

July 20, 2010

Via Hand Delivery

Jay Brown, Chair
Monterey County Planning Commission
168 West Alisal Street
Salinas, CA 93902

**Re: 2007 Monterey County General Plan EIR
PLN070525, SCH2007121001**

Dear Chairman Brown and Members of the Commission:

On behalf of LandWatch Monterey County, we offer the following comments on the Final EIR for the 2007 Monterey County General Plan ("2007 General Plan"). We appreciate that the Planning Commission is currently reviewing the Final EIR and proposed changes to the 2007 General Plan itself. We would like your deliberations and recommendations to the Board of Supervisors to be informed by the concerns and analysis we include herein.

I. Summary

SALINAS VALLEY WATER SUPPLY: These comments provide additional data from the Monterey County Water Resources Agency ("MCWRA") demonstrating that the General Plan EIR conclusions with regard to the adequacy of Salinas Valley water supply are not based on substantial evidence. In particular, we show the following:

- The MCWRA's 1995 Water Year Report provides additional confirmation that the baseline 1995 pumping assumptions in the Salinas Valley Water Project ("SVWP") EIR are incorrect, calling into question the County's reliance on the SVWP EIR and/or the pumping data itself.
- The Monterey County Agricultural Commissioner's annual Monterey County Crop Reports provide additional evidence that the assumption in the SVWP EIR that there would be no growth in agricultural acreage between 1995 and 2030 is simply wrong.

- Claims in the FEIR that the Salinas Valley Water Project has already resulted in increases in the water table are belied by MCWRA data from 2003-2009, which do not show any such trend.

EROSION/SEDIMENTATION: The Regional Water Quality Control Board's proposal to amend the agricultural waiver to require a riparian buffer between streams and agricultural operations supports Robert Curry's expert opinion that a stream setback ordinance be applied to all existing and future agricultural operations. The Supervisors' announced opposition to the RWQCB proposal is inconsistent with the claim in the General Plan EIR that the County can and should rely on the RWQCB waiver to control erosion and sedimentation. The Supervisors' letter calls into question the County's good faith in proposing a stream setback ordinance as mitigation of erosion impacts and demonstrates the need for an adequate specification of that mitigation in the EIR itself.

II. Salinas Valley Water Supply

As LandWatch has consistently pointed out, the Salinas Valley Water Project EIR does not provide credible support for the General Plan EIR's conclusions that water supplies in the Salinas Valley will be sufficient through 2030, that overdrafting will not occur, and that seawater intrusion will be halted. See DEIR, p. 4.3-127; FEIR, pp. 2-66. There are at least two fundamental problems with the General Plan EIR's reliance on the SVWP EIR.

First, the SVWP EIR baseline 1995 conditions assumed that agricultural pumping amounted to only 418,000 af/y (SVWP EIR, Table 1-2), whereas available MCWRA data shows that baseline 1995 pumping was at least 44,000 af in excess of that.

Second, the SVWP EIR erroneously assumes that there will be a decrease in agricultural acreage in the Salinas Valley between 1995 and 2030, even though available evidence indicates the contrary.

1. Baseline Pumping Assumptions in the SVWP EIR Are Inconsistent With MCWRA Pumping Data

LandWatch pointed out in its May 24, 2010 comments that the MCWRA annual groundwater pumping reports indicate that 1995 agricultural pumping was 462,628 af, not the 418,000 af used as the 1995 baseline in the SVWP EIR (SVWP EIR, Table 1-2). The General Plan EIR incorporates those annual groundwater pumping reports by reference and summarizes them at DEIR Table 4.3-5. The 44,268 af discrepancy between the pumping reports and the SVWP EIR vitiates use of the SVWP EIR to establish the adequacy of groundwater supplies.

We now also draw your attention to the MCWRA's Water Resources Data Report for Water Year 1994-1995, which states that agricultural pumping exceeds 495,000 acre-feet per year:

“With nearly 200,000 acres of land under cultivation today, agricultural pumping exceeds 495,000 acre-feet per year. Combined with urban and other uses, total water pumped in the Salinas Valley is approximately 520,000 acre-feet per year.” MCWRA’s Water Resources Data Report, Water Year 1994-1995, p. 51, Exhibit 1.

This independent report again shows that the SVWP EIR 1995 baseline agricultural pumping assumption of 418,000 af is substantially understated. Here, the discrepancy is 77,000 af (495,000 reported in the Water Resources Data Report vs. 418,000 reported in the SVWP EIR). Again, we note that the data inconsistency directly implies that the SVWP EIR’s projection of 2030 agricultural demand of 358,000 (SVWP EIR, Table 1-2) should be increased to reflect the error in baseline condition assumptions. And again, we note that this huge discrepancy dwarfs the size of the 542 af surplus that the FEIR predicts in the year 2030. FEIR, p. 4-83, Table 4.3-9b.

In sum, all of the available MCWRA pumping data for the 1995 base year used in the SVWP EIR indicate that the SVWP EIR simply got the baseline data wrong. If there is some explanation for the discrepancy, the public is entitled to hear it, comment on the explanation, and have some response from the County. However, as commenters have noted, the SVWP EIR modeling data have not been made available and the County failed to provide water balance data until the FEIR was issued. Furthermore, the data provided do not explain the discrepancy in baseline data. Accordingly, the County must revise and recirculate its analysis of Salinas Valley water supply.

2. The SVWP EIR’s Assumed Decrease In Agricultural Land Is Inconsistent With MCWRA Data And Crop Reports

As LandWatch has pointed out, the SVWP EIR assumed that there would be a net *decrease* of 1,849 acres in agricultural land through 2030. SVWP, EIR, § 7.2.3. By contrast, the net change in irrigated Salinas Valley agricultural land projected in the 2007 General Plan EIR is an *increase* of at least 7,682 acres between 2006 and 2030. This conservative minimum figure for the net increase in Salinas Valley agricultural land can be determined by subtracting the EIR’s County-wide projection of 2,571 acres farmland lost to urbanization from the EIR’s projection of 10,253 acres of new cultivation of open space that will occur, primarily in the Salinas Valley. DEIR, p. 4.2-12, Table 4.2-9 (projecting that 2,571 acres of farmland will be removed from agricultural land use designation through buildout); FEIR, p. 2-38 (primary focus of new conversions will be in Salinas Valley).

Obviously, the SVWP EIR’s assumptions regarding land under cultivation are critical: other factors being equal, more land under cultivation will result in more water demanded. If land under cultivation increases rather than decreases, the SVWP EIR’s projections of agricultural water usage cannot provide a foundation for the General Plan EIR. Thus, the General Plan EIR’s own admission that land under cultivation will

increase is itself a sufficient reason to reject the SVWP EIR projections of agricultural pumping.

We draw your attention to additional evidence that land under cultivation in the Salinas Valley has increased substantially since 1995, contrary to the assumptions made in the SVWP EIR. The Monterey County Crop Reports provide data for acreage under cultivation County-wide. Although we have been unable to locate data specific to the Salinas Valley on actual acreage under cultivation, the crop report data demonstrate that County-wide acreage under cultivation has grown substantially since 1995. For example, from 1995 to 2005, the County-wide acreage dedicated to major crops grew by 53,009 acres, from 252,177 acres to 305,186 acres, an increase of 21%. Monterey County Agricultural Commissioner, Monterey County Crop Report 2005, p. 20, excerpts attached as Exhibit 2.

The FEIR's discussion of new agricultural cultivation confirms that most agricultural conversions have occurred and will occur in the Salinas Valley. FEIR, pp. 2-35 to 2-38. Thus, it is a conservative and reasonable assumption that the percentage expansion of agricultural acreage Salinas Valley will be at least as great as it is County-wide. Thus the crop reports provide substantial evidence that there has been significant growth in acreage under cultivation in the Salinas Valley since the SVWP base year of 1995.

3. Contrary To The EIR, MCWRA Data Do Not Show Decreases In the Depth To Groundwater

A number of measures have been implemented or approved to improve Salinas Valley groundwater availability, including the CSIP program and the SVWP's modifications to the operations of Lake Nacimiento and Lake San Antonio and its Salinas River Diversion Facility. The FEIR states that CSIP and the SVWP's reoperation of the dams will themselves result in increased groundwater levels, even without the operation of the Diversion Facility. FEIR, pp. 2-69, 2-72, 2-74, 2-75.

The FEIR cites a memorandum of a conversation between Curtis Weeks and Bill Phillips of MCWRA, Terry Rivasplata of ICF International, and Wendy Strimling of the County Counsel's office. In that memorandum, MCWRA asserts that groundwater levels are already rising in the Salinas Valley:

“Groundwater levels are rising in the Salinas Valley according to groundwater monitoring, per the SVIGSM predictions. Levels in 2006 and 2007 were higher in coastal areas than they have been previously.” Weeks, Curtis, General Manager, Monterey County Water Resources Agency, personal communication, Dec. 28, 2009 (cited at FEIR, pp. 2-66, 6-34.)

This claim is not supported by MCWRA data.

The table below summarizes the information in the groundwater conditions reports for the Pressure Area of the Salinas Basin. The Pressure Area extends from the coast to just south of Gonzales. This is the area that would reflect MCWRA's claims of rising groundwater levels in coastal areas. However, according to the conditions reports, depth to water continues to drop in the 180 foot aquifer, except in the years 2005 and 2006(not 2006 and 2007 as suggested by the MCWRA memorandum). And 2005 and 2006 were years of exceptionally high rainfall. There is essentially no change in the 400 foot aquifer.

Summary
Salinas Valley Basin 4th Quarter Groundwater Conditions
Pressure Area¹

Year	% Avg. Precipitation King City	% Avg. Precipitation Salinas	Depth to Water 180 Pressure (5 wells)	Annual Change 180 Pressure	Change from WY 1985 180 Pressure	Depth to Water 400 Pressure (11 wells)	Annual Change 400 Pressure	Change From WY 1985 400 Pressure
2003	90%	84%	52'	3' down	1' down	50'	3' down	6 up
2004	66%	75%	56'	4' down	5' down	52'	2' down	4 up
2005	167%	135%	54'	2' up	3' down	47'	5' up	9 up
2006	117%	117%	51'	3' up	--	47'	--	9 up
2007	48%	76%	54'	3' down	3' down	50'	3' down	6 up
2008	84%	82%	56'	5' down	5' down	52'	2' down	5 up
2009	50%	89%	59'	3' down	8' down	53'	1' down	4 down

Note that water year 1985 is used as a base year for comparison because it is designated a year of "near normal conditions" for rainfall. Note also that while the MCWRA memorandum states that there are more than 500 wells participating in a comprehensive groundwater monitoring program, the water conditions reports are based upon data from a total of 16 wells, covering an area from the coast to south of Gonzales. Well locations are not provided; so there is no way to know where they might be in relation to the coast or the sediments in which they might be drilled.

