BPSO, III-14)</i> Groundwaters shall not contain concentrations of chemical constituents in excess of federal or state drinking water standards.	MUN
Chemical Constituents <i>(BPSO, III-14 and Tables 3-3 and 3-4)</i> Groundwaters shall not contain concentrations of chemical constituents in amounts that adversely affect such beneficial use. Interpretation of adverse effect shall be as derived from the University of California Agricultural Extension Service guidelines provided in Table 3-3. In addition, water used for irrigation and livestock watering shall not exceed the concentrations for those chemicals listed in Table 3-4.	AGR

<p align="center">GROUNDWATER QUALITY OBJECTIVE <i>(Source of WQO-Page in BP)</i> (Objectives are numeric unless labeled “narrative”)</p>	<p align="center">BENEFICIAL USE</p>
<p>Total Nitrogen <i>(BPSO, III-15 and Table 3-8)</i></p> <p>Groundwater Basin Objectives for Median values range from 1-10 mg/L as N.</p>	<p>Specific Groundwater Basins</p>
<p align="center">CONVENTIONALS</p>	
<p>Total Dissolved Solids (TDS) <i>(BPSO, III-15)</i></p> <p>Groundwater Basin Objectives for median values range from 100-1500 mg/L TDS.</p>	<p>Specific Groundwater Basins</p>
<p>Chloride (Cl) <i>(BPSO, III-15)</i></p> <p>Groundwater Basin Objectives for median values range from 20-430 mg/L Cl.</p>	<p>Specific Groundwater Basins</p>
<p>Sulfate (SO₄) <i>(BPSO, III-15)</i></p> <p>Groundwater Basin Objectives for median values range from 10-1025 mg/L SO₄.</p>	<p>Specific Groundwater Basins</p>
<p>Boron (B) <i>(BPSO, III-15)</i></p> <p>Groundwater Basin Objectives for median values range from 0.1-2.8 mg/L B.</p>	<p>Specific Groundwater Basins</p>
<p>Sodium (Na) <i>(BPSO, III-15)</i></p> <p>Groundwater Basin Objectives for median values range from 10-730 mg/L.</p>	<p>Specific Groundwater Basins</p>

Acronyms:

BP = Basin Plan or Water Quality Control Plan for the Central Coast Region

BPGO = Basin Plan General Objective

BPSO = Basin Plan Specific Objective related to a designated beneficial use

TMDL = Specific Objective related to an adopted Total Maximum Daily Load

WDR = Waste Discharge Requirements

SB = State Board established guideline

USEPA = US Environmental Protection Agency
CCAMP = Central Coast Ambient Monitoring Program
SWAMP = Surface Water Ambient Monitoring Program
MCL = Maximum Contaminant Level, California drinking water standards set forth in California Code of Regulations, Title 22.
NTU = Nephelometric Turbidity Unit
mg/L = milligram/Liter
MPN = Most Probable Number

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

ORDER NO. R3-2010-00XX

**TERMS AND CONDITIONS
FOR
CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS
FOR
DISCHARGES FROM IRRIGATED LANDS**

Attachment B to Order No. R3-2010-00XX contains the terms and conditions of the *Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands* (Order). This Order conditionally waives waste discharge requirements (WDRs) and reports of waste discharge (ROWDs) for individual discharges of waste from irrigated lands to waters within the Central Coast Region that comply with the conditions of this Order. Attachment A of Order No. R3-2010-00XX lists applicable plans, policies, regulations, and definitions of terms used in Order No. R3-2010-00XX. This Order establishes terms and conditions with which Dischargers must comply to obtain coverage under and to be in compliance with the Order. Order No. R3-2010-00XX defines “Discharger(s)” as the owner and operator of irrigated lands that discharge or have the potential to discharge waste that could directly or indirectly reach waters of the State and affect the quality of any surface water or groundwater. Order No. R3-2010-00XX defines “discharges of waste from irrigated lands” as including surface discharges, such as irrigation return flows, tailwater, drainage water, subsurface drainage generated by irrigating crop land or by installing and operating drainage systems to lower the water table below irrigated lands (tile drains), stormwater runoff flowing from irrigated lands, stormwater runoff conveyed in channels or canals resulting from the discharge of waste from irrigated lands, runoff resulting from frost control, and/or operational spills containing waste.

Dischargers must comply with the following conditions:

Part A. General Provisions

1. Dischargers must comply with all conditions of this Order, including timely submittal of all technical reports specified in Part C. Technical Reports. Violations may result in enforcement action under the California Water Code (Water Code), including Central Coast Regional Water Quality Control Board (Central Coast Water Board) orders, or termination of coverage under this Order.

2. Dischargers must comply with the Central Coast Region Water Quality Control Plan (Basin Plan) and all other applicable water quality control plans as identified in Attachment A. <CLARIFICATION OF EXISTING>
3. Dischargers must take all reasonable steps to prevent any discharge in violation of this Order.
4. Dischargers must not (a) cause, (b) have a reasonable potential to cause, or (c) contribute to an excursion above or outside the acceptable range for any Regional, State, or Federal numeric or narrative water quality standard identified in Attachment A, so as to assure the protection of all actual or designated beneficial uses of waters of the State, per the time schedule described in Part H of this Attachment B to the Order. In addition, per Resolution 68-16 (Anti-Degradation Policy), Dischargers must not discharge waste to receiving water that will result in degradation of existing high quality water. Dischargers must implement management practices to meet applicable water quality standards in receiving water, or maintain existing water quality, whichever is more stringent.
5. Dischargers must not cause or contribute to conditions of pollution or nuisance as defined in Water Code Section 13050.
6. Agricultural discharges percolated into groundwater must be of such quality at the point where they enter the ground to assure the protection of all actual or designated beneficial uses of all groundwaters.
7. Dischargers must comply with applicable Total Maximum Daily Loads (TMDLs), including any plan of implementation for the TMDL, commencing with the effective date or other date for compliance stated in the TMDL. A list of TMDLs adopted by the Central Coast Water Board is available on the Central Coast Water Board website at: http://www.waterboards.ca.gov/centralcoast/water_issues/programs/tmdl/index.shtml.
8. Dischargers must develop and implement a Farm Water Quality Management Plan (Farm Plan). The Farm Plan must identify and focus on the water quality impacts associated with the specific operation and watershed or subwatershed, based on water quality data from Individual Discharge Monitoring and/or Watershed Monitoring. Farm Plans must identify the management measures the Discharger is implementing to achieve compliance with this Order, a schedule for implementation and verification monitoring to evaluate progress towards compliance with this Order. Specifically, the Farm Plan must identify management practices the grower is implementing to comply with this Order, including the following: addressing irrigation management, pesticide management, nutrient management, salinity management, sediment and erosion control, and aquatic habitat protection.
<CLARIFICATION OF EXISTING>

