STATE OF CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD CENTRAL COAST REGION

STAFF REPORT FOR REGULAR MEETING OF MAY 12-13, 2010 Prepared on April 21, 2010

ITEM NUMBER: 3

SUBJECT: Board Workshop to Discuss Preliminary Draft Staff Recommendations for an Updated Agricultural Order, Public Comments and Alternatives

SUMMARY:

On February 1, 2010, Central Coast Regional Water Quality Control Board (Central Coast Water Board) staff released preliminary draft staff recommendations for an order conditionally waiving individual Waste Discharge Requirements (WDRs) for discharges from irrigated lands (Agricultural Order). The purpose of the May 12, 2010 Board Workshop is to have staff summarize its preliminary draft staff recommendations, provide an opportunity for public comments on these recommendations, and to provide an opportunity for the public to present proposed alternatives for regulating agricultural discharges. The May 12, 2010 Board Workshop agenda is included as Attachment 1. This staff report presents background information and the context for renewing the Agricultural Order, a general overview of the preliminary draft staff recommendations, a preliminary summary of key public comment areas, and a preliminary review of alternatives submitted by interested persons.

In preparation for the workshop, staff emphasizes the following key points:

- CONTEXT FOR RENEWING AGRICULTURAL ORDER The Central Coast Water Board has the statutory responsibility to protect water quality and beneficial uses such as drinking water and aquatic life habitat. Any waiver of waste discharge requirements adopted by the Water Board must be consistent with Basin Plan, be in the public interest, and must include monitoring. The renewed Agricultural Order is based on the existing order and the information collected in implementing that order.
- WATER QUALITY CONDITIONS Agricultural discharges are a major cause of water pollution in the Central Coast Region. Despite efforts to implement the existing Agricultural Order, agricultural discharges (primarily contaminated irrigation runoff and percolation to groundwater) continue to load additional pollutants to already severely impaired surface water bodies and groundwater basins. The pollution affects municipalities who must treat drinking water sources and rural communities who may be exposed to contaminated water and who may be unable to afford treatment, and results in rivers and creeks that are not swimmable, fishable, or healthy for fish and other aquatic life.
- WATER BOARD ACTION In response to the scale and severity of pollution in agricultural areas, staff are proposing new or revised conditions in a waiver to assure consistency with the Basin Plan, to provide adequate protection of water quality and beneficial uses, to reduce pollution, and to measure progress towards water quality improvement.

- PUBLIC OUTREACH EFFORTS The Central Coast Water Board continues to make a significant effort to conduct outreach to stakeholders and provide opportunities for the regulated community and public to provide input about the preliminary draft Agricultural Order. A wide range of stakeholders and diverse interests have provided the Central Coast Water Board with significant constructive ideas with respect to renewal of the Agricultural Order.
- <u>PUBLIC OUTREACH OUTCOMES</u> Staff is already considering specific changes to the preliminary draft Agricultural Order in response to public comments , such as:
 - a. removing conditions related to rainwater and containerized plants;
 - b. clarifying the intent to address surface irrigation runoff in the short term with immediate conditions vs. tiledrains in the long term;
 - c. removing "tributaries" as a consideration for prioritizing farming operations in close proximity to impaired waterbodies for more stringent or immediate conditions;
 - d. revising the table of high risk pesticides;
 - e. revising aquatic habitat conditions;
 - f. revising the level of prescription in conditions vs. required outcomes;
 - g. using something other than the Farm Plan as a compliance document;
 - h. including evaluations or milestones for pollutant loading in exchange, or in addition to, pollutant concentrations;
 - i. evaluating additional ways to define tiers of dischargers and associated conditions based on relative risk to water quality;
 - j. evaluating additional options for monitoring and reporting;
- <u>NEXT STEPS</u> Staff will continue to review comments and alternatives, conduct outreach, consider public feedback, and work towards producing a revised version of the preliminary draft Agricultural Order. Current efforts are engaging diverse stakeholder representation, providing effective opportunities for public input, and producing more constructive feedback on the Agricultural Order than ever before. Staff's intent is to continue on with the current efforts and build upon the meaningful dialogue achieved thus far to update the Agricultural Order.

Following the May 12, 2010 Board Workshop, staff will complete its review of comments and alternatives received, continue to conduct outreach and provide opportunities for additional public input, and consider such feedback in the development of the next draft version of the Agricultural Order. Specifically, staff recommends another Board workshop in July 2010 to allow for additional public/Board discussion in the northern part of the region. The existing Agricultural Order (Order R3-2009-0050) expires on July 10, 2010, and staff plans to recommend an additional time extension of the existing Agricultural Order to the Board at the July 2010 Board Meeting. In September 2010, staff will present the Board with a revised schedule for continuing development of the new Agricultural Order.

DISCUSSION

Public Release of Preliminary Draft Staff Recommendations

As directed by the Board, staff distributed preliminary draft staff recommendations for an updated Agricultural Order and supporting documents on February 1, 2010, to provide the public with an opportunity to review, comment, and recommend alternatives for regulating agricultural discharges. Documents released by staff on February 1, 2010 included the following:

- Press Release;
- Transmittal Memo;
- The Preliminary Draft Report, Draft Staff Recommendations for an Agricultural Order; Attachments:
 - 1 Preliminary Draft Report on Water Quality Conditions
 - 2 Draft Summary Table of Changes Related to Existing Conditional Waiver
 - 3 Draft Surface Water and Riparian Monitoring Sampling Parameters
 - 4 Preliminary Draft Initial Study and Environmental Checklist
 - 5 List of References Consulted and/or Cited

For convenience and purposes of discussion at the May 12, 2010 Board Workshop, the preliminary draft Agricultural Order is included in this staff report as Attachment 2. The entire contents of the preliminary draft staff recommendations released on February 1, 2010 are available on the Internet at:

http://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/ag_order.shtml

The purpose of this early public release was to increase transparency to the public regarding staff's efforts to renew the Agricultural Order, to provide an opportunity to interested persons to provide specific feedback about requirements and alternatives to address pollution from agricultural discharges, and to facilitate an open public process for interested persons to participate in the Agricultural Order renewal. Specifically, this early public release provides interested persons insight into staff's considerations for draft requirements to resolve pollution associated with irrigated agriculture and meet the Central Coast Water Board's legal obligations (e.g., California Water Code, Water Quality Control Plan, State Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program, Antidegradation Policy, and other statutory requirements), while taking into account diverse stakeholder interests. The draft report discussed the basis for renewing the Agricultural Order, provided a summary of water quality conditions, and included preliminary draft staff recommendations for an Agricultural Order. Staff anticipates making adjustments to this preliminary draft Agricultural Order based on public comments.