In sum, the available MCWRA data do not support the claim that groundwater levels are rising.

III. Erosion And Sedimentation

LandWatch has provided extensive comments and expert opinion that demonstrate that there is no foundation to General Plan EIR's conclusions that erosion

¹ The Quarterly Ground Water Conditions Reports are available for the 4th quarter by year at <http://www.mcwra.co.monterey.ca.us/> under Available Data and Reports, Quarterly Water Conditions.

and sedimentation impacts will be less than significant. One critical policy change proposed in the 2007 General Plan that will exacerbate the existing significant sedimentation impacts to County waterways is the proposal to relax the current ban on agricultural conversion on slopes in excess of 25%. LandWatch continues to urge the County not to modify this policy.

A key assumption in the EIR is that erosion and sedimentation from agricultural activities has been and will continue to be controlled by existing and future actions by the Regional Water Quality Control Board, primarily the RWQCB's agricultural waiver.² However, as Dr. Curry pointed out, and as the Regional Board staff now acknowledge, the existing agricultural waiver program has not been effective at preventing sedimentation impacts from agriculture. Accordingly, the Regional Board is now considering substantial revisions to the agricultural waiver program.³

Regional Board staff have concluded that agriculture is contaminating the water and that the existing conditional waiver is not working:

- “The majority of the creeks, rivers and estuaries in the Central coast Region are not meeting water quality standards. Most of these waterbodies are impacted by agriculture. These conditions were determined and documented on the Central Coast Water Board’s 2008 Clean Water Act Section 303(d) List of Impaired Waterbodies. The three main forms of pollution from agriculture are excessive runoff of pesticides and toxicity, nutrients, and sediments.” RWQCB Staff Report, p. 5.
- “Most of the same areas that showed serious contamination from agricultural pollutants five years ago are still seriously contaminated.” Id. at 11.
- “Sixty percent of the [Section 303(d)] surface water listings identified agriculture as one of the potential sources of water quality impairment.” Id. at 11.
- “. . . 82 percent of the most degraded sites in the Central Coast Region are in these agricultural areas.” Id. at 11.

² Significantly, the agricultural waiver is a key element in the TMDLs promulgated by the Regional Board that are also cited by the EIR as evidence that the existing regulations will adequately address sedimentation impacts. *See, e.g.*, CCRWQCB, Final Project Report – Pajaro River Sediment TMDL, November 2005, excerpt attached as Exhibit 6.

³ See Central Coast Regional Water Quality Control Board, Preliminary Draft Staff Recommendations for an Agricultural Order Conditionally Waiving Individual Waste Discharge Requirements For Discharges from Irrigated Lands, Feb. 1, 2010 (“RWQCB Staff Report”), attached as Exhibit 3.

- “Agricultural discharges contribute to sustained turbidity with many sites heavily influenced by agricultural discharges exceeding 100 NTUs as a median value. . . . 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.” Id. at 12.
- “Unstable, bare dirt and tilled soil, highly vulnerable to erosion and stormwater runoff, are common directly adjacent to surface waterbodies in agricultural areas. Erosion and stormwater runoff from agricultural lands contributes sediment and sustained turbidity at levels that impact the ability of salmonids to feed. Many of these sites are located in the lower Santa Maria and Salinas-Tembladero watersheds.” Id. at 16.
- “Currently, the Water Board and the public have no direct evidence that water quality is improving due to the 2004 Conditional Waiver.” Id at pp. 6-7.
- “. . . agricultural discharges continue to severely impact water quality in most receiving waters.” Id. at 19.

Regional Board staff note that many landowners have removed or discontinued use of previously adopted management practices including grassed waterways, filter or buffer strips, and trees or shrubs. Id. at 16. Thus, one of the key recommendations by staff is that farm operations support a functional riparian system. Id. at 20. In particular, the proposed new waiver would bar degradation of existing streams or riparian or wetland area habitat that result in discharge of waste. Id, Attachment 2, p. 5. This would require protection of existing streams, riparian habitat, and wetlands and minimum buffer widths to separate agricultural operations. Id., Attachment 2, pp. 12-13.

In short, Regional Board staff provide additional substantial expert evidence that confirms Dr. Curry’s assessment that the existing agricultural waiver program is not working and cannot be relied upon to support the EIR’s finding that sedimentation impacts would be less than significant.

Critically, the Regional Board’s proposed revision to the agricultural waiver would require a riparian buffer or set-back from existing streams in order to mitigate discharges of sediment and other pollutants. This proposal is akin to the Mitigation Measure BIO-2.1, Stream Setback Ordinance, which was proposed as essential mitigation to address significant impacts to biological resources *and* significant erosion and sedimentation impacts. DEIR, pp. 4.9-86, 4.4-42.

However, despite the apparent similarity of the proposals, the County’s Board of Supervisors has written to the Regional Board to object to the requirement for a riparian buffer. Simon Salinas and Eric Lauritzen, letter Jeffrey Young, CCRWQCB, April 6, 2010, attached as Exhibit 4. The basis of the County’s objection is that the stream buffer

would cause economic impact due to the loss of farmland.⁴ The County also questions the jurisdiction of the Regional Board, echoing the arguments made by agricultural interests that the Regional Board cannot regulate land use. *See, e.g.*, Kari Fisher, Farm Bureau Federation, letter to Jeffrey Young, CCRWQCB, April 1, 2010, excerpts attached as Exhibit 5.

The County's opposition to a stream setback requirement for agriculture calls into question its good faith in proposing the to-be-devised-later stream setback ordinance as mitigation for water quality and biological resource impacts of the 2007 General Plan. LandWatch has objected to the vague language of the proposed stream setback ordinance and has urged that the County clarify when it will be in place and to which activities it would apply. LandWatch has submitted expert comments indicating that the setback must be applied to all agricultural operations, which is consistent with the Regional Board staff recommendations. Despite this, the County has failed to clarify the scope of the proposed stream setback ordinance or to provide meaningful performance standards for it.

Although the FEIR continues to assert that the agricultural waiver will apply to "routine and on-going agriculture" (FEIR, p. 2-174), it is apparent from the County's opposition to application of the setback requirement to existing agricultural operations that the County would exempt existing operations from a future setback ordinance developed pursuant to Mitigation Measure BIO 2.1. The County offers no basis in science for such an exemption, and it runs counter to recommendations from both Dr. Curry and Regional Board staff.

Furthermore, the County's objection that the Regional Board lacks the authority to impose a stream setback calls into question the EIR's repeated reliance on the Regional Board's agricultural waiver program as a basis for the conclusion that water quality impacts will be less than significant. Nowhere does the EIR admit that the County will take the position that the Regional Board does not have the jurisdiction to implement necessary controls on agriculture. Instead, the FEIR insists that "a revised and improved conditional waiver program will be enacted by the Central Coast Regional Water Quality Control Board to further reduce the impacts of agricultural operations." FEIR, p. 2-173. And, as noted, the FEIR states that the waiver will be applied to existing agriculture. FEIR, p. 2-174.

If the County believes that the Regional Board does not have jurisdiction to impose a setback ordinance, then it is critical that the County say so in the 2007 General Plan EIR and that the County clarify that it will use its own land use authority to impose the necessary setback. If the County believes that no agency, including the County, has jurisdiction to impose a setback requirement on existing agricultural operations, then the County must say so and explain why this mitigation is not feasible. LandWatch again

⁴ Regional Board Staff acknowledge that correcting agricultural practices will cost money, but they conclude that "continuing to operate in a mode that causes constant or increasingly severe receiving water problems is not a sustainable model." RWQCB Staff Report, p. 8.

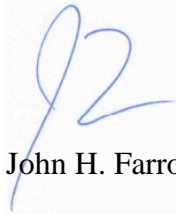
asks that the County provide clear specifications for its proposed stream setback ordinance and that it confirm that the County will apply it to all agricultural operations, not just to future discretionary permits.

If the County does not believe that the setback recommended by Regional Board staff is necessary, then it must justify this position in the first instance with science, not with economic objections. The unrebutted evidence in this record, including Dr. Curry's letter and the Regional Board staff recommendations, demonstrates that a setback is essential and that it must be applied to all agricultural operations.

If the County ultimately makes the judgment that a stream setback ordinance is too costly for agriculture, then CEQA provides a mechanism for it to do so. The County must identify the water quality impacts as significant, demonstrate that mitigation is infeasible, and identify specific overriding considerations that justify approving the 2007 General Plan without adequate mitigation. This mechanism would ensure that decision makers remain politically accountable for the unmitigated impacts. But CEQA does not permit the County simply to sweep the problem under the rug by failing to recognize the significance of the problem or by proposing inadequately specified mitigation that the County does not intend to make effective.

Yours sincerely,

M. R. WOLFE & ASSOCIATES, P.C.



John H. Farrow

JHF: ms

Exhibit 1

Water Resources Data Report

Water Year 1994-1995



Monterey County Water Resources Agency

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Water Resources Data Report Water Year 1994-1995

October 1997

Monterey County Water Resources Agency
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and the administrative Fund 201.*

Monterey County Water Resources Agency Strategic Plan

Mission / Purpose Statement

Monterey County Water Resources Agency provides flood control services and manages, protects, and enhances the quantity and quality of water for present and future generations of Monterey County.

Vision Statement

Monterey County Water Resources Agency's vision is to be recognized as a leader in efficient, innovative, and equitable water resources management.