9. Dischargers must update their Farm Plans at least annually with monitoring and site evaluation results, and specific adjustments in response to any results that indicate unacceptable progress (e.g., do not meet interim milestones identified in this Order). <NEW>
10. Dischargers must submit the Farm Plan or requested elements of the Farm Plan within 30 days of written notice by the Executive Officer. <NEW>
11. Objectionable odors due to the storage of wastewater and/or stormwater shall not be perceivable beyond the limits of the property owned or operated by the Discharger.
12. Dischargers must maintain in good working order and operate as efficiently as possible any facility or control system, including management practices and monitoring devices installed or used to achieve compliance with this Order. <NEW>
13. **Within 3 months** from adoption of this Order and prior to initiating discharge monitoring, Dischargers must submit a Quality Assurance Project Plan (QAPP) and Sampling and Analysis Plan (SAP) for Executive Officer approval as specified in the Monitoring and Reporting Program (MRP) Order No. R3-2010-00XX. To reduce costs for individual Dischargers, Dischargers may utilize QAPPs and SAPs prepared by a third-party and approved by the Executive Officer (e.g. Cooperative Monitoring Program, if applicable). <NEW>
14. Dischargers must conduct waste specific monitoring and reporting that includes Individual Discharge Characterization Monitoring, Individual Discharge Monitoring, Watershed (receiving water) Monitoring, and Additional Monitoring, as required by the Executive Officer (receiving water and/or discharge) per MRP Order No. R3-2010-00XX. In addition, Dischargers must submit a plan to monitor groundwater quality in agricultural areas to evaluate long term trends in groundwater quality and protection of beneficial uses, including drinking water. The specific waste constituents to be monitored are set forth in MRP Order No. R3-2010-00XX. To reduce costs for individual Dischargers, Dischargers may elect to conduct monitoring and reporting by participating in a monitoring program conducted by a third-party and approved by the Executive Officer (e.g. Cooperative Monitoring Program (CMP), if applicable). Per MRP Order No. R3-2010-00XX, Dischargers must conduct monitoring as follows: <NEW>
 - a. *Individual Discharge Characterization Monitoring* – Used to characterize the type and nature of non-stormwater discharges to surface water and groundwater from individual agricultural operations (including type of discharge, flow or volume of discharge, frequency of discharge, concentration or load of wastes in discharge in comparison to water quality standards and receiving water quality). Individual Discharge Characterization Monitoring is also used to evaluate the need for one time and/or continuous Individual Discharge Monitoring.

- b. *Individual Discharge Monitoring* – Used to monitor discharges of waste from individual agricultural operations and assess compliance with applicable water quality standards for the protection of water quality and associated beneficial uses.
 - c. *Watershed Monitoring* – Used to monitor discharges of waste in stormwater runoff from agricultural operations and associated impacts to receiving water. Watershed Monitoring is also used monitor and assess long term water quality trends in agricultural watersheds, and monitor and assess the protection of beneficial uses, including aquatic habitat.
 - d. *Additional Monitoring* - Used to provide more detailed monitoring and assessment to further characterize and identify specific sources and causes of water quality impairment.
15. Dischargers must submit a plan to monitor groundwater quality in agricultural areas to evaluate long-term trends in groundwater quality and protection of beneficial uses, including drinking water <NEW>.
16. The Executive Officer may postpone individual reporting of Individual Discharge Monitoring data (including but not limited to irrigation runoff and percolation to groundwater) in cases where all Dischargers in a watershed or subwatershed are achieving collective progress towards compliance and meeting milestones (e.g. tailwater reduction or elimination) per the defined time schedule. In this case, Dischargers must report individual monitoring data collectively as a group (including average, minimum, and maximum values for flow volume and waste concentrations or loads). <NEW>
17. Consistent with Water Code Section 13267, Dischargers must furnish the Central Coast Water Board, within a reasonable time, technical reports that the Executive Officer may request to determine compliance with this Order.
18. Pursuant to Water Code Section 13267(c), Central Coast Water Board or its authorized representatives may (a) enter upon the Discharger’s premises where a regulated operation or activity is located or conducted; (b) inspect or photograph any operation or activity pertinent to this Order, (c) have access to and copy any records pertinent to this Order; and (d) sample or monitor to determine compliance with this Order. The inspection may be made with the consent of the owner or possessor of the facilities, or if consent is withheld, with a duly issued warrant. <CLARIFICATION OF EXISTING>
19. This Order is not transferable to any person except after notice to and approval by the Executive Officer. <NEW>

20. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code Sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. Sections 1531 to 1544). If a "take" will result from any action authorized under this Order, the Dischargers must obtain authorization for an incidental take prior to construction or operation of the project. Dischargers must be responsible for meeting all requirements of the applicable Endangered Species Act. <NEW>

Part B. Discharge Prohibitions

21. The discharge of waste that (a) causes, (b) has a reasonable potential to cause, or (c) contributes to an excursion above or outside the acceptable range for any Regional, State, or Federal numeric or narrative water quality standard is prohibited, so as to assure the protection of all actual or designated beneficial uses of waters of the State. <CLARIFICATION OF EXISTING>

22. The discharge of waste that results, or has reasonable potential to result in degradation of existing high quality water is prohibited <NEW>.

23. The discharge of waste that creates conditions of pollution or nuisance as defined in Water Code Sections 13050(l) and 13050(m) is prohibited.

24. The discharge of any waste not specifically regulated by the Order described herein is prohibited unless the Discharger complies with Water Code Section 13260(a) and the Central Coast Water Board either issues WDRs pursuant to Water Code Section 13263 or an individual waiver pursuant to Water Code Section 13269 or the conditions specified in Water Code Section 13264(a) have occurred. Waste specifically regulated by this Order includes earthen materials, such as soil, silt, sand, clay, and rock; inorganic materials, such as metals, plastics, salts, boron, selenium, potassium, and nitrogen; and organic materials, such as organic pesticides, that enter or have the potential to enter into waters of the State. <NEW>

25. The discharge of any waste at a location or in a manner different from that described in the approved Notice of Intent (NOI) is prohibited. <NEW>

26. The discharge of waste to groundwater with the beneficial use of municipal or domestic water supply in excess of maximum contaminant levels (MCLs) for primary and secondary drinking water standards established by the United States Environmental Protection Agency (USEPA) or California Department of Public Health (CDPH), whichever is more stringent, is prohibited. <CLARIFICATION OF EXISTING>