Staff provided a sixty-day public review and comment period through April 1, 2010, for the public to submit comments and/or alternatives to the preliminary draft staff recommendations. In response, the Central Coast Water Board received more than 1200 comment letters from interested persons, including two alternatives submitted by the California Farm Bureau Federation and OSR Enterprises, Inc. At the time of this writing, staff was still in the process of conducting a thorough review and evaluation of all comments and alternatives received, and posting all comments on the Board's web site. In this report, staff provides a preliminary summary of key public comment areas, and a preliminary review of the alternatives.

Context for Renewing the Agricultural Order

The Central Coast Water Board is responsible for regulating discharges of waste to the region's waterbodies to protect beneficial uses, including drinking water and aquatic life¹. In some cases, such as the discharge of nitrate to groundwater, the Water Board is the only agency with regulatory responsibility and authority for controlling the discharge and protecting sources of drinking water from contamination. Agricultural discharges are a major cause of water pollution. Despite efforts related to the existing requirements, agricultural discharges (primarily due to contaminated irrigation runoff and percolation to groundwater) continue to load additional pollutants to already severely impaired surface water bodies and groundwater basins. New or revised requirements are necessary to assure adequate protection of water quality and beneficial uses, and to measure progress towards water quality improvement. Specifically, at a minimum, any new or revised conditions in a waiver must include the following:

- a clear articulation of water quality standards to assure consistency with the Basin Plan and other applicable plans and policies,
- time schedules to achieve compliance,
- milestones, and
- compliance verification monitoring on individual farms.

Given the scale and severity of the pollution in agricultural areas and the impacts to beneficial uses, including drinking water sources, staff recommends greater public transparency and discharger accountability regarding on-farm discharges and individual compliance with requirements. Additionally, greater public transparency and discharger accountability will insure consistency with the State Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program (Nonpoint Source Implementation Policy).

The agricultural industry in the Central Coast region is one of the most productive and profitable agricultural regions in the nation and is a significant contributor to California's agricultural economy. Staff acknowledges that farmers have adapted and will continue to adapt their farming operations to address pollution and better protect water quality. Such changes in farming practices may impose increasing costs to individual farmers and the agricultural industry at a time of competing demands on farm income, regulatory compliance efforts, and food safety challenges, and may impact the local economy.

Staff also realizes that the costs of pollution, such as removing nitrate from drinking water, are extraordinary and are increasing, and this cost is passed on to the public. There are also the unknown costs of health effects due to nitrate pollution in drinking water. These types of costs have never been well documented or presented to the Water Board. Staff will continue to evaluate these costs and consider them in its recommendations to the Water Board. Another critically important fact is that no industry or individual has a legal right to pollute and degrade water quality, while everyone has a legal right to clean water. The challenge is to have sustainable agriculture; farming that contributes to a green economy with socially, environmentally and economically sustainable agricultural systems that engender resilient ecosystems. The alternative of continued non-sustainable agriculture would be an economic disaster for the Central Coast.

¹ "Aquatic life" is a summary phrase for several beneficial uses listed in the Basin Plan: Warm and Cold Fresh Water Habitat; Inland Saline Water Habitat; Estuarine Habitat; Marine Habitat; Wildlife Habitat; Preservation of Biological Habitats of Special Significance, Rare, Threatened, or Endangered Species; Migration of Aquatic Organisms; Spawning, Reproduction, and/or Early Development (of fish); Shellfish Harvesting, Areas of Special Biological Significance.

Staff recognizes that the pollution caused by irrigated agriculture is significant and will not be resolved in a short time frame. Staff's priority in the short term is to take deliberate steps towards water quality improvement and eliminate or reduce agricultural discharges that load additional pollutants to water bodies and groundwater basins that are already polluted or at high risk of pollution. As with all other dischargers, the agricultural industry is accountable for preventing and resolving pollution caused by irrigated agriculture, and must demonstrate compliance with waiver conditions and improved water quality.

Water Quality Conditions in Agricultural Areas

In the Central Coast Region, pollution in irrigated agricultural areas is well documented and impacts nearly all beneficial uses of water. Staff distributed a report on water quality conditions in agricultural areas of the region with the Preliminary Draft Agricultural Order on February 1, 2010 (Attachment 3). In many irrigated agricultural areas, the excess application of fertilizers contributes to severe nitrate contamination of groundwater that communities depend on for drinking water.^{2,3,4} Staff estimates that thousands of people on the Central Coast are drinking water from wells that are contaminated with unsafe levels of nitrate, or are drinking treated or replacement water to avoid drinking contaminated water. For example, data from the California Department of Public Health (CDPH), indicate that in areas of the Salinas Valley, approximately 20% of the public supply wells used for drinking water exceed the safe drinking water standard for nitrate⁵. Water purveyors may not serve this water to the public until the nitrate is removed with treatment or reduced via blending with better guality water (typically requiring deeper wells), resulting in significant cost to municipalities and local water agencies. Staff estimates that the current cost to the public for treating polluted drinking water is in the hundreds of millions of dollars. This does not account for small water systems or the approximately 12,000 private domestic wells in Monterey County that are not regulated by CDPH. Private domestic wells are significantly more vulnerable to pollution, are not routinely monitored, and many rural residents are exposed to polluted drinking water because they are not aware of the water quality impacts or cannot afford treatment. Studies in Monterey County indicate that as many as 50% of these wells may be contaminated by nitrate⁶.

The health risks of nitrate pollution include methemoglobinemia or "blue baby syndrome", non-Hodgkin's lymphoma, diabetes, Parkinson's disease, Alzheimers, endrocrine disruption, and cancer of the organs among adults as a result of long-term consumption exposure⁷,⁸.