Three-Year Goals (1997-2000)

Complete the Salinas River Basin Management Plan document and Environmental Impact Report, and begin implementation

Complete construction, begin startup, and implement operations and maintenance of the Castroville Seawater Intrusion Project and the Salinas Valley Reclamation Project

Establish budget and program priorities to improve Agency capability and efficiency

Maintain a positive relationship among the public, Board of Supervisors, Board of Directors, Agency management, and employees

Exercise leadership, build consensus, and take action on water resources issues involving agricultural, urban, recreational, and environmental interests

Evaluate and prioritize agency services and develop a course of action to meet the requirements of Proposition 218 in Zones 2 & 2A, working through the Proposition 218 Ad Hoc Committee and the Board of Supervisors

Monterey County Board of Supervisors

Simon Salinas, Chair	District #1
Judy Pennycook	District #2
Tom Perkins	District #3
Edith Johnsen	District #4
Dave Potter	District #5

Monterey County Water Resources Agency Board of Directors

Stephen Collins, Chair	District #1
Michael Fletcher, Jr.	District #2
Tim M. Handley	District #3
Paul Martin	District #4
Robert Hunsicker	District #5
Robert Scattini	Agricultural Advisory Committee
Lawrence Porter	Farm Bureau
Norman Martella	Grower-Shipper Vegetable Association
Roy Morris	Mayor Select Committee

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Section 5

Ground Water Levels

Introduction and General Program Description

An estimated 95 percent of all water used in Monterey County is derived from ground water wells. As mentioned in Section 4, Reservoir Operations, ground water pumping in the Salinas Valley Basin was not significant until irrigation was introduced for agriculture in the early 1900s. Irrigation became wide-spread when it was learned the fertile valley and climate were ideal for growing vegetable crops. From that early beginning, irrigation demand for ground water grew steadily in proportion to the increase in agricultural land brought into production. The increase in agricultural cropland stabilized in the mid 1980s. With nearly 200,000 acres of land under cultivation today, agricultural pumping exceeds 495,000 acre-feet per year. Combined with urban and other uses, total water pumped in the Salinas Valley is approximately 520,000 acre-feet per year. Assuring that there are sufficient quantities of good quality ground water is the most important aspect of managing water resources in Monterey County today.

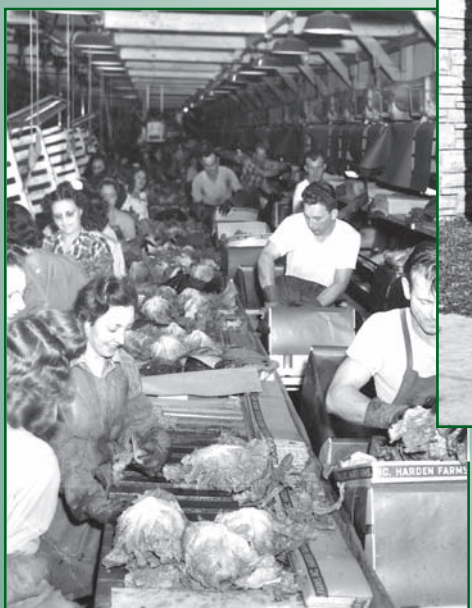
Table 5.1 Use and Purpose of Ground Water Data

- | |
|--|
| <ol style="list-style-type: none">1. Public information2. Evaluate changes in ground water storage3. Evaluate potential for seawater intrusion4. Track seasonal pumping5. Evaluate effects of reservoir operation and quantify stream recharge to Basin.6. Capital projects evaluation7. Quarterly status reports to BOD on ground water conditions8. MCWRA / other water rights evaluation9. Hydrogeologic evaluation10. Ground water model inputs11. Define direction of ground water flow and ground water gradient.12. Drought response trigger |
|--|

The ability of ground water supplies to meet pumping needs can be determined through monitoring fluctuations in ground water levels and the corresponding changes in ground water storage. Programs of consistent well measurement have been ongoing since the 1940s when Monterey County and the State of California began investigations to determine the cause of seawater intrusion along the coast. They found that intrusion was caused by pumping the basin beyond rates that it could recharge through the natural ground water system. The aquifers near the coast are covered by heavy clays and receive little direct recharge from the overlying land

Exhibit 2

Monterey County **CROP REPORT 2005**



Recognizing Grower-Shipper Association for 75 Years of Service.

Grower-Shipper Association of Central California

From its simple beginnings in 1930, the Grower-Shipper Association of Central California has grown from a handful of members producing iceberg lettuce to over 300 members spanning four Central Coast counties and virtually every commodity mentioned in the Monterey County Crop Report (vegetables, berries, mushrooms and wine grapes). The strength and influence of the Association, much like the wide variety of regions and commodities it covers, comes from the diversity of the membership. Growers, shippers, coolers, harvesting and packing companies, salad plants and other processors, wineries, seed companies and numerous ancillary businesses are the types of individuals and companies who belong to GSA. From the largest vertically-integrated agribusiness firms to the smallest one-person farming operation, the Grower-Shipper Association is truly a "Who's Who" of Monterey County agriculture.

As Grower-Shipper's membership has grown, so too have the challenges facing the industry. The Association has continuously expanded and broadened its programs and services to meet the members' needs. GSA has, since its inception, represented the membership at the local, regional, state, and federal levels. Government and regulatory affairs, legislative and public policy advocacy, legal services, labor relations, personnel management and human resources, food safety, worker safety and health, land use, environmental compliance, water and air quality, farm labor availability, worker and affordable housing, and specialty crop protection are just a few of the many items on the organization's agenda.

Grower-Shipper plays a strong role in working with other agricultural associations and government agencies on issues important to agriculture. In addition to its long-standing effectiveness as an advocate on behalf of its membership, GSA takes justifiable pride in its reputation as a "liaison/facilitator" between the industry and government. Whether it is working with legislators in drafting laws, local elected officials in crafting ordinances, or providing feedback to, and working with, regulators on the best methods to enforce those laws and ordinances, GSA is recognized by all as the "link" between industry and government to keep Central Coast agriculture viable.

As is readily apparent, the variety and quality of services, programs, and benefits the Association provides its membership is extensive, impressive - and growing. GSA's services fall into three major categories: representation, advocacy and education. There is no question that Grower-Shipper's educational and training programs are unrivaled among local and regional trade associations. This past year for example, GSA has conducted or presented almost 100 workshops, seminars, and training sessions on a myriad of subjects such as: wage and hour issues, heat stress regulation, labor and employment law update, sexual harassment, worker safety, CPR classes, environmental regulations and compliance, age crime prevention, supervisor training, annual industry wage and benefits survey, updated food safety guidelines, PACA, debt collection and bankruptcy, market access and exports, ag waivers, and conservation of agricultural lands.

Grower-Shipper's mission statement sums it up best: "We are the Central Coast's solution representing our members' agricultural needs." Whatever the issue, whatever the challenge, whatever the problem, the Association takes up the banner on behalf of its membership. To this end, and at every opportunity for over 75 years, GSA has expanded and improved upon its many services and programs to better serve the membership.

To me, however, the Association's greatest contribution to the industry can be summed up in one word: people. Grower-Shipper's strength is derived from a truly remarkable group of people -- the founders, members, officers, directors, and hard-working staff who have given so much to agriculture over the years. It is truly a legacy worth celebrating.

Many thanks are extended to my friend and colleague, Monterey County Agricultural Commissioner Eric Lauritzen and his office for recognizing and honoring the Grower-Shipper Association on its "Diamond Anniversary." I speak on behalf of our entire membership in expressing our sincere appreciation for the professional and productive working relationship GSA has enjoyed with the Monterey County Agricultural Commissioner's office these past 75 years, and look forward to that relationship continuing and thriving for many years to come.

James W. Bogart, President & General Counsel
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MONTEREY COUNTY



AGRICULTURAL COMMISSIONER SEALER OF WEIGHTS & MEASURES

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The Honorable Board of Supervisors of Monterey County

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W. B. "Butch" Lindley	3 rd District
Dave Potter	5 th District

It is a pleasure to present the 2005 annual Monterey County Crop Report, which is prepared pursuant to the provisions of Section 2279 of the California Food & Agriculture Code. This report reflects a production value of nearly \$3.3 billion for Monterey County, an increase of approximately 11% over 2004. The increase is attributable to higher values for leaf lettuce, strawberries, wine grapes, nursery products, spinach, spring mix and a variety of other vegetable crops and reflects the diversity of our agricultural industry. However, decreases were noted in other core commodities including broccoli and asparagus. While the overall production value reflects an increase over 2004, it is critical to note that the figures provided are ***gross values and do not represent or reflect net profit or losses experienced by individual growers.***

Monterey County continues to be a leader in agriculture, in both exports, shipping more than 580 million pounds of produce to more than 50 countries worldwide and diversity, with more than 40 crops exceeding \$1 million in production value.

The 2005 crop figures reveal a continuing trend toward consumer-ready packaging, resulting in increased consumption and production of commodities like leaf lettuces, especially Romaine, spinach and spring mix. Strawberry production was up nearly \$74 million on increased acreage, production and price. Wine grape production per acre was up significantly over 2004, resulting in an increase of \$80 million. Nursery products, celery, mushrooms and artichokes also posted increases in 2005. The County's organic segment increased slightly with a value of more than \$155 million on over 16,000 acres.

This report is our yearly opportunity to recognize the producers, growers and ranchers, along with all the other related businesses that contribute to Monterey County's economic engine. In our continuing effort to improve this report and to more accurately reflect the value of production at the grower level we made adjustments to some 2004 values to provide a fair comparison with the 2005 values that do not capture crop values associated with processing and packaging, as it has in some past years' reports. It is critical to thank the agricultural industry and others who generously provide assistance and vital information to complete this report. Without a very collaborative effort, compilation of this report would not be possible.

This year's report is dedicated to the Grower-Shipper Association of Central California who celebrated their 75th anniversary of service to the agricultural industry of Monterey County. I want to personally thank Jim Bogart for his contributions to this report. Special recognition for the production of this report goes to Richard Ordonez, Melissa Sells and all the staff who assisted in compiling this information and in improving the quality of the report.

Sincerely,

Eric Lauritzen
Agricultural Commissioner

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Thanks to those who provided information for this year's crop statistics. Without your cooperation compiling accurate data would not have been possible. Enumeration and layout was a cooperative effort of the Agricultural Commissioner's Staff.

Special Thanks to **Grower Shipper Association** for their help in the production of this year's Crop Report.