27. Excessive use or over-application of fertilizer in excess of crop needs is prohibited. <NEW>
28. The discharge of agricultural rubbish, refuse, irrigation tubing, or other solid wastes into surface waters or at any place where they may contact or may be eventually discharge to surface waters is prohibited. < NEW>
29. The discharge of wastes from point sources to waters of the United States subject to Clean Water Act Sections 301, 402 (NPDES), or 404 (dredge and fill) is prohibited.
30. The application of any chemical directly to surface waterbodies designated in the Basin Plan, including chemicals used for the purposes of breaking down applied pesticides or reducing associated toxicity, is prohibited, unless approved by the Central Coast Water Board. Any such chemical used for this purpose in irrigation systems must have documented effectiveness and must not result in further impact to water quality or aquatic habitat, and must not result in negative ecological impacts. <NEW>
31. Degradation of existing perennial, intermittent, or ephemeral streams or riparian or wetland area habitat that results or has the potential to result in erosion and discharges of waste to waters of the State is prohibited, unless authorized by the Central Coast Water Board. Degradation of aquatic habitats results from human activities that result in water quality impairment and make habitats less suitable or less available to aquatic life, such as removal of riparian vegetation, channel clearing, creation of bare dirt areas, and hydromodification. <NEW>

Part C. Technical Reports

All technical reports submitted pursuant to the Order are required pursuant to Water Code Section 13267. Failure to submit technical reports in accordance with schedules established by the Order and/or the attachments, or failure to submit a complete technical report (i.e. of sufficient technical quality to be acceptable to the Executive Officer), may subject the Discharger to enforcement action pursuant to Water Code Section 13268.

Notice of Intent (NOI) and Acreage Updates <CLARIFICATION OF EXISTING>

32. Dischargers seeking authorization to discharge under this Order must submit a completed NOI to the Central Coast Water Board in a manner set forth in this Attachment B or as revised by the Executive Officer. Upon receipt of a Notice of Enrollment (NOE) approved by the Executive Officer the Discharger will be subject to this Order. The NOI form is included at the end of this Attachment B.

- a. The NOI must contain all the information requested in a format as determined by the Executive Officer;
- b. The NOI must identify the property covered by enrollment, landowner(s), operator(s) and other representative(s) authorized to sign reports submitted on behalf of the Discharger;
- c. The NOI must include a statement of understanding of the requirements of this Order signed by both the landowner(s) and operator(s). <NEW>
- d. The NOI must identify the ranch location, including a detailed map of the ranch area. The map(s) must identify the points where wastes as described in this Order are discharged from irrigated lands, location of proximal surface waterbodies, groundwater wells, tiledrains, and existing perennial, intermittent, or ephemeral streams or riparian or wetland area habitats. <CLARIFICATION OF EXISTING>
- e. The NOI must identify if the operation can be classified as a “**Low-Risk Discharge**” by: <CLARIFICATION OF EXISTING>
 1. Obtaining the Central Coast Vineyard Team (CCVT) Sustainability in Practice (SIP) certification, or
 2. By demonstrating that the Discharger meets all of the following criteria:
 - a. Eliminates all tailwater;
 - b. Does not farm adjacent to or in close proximity (within 1000 feet) to an impaired surface waterbody identified on the Clean Water Act Section 303(d) List of Impaired Waterbodies for the Central Coast Region (Impaired Waters List);
 - c. Demonstrates effective use of integrated pest management techniques and does not use pesticides identified in Attachment A (or elsewhere) as having a high potential to degrade/pollute surface water;
 - d. Demonstrates effective use of a nutrient management plan certified by a XXX *{Note: Appropriate professional certification, such as Certified Crop Advisor (CCA) or other certification with similar expertise and experience}* to be protective of water quality (e.g. will not contribute to an exceedance of water quality standards); and
 - e. Demonstrates effective use of stormwater control measures to minimize erosion and sediment deposition using best practicable treatment or control.
- f. The NOI must identify the following: <NEW, CLARIFICATION OF EXISTING>
 1. Crops grown;

2. Chemicals (pesticides, fertilizers, etc.) applied in a manner that may result in the material coming in contact with irrigation water, stormwater, surface water, or groundwater;
 3. Irrigation system type;
 4. Nitrate concentration in irrigation source water;
 5. A description of the nature of any discharges (presence and volume of tailwater, tiledrains utilized, containment structures, subsurface drainage collection systems, etc.)
 6. Management practices implemented to eliminate or minimize the discharges of waste to water which may impair water quality;
 7. Backflow prevention devices on groundwater wells;
 8. Other information as requested by the Executive Officer
- g. Dischargers must ensure that key operating and site management personnel comply with the Order, Notice of Intent (NOI), and Farm Plan. In addition, Dischargers must maintain a copy of such documents at the operation for reference by operating personnel and inspection by Central Coast Water Board staff. <CLARIFICATION OF EXISTING>
- a. In the event of a change in control or ownership of an operation presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner and operator of the existence of this Order by letter, and forward a copy the letter to the Executive Officer **immediately**.
- i. Dischargers already enrolled in the 2004 Order must submit an updated 2010 NOI **within 60 days** of the adoption of this Order. <NEW>
- j. Any Discharger acquiring control or ownership of an existing operation must submit a new NOI **within 60 days** of acquiring control or ownership of an operation. <CLARIFICATION OF EXISTING>
- k. Any Discharger proposing to control or own a new operation that has the potential to discharge waste that could directly or indirectly reach waters of the State and affect the quality of any surface water or groundwater must submit an NOI **prior to any discharge or commencement of activities that may cause a discharge**, including land preparation prior to crop production . <NEW>
- l. Dischargers who do not enroll in the Order in a timely manner as specified in this Order may be subject to WDRs and must submit a ROWD for consideration by the Executive Officer.
33. Dischargers must submit an Acreage Update form on **January 1, 2012** and annually thereafter. The Acreage Update form is included at the end of Attachment B. The purpose of the Acreage Update form is to keep the Central Coast Water Board

records up-to-date about Discharger and ranch information represented on the NOI. The Acreage Update form must contain all the information requested in a format as approved by the Central Coast Water Board Executive Officer;

Notice of Termination (NOT)

34. If a Discharger wishes to terminate coverage under the Order, the Discharger must submit a completed Notice of Termination (NOT) **immediately**. The NOT form is included at the end of this Attachment B. Termination from coverage will occur on the date specified in the NOT, unless specified otherwise. All discharges, as defined in Attachment A must cease before the date of termination, and any discharges on or after the date of termination shall be considered in violation of the Order, unless other Waivers of WDRs, General WDRs, or individual WDRs cover the discharge.
<NEW>

Farm Water Quality Management Plan (Farm Plan)