In addition, in many agricultural areas, nearly all the rivers and creeks in the lower watershed are polluted. Toxicity exists that is lethal to aquatic life, critical for fish and other organisms and data shows that the toxicity is directly related to the runoff of pesticides from farming operations⁹. For example, data from the 2008/2010 List of Impaired Waterbodies indicate that of the 15 rivers and creeks monitored in the lower Santa Maria watershed, every single one is polluted with multiple pollutants.¹⁰ In nearly all cases, it is not safe for the public to swim, fish, or recreate in these areas and surface water is not healthy for fish and other aquatic life.

² State Water Resources Control Board, 2005. California GAMA Program: Sources and Transport of nitrate in shallow groundwater in the Llagas Basin of Santa Clara County, California.

³ Monterey County Flood Control and Water Conservation District, November 1990. "Report of the Ad Hoc Salinas Valley Nitrate Advisory Committee." Zidar, Snow, and Mills.

⁴ Thomas Harter, 2003. Agricultural Impacts on Groundwater Nitrate, Southwest Hydrology, Vol 8/No.4, July/August.

⁵ Geotracker GAMA, April 2010, http://www.swrcb.ca.gov/gama/geotracker_gama.shtml.

⁶ Monterey County Water Resources Agency, July 2003. "Implementation of Public Outreach and Education Elements of the Salinas Valley Nitrate Management Plan, 2000-2002 319(h) Grant Project Report."

⁷ Ward, M.H. et al (September 1996), Epidemiology. "Drinking water nitrate and the risk of non-Hodgkins Lymphoma.".

⁸ Pelley, J. (May 2003). Environmental Science & Technology. "Nitrate as an Endocrine Disruptor"

⁹ Anderson, B.S., J.W. Hunt, B.M. Phillips, P.A. Nicely, V. De Vlaming, V. Connor, N. Richard, R.S. Tjeerdema (2003). Integrated assessment of the impacts of agricultural drainwater in the Salinas River (California, USA). Environmental Pollution 124 (2003) 523 - 532.

¹⁰Central Coast Regional Water Quality Control Board (July 2009), Draft 2008 California 303(d)/305(b) Integrated Report.

The costs associated with pollution from agricultural dischargers are transferred to the public in the form of public health costs, treatment costs for unsafe drinking water sources or bottled water costs, loss of clean rivers and streams and aquatic habitat, and pollution of future drinking water supplies.

Staff will present an overview of water quality conditions at the May 12, 2010 Board Workshop.

HISTORY OF WATER QUALITY REQUIREMENTS FOR IRRIGATED AGRICULTURE

From the inception of the State Water Resources Control Board's (State Water Board) Non-Point Source Program in 1988, and up to 2004, the Central Coast Water Board's emphasis in working with agriculture was on encouraging voluntary, proactive efforts and supporting such cooperative efforts as the Monterey Bay National Marine Sanctuary's Plan for Agriculture. The Central Coast Water Board has directed millions of dollars in grant funding toward increasing educational outreach, and has encouraged efforts toward self-determined compliance with water quality regulations through promotion of ranch and farm water quality management planning short courses and implementation grants throughout the Central Coast region. For the most part, the Central Coast Water Board has had minimal direct contact with individual farmers and relied upon education, outreach, and voluntary technical assistance programs already in place, such as Farm Bureau watershed groups, Natural Resource Conservation Service (NRCS) and Resource Conservation District (RCD) programs and University of California Cooperative Extension (UCCE) Farm Water Quality short courses. With this approach, Water Boards could not measure and account for success in terms of reducing pollutant loading or achieving compliance with water quality objectives. For this reason, the State Water Board adopted the Non Point Source Implementation Policy in May 2004, which requires nonpoint source pollution control programs to take a regulatory approach, define water quality objectives, define management practices to address the water quality objectives, establish schedules to achieve compliance, and include compliance verification monitoring, and enforcement.

On July 9, 2004, the 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). The intent of the 2004 Conditional Waiver was to regulate discharges from irrigated lands to ensure that such discharges are not causing or contributing to exceedances of any Regional, State, or Federal numeric or narrative water quality standard (Finding #1, 2004 Conditional Waiver). However, the 2004 Conditional Waiver did not follow the State Board's 2004 Non Point Source Implementation Policy because the Policy was adopted only two months prior to Regional Board action and the Regional Board's 2004 Conditional Waiver effort had already been underway for two years. In July 2009, the Central Coast Water Board adopted Resolution No. R3-2009-0050 extending the terms and conditions of the 2004 Conditional Waiver for an additional year until July 10, 2010, to allow more time for draft order development and a more rigorous public comment process.

As described in the 2004 Conditional Waiver and associated staff report to the Board for the July 2004 Board Meeting, initial requirements to regulate agricultural discharges and performance goals are identified in Table 1 below. In addition, at the December 2010 Board Meeting, interested persons provided comments, and Board Members, staff, and the public engaged in discussion regarding the effectiveness of the 2004 Conditional Waiver and areas for improvement.

Since adoption of the 2004 Conditional Waiver, the Central Coast Water Board has implemented the Agricultural Regulatory Program to regulate discharges from irrigated agricultural lands that cause or threaten to cause impacts to water quality. Based on Department of Pesticide Regulation (DPR) pesticide use data and county crop maps, staff estimates that there are approximately 3000 farming operations in the Central Coast Region. From January 2005 to present, the Central Coast Water

Board received enrollment information from approximately 1719 Dischargers, conducted inspections at approximately 59 farming operations, and initiated more than 200 enforcement actions, including five Administrative Civil Liability complaints. Staff provided program status reports to the Central Coast Water Board and State Water Board at numerous Board Meetings, including a detailed review of toxicity data in agricultural areas in May 2008 and a detailed review of nitrate impacts to groundwater in June 2009.