To learn more about the Monterey County Agricultural Commissioner's Office visit our web site:

www.co.monterey.ca.us/ag/

TRENDS OF MAJOR CROPS IN MONTEREY COUNTY

CROP		YEAR		
		1985	1995	2005
ARTICHOKES	ACRE VALUE CPI ADJUSTED \$ ¹	9,187	6,344	6,081
		30,555,000	37,655,000	54,674,000
		55,454,000	48,288,000	54,674,000
BROCCOLI	ACRE VALUE CPI ADJUSTED \$	54,805	61,447	38,863
		129,332,000	264,396,000	216,575,000
		234,722,000	338,969,000	216,575,000
CAULIFLOWER	ACRE VALUE CPI ADJUSTED \$	22,415	23,569	16,380
		62,239,000	125,000,000	93,386,000
		112,956,000	160,256,000	93,386,000
CELERY	ACRE VALUE CPI ADJUSTED \$	5,410	7,445	10,138
		39,380,000	73,309,000	104,144,000
		71,470,000	93,986,000	104,144,000
GRAPES ²	ACRE VALUE CPI ADJUSTED \$	28,647	30,483	38,179
		38,321,000	79,309,000	254,615,000
		69,548,000	101,678,000	254,615,000
HEAD LETTUCE	ACRE VALUE CPI ADJUSTED \$	62,640	71,770	64,456
		243,357,000	481,593,000	311,813,000
		441,664,000	617,427,000	311,813,000
LEAF LETTUCE	ACRE VALUE CPI ADJUSTED \$	7,737	33,822	103,159
		28,494,000	184,393,000	600,808,000
		51,713,000	236,401,000	600,808,000
MUSHROOMS	ACRE VALUE CPI ADJUSTED \$	N/A	N/A	N/A
		38,432,000	51,541,000	65,983,000
		69,750,000	66,078,000	65,983,000
NURSERY PRODUCTS	ACRE VALUE CPI ADJUSTED \$	967	1,575	1,699
		77,687,000	111,199,000	276,235,000
		140,988,000	142,563,000	276,235,000
SPINACH	ACRE VALUE CPI ADJUSTED \$	3,046	8,700	16,937
		5,278,000	43,721,000	188,224,000
		9,579,000	56,053,000	188,224,000
STRAWBERRIES	ACRE VALUE CPI ADJUSTED \$	3,500	7,022	9,294
		93,619,000	192,714,000	390,898,000
		169,907,000	247,069,000	390,898,000

TOTAL	ACRE VALUE CPI ADJUSTED \$	198,354	252,177	305,186
		\$786,694,000	\$1,644,776,000	\$2,557,355,000
		\$1,427,751,000	\$2,108,769,000	\$2,557,355,000

¹ Consumer Price Index Conversion Factors from http://oregonstate.edu/Dept/pol_sci/fac/sahr/cv2004x.pdf

² Represents Bearing Acres Only

Exhibit 3

**PRELIMINARY DRAFT
STAFF RECOMMENDATIONS
FOR AN
AGRICULTURAL ORDER**

**CONDITIONALLY WAIVING INDIVIDUAL WASTE
DISCHARGE REQUIREMENTS
FOR DISCHARGES
FROM IRRIGATED LANDS**

Preliminary Draft Report

**CENTRAL COAST REGIONAL
WATER QUALITY CONTROL BOARD**

February 1, 2010





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State of California

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California Environmental Protection Agency

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1. Preliminary Draft Report on Water Quality Conditions
2. Draft Summary Table of Changes Related to Existing Conditional Waiver
3. Preliminary Draft Agricultural Order
4. Draft Surface Water and Riparian Monitoring Sampling Parameters
5. Preliminary Draft Initial Study and Environmental Checklist
6. List of References Consulted and/or Cited for Preliminary Draft Agricultural Order

1.0 Introduction

The Central Coast Water Board currently regulates discharges from irrigated lands with a Conditional Waiver of Waste Discharge Requirements (Order No. R3-2009-0050, hereafter current Order) that expires in July 2010. The Central Coast Water Board is beginning their process to consider conditions to be included in a new or revised Order that achieves desired water quality improvement.

1.1 What is the issue?

The Central Coast Water Board must determine how best to regulate agricultural discharges on the Central Coast to directly address the major water quality issues of toxicity, nitrates, pesticides and sediment in agricultural runoff and/or leaching to groundwater so that we achieve desired water quality outcomes that support all beneficial uses. Agricultural discharges (primarily due to contaminated irrigation runoff and percolation to groundwater) are a major cause of water quality impairment. The main problems are:

1. In the Central Coast Region, thousands of people are drinking water contaminated with unsafe levels of nitrate or are drinking replacement water to avoid drinking contaminated water. The cost to society for treating polluted drinking water is estimated to be in the hundreds of millions of dollars.
2. Aquatic organisms in large stretches of rivers in the entire region's major watersheds have been severely impaired or completely destroyed by severe toxicity from pesticides.

These impairments are well documented, severe, and widespread. Nearly all beneficial uses of water are impacted, and the discharges causing the impairments continue. Immediate and effective action is necessary to improve water quality protection and resolve the widespread and serious impacts on people and aquatic life.

1.2 Why is the issue important?

The Central Coast Region's coastal and inland water resources are unique, special, and in some areas still of relatively high quality. Millions of Central Coast residents depend on groundwater for nearly all their drinking water from both deep municipal supply wells and shallow domestic wells. In addition, the region supports some of the most significant biodiversity of any temperate region in the world and is home to many sensitive natural habitats and species of special concern. These resources and the beneficial uses of the Central Coast water resources are severely impacted or threatened by agricultural discharges. At the same time, the Central Coast Region 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 14 percent of California's agricultural economy. For example, agriculture in Monterey County supplies

80 percent of the nation's lettuces and nearly the same percentage of artichokes and sustains an economy of 3.4 billion dollars.¹

Thousands of people rely on public supply wells with unsafe levels of nitrate and other pollutants. Excessive nitrate concentration in drinking water is a significant public health issue resulting in risk to infants for methemoglobinemia or "blue baby syndrome", and 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. Seventeen percent of public supply wells surveyed by the Department of Water Resources (DWR) showed contaminants above the drinking water standard, with nitrate as the most frequent chemical to exceed the drinking water standard. In a Monterey County study, in portions of the Salinas Valley, up to 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. Water Board staff estimate several additional thousands of people are drinking from shallow private domestic wells. For these wells, water quality is not regulated, is often unknown, not treated, or treated at significant cost to the well owner.

Agricultural discharges of fertilizer are the main source of nitrate contamination to groundwater based on local nitrate loading studies. In some cases, up to 30 percent of applied nitrogen may have leached to groundwater in the form of nitrate. Due to elevated concentrations of nitrate in groundwater, many public water supply systems have abandoned wells and established new wells or sources of drinking water, or are required to remove nitrate before delivery to the drinking water consumer, often, at significant cost.

Agricultural discharges have impaired surface water quality in the Central Coast Region, such that some creeks are found toxic (lethal to aquatic life) every time the site is sampled and as a result many areas are devoid of aquatic organisms essential to ecological systems. Vertebrates, including fish, rely on invertebrates as a food source. Consequently, invertebrates are key indicators of stream health, and are commonly used for toxicity analyses and assessments of overall habitat condition. The majority of creeks, rivers and estuaries in the Central Coast Region are not meeting water quality standards. Most of these waterbodies are impacted by agriculture. These conditions were determined and documented on the Central Coast Water Board's 2008 Clean Water Act Section 303(d) List of Impaired Waterbodies. The three main forms of pollution from agriculture are excessive runoff of pesticides and toxicity, nutrients, and sediments. In a statewide study, the Central Coast Region had the highest percentage of sites with pyrethroid pesticides detected and the highest percentage of sites exceeding toxicity limits. In addition, there are more than 46 waterbodies that exceed the nitrate water quality standard and several waterbodies routinely exceed the nitrate water quality standard by five-fold or more. In addition to causing the human health impacts discussed previously, these high levels of nitrate are impacting sensitive fish

¹ Salinas Valley Chamber of Commerce http://atlantabrain.com/ag_industry.asp

species such as the threatened Steelhead, endangered Coho Salmon, by causing algae blooms that remove oxygen from water, creating conditions unsuitable for aquatic life.

The water quality conditions throughout the region are also impacting several other threatened and endangered species, including the marsh sandwort (*arenaria paludicola*), Gambel's watercress (*nasturtium rorippa gambelii*), California least tern (*sterna antillarum browni*), and red-legged frog (*Rana aurora*). The last remaining known populations of the two endangered plants, marsh sandwort and Gambel's watercress, occur in Oso Flaco Lake, are critically imperiled and depend upon the health of the Oso Flaco watershed to survive.

1.3 What is the Central Coast Water Board's regulatory role?

The California Regional Water Board's and State Water Resources Control Board's mission and regulatory responsibility *"is to preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations."* The Central Coast Water Board is responsible for regulating discharges of waste to the region's waterbodies to protect beneficial uses of the water. 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 to waters of the State. The Central Coast Water Board issues Orders that contain prohibitions on and requirements for discharging waste and enforces violations of the prohibitions and requirements in these Orders. The Central Coast Water Board also develops water quality standards and implements plans and programs. These activities are conducted to best protect the State's waters, recognizing the local differences in climate, topography, geology and hydrology. As the current Order expires in July 2010, The Central Coast Water Board must immediately determine how best to regulate agricultural discharges on the Central Coast to directly address the major water quality issues of toxicity, nitrates, pesticides and sediment in agricultural runoff and/or leaching to groundwater so that we achieve desired water quality outcomes that support all beneficial uses.