35. Dischargers must develop and implement a Farm Plan. The Farm Plan must identify and focus on the water quality impacts associated with the specific operation and water quality impairments at the watershed or subwatershed, based on water quality data from individual discharge monitoring and/or watershed scale monitoring. Farm Plans must identify the management measures the Discharger is implementing to meet water quality standards, maintain existing high quality water, and achieve compliance with this Order, including any management practice requirements identified in Part E of this Attachment B to the Order, a schedule for implementation and verification monitoring to evaluate progress towards compliance with this Order. Specifically, the Farm Plan must identify management practices the grower is implementing to comply with this Order, including: <CLARIFICATION OF EXISTING>
- a. Irrigation Management: Maximize irrigation efficiency and management to effectively eliminate or minimize irrigation runoff and tailwater discharges using best practicable treatment or control;
 - b. Pesticide Management: Maximize integrated pest management to eliminate or minimize toxic discharges and discharges of pesticides and herbicides to meet water quality standards using best practicable treatment or control;
 - c. Nutrient Management: Maximize effective nutrient budgeting and management to eliminate or minimize discharge of nutrients to meet nutrient and biostimulatory water quality standards using best practicable treatment or control;
 - d. Salinity Management: Maximize salinity management to eliminate or minimize discharge and leaching of salts to meet salt water quality standards using best practicable treatment or control;
 - e. Sediment and Erosion Control: Maximize sediment and erosion control and stormwater management to eliminate or minimize discharge of sediments and

- turbidity to meet water quality standards using best practicable treatment and control;
- f. Aquatic Habitat Protection: Maximize protection of existing perennial, intermittent, or ephemeral streams or riparian or wetland area habitat using buffers to minimize degradation of aquatic habitat and impacts to aquatic life beneficial uses using best practicable treatment and control;
36. The Farm Plan must include a schedule to effectively implement management practices to eliminate or minimize discharges of waste and achieve the requirements of this Order and applicable water quality standards, to assure the protection of all actual or designated beneficial uses of waters of the State. <CLARIFICATION OF EXISTING>
37. Dischargers must update Farm Plans at least annually with monitoring and site evaluation results, and specific adjustments in response to any results that measure progress towards water quality improvement and compliance with this Order (e.g., interim milestones identified in Part H). <NEW>
38. Pursuant to Water Code Section 13267, the Executive Officer may, at any time, require Dischargers to submit Farm Plans or specific modifications to Farm Plans.
39. The Discharger (including the landowner and operator) or a representative authorized by the Discharger must sign technical reports submitted to comply with the Order. <CLARIFICATION OF EXISTING>
40. Any person signing a report submitted as required by the Order must make the following certification:
- “In compliance with Water Code Section 13267, I certify under penalty of perjury that this document and all attachments were prepared by me, or under my direction or supervision following a system designed to assure that qualified personnel properly gather and evaluate the information submitted. To the best of my knowledge and belief, this document and all attachments are true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”*
41. Per MRP Order No. R3-2010-00XX, the Discharger must submit monitoring results and reporting based on sample analyses conducted according to test procedures approved by USEPA (40 CFR Part 136), authorized by the Executive Officer or otherwise indicated in this Order. Dischargers must identify any discharges that exceed applicable water quality standards. <NEW>
42. The Discharger or a third party approved by the Executive Officer must report water quality data to the Central Coast Water Board that is certified by a State registered professional engineer, registered geologist, State certified laboratory or approved third-party. Surface water quality data must be submitted in a format that is compatible with the Central Coast Ambient Monitoring Program (CCAMP), or as

directed by the Executive Officer. Groundwater quality data must be submitted in a format approved by the Executive Officer and compatible with the electronic deliverable format (EDF) used by the State Water Board's Geotracker data management system, or as directed by the Executive Officer. <NEW>

Part D. Water Quality Standards

43. Applicable water quality standards are identified in detail in Attachment A. <CLARIFICATION OF EXISTING>

Part E. Management Practice Implementation Requirements

44. Dischargers must implement management practices to eliminate the discharge of wastes to waters of the State, or achieve treatment or control of the discharge that will reduce wastes in the discharges and that will achieve compliance with applicable water quality standards, protect the beneficial uses of waters of the State, and prevent nuisance.
45. Dischargers must identify, select, and effectively implement management practices to meet water quality standards, maintain existing high quality water, and achieve compliance with this Order, including any management practice requirements. Dischargers must address the priority water quality impacts associated with their specific operation and/or priority water quality impairments associated with a specific watershed or sub-watershed as identified in their Farm Plan. Specific management practice requirements associated with specific water quality issues are identified below. Based on the specific water quality impacts associated with an operation or priority water quality impairments associated with a specific watershed or sub-watershed, Dischargers must implement all or a subset of the identified strategies below, or alternative strategies that achieve a similar outcome to eliminate or minimize the discharge of waste to meet water quality standards and maintain existing high quality water, using best practicable treatment or control. Dischargers are encouraged to collaborate and coordinate management measures to lower costs and achieve compliance on local, regional, or watershed scales. <CLARIFICATION OF EXISTING>

Irrigation Management <NEW>

46. The purpose of the irrigation management element of the Farm Plan is to eliminate irrigation runoff and tailwater discharges or reduce their volume to meet water quality standards and maintain existing high quality water using best practicable treatment or control, and to assure compliance with this Order. The irrigation management element of the Farm Plan must include, but is not limited to:

- a. Detailed map of the ranch area identifying the points where wastes as described in the Order are discharged from irrigated lands and identifying waterbodies receiving the discharge;
 - b. Type of irrigation system, distribution efficiency and distribution uniformity;
 - c. Average total water demand per crop;
 - d. Total water applied per crop;
 - e. The schedule, duration and frequency of irrigation events;
 - f. Evaluation of the potential for irrigation runoff and water quality impairment;
 - g. Evaluation of the potential for percolation of irrigation water below the root zone;
 - h. Identification of planned irrigation management practices (such as irrigation system and distribution uniformity upgrades, irrigation scheduling, water recycling and tailwater recovery);
 - i. Schedule for implementation to achieve compliance with this Order including compliance time schedules and interim milestones;
 - j. Progress towards interim milestones identified in Part H;
47. Dischargers must install and maintain the irrigation system to minimize or eliminate irrigation runoff and deep percolation to groundwater beyond the root zone that may transport waste constituents from irrigated lands to waters of the State. At a minimum, the irrigation system distribution uniformity must be designed and operated to achieve the following efficiencies: 0.70 for furrow, 0.75 for hand-move sprinkler, 0.80 for solid sprinkler systems, 0.85 for drip and micro-sprinkler systems; or alternative methods to achieve irrigation efficiency to eliminate or minimize irrigation runoff and discharge of waste using best practicable treatment and control.
48. Dischargers must implement appropriate irrigation scheduling duration and frequency, in consideration of weather factors such as wind and precipitation, to minimize or eliminate the discharge of irrigation runoff and to minimize deep percolation of water below the root zone using best practicable treatment and control.
49. Dischargers must maintain the irrigation delivery system to eliminate operational spills such as overflows from standing pipes or water remaining from previously operated gravity flow delivery systems.
50. **Within 2 years** from the adoption date of this Order, all Dischargers adjacent to, in close proximity to (within 1000 feet), or otherwise discharging to an impaired surface waterbody identified on the Impaired Waters List, or discharging to tributaries to such waterbodies, must implement management practices sufficient to eliminate irrigation runoff from their farming operation. Alternatively, Dischargers may provide water quality data and information per MRP Order No. R3-2010-00XX to demonstrate that any irrigation runoff has been sufficiently treated or controlled to meet water quality standards for the specific impairment or is of sufficient quality

where it will not cause or contribute to exceedances or excursions of any water quality standards in waters of the State.