The 2004 Conditional Waiver raised awareness to some degree and helped bring about changes on some farms according to anecdotal observations. However, the 2004 Conditional Waiver lacks clarity regarding water quality requirements, does not include time schedules or milestones to achieve compliance with water quality standards, and does not include compliance and verification monitoring to measure progress towards water quality improvement. The 2004 Conditional Waiver includes the option for watershed scale, surface water monitoring, which has shown significant pollution problems and some indications of improvement in certain areas, but has not identified any individual discharges that are polluting so that they can be corrected. The 2004 Conditional Waiver did generally allow time for compliance and specified that increased reporting and monitoring may be required in order to ensure that water quality is improving (Finding 16, 2004 Conditional Waiver). The Central Coast Water Board did not increase monitoring and reporting requirements during the first five years of the 2004 Conditional Waiver.

At this time, more data and information are known about the scale and severity of the pollution in agricultural areas and the impacts to beneficial uses, including drinking water compared to 2004. Current data indicate that agricultural discharges continue to load pollutants to waters of the State and impact water quality and beneficial uses. This additional information compels a greater sense of urgency and accountability for the Central Coast Water Board to protect water quality and better regulate agricultural discharges that cause or threaten to cause pollution to waters of the State.

REQUIREMENT	GENERAL PURPOSE	PERFORMANCE GOALS ¹	PERFORMANCE OUTCOMES ²
ENROLLMENT	Requires individual Dischargers to enroll in the 2004 Conditional Waiver.	Jan. 2005 – Minimum of 50% of Dischargers are enrolled. Jul. 2005 – Minimum of 80% of Dischargers are enrolled.	Enrollment – 1719 out of approx. 3000 Dischargers (57%) enrolled, representing approximately 93 % of the Central Coast Region's total irrigated agricultural acreage.
			More detailed review of enrollment data suggests that there are significant gaps in enrollment in impaired areas.
EDUCATION	Requires a minimum of 15 hours of education to assist dischargers in making informed decisions necessary to protect water quality and comply with the 2004 Conditional Waiver.		Education - 1300 Dischargers (43%) in compliance, representing more than 18,000 hours of completed education.
FARM PLAN	Requires the development of a Farm Plan that addresses, at a minimum, irrigation management, nutrient management, pesticide	Jul. 2006 – Dischargers will implement management practices on a minimum of 50% of irrigated agriculture acres.	Farm Plan – 1528 Dischargers (50%) report having a Farm Plan. Monitoring and reporting

Table 1. 2004 Conditional Waiver Requirements, Performance Goals and Outcomes

	management and erosion control. Requires the implementation of management practices to protect water quality and documentation in Notice of Intent and practice checklists.	Jul. 2009 – Dischargers will implement management practices on a minimum of 80% of irrigated agriculture acres.	insufficient to determine the extent of management practice implementation as a performance outcome.
MONITORING	Requires individual water quality monitoring or participation in cooperative water quality monitoring to verify the adequacy and effectiveness of requirements and detect improvements in water quality due to changes in management practices within the time frame of the waiver.	Jul. 2005 – Minimum of 50% of Dischargers are enrolled in the cooperative monitoring program	Individual Monitoring - Fifteen Disch. have elected individual monitoring. No individual monitoring reports have been submitted and all fifteen are out of compliance. Cooperative Monitoring – 1677 (56%) Disch. have elected cooperative monitoring. 368 Disch. have not paid fees, totaling more than \$220,000 and are out of compliance.
WATER QUALITY STANDARDS	Requires compliance with Basin Plan and water quality standards		Exceedance of water quality standards in surface water and groundwater. Monitoring and reporting insufficient to determine compliance.

- Performance goals identified in the staff report for the 2004 Conditional Waiver presented at the July 2004 Board Meeting.

² – Performance outcomes achieved as of April 2010.

Summary of The Preliminary Draft Agricultural Order

The intent of the preliminary draft Agricultural Order is to regulate discharges from irrigated lands to ensure that such discharges are not causing or contributing to exceedances of any Regional. State. or Federal numeric or narrative water quality standard in compliance with Water Code sections 13263 and 13269. The preliminary draft Agricultural Order (Attachment 1) sets forth conditions that apply to owners and operators (Dischargers) 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. The preliminary draft Agricultural Order aims to resolve pollution in agricultural areas by directly addressing agricultural discharges - especially polluted irrigation runoff and percolation to groundwater that may result in unsafe levels of nitrate, unsafe levels of pesticides, toxicity, and excessive sediment in surface waters and/or groundwater. The preliminary draft Agricultural Order prioritizes conditions by focusing on those areas of the Central Coast Region already impaired or at risk of pollution. Staff acknowledges that farming operations are unique and adequate flexibility is necessary to achieve water quality standards. The preliminary draft Agricultural Order requires the effective implementation of management strategies (practices related to irrigation, nutrient, pesticide/toxicity, and erosion control and sediment management) that will most likely yield the greatest amount of water quality protection with flexibility given the conditions of individual operations in specific watersheds.

The preliminary draft Agricultural Order includes immediate, shorter-term conditions to eliminate or minimize irrigation runoff and loading to groundwater to the most severely impaired surface waterbodies or groundwater basins, and additional conditions with specific and longer time schedules to eliminate or minimize degradation in lower priority areas. The specific requirement to eliminate or minimize surface irrigation runoff (or tailwater) is based upon specific feedback from the

May 6, 2009 Agricultural Advisory Panel meeting. The May 6, 2009 meeting was dedicated to discussions about methods to address irrigation surface runoff/tailwater, and the general agreement that reduction of surface irrigation runoff/tailwater and the reduction of pollutants contained in irrigation surface runoff/tailwater could maximize water quality improvement and pollution prevention. The group emphasized the importance of knowing how much irrigation surface runoff/tailwater is generated from a farm and what is in it.

Concepts for water quality monitoring requirements are included in the preliminary draft staff recommendations report and preliminary draft Agricultural Order. Water quality monitoring concepts presented by staff include Individual Discharge Characterization Monitoring, Individual Discharge Monitoring (surface water and groundwater), Watershed Scale Monitoring, and Additional Monitoring. The goals of each type of monitoring are described in the preliminary draft staff recommendations report. These concepts are based upon the discussion about surface water quality monitoring at the September 22, 2009 Agricultural Advisory Panel meeting, including a straw man proposal developed by representatives of the agricultural community. At this time, staff has not presented detailed recommendations for monitoring and has not included a draft Monitoring and Reporting Program (MRP) to accompany the preliminary draft Agricultural Order. Staff plans to develop the proposed monitoring concepts in more detail based on public comments and alternatives received, and will release a draft MRP with the next version of the draft Agricultural Order.