1.4 Why is the Central Coast Water Board changing the current Order?

The Central Coast Water Board and other stakeholders successfully developed an Order (in the form of a Conditional Waiver of Waste Discharge Requirements (2004 Conditional Waiver) through a stakeholder process and the Board adopted the Conditional Waiver on July 9, 2004 and renewed it for one year on July 10, 2009. Agricultural dischargers enrolled and established farm plans based on education and outreach, and created an industry-led, nonprofit, monitoring program. The current Conditional Waiver, however, lacks clarity and does not focus on accountability and verification of directly resolving the known water quality problems. The conditions of the 2004 Conditional Waiver address all common problems associated with all agricultural operations equally and without specific targets or timelines for compliance. Currently, the Water Board and the public have no direct evidence that water quality is improving

due to the 2004 Conditional Waiver. The current watershed-scale monitoring program only indicates long-term (multi-year), receiving water changes without measuring : 1) if individual agricultural dischargers are in compliance with Conditional Waiver conditions or water quality standards, or 2) if short-term progress towards water quality improvements on farms or in agricultural discharges is occurring. We know that better on-site information assists growers in improving farming practices and some growers have advanced efforts toward water quality protection. Currently, information that provides evidence of on-farm improvements and reductions in pollution loading from farms is not required, and therefore probably does not exist for most farms. The public, including those who are directly impacted by farm discharges, and the Water Board, do not have the necessary evidence of compliance or improvements. This is unacceptable given the magnitude and scale of the documented water quality impacts and the number of people directly affected. At a minimum, we continue to observe that agricultural discharges continue to severely impact water quality. The Central Coast Water Board must determine how best to regulate agricultural discharges on the Central Coast to directly address the major water quality issues of toxicity, nitrates, pesticides and sediment in agricultural runoff and/or leaching to groundwater so that we achieve desired water quality outcomes that support all beneficial uses.

1.5 What actions are necessary to achieve water quality improvement?

The Central Coast Water Board must fulfill its regulatory responsibility to protect water quality. The Central Coast Water Board must determine how best to regulate agricultural discharges on the Central Coast to directly address and resolve the major water quality issues of toxicity, nitrates, pesticides and sediment in agricultural runoff and/or leaching to groundwater so that we achieve desired water quality outcomes that support all beneficial uses. The agricultural industry must be accountable for preventing and addressing the water quality issues caused by agriculture. Together, we must control agricultural discharges – especially contaminated irrigation runoff and percolation to groundwater. The Central Coast Water Board must focus on those areas of the Central Coast Region already known to have, or be at great risk for, severe water quality impairment. The agricultural industry must implement the most effective management practices (related to irrigation, nutrient, pesticide and sediment management) that will most likely yield the greatest amount of water quality protection, and verify their effectiveness with on-farm data. The Central Coast Water Board must establish a known and reasonable time schedule, with clear and direct methods of verifying compliance and monitoring progress over time so that agricultural dischargers understand when and if they are successfully reducing their contribution to the problems or maintaining adequate levels of protection. We all must adapt to what we learn from measures of progress, so we efficiently and effectively achieve water quality improvement over time. To prevent further water quality impairment and impact to beneficial uses, we must take action now.

1.6 A Dilemma:

Agricultural discharges continue to contribute to already significantly impaired water quality and impose certain risk and massive costs to public health, drinking water supplies, aquatic life, and valued water resources. If we do not protect water quality and beneficial uses, these costs and other impacts are likely to increase significantly. Resolving agricultural water quality issues will greatly benefit public health, present and future drinking water supplies, aquatic life, aesthetic, recreational, and other beneficial uses. Resolving agricultural water quality issues will require changes in farming practices, will 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.

Protecting water quality and the environment while protecting agricultural benefits and interests will require change and may shift who bears the costs and who reaps the benefits. There will be a spectrum of adaptation by individual farmers to any change in water quality requirements – some farmers will react by actively adapting to the change and find efficiencies and advantages to achieving compliance; and some farmers may be more resistant to change or otherwise have greater difficulty adapting, possibly resulting in negative impacts. These impacts can be reduced by the use of reasonable time schedules and by providing that individual farmers identify how they can best meet water quality standards in their individual Farm Plans.

However, continuing to operate in a mode that causes constant or increasingly severe receiving water problems is not a sustainable model. Change will be effected one way or another. Without proactive improvements in operation, a non-sustainable model will result in increasing changes such as increasingly impaired habitat, and reactive fixes such as additional costly water supply treatment, and additional cost for developing new supplies (example: northern Monterey County water supply on-going development costs due in part to groundwater overuse by Salinas Valley water users and seawater intrusion). There is no “new water” other than through desalinization which is expensive not only in terms of money but in energy costs.

To prevent further water quality impairment and impact to beneficial uses, the Central Coast Water Board must take action immediately to better regulate agricultural discharges on the Central Coast to directly address the major water quality issues of toxicity, nitrates, pesticides and sediment in agricultural runoff and/or leaching to groundwater so that we achieve desired water quality outcomes that support all beneficial uses.

2.0 Background

The California Regional Water Quality Control Board (Central Coast Water Board) Agricultural Regulatory Program was initiated in 2004, with the adoption of a Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (2004 Conditional Waiver, Order No. R3-2004-0117). The 2004 Conditional Waiver expired on July 9, 2009 and the Central Coast Water Board extended it until July 10, 2010 (Order No. R3-2009-0050).

The intent of the 2004 Conditional Waiver was to regulate discharges from irrigated lands to ensure that such dischargers are not causing or contributing to exceedances of any Regional, State, or Federal numeric or narrative water quality standard. The requirements of the 2004 Conditional Waiver focused on enrollment, education and outreach, the development of Farm Water Quality Management Plans (Farm Plans), and receiving (watershed-scale) water quality monitoring. However, substantial evidence indicates discharges of waste are causing significant exceedances of numeric and narrative water quality standards resulting in negative impacts on beneficial uses.

Prior to the expiration of the current Conditional Waiver in July 2010, the Central Coast Water Board must consider the adoption of new or revised conditions to achieve desired water quality improvement. This report provides background and supporting information, and the terms and requirements for these Preliminary Staff Recommendations for an Agricultural Order for Discharges from Irrigated Lands (Preliminary Draft Agricultural Order). Specifically, this report contains:

1. an introduction explaining the context for considering a new Agricultural Order,
2. a description of the water quality impacts caused by agricultural discharges,
3. the Preliminary Draft Agricultural Order,
4. and a preliminary draft evaluation of environmental impacts from implementation of this Preliminary Draft Agricultural Order (initial study/environmental checklist).

3.0 The Preliminary Draft Agricultural Order

3.1 Summary

The Preliminary Draft Agricultural Order, like the 2004 Conditional Waiver, must regulate discharges of waste from irrigated lands to ensure that such dischargers are not causing or contributing to exceedances of any Regional, State, or Federal numeric or narrative water quality standard, such that all beneficial uses are protected. The Preliminary Draft Agricultural Order directly addresses agricultural discharges – especially contaminated irrigation runoff and percolation to groundwater causing widespread toxicity, unsafe levels of nitrate, unsafe levels of pesticides, and excessive sediment in surface waters and/or groundwaters. The Preliminary Draft Agricultural Order also focuses on those areas of the Central Coast Region already known to have, or at great risk for, severe water quality impairment. In addition, the Preliminary Draft

Agricultural Order requires the effective implementation of management practices (related to irrigation, nutrient, pesticide and sediment management) that will most likely yield the greatest amount of water quality protection. The Preliminary Draft Agricultural Order includes immediate requirements to eliminate or minimize the most severe or impactful agricultural discharges and additional requirements with specific and reasonable time schedules to eliminate or minimize degradation from all agricultural discharges. The Preliminary Draft Agricultural Order also includes clear and direct methods and indicators for verifying compliance and monitoring progress over time.

3.2 Public Input and Consideration of Additional Information

The Preliminary Draft Agricultural Order describes requirements for 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 requirements described in the Preliminary Draft Agricultural Order were developed by Central Coast Water Board staff based upon information and data available, and public input received to date. 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. The Central Coast Water Board will review and consider all alternatives submitted for consistency with: 1) the program goals of resolving surface and groundwater water quality impairment 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 (including Water Code sections 13263 and 13269 and relevant plans, policies, and regulations identified in Attachment A to the Preliminary Draft Agricultural Order). During the course of reviewing alternatives (including any specific comments on or recommendations for the Preliminary Draft Agricultural Order), Central Coast Water Board staff may modify proposed conditions or identify other feasible conditions, resulting in revisions to the Preliminary Draft Agricultural Order. Interested Persons will have an opportunity to review and provide comments on forthcoming versions of the Agricultural Order (e.g., during informal staff workshops or Board information workshops), and during future public comment periods associated with specific actions to be taken by the Central Coast Water Board (e.g., adoption of new Agricultural Order).

4.0 Water Quality Conditions

4.1 Summary of Surface Water Quality Conditions

Most waterbodies located in or near areas influenced by agriculture in the Central Coast Region have unsafe levels of nutrients, unsafe levels of pesticides/toxicity, and

excessive levels of sediment/turbidity, evidenced by exceedances of surface water quality standards, and poor biological and physical conditions. Most surface waterbodies in agricultural watersheds are not suitable for drinking water, recreation (swimming or fishing), or aquatic life. Surface water quality data shows severe water quality impairment in most areas of the region with only minimal signs of improvement in a few areas.

To develop a comprehensive assessment of surface water quality in agricultural areas throughout the Region, staff evaluated data from the Cooperative Monitoring Program (CMP), the monitoring program established for compliance with the Conditional Waiver, and the Central Coast Water Board's Regional Monitoring Program, the Central Coast Ambient Monitoring Program (CCAMP). The CMP data focused monitoring in problem areas with agricultural sources and CCAMP data focused monitoring in all areas of the Region. Consequently, CMP data are biased toward more agricultural runoff influenced streams. Staff also evaluated (and will continue to evaluate) both sets of data for evidence of trends. Staff also completed an assessment of potential risk to Marine Protected Areas in the nearshore marine environment.

Surface water quality conditions are detailed in Attachment 1 to this staff report and summarized below.

Indicators of Surface Water Quality Impairment-

- Most of the same areas that showed serious contamination from agricultural pollutants five years ago are still seriously contaminated.
- The 2008 Clean Water Act Section 303(d) List of Impaired Waterbodies for the Central Coast Region (Impaired Waters List) identified surface water impairments for approximately 167 water quality limited segments 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.
- Agricultural discharges most severely impact surface waterbodies in the lower Salinas and Santa Maria watersheds, both areas of intensive agricultural activity. Evaluated through a multi-metric of water quality, 82 percent of the most degraded sites in the Central Coast Region are in these agricultural areas.
- Nitrate concentrations in areas that are most heavily impacted are not improving in significantly or in any widespread manner and in a number of sites in the lower Salinas and Santa Maria watersheds appear to be getting worse in the last few years (from CCAMP and CMP data) .
- Thirty percent of all sites from CCAMP and CMP have average nitrate concentrations that exceed the drinking water standard, and approximately 57 percent exceed the level 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 Tembladero Slough system (including Old Salinas River, Alisal Creek, Alisal Slough, Espinosa Slough, Gabilan Creek and Natividad Creek), the Pajaro River (including Llagas Creek, San Juan Creek, and Furlong Creek), the

lower Salinas River (including Quail Creek, Chualar Creek and Blanco Drain), the lower Santa Maria River (including Orcutt-Soloman Creek, Green Valley Creek, and Bradley Channel), and the Oso Flaco watershed (including Oso Flaco Lake, Oso Flaco Creek, and Little Oso Flaco Creek).