51. Dischargers that discharge irrigation runoff to tile drains must report that discharge in their NOI. In addition, Farm Plans must describe the tile drain discharges and the management measures Dischargers will implement to assure the tile drain discharges are in compliance with this Order. Dischargers are encouraged to coordinate the implementation of management practices with other Dischargers discharging to common tile drains, including efforts to develop regional salt and nutrient management plans. The Executive Officer may require additional monitoring and reporting for discharges to tile drains as necessary to achieve compliance with this Order. .
52. Dischargers that install or construct containment structures for the purposes of storing or treating irrigation water must report such structures in their NOI, and construct and maintain such structures to avoid percolation of waste to groundwater and to avoid surface water overflows that have the potential to impair water quality.

Pesticide Runoff/Toxicity Elimination <NEW>

53. **Within 2 years** from the adoption date of this Order, all Dischargers adjacent or in close proximity (within 1000 feet) to any surface waterbody (creek, stream, river, slough, lake, pond, or other body of water) designated in the Basin Plan, or to tributaries to such waterbodies must implement management practices sufficient to eliminate toxicity in irrigation runoff or eliminate the discharge of irrigation runoff from their farming operation. Alternatively, Dischargers may provide water quality data and information per MRP Order No. R3-2010-00XX to demonstrate that any irrigation runoff has been sufficiently treated or controlled to achieve toxicity water quality standards, or is of sufficient quality where it will maintain existing high quality water, and not cause or contribute to exceedances of any toxicity water quality standards in waters of the State.
54. The purpose of the pesticide management element of the Farm Plan is to eliminate toxicity in discharges and surface water, to eliminate or minimize the discharge of pesticides to meet water quality standards using best practicable treatment or control, and to assure compliance with this Order. The pesticide management element of the Farm Plan must include, but is not limited to, the following:
 - a. Location of the cropped area and the identification of the crop and pest(s) to be treated;
 - b. For each of those crops/pests: the crop stage, frequency, and method of counting the pest and any natural enemies, to be used in a monitoring (scouting) program, or a description of the pest predictive model, such as degree-days, to be used;
 - c. Scouting records to show the levels of the pest and any natural enemies monitored, or relevant model results;

- d. Treatment thresholds or the treatment decision making process to be used, and any treatment timing guidelines;
- e. For crops covered by a University of California (UC) Year-Round Integrated Pest Management (IPM) Program, a filled out up-to-date annual IPM checklist pertaining to the pest to be treated;
- f. For crops not covered by a UC Year Round IPM Program, use of the UC IPM Pest Management Guidelines, if available;
- g. Identification of pesticides used at the operation, including those identified in Attachment A of this Order as having a high potential to degrade/pollute surface water;
- h. Identification of any chemicals (e.g. Landguard) proposed to be used for the purposes of breaking down applied pesticides or reducing associated toxicity;
- i. Identification of planned pesticide management practices to eliminate or minimize toxicity and the discharge pesticides;
- j. Schedule for pesticide management practice implementation;
- k. Progress towards interim milestones identified in Part H;

55. Dischargers using pesticides with a high potential to degrade/pollute surface water (identified in Attachment A of this Order) and persons performing pest control using such pesticides for the Discharger, must comply with the following conditions to protect surface water from pesticide drift, in compliance with any existing pesticide use regulation: <NEW>

- a. Ground applications must not be made within 50 feet of any surface waterbody;
- b. Airblast, high-pressure wand or hand gun applications must not be made within 100 feet of any surface waterbody;
- c. Aerial applications must not be made within 150 feet of any surface waterbody;

56. Dischargers must not apply any chemical directly to surface waterbodies designated in the Basin Plan, including chemicals used for the purposes of breaking down applied pesticides or reducing associated toxicity (e.g. Landguard), unless approved by the Central Coast Water Board. Any such chemical used for this purpose in irrigation systems must have documented effectiveness and must not result in further impact to water quality or aquatic habitat, and must not result in negative ecological impacts. <NEW>

Nutrient and Salt Management <NEW>

57. **Within 4 years** from the adoption of this Order, all Dischargers adjacent or in close proximity (within 1000 feet) to any surface waterbody (creek, stream, river, slough, lake, pond, or other body of water) designated in the Basin Plan, or to tributaries to such waterbodies must implement management practices sufficient to eliminate nutrients and salts to meet water quality standards in irrigation runoff or eliminate the discharge of irrigation runoff from their farming operation. Alternatively, Dischargers

may provide water quality data and information per MRP Order No. R3-2010-00XX to demonstrate that any irrigation runoff has been sufficiently treated or controlled to achieve nutrient and salt water quality standards, or is of sufficient quality where it will maintain existing high quality water, and not cause or contribute to exceedances of any nutrient or salt water quality standards in waters of the State.

58. **Within 6 years** from adoption of this Order, all Dischargers must implement management practices sufficient to eliminate or minimize nitrate and salt in groundwater discharges to meet water quality standards. Alternatively, Dischargers may provide water quality data and information per MRP Order No. R3-2010-00XX to demonstrate that any discharge has been sufficiently treated or controlled to meet nitrate and salt water quality standards or is of sufficient quality where it will maintain existing high quality water, and not cause or contribute to additional loading of waste or exceedances of any nitrate or salt water quality standards in waters of the State.
59. The purpose of the nutrient management element of the Farm Plan is to eliminate or minimize nutrient discharges to groundwater and surface water to meet water quality standards using best practicable treatment or control, and to assure compliance with this Order. The nutrient management element of the Farm Plan must be certified by a XXX *{Note: Appropriate professional certification, such as Certified Crop Advisor (CCA) or other certification with similar expertise and experience}* to be protective of water quality (e.g. will not result in an exceedance of surface water quality standards or additional loading of waste constituents to groundwater per the required time schedule).
60. The nutrient management element of the Farm Plan must include, but is not limited to, the following:
- a. Average total crop nutrient demand and method(s) of determination per crop;
 - b. Average total water demand per crop and total water applied per crop;
 - c. Monthly record of fertilizer applications per crop, including fertilizer type and quantity applied (including but not limited to fertilizers, compost, manure, and humic acids);
 - d. Nitrate concentration of irrigation source water;
 - e. Timing of fertilizer application to maximize crop uptake, (6) an evaluation of fertilizer handling and storage activities;
 - f. Estimation of the amount of fertilizer applied in excess of crop needs, if applicable;
 - g. Estimation of excess or residual fertilizer/nutrients in the root zone at the end of the crop growing season;
 - h. Identification of planned nutrient management practices (such as irrigation efficiency, nutrient budgeting, and nutrient trapping) to eliminate or minimize nutrients in irrigation runoff or percolation to groundwater;
 - i. Identification of planned management practices related to fertilizer handling, storage, disposal, and management to prevent pollution;
 - j. Schedule for implementation;

k. Progress towards interim milestones identified in Part H;

61. Dischargers that use leaching to control salt in the soil profile must not cause or contribute to exceedance of water quality standards. Leaching must not be performed to wash nitrate based salts from the soil profile. The Farm Plan must describe leaching management practices and assure compliance with this Order.
62. Dischargers must cease all foliar fertilizer applications a minimum of 72 hours before any forecasted rain event and up to 72 hours after a rain event has occurred.
63. Dischargers must implement proper handling, storage, disposal and management of fertilizer to prevent discharge of waste to waters of the State.