An overview of key requirements included in the preliminary draft Agricultural Order is shown in Table 2. The format of Table 2 is consistent with the draft "blank" table provided to the Agricultural Advisory Panel in December 2008.

Authority	Legal Requirement	Confirmation of Compliance (monitoring/reporting)	Point of Compliance	Milestone(s) to Measure Progress	Time to Compliance
Water Code, Basin Plan	Discharges must not cause or contribute to the exeedance of any water quality standard.	Within 1000 ft. of an impaired surface waterbody: Eliminate irrigation runoff/ tailwater OR Treat/Control irrigation runoff/ tailwater OR Monitor irrigation runoff/ tailwater to show it is not causing or contributing to impairment	Edge of Property	Volume of Tailwater Year 1 – 50 % reduction 18 months – 75% reduction	2 Years

Table 2. Preliminary Draft Agricultural Order Key Requirements (*See note at end of table)

Water Code, Basin Plan	All waters must 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.	Eliminate irrigation runoff/ tailwater OR Eliminate/Treat/Control toxicity in irrigation runoff/ tailwater OR Monitor irrigation runoff/ tailwater to demonstrate that it will not cause or contribute to impairment Individual On-Farm Monitoring of Irrigation Runoff/Tailwater Volume and Quality	Edge of Property	Volume and Quality of Tailwater Year 1 – TBD 18 Months – TBD	2 Years
Water Code, Basin Plan	Minimize sediment discharges to surface waters to meet sediment and turbidity water quality standards.	Eliminate irrigation runoff/ tailwater OR Eliminate/Treat/Control sediment and turbidity to meet water quality standards in irrigation runoff/ tailwater OR Monitor irrigation runoff/ tailwater to demonstrate that it will not cause or contribute to impairment Individual On-Farm Monitoring of Irrigation Runoff/Tailwater Volume and Quality	Edge of Property	Volume and Quality of Tailwater Year 1 – TBD Year 2 – TBD	3 Years
Water Code, Basin Plan	Minimize nutrient and salt discharges to surface waters to meet nutrient water quality standards.	Eliminate irrigation runoff/ tailwater OR Eliminate/Treat/Control nutrients and salts to meet water quality standards in irrigation runoff/ tailwater OR Monitor irrigation runoff/ tailwater to demonstrate that	Edge of Property	Volume and Quality of Tailwater Year 1 – TBD Year 2 – TBD Year 3 - TBD	4 Years

		it will not cause or contribute to impairment Individual On-Farm Monitoring of Irrigation Runoff/Tailwater Volume and Quality			
Water Code, Basin Plan	Minimize nitrate discharges to groundwater to meet water quality standards	Eliminate or minimize nitrate and salt loading to groundwater to meet water quality standards. OR Treat or control nitrate and salt loading to groundwater to meet water quality standards OR Monitor loading to groundwater to demonstrate it will not cause or contribute to impairment	Below root zone of planted irrigated crop	Measured or Estimated Nitrate Loading Year 2 – TBD Year 4 – TBD	6 Years
Water Code, Basin Plan	Protect aquatic habitat (riparian areas and wetlands) and meet applicable water quality standards including, but not limited to, temperature, turbidity, and dissolved oxygen	Protect existing habitat AND Implement minimum buffer widths OR Implement approved Riparian Function Protection and Restoration Plan	Between 50 and 100 feet of top of bank depending on flow of waterbody, or as defined in approved Riparian Function Protection and Restoration Plan	Year 1 – Protection of existing riparian habitat Year 2 - 35% of riparian buffer is established, managed, and protected 3 Years –65% of riparian buffer is established, managed, and protected OR Implement Riparian Function Protection and Restoration Plan	4 Years

TBD – Interim milestones to be determined. Note – Staff clarifies that the above conditions and time schedules specifically related to irrigation runoff/tailwater in the Preliminary Draft Agricultural Order are intended to address surface irrigation runoff and not tile drains. Tile drains are addressed separately in the Preliminary Draft Agricultural Order. Staff will recommend clarifications to this effect in future versions of the Agricultural Order.

Public Outreach Efforts and Outcomes

Staff initiated development of a new Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Agricultural Order) in 2008. In a December 2008 letter, the Central Coast Water Board invited key stakeholders to participate on the Agricultural Advisory Panel (Ag Panel) to recommend conditions for an updated Agricultural Order. Participants on the Ag Panel represented agricultural and environmental organizations that had participated in the development of the 2004 Conditional Waiver. To resolve water quality impairments associated with irrigated agriculture and comply with minimum statutory requirements, Ag Panel representatives were specifically invited to make recommendations regarding milestones, targets, and schedules for achieving water quality standards and protecting beneficial uses, using a table format similar to that presented above in Table 2.

Between January and September 2009, the Ag Panel met five times as a group and three times without Central Coast Water Board staff to discuss agricultural water quality issues and potential conditions. Despite discussions, the Ag Panel did not produce recommendations to staff for an updated Agricultural Order (although many ideas came out of the meetings, including some with considerable support, like the tailwater elimination/reduction ideas mentioned above and a strawman monitoring proposal). At the Ag Panel meeting on September 22, 2009, several panel members suggested that the forum and process were no longer productive for developing recommendations for renewing the Agricultural Order. The Ag Panel requested that staff take the first step in producing a preliminary draft Agricultural Order to provide panel members and other interested persons insight into staff's considerations for draft conditions.

At the October 2009 Board meeting, staff updated the Central Coast Water Board of this development and Board members requested that staff present a revised public input process to the Board and interested persons at the December 2009 meeting.

At the December 2009 Board meeting, the Central Coast Water Board directed staff to release preliminary draft staff recommendations for an updated Agricultural Order by February 1, 2010, and to provide the public with an opportunity to review, comment, and recommend alternatives for regulating agricultural discharges. On February 1, 2010, staff released the preliminary draft staff recommendations for an updated Agricultural Order, opened up a 60-day informal public comment period, and scheduled the May 12, 2010 Board Workshop to discuss public comments and alternatives regarding the preliminary draft Agricultural Order.