- Discharges from 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.
- Agricultural use of pyrethroid pesticides in the Central Coast Region and associated toxicity are 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 (42 percent), and the highest rate (by three-fold) of active ingredients applied (113 lbs/acre).
- Agricultural discharges contribute to sustained turbidity with many sites heavily influenced by agricultural discharges exceeding 100 NTUs as a median value. Most CCAMP sites have a median turbidity level of under 5 NTUs. 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.
- Agricultural discharges result in water temperatures that exceed levels that are desirable for 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.
- Bioassessment data shows that creeks in areas of intensive agricultural activity have impaired benthic communities. Aquatic habitat is often poorly shaded, high in temperature, and has in-stream substrate heavily covered with sediment.
- Several Marine Protected Areas (MPAs) along the Central Coast are at risk of pollution impacts from sediment and water discharges leaving river mouths. Three of the MPAs, Elkhorn Slough, Moro Cojo Slough and Morro Bay, are estuaries that receive runoff into relatively enclosed systems.
- For Moro Cojo Slough and Elkhorn Slough, nitrates, pesticides and toxicity are documented problems. These two watersheds have more intense irrigated agricultural activity than does the Morro Bay watershed.

Indicators of Surface Water Quality Improvement -

- Some drainages in the Santa Barbara area are improving in surface water quality (such as Bell Creek, which supports agricultural activities) and on Pacheco Creek in the Pajaro watershed. In the lower Salinas and Santa Maria watersheds, flow volumes are declining at some sites, so at these locations nitrate loads may not necessarily be getting worse in spite of trends in concentrations;
- Dry season flow volume appears to be declining in some areas of intensive agriculture;

- 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;
- Two sites in the lower Santa Maria area show significant improvements in nitrate concentration (Green Valley Creek (312GVS) and Oso Flaco Creek (312OFC);
- Four sites on the main stem of the Salinas River show improvements in turbidity during the dry season;
- Dry season turbidity is improving along a portion of the main stem of the Salinas River;
- CCAMP monitoring has detected declining flows at other sites elsewhere in the Region, likely because of drought;

Surface Water Quality Data and Information Gaps -

- The timeframe and frequency of data collection limit the evaluation of statistical trends for some water quality parameters in surface waterbodies;
- Flow data are not collected at all sites, making it difficult to identify patterns or trends in flow and loading of pollutants (compared to changes in concentration);
- Flow information and water quality data are not reported for agricultural discharges from individual farms, so correlations cannot be made between reductions in irrigation runoff or improvements in agricultural discharge quality vs. in-stream changes.
- In-stream water quality is an effective long-term measure of water quality improvement (especially for nutrients), and more time may be necessary to identify any significant change.
- There is no individual on-farm monitoring or reporting, and it is unknown how individual farms contribute to surface water quality improvement or impairment. In addition, it is unknown if individual Dischargers are in compliance with water quality standards (given the magnitude and scale of documented impacts, it is highly likely that most discharges are not in compliance).
- In Marine Protected Areas, there is no monitoring of sediments that carry pesticides in attached forms. Without this information it is difficult to determine if these pesticides, carried downstream in streamflow by sediments and discharged to the ocean, harm marine life.
- Additional research would increase understanding of the potential impacts of nutrient discharges in rivers in local ocean waters.

4.2 Groundwater Quality

Groundwater is severely impaired by nitrate contamination in many areas of the Central Coast Region. In many areas, nitrate concentration in groundwater is orders of magnitude above the drinking water standard, resulting in a significant threat to public health. This problem is critically important because much of the Central Coast Region is almost completely dependent on groundwater resources.

To develop a comprehensive assessment of groundwater quality in agricultural areas throughout the Region, staff evaluated available groundwater data collected by the California Department of Water Resources, California Department of Public Health (CDPH), Monterey County Water Resources Agency, and other researchers. Groundwater quality data generally represents conditions at the groundwater basin and sub-basin scale, and in particular, comprehensive impacts of agricultural land uses over a broad scale. Groundwater quality data for the purposes of characterizing specific individual agricultural discharges are not available and collection of this type of groundwater data is not required in the 2004 Conditional Waiver.

Groundwater quality conditions are detailed in Attachment 1 to this staff report and summarized below.

Indicators of Groundwater Quality Impairment -

- 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 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 MCL for nitrate. According to data maintained in the GAMA-Geotracker database, recent impacts to public supply wells are greatest in portions of the Salinas Valley (up to 20 percent of wells impacted) and Santa Maria groundwater (approximately 17 percent) 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. Due to these elevated concentrations of nitrate in groundwater, many public water supply systems are required to provide wellhead treatment, at significant cost, to remove nitrate before delivery to the drinking water consumer.
- Groundwater contamination from nitrate severely impacts shallow domestic drinking water supplies in the Central Coast Region. Domestic wells (wells supplying one to several households) are typically screened in shallower zones than public supply wells, and typically have higher nitrate concentrations as a result. 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 hundreds to thousands in the Central Coast Region.
- In Monterey County, 25 percent of 352 wells sampled (88 wells) had concentrations above the nitrate drinking water standard in the northern Salinas Valley. In 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 exceedences in the Gilroy-Hollister and Pajaro groundwater basins are similar, as reported by local agencies/districts for those basins.

- In many cases, whole communities relying on groundwater for drinking water purposes are affected. Local agencies have reported the shut down of domestic drinking water wells due to high nitrate concentrations. In addition, 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 quality drinking water for the long-term. In the Central Coast Region, the Monterey County community of San Jerardo, the San Martin area of Santa Clara County, and the City of Morro Bay are among the local communities affected by nitrate.

Groundwater Quality Data and Information Gaps -

- Groundwater quality (especially in deeper parts of the aquifer) is an effective long-term measure of water quality improvement and long time periods are usually necessary to identify significant change in water quality.
- Shallow groundwater is generally more directly susceptible to pollution from overlying land use. Groundwater quality data collection from shallow wells (especially agricultural or domestic drinking water wells) is not required and data is only broadly available, thus limiting evaluations related to shorter term indications of water quality changes.
- Well construction data (e.g., depth and screened intervals) are generally available for public supply wells but are otherwise not collected on a broad scale in a common format. This data gap limits more precise evaluations of water quality and groundwater depth.
- Groundwater data from wells associated with individual farms or areas of intensive agriculture are not routinely collected, nor have data been collected for all such areas in the region. This data gap limits understanding of chemical contributions from individual farms or areas to the levels of chemicals found in groundwater wells.

4.3 Aquatic Habitat Conditions

Aquatic habitat is degraded in many areas of the region as evidenced by poor biological and physical conditions. Most surface waterbodies in agricultural watersheds are not suitable for safe recreational fishing or to support aquatic life.

To determine aquatic habitat conditions, staff reviewed data collected by CMP and CCAMP, and conducted a review of available riparian and wetland information for the Central Coast Region. While the 2004 Conditional Waiver did not specifically require aquatic habitat monitoring, it stated that cooperative monitoring of in-stream effects would enable the Central Coast Water Board to assess the overall impact of agricultural discharges to beneficial uses, such as aquatic life and habitat. The 2004 Conditional Waiver also requires protection of beneficial uses including aquatic and wildlife habitat.

The proposed 2010 order continues that requirement.

Aquatic habitat conditions are detailed in Attachment 1 to this staff report and summarized below.

Indicators of Aquatic Habitat Degradation -

- Agricultural activities result in the alteration of riparian and wetland areas, and continue to degrade the waters of the State and associated beneficial uses. Owners and operators of agricultural operations historically removed riparian and wetland areas to plant cultivated crops and in many areas continue to do so.
- As a result of aquatic habitat degradation, watershed functions that serve to maintain high water quality, aquatic habitat and wildlife - by filtering pollutants, recharging aquifers, providing flood storage capacity, have been disrupted.
- Data collected from CCAMP and CMP indicate that population characteristics of aquatic insects (benthic macroinvertebrates) important to ecological systems reflect poor water quality, degradation or lack of aquatic habitat, and poor overall watershed health at sites in areas with heavy agricultural land use. Aquatic habitat is often poorly shaded, high in temperature, and stream bottoms are heavily covered with sediment.
- The lower Salinas watershed and lower Santa Maria watersheds score low for common measures of benthic macroinvertebrate community health and aquatic habitat health.
- Unstable, bare dirt and tilled soils, highly vulnerable to erosion and stormwater runoff, are common directly adjacent to surface waterbodies in agricultural areas. Erosion and stormwater runoff from agricultural lands contributes sediment and sustained turbidity at levels that impact the ability of salmonids to feed. Many of these sites are located in the lower Santa Maria and Salinas-Tembladero watersheds.
- Degradation of aquatic habitat also results in water temperatures that exceed levels that are desirable for 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.
- Real and/or perceived incompatible demands between food safety and environmental protection and subsequent actions taken by Dischargers to address food safety concerns associated with environmental features have resulted in the removal of aquatic habitat and related management practices.
- 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. 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.