Sediment Management / Erosion Control / Stormwater Management <NEW>

64. **Within 3 years** from the adoption of this Order, all Dischargers adjacent or in close proximity (within 1000 feet) to any surface waterbody (creek, stream, river, slough, lake, pond, or other body of water) designated in the Basin Plan or to tributaries to such waterbodies must implement management practices sufficient to eliminate or minimize sediment and turbidity to meet water quality standards in irrigation runoff or eliminate the discharge of irrigation runoff from their farming operation. Alternatively, Dischargers may provide water quality data and information per MRP Order No. R3-2010-00XX to demonstrate that any irrigation runoff has been sufficiently treated or controlled to meet sediment and turbidity water quality standards or is of sufficient quality where it will maintain existing high quality water, and not cause or contribute to exceedances of any sediment or turbidity water quality standards in waters of the State.
65. The purpose of the erosion control and sediment management element of the Farm Plan is to maximize sediment and erosion control and stormwater management to eliminate or minimize discharge of sediments and turbidity to meet water quality standards using best practicable treatment and control, and to assure compliance with this Order. Dischargers are encouraged to coordinate the implementation of stormwater management practices with other Dischargers in the watershed or subwatershed to maximize water quality protection and reduce costs. The sediment management element of the Farm Plan must include, but is not limited, the following:
 - a. The identification and implementation of management practices to eliminate or minimize the discharge of sediments by (1) controlling erosion, (2) reducing soil detachment, (3) reducing sediment transport, and (4) trapping sediments.
 - b. Management practices that will be implemented to achieve the following: (1) maintain crop residue or vegetative cover on the soil; (2) improve soil properties; reduce slope length, steepness, or unsheltered distance; reduce effective water and/or wind velocities;
 - c. Erosion control management measures that reduce or prevent sheet and rill erosion, wind erosion, concentrated flow, streambank erosion, soil mass

- movements, road bank erosion, construction site erosion, and irrigation-induced erosion;
- d. Specific stormwater management measures;
- e. Schedule for implementation;
- f. Progress towards interim milestones identified in Part H;

Aquatic Habitat Protection <NEW>

66. The purpose of the aquatic habitat protection element of the Farm Plan is to maximize protection of existing perennial, intermittent, or ephemeral streams or riparian or wetland area habitat using buffers to eliminate or minimize degradation of aquatic habitat and discharge of waste, to meet water quality standards and protect aquatic life beneficial uses using best practicable treatment or control, and to assure compliance with this Order. The aquatic habitat protection element of the Farm Plan must include the following:
- a. Maps locating and photo documentation of existing perennial, intermittent, or ephemeral streams or riparian or wetland area habitat located on ranch property;
 - b. Maps and photo documentation of the presence of minimum buffer widths as specified in Table 3, per the time schedule and milestones in Part H;
 - c. Annual photo documentation that verifies the ongoing protection of existing perennial, intermittent, or ephemeral streams, riparian and wetland area habitats;
 - d. Identification of management measures implemented to protect or restore aquatic habitat;
 - e. Implementation of aquatic habitat requirements in Part G, including the development of a *Riparian Function Protection and Restoration Plan, if applicable*;
 - f. Schedule for implementation;
 - g. Progress towards interim milestones identified in Part H;

Commercial Nursery, Nursery Stock Production and Greenhouse Requirements <NEW>

67. Dischargers who own or operate commercial nurseries, nursery stock production and greenhouse operations that have point-source discharges as defined in Clean Water Act, and fully contained greenhouse operations (those that have no groundwater discharge due to impervious floors) are not covered under this Order and must apply for individual WDRs.
68. Dischargers who own or operate commercial nurseries, nursery stock production and greenhouse operations that do not have point-source type discharges and have pervious floors must develop and implement a Farm Plan that includes management practices to protect and improve water quality by managing irrigation, pesticides, nutrients, salinity, sediment, and aquatic habitat. Farm Plans must identify the

management measures the Discharger is implementing to meet water quality standards, maintain existing high quality water, and achieve compliance with this Order, including any management practice requirements identified Part E of this Attachment B to the Order, a schedule for implementation and verification monitoring to evaluate progress towards compliance with this Order

69. Commercial nursery, nursery stock production and greenhouse operation Farm Plans must comply with any applicable stormwater permit.
70. Dischargers who own or operate commercial nurseries, nursery stock production and greenhouse operations that grow crops in pots and/or containers must implement management practices that keep rainwater and/or stormwater separated from wastewater and irrigation runoff, and prevent rainwater from coming into contact with containerized plants.
71. Dischargers who own or operate commercial nurseries, nursery stock production and greenhouse operations that grow crops in pots and/or containers must monitor wastewater and irrigation runoff as specified in MRP Order No. R3-2010-00XX.

Part F. Groundwater Protection Requirements <NEW>

72. **Within 6 months** from the adoption of this Order, all Dischargers must report the following groundwater well location and construction information regarding groundwater wells located at the agricultural operation, in a format approved by the Central Coast Water Board Executive Officer:
 - a. Owner-Assigned Well Identification;
 - b. Well Location (Latitude and Longitude, measured in decimal degrees and reported to 7 decimal points);
 - c. Water Use Category (e.g. domestic drinking water and/or agricultural);
 - d. Well construction Information (Well-logs, as-built drawings and descriptions, if available), including total depth, screened intervals, specific capacity, and pumping capacity.
 - e. Use for fertigation or chemigation purposes;
 - f. Type of backflow prevention devices utilized;
 - g. Photograph documenting condition of well and backflow prevention devices;
 - h. All historical water quality information;
73. Dischargers that fertigate, chemigate, or apply any chemicals through the irrigation system connected to a groundwater well, must install and properly maintain backflow prevention device(s) to prevent the discharge of waste to groundwater, consistent with any applicable Department of Pesticide (DPR) requirements and local ordinances.