Following the release of the draft report and supporting documents, Water Board staff participated in several outreach meetings and events. To ensure a diverse representation of stakeholders, staff made a deliberate effort to engage stakeholders who were not represented on the Ag Panel and who were not already actively participating in the process to renew the Agricultural Order, including technical assistance providers, municipalities, environmental justice organizations, and agricultural industry groups not yet involved. In addition to discussing potential conditions and alternatives, staff met with stakeholders to discuss water quality conditions and priorities, methods to outreach to underrepresented groups, technical considerations associated with achieving water quality standards, potential costs of compliance to agriculture and potential costs to communities impacted by agriculture. Specific outreach meetings and events are ongoing, and include the following:

Date	Meeting / Event
November 17, 2009	2009 Sustainable Ag Expo, sponsored by the Central Coast Vineyard Team
January 12, 2010	American Society of Agronomy, California Certified Crop Advisers
February 17, 2010	Monterey Coastkeeper
February 22, 2010	Santa Cruz County, Resource Conservation District of Santa Cruz County, and Big Sur Land Trust
March 3, 2010	San Luis Obispo County Water Resources Advisory Committee
March 8, 2010	Technical Assistance Providers (University of California Cooperative Extension, Cal Poly Irrigation Training Research Center, Monterey Bay National Marine Sanctuary, Natural Resources Conservation Service, Resource Conservation District of Monterey County)
March 9, 2010	Annual Monterey County Ag Expo – Presentation to Spanish speaking growers and irrigators
March 17, 2010	California Strawberry Commission
March 22, 2010	San Luis Obispo County Farm Bureau – North Coast Farm Center
March 23, 2010	The Commonwealth Scientific and Industrial Research Organisation (CSIRO) and Antinetti Consulting, Inc.
March 30, 2010	Central Coast Vineyard Team, Department of Pesticide Regulation, State Water Resources Control Board, Central Valley Regional Water Quality Control Board
April 11, 2010	Presentation to Association of California Water Agencies on Water Quality and Water Supply
April 14, 2010	Agricultural Water Quality Alliance (Monterey Bay National Marine Sanctuary, Resource Conservation District of Monterey County, Natural Resources Conservation Service, Central Coast Agricultural Water Quality Coalition, Central Coast Water Quality Preservation, Inc., Resource Conservation District of Monterey County, University of California Cooperative Extension, AWQA RCDs)
April 28, 2010 (<i>Pending</i>)	Interagency Meeting (U.S. Environmental Protection Agency, U.S. Fish and Wildlife, California Department of Public Health, California Department of Water Resources, California Department of Food and Agriculture, California Department of Fish and Game, California State Parks, County public health agencies, County Agriculture Commissioners)
April 29, 2010 (Pending)	Farm, Food Safety, Conservation Network
April 30, 2010 (Pending)	California Association of Nurseries and Garden Centers, University of California Cooperative Extension
May 24, 2010 (Pending)	Agriculture & Land-Based Training Association – Presentation to Spanish speaking growers "Programa Educativo Para Agricultores"

Table 3. Agricultural Order Renewal Outreach Meetings and Event Presentations

Current public outreach efforts are engaging diverse stakeholder representation, providing effective opportunities for public input, and producing meaningful constructive feedback on the Agricultural Order. Staff is already changing the preliminary draft Agricultural Order based on feedback received

from stakeholders and will continue to consider input throughout the process to renew the Agricultural Order.

The following are examples of changes staff is already considering:

- removing conditions related to rainwater and containerized plants;
- clarifying the intent to address irrigation runoff in the short term with immediate conditions vs. tiledrains in the long term;
- removing "tributaries" as a consideration for prioritizing farming operations in close proximity to impaired waterbodies for more stringent or immediate conditions;
- revising the table of high risk pesticides;
- revising aquatic habitat conditions;
- revising the level of prescription in conditions vs. required outcomes;
- using something other than the Farm Plan as a compliance document;
- including evaluations or milestones for pollutant loading in exchange, or in addition to, pollutant concentrations
- evaluating additional ways to define tiers of dischargers and associated conditions based on relative risk to water quality;
- evaluating additional options for monitoring and reporting;

Staff will continue to reach out to and meet with stakeholders, including municipalities, water purveyors, homeowners, farmers, and others to inform the development of the next draft version of the Agricultural Order.

PUBLIC COMMENTS AND ALTERNATIVES

In response to the February 1, 2010 release of the preliminary draft staff recommendations for an updated Agricultural Order, the Central Coast Water Board received more than 1200 comment letters from interested persons, including two alternatives, one submitted by the California Farm Bureau Federation and the other by OSR Enterprises, Inc.

Comment letters and alternatives are collated in groups and available on the Internet at http://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/ag_order.shtml. Staff will continue to post additional comment letters as they are received and processed.

At the time of the drafting of this report, staff was in the process of conducting a thorough review of all comments and alternatives received. Staff wrote a preliminary summary of key public comment areas and a preliminary review of the alternatives below. Staff will complete review of comments and alternatives received, continue to conduct outreach and provide opportunities for additional public input, and consider such feedback in the development of the next draft version of the Agricultural Order. In addition, staff recommends another Board workshop in July 2010, to allow an additional opportunity in the northern part of the region for the public to provide additional input directly to the Board on the preliminary draft staff recommendations.

Preliminary Summary of Key Public Comment Areas

The Central Coast Water Board received more than 1200 comment letters from numerous organizations and individuals, including agricultural industry organizations, individual farmers, technical assistance providers, rural residents in agricultural areas, environmental justice organizations, environmental organizations, State and local agencies, and the general public. In at least seven cases, numerous individuals submitted individually signed versions of the same or very similar comment letter.

Table 3 below provides a preliminary summary of key public comment areas based on comment letters reviewed thus far. Staff identified those comments that appeared with the most frequency and not all comments are represented in the table below. It is worth noting that, in addition to comment letters containing general statements of support or opposition, many comment letters contained specific suggestions for improving the preliminary draft Agricultural Order – from agricultural representatives and non-agricultural representatives. These comments are particularly helpful.