Indicators of Aquatic Habitat Improvement -

- Protection, restoration and enhancement of aquatic habitat and watershed functions are demonstrated to be effective for improving water quality, aquatic and wildlife habitat, aquifer recharge, and flood storage capacity.
- Grant-funded projects in the Gabilan Watershed and surrounding Southern Monterey Bay Watersheds demonstrate that wetland restoration results in improved aquatic habitat conditions measured by changes in populations of native plants and birds, and establishment of macroinvertebrate populations. Restoration projects also resulted in water quality improvement by reducing sediment loads, removing large fractions of nitrate and suspended sediment inputs, and removal of ammonia, phosphate, and diazinon.
- Restoration projects implemented in the Moro Cojo Slough indicated that agricultural runoff that ran through wetland habitats can result in greatly reduced levels of nitrate. In addition, restoration resulted in better support of native plants and animals. Greater than 40 native plant species and 22 native vertebrates were observed throughout the project sites. In addition, the following protected species were documented throughout the Moro Cojo Watershed: California Red-legged Frog, California Tiger Salamander, Steelhead, Santa Cruz Long-toed Salamander, Tidewater Goby, and Saline Clover.
- Restoration projects in the Hansen Slough area near Watsonville resulted in decreases in stream turbidity by more than 50-fold, comparing sites above and below restoration. Nitrate concentrations also decreased as water passed through the restoration area – nitrate concentrations entering the site exceeded 140 mg/L and levels leaving the site never exceeded 40 mg/L, and were frequently below 5 mg/L.

Aquatic Habitat Data and Information Gaps -

- The success of aquatic habitat protection and restoration efforts is dependent on a variety of different parameters including scale, climate, topography, flow, water quality, and other site-specific variables.

4.4 Agricultural Discharge Water Quality

Water quality of agricultural discharges is often poor, carrying nitrates at concentrations above safe drinking water levels and pesticides at concentrations above toxic levels to waterbodies in the region. Agricultural discharges contribute significantly to water quality conditions. In some cases, agricultural discharges are the sole or primary source of pollution in impaired waterbodies. Even in areas where agricultural is not the only source of pollution, it is a primary contributor.

Numerous studies document the impact of agricultural discharges on water quality and specific pollutants contained in irrigation runoff. Research conducted by the Food and Agriculture Organization of the United Nations found that irrigation return flow resulted in a significant increase in nitrogen, phosphorous, pesticide residues, and sediments.

Agricultural research conducted by University of California Cooperative Extension (UCCE) found nitrate values in agricultural tailwater at 26, 53, and 75 mg/L NO₃-N (up to 7.5 times the drinking water standard). UCCE researchers indicated that the high levels of nitrate at the site were likely caused by the grower injecting nitrogen fertilizer into the irrigation water during the 2nd and 3rd irrigation events. A UC Davis study of Salinas Valley farms found that by the second and third crop cycles, farm soils had begun to accumulate nitrogen, but that growers continued with the same fertilization schedule. In addition, soils are high enough in phosphorus that in some areas no added phosphorus is necessary; however, growers continue to add this chemical to their fields. These practices lead to excess fertilizer leaving the farm, which ultimately cause significant water quality impairment. Similar to tailwater, tile drain water with elevated nitrate levels has been found draining into surface water bodies. Nitrate concentrations in selected waterbodies in the Pajaro Valley Watershed have been found to range from 19 to 89.5 mg/l NO₃ as N (compared to the drinking water standard, 10 mg/l).

Pesticides have been detected in agricultural tailwater and routinely exceed the toxicity water quality standard (lethal to aquatic life). Regionwide, CCAMP and the Cooperative Monitoring Program have conducted toxicity monitoring in 80 streams and rivers. Some measure of lethal effect (as opposed to growth or reproduction effect) has been observed at 65 percent of the water bodies monitored.

5.0 Preliminary Draft Staff Recommendations for an Agricultural Order

5.1 Background on Agricultural Regulatory Program Implementation (2004 – 2009)

On July 9, 2004, the Central Coast Water Board unanimously adopted the 2004 Conditional Waiver, and the associated Monitoring and Reporting Program, with the support of an Agricultural Advisory Panel (including agricultural and environmental interest group representatives), and overall public support. The goal of the 2004 Conditional Waiver was to improve agricultural water quality through the implementation of appropriate management practices. The requirements of the 2004 Conditional Waiver focused on enrollment, education and outreach, development of Farm Water Quality Management Plans (Farm Plans), and cooperative water quality monitoring.

During the term of the 2004 Conditional Waiver, Water Board staff worked with the agriculture community to develop an Agricultural Regulatory Program that would progress to protect and restore surface water quality, groundwater quality, and aquatic habitat to conditions that protect all designated beneficial uses of water in areas with irrigated agricultural lands. Major programmatic accomplishments of the first five years include the following:

- Enrollment of approximately 90 percent of the Central Coast Region's total irrigated agricultural acreage under the 2004 Conditional Waiver;

- Development and Implementation of a region-wide monitoring program (CMP) to assess water quality conditions at the watershed-scale;
- Tracking program implementation for more than 1700 farming operations (including inspections at 59 farming operations, and various enforcement actions: more than 200 Notices of Violation, more than 20 water quality enforcement actions, and five Administrative Civil Liability complaints);
- Discharger development of Farm Water Quality Management Plans for over 1528 operations (72 percent of enrollees); and
- Discharger completion of water quality education courses (in total, more than 18,000 hours);

While the success of initial efforts of the Agricultural Regulatory Program to develop a Conditional Waiver with stakeholders and achieve enrollment through education and outreach is significant, the current Conditional Waiver lacks clarity and focus on water quality requirements and does not include adequate compliance and verification monitoring. Thus, desired water quality outcomes achievement is uncertain and unmeasured. At a minimum, agricultural discharges continue to severely impact water quality in most receiving waters. The Central Coast Water Board must determine how better to regulate agricultural discharges on the Central Coast to directly address the major water quality issues of toxicity, nitrates, pesticides and sediment in agricultural runoff and/or leaching to groundwater to achieve desired water quality outcomes that support all beneficial uses.

5.2 Preliminary Draft Agricultural Order – Summary of Staff Proposed Conditions

Conditions in the Preliminary Draft Agricultural Order and changes related to the 2004 Conditional Waiver are summarized in Attachment 2 and the Preliminary Draft Agricultural Order is contained in Attachment 3. Conditions in the Preliminary Draft Agricultural Order that are a clarification of conditions in the 2004 Conditional Waiver are notated as “<CLARIFICATION OF EXISTING>” in the Preliminary Draft Agricultural Order, Attachment B, Terms and Conditions. -. Conditions in the Preliminary Draft Agricultural Order that do not exist in the 2004 Conditional Waiver are notated as “<NEW>”. Conditions in the Preliminary Draft Agricultural Order without a notation are the same as conditions contained in the 2004 Conditional Waiver.

Staff developed these preliminary recommendations for an Agricultural Order by building upon the 2004 Conditional Waiver to advance efforts to improve agricultural water quality and gain compliance with applicable water quality standards. Thus, staff recommends the same regulatory tool, a Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands, to regulate agricultural discharges. To ensure understanding of applicable water quality standards, staff included explicit clarification of water quality discharge and compliance requirements. In addition, to improve implementation actions directly addressing the specific priority water quality issues, the Preliminary Draft Agricultural Order builds upon the development and

implementation of Farm Plans, including effective implementation of management practices (related to irrigation, nutrient, pesticide and sediment management) that will most likely yield the greatest amount of water quality protection. The Preliminary Draft Agricultural Order also builds upon the existing Cooperative Monitoring Program by retaining watershed-scale, receiving water monitoring, but adds individual monitoring and reporting to improve Water Board staff's ability to identify specific discharges loading pollutants or contributing to impacts, verify compliance with the requirements by dischargers and measure progress over time at the farm and watershed scales. The Preliminary Draft Agricultural Order focuses on reducing or eliminating agricultural discharges – especially contaminated irrigation runoff and percolation to groundwater in the most severely impaired areas. Due to the unique conditions related to irrigated lands and individual farming operations, the Preliminary Draft Agricultural Order includes multiple options for compliance to maximize Dischargers' flexibility in achieving desired water quality improvement according to a specific time schedule and specific milestones. Similar to the 2004 Conditional Waiver, the Preliminary Draft Agricultural Order also includes significantly reduced monitoring and reporting requirements for those agricultural discharges identified as having relatively low-risk for water quality impairment. The conditions for compliance, the monitoring and reporting requirements and the time schedule for compliance are summarized in the following paragraphs.

To demonstrate compliance with this Order, Dischargers must:

- Enroll to be covered by the Order
- Develop and implement a farm plan that includes management practices with certain conditions and specifications
- Eliminate non-storm water discharges, or use source control or treatment such that non-storm water discharges meet water quality standards
- Demonstrate through water quality monitoring that individual discharges meet certain basic water quality targets (that are or indicate water quality standards that protect beneficial uses). For example, non-storm water discharge monitoring should find:
 - No toxicity
 - Nitrate ≤ 10 mg/L NO₃ (N)
 - Turbidity ≤ 25 NTUs
 - Un-ionized Ammonia < 0.025 mg/L (N)
 - Temperature $\leq 68^{\circ}\text{F}$
- Demonstrate through water quality monitoring that receiving water is trending toward water quality standards that protect beneficial uses or is being maintained at existing levels for high quality water
- Farm operation must support a functional riparian system and associated beneficial uses (e.g., recreational uses like swimming, wading, or kayaking, fishing, wildlife habitat, etc.)

5.3 Preliminary Draft Monitoring and Reporting Requirements

Water quality monitoring for the Preliminary Draft Agricultural Order is required by California Water Code Section 13269. Monitoring requirements are designed to support the implementation of the Preliminary Draft Agricultural Order (specifically as a Conditional Waiver of Waste Discharges). Monitoring must verify the adequacy and effectiveness of the Order's conditions. Monitoring information and data must be reported to the Water Board. The reporting requirements that staff recommends with the Preliminary Draft Agricultural Order include all farm operations to report on management practice implementation at the time of enrollment, to report on management practices at least once during the period of the Order, to update their farm plans annually with monitoring and site evaluation results, and to update their plans annually with specific adjustments in response to any results that indicate unacceptable progress (e.g., do not meet interim milestones set forth in the Order).

The current monitoring program for the 2004 Conditional Waiver uses a third party for meeting all monitoring and reporting requirements (Preservation, Inc., the nonprofit organization that implements the Cooperative Monitoring Program). Under the current monitoring and reporting program, Dischargers are responsible for monitoring and reporting either individually or collectively, and they must comply with the requirements of the Board-approved Monitoring and Reporting Program. The preliminary draft monitoring and reporting requirements provide for Dischargers to continue to use a third party as long as the third party is approved by the Executive Officer.