74. Dischargers must monitor and report depth to water and sample groundwater from groundwater wells per MRP Order No. R3-2010-00XX at a quarterly sampling frequency of four consecutive quarters (i.e., first quarter is from January 1 to March 31, etc.) for the first year followed by annual monitoring thereafter.
75. Dischargers must properly destroy all abandoned groundwater wells, exploration holes or test holes, as defined by Department of Water Resources (DWR) Bulletin 74-81 and revised in 1988, in such a manner that they will not produce water or act as a conduit for mixing or otherwise transfer groundwater or waste constituents between permeable zones or aquifers. Proper well abandonment must be done consistent with any applicable DWR requirements and local ordinances,
76. Dischargers must construct and maintain ponds, reservoirs or other water containment structures to avoid leaching of waste to groundwater. Dischargers must sample surface water held in containment structures monthly as specified in the MRP Order No. R3-2010-00XX and promptly notify the Executive Officer in writing, if concentrations exceed applicable water quality standards.
77. Pursuant to Water Code Section 13267, the Executive Officer may require Dischargers to conduct sampling of private domestic wells in or near agricultural areas with high nitrate in groundwater and submit technical reports evaluating the sampling results. In addition, pursuant to Water Code Section 13304, the Central Coast Water Board may require Dischargers to provide alternative water supplies or replacement water service, including wellhead treatment, to affected public water suppliers or private domestic well owners.

Part G. Aquatic Habitat Protection Requirements <NEW>

This Part G applies to Dischargers who discharge or threaten to discharge waste to waters of the State that cause or contribute to exceedances or excursions of water quality standards due to disturbance and degradation of aquatic habitat as described below. Disturbance and degradation of aquatic habitats result from human activities that result in water quality impairment and make habitats less suitable or less available to aquatic life, such as removal of riparian vegetation, channel clearing, creation of bare dirt areas, and hydromodification.

78. Dischargers must protect existing aquatic habitat, collectively described as perennial, intermittent, or ephemeral streams, and riparian and wetland area habitat and prevent discharges of waste to waters of the state to meet water quality standards (e.g. temperature, turbidity, dissolved oxygen, etc), maintain existing high quality water, protect beneficial uses, and achieve compliance with this Order using best practicable treatment and control. Management practices to prevent such discharges of waste include, but are not limited to the following:

- a. Maintaining the following riparian functions: Streambank stabilization and erosion control; stream shading and temperature control; chemical filtration; flood water storage; aquatic life support; wildlife support;
- b. Maintaining naturally occurring mixed vegetative cover (such as trees, shrubs, grasses, as described in NRCS Ecological Site Descriptions or other similar regional biological typologies) in aquatic habitat areas and their buffer zones;
- c. No clearing of beneficial vegetation for food safety reasons;
- d. No clear cutting or creating bare dirt areas;
- e. No channel clearing except for agriculture ditches;
- f. Preventing man made erosion and sedimentation, and maintaining shade over surface waters;
- g. Other measures include limiting agricultural activities, such as equipment operation, in and near aquatic habitat;

79. The Central Coast Water Board may authorize aquatic habitat disturbance necessary for the purposes of water quality improvement or restoration of aquatic habitat. In these cases, Dischargers must implement appropriate and practicable measures to avoid or minimize impacts to aquatic habitat;

80. Where the discharge of waste impacts waters of the State that constitute wetlands or jurisdictional waters of the United States, the Discharger shall notify the Executive Officer and seek waste discharge requirements or Clean Water Act Section 401 certification and any required federal permit.

81. **Within 4 years** from the adoption of this Order, Dischargers must document with photo documentation in the Farm Plan, the presence of minimum riparian buffer widths adjacent to perennial and intermittent streams, per the time schedule and milestones in Part H below. Required buffer widths are based on stream tiers and identified in Table 1. Stream tiers are based upon modeled average daily natural flow and identified in Table 2. The buffer width for streams is measured from the top of the bank in each direction. In the case of an existing engineered levee system, the outer bank of the existing levee will be the outer edge of the buffer width. Where existing riparian vegetation width is greater than the riparian buffer widths required in Table 1, the Discharger must protect and maintain the maximum buffer width.

Table 1. Minimum riparian buffer widths for perennial and intermittent streams.

Tier	Minimum Riparian Buffer Width	Modeled Average Daily Natural Flow
Tier 1	50 feet	1- 15 cfs
Tier 2	75 feet	15 – 50 cfs
Tier 3	100 feet	50 cfs and above

Table 2. Tier 2 and Tier 3 streams. All other perennial or intermittent streams not listed in Table 2 are considered Tier 1. Tiers are based on the National Hydrography Dataset Plus' (NHDPlus) estimated unit runoff mean annual natural flow.

Tier 2 (75 Foot Buffer)	Tier 3 (100 Foot Buffer)
Aptos Creek	Carmel River (from Pacific Ocean to Tularcitos Creek confluence)
Arroyo Grande Creek	Estrella River (from Salinas River confluence to Yokum Bend)
Arroyo Seco	Pajaro River (from Pacific Ocean to San Benito River confluence)
Bear Creek	Salinas River (from Pacific Ocean to San Marcos Creek confluence)
Big Sur River	San Lorenzo River (from San Lorenzo River Lagoon at Crossing Street to Boulder Creek confluence)
Carbonera Creek	Santa Maria River (from Pacific Ocean to 0.9 miles east of Hwy 101)
Carmel River (upstream from Tularcitos Creek confluence)	Santa Ynez River (from Pacific Ocean to 5 miles west of Hwy 101 bridge)
Cholame Creek	
Cuyama River	
Estrella River (upstream from Yokum Bend)	
Little Sur River	
Nacimiento River	
Old Salinas River Estuary	
Pajaro River (upstream from San Benito River confluence)	
Paso Robles Creek	
Salinas Reclamation Canal (from Tembladero Slough confluence to Natividad Creek confluence)	
Salinas River (from San Marcos Creek confluence to Paso Robles Creek confluence)	
San Antonio River	
San Benito River	
San Juan Creek	
San Lorenzo Creek	
San Lorenzo River (upstream from Boulder Creek confluence)	

San Luis Obispo Creek	
Santa Maria River (from 0.9 miles east of Hwy 101 bridge to Cuyama River confluence)	
Santa Rosa Creek	
Santa Ynez River (from 5 miles west of Hwy 101 bridge to Lake Cachuma)	
Scott Creek	
Soquel Creek	
Tembladero Slough	
Tequisquita Slough	
Waddell Creek	
Zayante Creek	

82. **Within 4 years** of the Board adoption of this Order, Dischargers must document with photo documentation in the Farm Plan, the presence of minimum buffer widths of fifty feet as measured from the high water mark for lakes, wetlands, estuaries, lagoons or any other natural body of standing water, as specified in Table 3, per the time schedule and milestones in Part H below.

Table 3. Minimum buffer widths for lakes, wetlands, and estuaries.