Key Comment Area	Approximate No. of Commenters
General and Specific Support for Draft Order	
Supports process, Agricultural Regulatory Program and preliminary draft recommendations for an updated Agricultural Order. Supports prioritization of agricultural water quality and urges Central Coast Water Board to take timely actions to prevent further degradation.	886
Supports the regulation of agricultural discharges to groundwater and the protection of drinking water sources. Supports requirements to provide safe drinking water to affected communities.	883
Supports requirements for individual groundwater monitoring, including private domestic wells and submittal of data and technical reports.	478
Supports stringent individual monitoring and reporting requirements for Dischargers, and making related data available to the public in a user-friendly format and timely manner.	411
Supports requirements to eliminate, treat, or control agricultural discharges to surface water.	410
Supports requirements to protect aquatic habitat and riparian areas.	404
Supports requirements to prohibit excess application of fertilizers and requirements for Dischargers to submit fertilizer application data.	403
General Objections	
Concerns that requirements will result in economic hardship. Concerns that requirements will result in crop yield reductions and farmers will go out of business.	210
Concerns that goals and objectives of Agricultural Order are not achievable, practical, or realistic.	150

	1			
Concerns about the current process, including California Environmental Quality Act (CEQA) requirements and specifically requirements to consider the social environmental and economical impacts, and evaluate alternatives.	139			
Concerns about the lack of cooperation with the public to develop requirements. Requests that the Water Board listens to the concerns, feedback, and suggestions of the public.	170			
Specific Objections				
Concerns about the prohibition of rainwater getting into contact with potted plants as unnecessary for water quality improvement and impacts to nurseries and greenhouses.	166			
Oppose the aquatic habitat protection requirements and Riparian Function Restoration Plan, requirements result in a "taking of land".	140			
Oppose individual monitoring requirements, especially analytes included. Concerns about costs to conduct monitoring and develop QAPP, and impacts or unequal disadvantages to small or non-english speaking farmers. General support for Cooperative Monitoring Program in its current form. Oppose making individual monitoring data available to the public.	131			
Concerns about scope and burden of requirements related to paperwork reporting or record keeping. Concerns that Water Board staff cannot manage, analyze, or interpret data.	110			
Do Nothing on New Order				
Oppose preliminary draft Agricultural Order. Support extending the 2004 Conditional Waiver or the Agricultural Industry's Alternative.	102			

Preliminary Review of Alternatives

At the December 2009 Board Meeting, the Central Coast Water Board invited interested persons to submit any alternative recommendations for regulating agricultural discharges for consideration by Board members and staff. Board members directed interested persons to submit alternative recommendations in writing by April 1, 2010.

As indicated in the February 1, 2010 preliminary draft staff recommendations, the Central Coast Water Board is reviewing and considering all alternatives submitted for consistency with: 1) the program goals of resolving surface and groundwater water quality impairments and impacts to aquatic habitat over a reasonable time frame, including milestones, and monitoring and reporting to verify compliance and measure progress over time; and 2) minimum statutory requirements (including Water Code Sections 13263 and 13269 and relevant plans, policies, and regulations

identified in Attachment A to the preliminary draft Agricultural Order). Below is a preliminary review of alternatives received.

Alternative 1. California Farm Bureau Federation – Preliminary Alternative Agriculture Proposal in Response to Preliminary Staff Recommendations for an Agriculture Order to Control Discharges from Irrigated Lands (CFBF Alternative, dated April 1, 2010, included as Attachment 4).

The California Farm Bureau Federation submitted a Preliminary Alternative Agriculture Proposal supported by seven county Farm Bureaus comprising counties within the jurisdiction of the Central Coast Water Board and approximately 44 agricultural organizations, technical assistance organizations, and individual growers.

The CFBF Alternative conveys water quality improvement as the shared goal of the Agricultural Order, and also underscores the importance of "farmers taking necessary steps to demonstrate water quality improvement over a scientifically feasible timeline with immediate milestones". The CFBF Alternative includes a general recommendation that the Central Coast Water Board proceed with the development of a long term program rather than conditional waivers limited to five year terms, and includes suggestions for revisions to the preliminary draft Agricultural Order. Specifically, the CFBF Alternative focuses on the following elements: 1) Farm Plan, 2) Practice Implementation, 3) Education, 4) Monitoring, 5) Groundwater, and 6) Land Use Regulations.

Staff conducted a preliminary review of the CFBF Alternative based on the criteria described above, including consistency with: 1) the program goals of resolving surface and groundwater water quality impairments and impacts to aquatic habitat over a reasonable time frame, and including milestones, and monitoring and reporting to verify compliance and measure progress over time; and 2) minimum statutory requirements. While the CFBF Alternative presents several workable concepts (described below), the alternative does not describe how the proposed methods will sufficiently resolve pollution related to nitrate, pesticides, toxicity, and sediment resulting from agricultural discharges. In addition, the CFBF Alternative does not include a time schedule for compliance, interim milestones, or monitoring and reporting to verify compliance with requirements and measure progress over time. Without these elements, the CFBF Alternative does not meet the minimum statutory requirements such as the State Water Board's 2004 Non-Point Source Implementation Policy and the Water Quality Control Plan for the Central Coast Region.

In many areas of the CFBF Alternative, staff agrees with the general concepts and strategies presented. Although staff has not completed a detailed evaluation of the CFBF alternative, a few examples follow below. The CFBF Alternative suggests the requirement for farmers to submit an annual report in lieu of submission of the Farm Plan. The annual report would contain information that directly relates to the types of farm practices which have an impact on water quality (p.5). Staff do not object to the concept of an annual report requirement in lieu of the Farm Plan as long as it focuses on measuring and verifying the effectiveness of specific practices that will have an impact on water quality and water quality outcomes. Staff is also open to working with the agricultural industry and other stakeholders to determine the content of such an annual report. In another example, the CFBF Alternative states that "If a grower has already eliminated tailwater, there should be no further surface water requirement, as nothing more is needed to address this issue" (p. 5). Staff does not object to this clarification (as long as separate requirements exist to address stormwater guality). Staff also agrees that requirements should focus on pollutant load reductions. rather than concentrations, when appropriate. Staff also agrees with the concept that "each farm needs to address water quality issues that are real to their operation". Staff also agrees that education is an important element of any future agricultural discharge program. (Note: the draft order recommends education rather than requiring it). Farm Bureaus, University of California Cooperative

Extension, Resource Conservation Districts, Natural Resource Conservation Service, and commodity groups should be taking the lead on education and measuring the effectiveness of education. However, staff does not view education as an appropriate requirement in lieu of or as an indicator of implementation milestones or pollutant load reductions and water quality outcomes.

Staff agrees with the CFBF Alternative's recommendation that the Cooperative Monitoring Program should continue to "document water quality improvements" at the watershed scale. However, staff does not believe that this type of monitoring can be used to document compliance or "achievement of water quality standards" at the farm scale. The CFBF Alternative also includes a recommendation for SMART (Simple Methods to Achieve Reasonable Targets) Sampling. The CFBF stated goals for SMART Sampling include: 1) Identify water quality issues, 2) Implement practice, and 3) Confirm water quality improvement or identify continued water quality issue. Staff agrees with the concept and goals of SMART sampling to satisfy individual monitoring requirements and is open to working with the agricultural industry and other stakeholders to determine the details of monitoring. However, in order to determine individual compliance with water quality objectives, sampling at the farm scale and the results of sampling must be submitted to the Central Coast Water Board.

Central Coast Water Board staff support working with agriculture to identify workable requirements that resolve pollution and protect beneficial uses, and will use concepts contained in the CFBF Alternative to inform revisions to the preliminary draft Agricultural Order.

Alternative 2. OSR Enterprises, Inc - Recommendations for an Agriculture Order to Control Discharges from Irrigated Lands (OSR Alternative, dated March 31, 2010, included as Attachment 5).

OSR Enterprises, Inc (represented by Price, Postel, and Parma LLP law firm) submitted a document titled "Recommendations for an Agriculture Order to Control Discharges from Irrigated Lands" (Ag Waiver Proposal). The OSR Alternative is written in a format that emulates an adoptable Water Board order and uses the 2004 Conditional Waiver as a baseline. The OSR Alternative is similar to the CFBF Alternative and proposes requirements that include a Farm Plan, education, cooperative monitoring, and scheduled "updates" to monitor the progress and effectiveness of the Agricultural Order

Staff conducted a preliminary review of the OSR Alternative based on the criteria described above, including consistency with: 1) the program goals of resolving surface and groundwater water quality impairments and impacts to aquatic habitat over a reasonable time frame, and including milestones, and monitoring and reporting to verify compliance and measure progress over time; and 2) minimum statutory requirements.

The OSR Alternative includes recommendations related to management practice implementation, including irrigation management efficiency, nutrient usage efficiency, integrated pest management techniques, and erosion control. However, it is not clear how such recommendations will sufficiently resolve pollution related to nitrate, pesticides, toxicity, and sediment resulting from agricultural discharges. The OSR Alternative does include time schedules related to completing education requirements within five years, revision of Farm Plans within two years, submission of a practice implementation checklist every two years, and submittal of "non-privileged" information within a "reasonable time" to determine compliance with the Order conditions. However, the OSR Alternative does not include a time schedule for compliance with water quality objectives, interim milestones, or monitoring and reporting to verify individual compliance with requirements and measure progress over time. Without these elements, the OSR Alternative does not meet the minimum statutory requirements such as the California Water Code, Non-Point Source Implementation Policy and the Water Quality Control Plan for the Central Coast Region.

CONCLUSION

A waiver of waste discharge requirements implemented through the Agricultural Order is required to comply with the Basin Plan and State Water Board plans and policies to protect water quality and must include methods to verify compliance with water quality standards. The Central Coast Water Board has the regulatory responsibility to protect water quality and beneficial uses such as drinking water and aquatic life. Agricultural discharges are a major cause of water pollution in the Central Coast Region. Despite efforts to implement the 2004 Conditional Waiver, agricultural discharges continue to load additional pollutants to already severely impaired surface water bodies and groundwater basins. The pollution affects municipalities that must treat drinking water sources and rural communities that may be exposed to contaminated water and that may be unable to afford treatment, and results in the loss of rivers and creeks that are swimmable, fishable, and healthy for fish and other aquatic life. In response to the scale and severity of pollution in agricultural areas, staff is proposing new or revised requirements to assure compliance with the applicable laws and policies to protect water quality and beneficial uses, to resolve pollution, and to measure progress towards water quality improvement.

The Central Coast Water Board will continue to make a significant effort to conduct outreach to stakeholders and provide opportunities for the regulated community and public to provide input about the preliminary draft Agricultural Order. Current efforts are engaging diverse stakeholder representation, providing effective opportunities for public input, and producing more constructive feedback on the Agricultural Order than ever before. Staff plans to continue on with the current efforts and build upon the meaningful dialogue achieved thus far to update the Agricultural Order. *Staff* is already revising the preliminary draft agricultural order in response to feedback from the public.

Following the May 12, 2010 Board Workshop, staff will complete review of comments and alternatives received to date, continue to conduct outreach and provide opportunities for additional public input, and consider such feedback in the development of the next draft version of the Agricultural Order. Specifically, staff recommends another Board workshop in July 2010 to allow for additional public input in the northern part of the region. The existing Agricultural Order (Order R3-2009-0050) expires on July 10, 2010 and staff plans to recommend an additional time extension of the existing Agricultural Order to the Board at the July 2010 Board Meeting. In September 2010, staff will present the Board with a revised schedule for developing the new Agricultural Order.

ATTACHMENTS

- 1. May 12 Board Workshop Agenda
- 2. Preliminary Draft Agricultural Order (dated February 1, 2010)
- 3. Water Quality Conditions in the Central Coast Region Related to Agricultural Discharges, Attachment 1 to Preliminary Draft Staff Report, Staff Recommendations for Agricultural Order (dated February 1, 2010)
- 4. California Farm Bureau Federation Preliminary Alternative Agriculture Proposal in Response to Preliminary Staff Recommendations for an Agriculture Order to Control Discharges from Irrigated Lands (dated April 1, 2010)
- 5. OSR Enterprises, Inc. Recommendations for an Agriculture Order to Control Discharges from Irrigated Lands (dated March 31, 2010)