Feature	Minimum Buffer Width
Lakes, wetlands, estuaries and other natural body of standing water	50 feet

83. As an alternative to establishing and maintaining minimum buffer widths as required in Tables 1 – 3 above, a Discharger or group of Dischargers may develop and implement a *Riparian Function Protection and Restoration Plan*, as part of the Farm Plan, that demonstrates how all of the following riparian functions are to be restored and protected: (a) Streambank stabilization and erosion control, (b) stream shading and temperature control, (c) chemical filtration, (d) flood water storage, (e) aquatic life support, (f) Wildlife support. The *Riparian Function Protection and Restoration Plan* must be certified by a State registered Professional Engineer or Registered Geologist and include a schedule for implementation, measurable success criteria and a maintenance and monitoring plan. The *Riparian Function Protection and Restoration Plan* must be submitted **within 2 years** of the Board adoption of this Order for approval by the Executive Officer.

Part H. Time Schedule

General time schedules and milestones are identified in Tables 4 through 8. Dischargers must meet milestones as described by identified compliance dates. Interim milestones are identified to evaluate progress towards compliance with this Order. The

milestones are specific dates to achieve water quality objectives in irrigation runoff and discharge to groundwater.

Table 4. All Dischargers must comply with the following time schedule.

Task	Compliance Date
Submit completed 2010 Notice of Intent	<p>For existing Dischargers enrolled under the 2004 Conditional Waiver - Within 60 days of Board adoption of the Order;</p> <p>For any Discharger acquiring control or ownership of an existing operation - Within 60 days of acquiring control or ownership of an operation.</p> <p>For any new proposed Discharger - Prior to any discharge.</p>
Submit Annual Acreage Update	January 1, 2012 and annually thereafter
Submit copy of notification letter to new Discharger (owner and/or operator) in the event of a change in control or ownership of an operation.	Immediately , when applicable
Submit Notice of Termination	Immediately , when applicable
Develop and Implement Farm Plan to address priority water quality issues	Immediately , when applicable
Submit Farm Plan or required elements of a Farm Plan	Within 30 days of written notification
Submit any required modifications to the Farm Plan	Within 30 days of written notification
Submit updated Quality Assurance Project Plan and Sampling and Analysis Plan for Watershed Monitoring Program for Executive Officer Approval	Within 3 months from adoption of this Order
Submit Quality Assurance Project Plan and Sampling and Analysis Plan for	Within 3 months from adoption of this Order

Individual Discharge Monitoring for Executive Officer Approval	
Submit groundwater well location and construction information	Within 6 months from adoption of this Order
Start Date for Implementing Watershed Monitoring Program	Within 6 months from adoption of this Order
Start Date for Implementing Individual Discharge Monitoring	Within 6 months from adoption of this Order
Submit Monitoring Reports	Within 3 months after start of monitoring, and quarterly thereafter – or as otherwise directed by the Executive Officer.
Submit Conceptual Plan for Groundwater Monitoring Program for Executive Officer approval.	Within 2 years from the adoption of this Order.

Table 5. Dischargers adjacent to or in close proximity (within 1000 feet) to an impaired surface waterbody identified on Impaired Waters List or their tributaries must comply with the following time schedule and milestones.

Milestone	Compliance Date
Eliminate discharge of irrigation runoff, or provide water quality data and information to demonstrate that any discharge of irrigation runoff has been sufficiently treated or controlled to meet water quality standards or is of sufficient quality where it will maintain existing high quality water, and not cause or contribute to exceedances or excursions of any water quality standards in waters of the State.	Within 2 years from the adoption of this Order, with the following interim milestones: <i>Year 1 - 50% runoff volume reduction</i> <i>18 Months - 75% runoff volume reduction</i>

Table 6. Dischargers adjacent to or in close proximity (within 1000 feet) to any surface waterbody (creek, stream, river, slough, lake, pond, or other body of water) designated in the Basin Plan or their tributaries must comply with the following time schedule and milestones

Milestone	Compliance Date
<p>Eliminate toxicity in irrigation runoff or eliminate the discharge of irrigation runoff from their farming operation. Alternatively, Dischargers may provide water quality data and information to demonstrate that any irrigation runoff has been sufficiently treated or controlled to meet toxicity water quality standards, or is of sufficient quality where it will maintain existing high quality water, and not cause or contribute to exceedances of any toxicity water quality standards in waters of the State.</p>	<p>Within 2 years from the adoption of this Order, with the following interim milestones: <i>Year 1 - XX</i> <i>18 Months - XX</i></p>
<p>Eliminate or minimize sediment and turbidity to meet water quality standards in irrigation runoff or eliminate the discharge of irrigation runoff from their farming operation. Alternatively, Dischargers may provide water quality data and information to demonstrate that any irrigation runoff has been sufficiently treated or controlled to meet sediment and turbidity water quality standards or is of sufficient quality where it will maintain existing high quality water, and not cause or contribute to exceedances of any sediment or turbidity water quality standards in waters of the State.</p>	<p>Within 3 years from the adoption of this Order, with the following interim milestones: <i>Year 1 - XX</i> <i>Year 2 - XX</i></p>
<p>Eliminate nutrients and salts to meet water quality standards in irrigation runoff or eliminate the discharge of irrigation runoff from their farming operation. Alternatively, Dischargers may provide water quality data and information to demonstrate that any irrigation runoff has been sufficiently treated or controlled to achieve nutrient and salt water quality</p>	<p>Within 4 years from the adoption of this Order, with the following interim milestones: <i>Year 1 - XX</i> <i>Year 2 - XX</i> <i>Year 3 - XX</i></p>

standards, or is of sufficient quality where it will maintain existing high quality water, and not cause or contribute to exceedances of any nutrient or salt water quality standards in waters of the State.	
Protect existing aquatic habitat	Immediately
Achieve full implementation of riparian buffer widths as identified in Tables 1 – 3 or as identified in certified Riparian Function Protection and Restoration Plan.	Within 4 years from the adoption of this Order, with the following interim milestones: <i>Year 2 – 1/3 of riparian buffer is protected or Plan completion, if applicable</i> <i>Year 3 – 2/3 of riparian buffer is protected</i>

Table 7. All Dischargers must comply with the following time schedule and milestones related to nitrate and salt in groundwater.

Milestone	Compliance Date
Eliminate or minimize nitrate and salt in groundwater discharges to meet water quality standards. Alternatively, Dischargers may provide water quality data and information to demonstrate that any discharge has been sufficiently treated or controlled to meet nitrate and salt water quality standards or is of sufficient quality where it will maintain existing high quality water, and not cause or contribute to additional loading of waste or exceedances of any nitrate or salt water quality standards in waters of the State.	Within 6 years from the adoption of this Order, with the following interim milestones: <i>Year 2 - XX</i> <i>Year 4 – XX</i>

Part I. Fees

84. Dischargers must pay a fee to the State Water Resources Control Board in compliance with the fee schedule contained in Title 23 California Code of Regulations.

85. Dischargers must pay any relevant monitoring fees (e.g. Cooperative Monitoring Program) necessary to comply with monitoring and reporting requirements of this Order.

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