The existing monitoring program does not collect sufficient information regarding:

- Groundwater quality
- Pollution source identification
- Individual compliance
- Terrestrial riparian conditions

To address the critical need for additional data for groundwater quality, source identification, source control and/or compliance and riparian condition, Water Board Staff considered various monitoring options.

In the Preliminary Draft Agricultural Order, Water Board staff recommends a monitoring program that requires four categories of monitoring: Individual Discharge Characterization Monitoring, Individual Discharge Monitoring, Watershed (receiving water) Monitoring, and Additional Monitoring if required by the Executive Officer (receiving water and/or discharge). Staff recommends this monitoring program because it:

- Addresses all surface water (tailwater, tile drain water, stormwater, etc) and groundwater
- Provides complete identification of individual operations responsible for discharge
- Allows for immediate management of known discharges with the potential to impact water quality

- Limits costs for farms that are in compliance
- Prioritizes further regulatory action on farms that are not progressing toward compliance
- Uniformly distributes costs for trend and stormwater monitoring across all growers resulting in similar costs for all growers based on acreage farmed
- Provides data for surface and groundwater trends, individual compliance, management practice implementation, riparian protection, and stormwater
- Allows data collection, analysis, and reporting to be performed by a non-regulatory single third party
- Provides follow up monitoring to identify and mitigate known discharges with the potential to impact water quality

The following paragraphs describe each of the four categories of monitoring recommended.

Individual Discharge Characterization Monitoring-

To establish the need for one time and/or continuous monitoring at an individual farm operation, farm operations (Dischargers) will be required to evaluate their farms individually. The first step under this option is a requirement that all farm operations conduct an “individual discharge characterization” of their farm operation. The characterization will require a farm operation to identify if they have non-stormwater discharge(s) to either surface or ground water. Examples of non-stormwater discharges include agriculture tailwater, irrigation runoff, tile drain water, pond water discharge, ponded furrows, and/or another intermittent agriculture water discharge.

If a farm operation verifies that it does not have any non-stormwater discharge, that farm operation is not required to conduct any individual discharge water quality monitoring. Each operation without an identified non-stormwater discharge must conduct watershed monitoring for stormwater and long-term in-stream trends.

If a farm operation has an identified non-stormwater discharge to either surface or ground water, that discharge must be sampled and analyzed for the following discharge characterization parameters:

- Flow
- Toxicity
- Total Nitrogen (mg/L)
- Nitrate-Nitrite (mg/L)
- Total Ammonia (mg/L)
- Ortho-Phosphosphate (mg/L)
- Turbidity (NTU)
- Water Temperature (degrees C)
- pH
- Total Dissolved Solids (mg/L)

The following parameter must be calculated (based on Ammonia and pH):

- Un-ionized Ammonia (mg/L)

Staff and the discharger will use this information to assess the discharge to surface and/or ground water. If the discharge characterization demonstrates the discharge is impairing or has potential to impair surface and/or groundwater (load pollutants at levels that would cause exceedance of water quality standards to protect beneficial uses), that pollutant discharge must be eliminated. If the discharge flow can not be eliminated, the discharge must be treated or controlled to meet water quality standards to be protective of ground and surface water beneficial uses (within a time-frame specified in the Order), and must be monitored as described under “individual discharge monitoring” below.

Individual Discharge Monitoring-

For a farm operation with continuous discharge(s), the discharge(s) must be monitored until the discharge(s) is terminated or controlled so that it meets water quality standards (within a time frame specified in the Order). Data collected through individual monitoring will be used to verify that individual operations are progressing towards or have succeeded to eliminate or adequately control discharges that are impacting waters of the state and associated beneficial uses. If individual discharge monitoring demonstrates discharges are loading significant amounts of pollutants to receiving waterbodies that are already impaired (exceed water quality standards that protect beneficial uses) or that have water quality conditions at or better than water quality standards currently supporting beneficial uses, the Discharger must use additional source control/pollutant reduction (compliance is defined by time frames specified in the Order).

A third-party monitoring group can fund or perform this monitoring on behalf of individual dischargers. Individual agriculture operations identified through Individual Discharge Characterization or Follow-up monitoring efforts as the source of pollution must implement additional management practices or improve implementation of current practices for the protection of water quality and associated beneficial uses.

If management practice implementation fails to eliminate a source of pollution or bring a discharge in compliance with applicable water quality standards, the Water Board may pursue enforcement to bring the discharge into compliance with water quality standards.

Watershed Monitoring Program-

Sites on main stems of rivers and tributaries in agricultural areas of the region must be monitored on a regular basis to evaluate in-stream stormwater trends and long-term trends in water quality and associated beneficial uses. All Dischargers must conduct watershed monitoring program.

The watershed monitoring program must collect samples at a core network of receiving water sites. For the watershed monitoring component of the monitoring requirements, Dischargers may recommend monitoring sites or constituents to best characterize potential agricultural impacts that the Executive Officer must approve to be effectuated. Similarly, the Executive Officer may require changes to the sites or waste constituents, or other aspects of the watershed monitoring program, to better characterize agricultural

impacts, identify sources of pollution, or better characterize stream water quality (See discussion of Additional Monitoring below).

Surface Water

Representative surface water samples shall be collected and analyzed for the parameters listed in Attachment 4. Also, two stormwater events shall be monitored for the parameters listed in Attachment 4 during the rainy season (October 15 – March 15). Rainy season sampling is typically conducted during or shortly after runoff events, preferably including the first event that results in significant flow increase.

Groundwater

At a minimum, all Dischargers must sample their own irrigation wells and drinking water wells annually. Sampling must include collection and analyses of data for nitrate and TDS, at a minimum.

Additionally, individual Dischargers (or approved third party on their behalf) must develop a plan to monitor groundwater to characterize groundwater quality in agricultural areas including:

- current representative conditions of groundwater quality,
- more specific groundwater quality along general groundwater flow paths (where water is recharged to where it discharges, e.g., into streams or wells), and
- trends in groundwater quality
- impacts to beneficial uses (or protection of beneficial uses).

The proposed groundwater monitoring plan may rely on existing groundwater wells and may include existing monitoring efforts around the region to document groundwater quality. The proposed groundwater monitoring plan must be submitted to the Water Board Executive Officer by March 1, 2012.

To be an acceptable third-party, the monitoring group must:

- Be responsible for implementing monitoring and reporting program.
- Report names of participating dischargers.
- Report any dischargers who cease to comply with requirements.
- Comply with a Quality Assurance Program Plan and monitoring plan approved by the Water Board's quality assurance officer.
- Submit all data (daily, monthly, quarterly, etc.) to the Water Board; the data submission shall conform to criteria approved by the Central Coast Regional Water Quality Control Board Executive Officer.

Additional Monitoring required by the Executive Officer

At the direction of the Water Board Executive Officer, individual Dischargers or an approved third party must conduct Follow up monitoring in areas identified as problematic through Individual Discharge Monitoring, Watershed Monitoring, and the Central Coast Ambient Monitoring Program. This monitoring must be conducted to identify the source of pollution and monitor any identified discharges associated with

agriculture operations to surface or ground water, including discharges to streams, discharges to tail-water ponds, and stormwater runoff.

5.4 Proposed Time Schedule for Compliance

Water Board Staff considered a time schedule that would support timely and effective implementation. Under this Preliminary Draft Agricultural Order, either irrigation runoff will need to be eliminated within two years of adoption of the Order or the following pollutants in irrigation runoff will need to be eliminated and/or treated or controlled to meet applicable water quality standards by the dates specified:

- Toxicity – within two years of adoption of the Order
- Turbidity – within three years of adoption of the Order
- Nutrients – within four years of adoption of the Order
- Salts – within four years of adoption of the Order

Additionally, dischargers must implement management practices to reduce pollutant loading to groundwater.

Staff recommends the time-schedule in this Preliminary Draft Agricultural Order as a reasonable starting point to improve water quality. This schedule acknowledges that to fully control all discharges and achieve compliance will take longer than the five years of this Preliminary Draft Agricultural Order. In a separate, but related effort regarding regulation of agricultural discharges, staff is evaluating and developing a time schedule for actions and to meet interim milestones that extends out to 2025.

6.0 Preliminary Draft Environmental Analysis Pursuant to the California Environmental Quality Act (CEQA)

Consistent with CEQA, staff prepared a preliminary draft environmental impact analysis, currently in the form of an Initial Study, including an environmental checklist. See Attachment 5.

The project evaluated in this Initial Study/Environmental Checklist is the Preliminary Draft Irrigated Ag Order, which is a revised Conditional Waiver of Waste Discharge Requirements and the requirement to submit a report of waste discharge.

The preliminary draft environmental impact analysis contains the following information relating to the Preliminary Draft Irrigated Ag Order:

1. A description of proposed activity and proposed alternatives ,
2. An environmental checklist,
3. An initial evaluation of potentially significant environmental impacts.

7.0 References

Staff consulted several references in preparing the report on water quality conditions and the Preliminary Draft Agricultural Order. A list of those references is included as Attachment 6.

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ATTACHMENT 2

Preliminary Draft Report Staff Recommendations For Agricultural Order February 1, 2010

Preliminary Draft Agricultural Order Summary Table of Changes Related to Existing Conditional Waiver

Topic	Existing 2004 Conditional Waiver	Proposed Changes Preliminary Draft Agricultural Order
Regulatory Tool; See Preliminary Draft Order General Findings.	Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands.	<UNCHANGED>
Time frame; See Preliminary Draft Order General Findings.	5 year term	<UNCHANGED>
Intent; See Preliminary Draft Order General Findings.	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".	<CLARIFICATION> Findings to explicitly identify Water Board's intent to directly address the discharges of waste 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: <ol style="list-style-type: none">1. Reduce nutrient discharges to surface waters and groundwater to meet applicable nutrient and biostimulatory water quality standards, and maintain existing high quality water;2. Reduce toxic discharges of agricultural pesticides to surface waters and groundwater to meet applicable toxicity water quality standards, and maintain existing high quality water;3. Reduce sediment discharges from agriculture lands to meet applicable standards, including turbidity

Topic	Existing 2004 Conditional Waiver	Proposed Changes Preliminary Draft Agricultural Order
		<p>and sediment water quality standards, and maintain existing high quality water;</p> <p>4. 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;</p>
<p>Relevant Plans; See Preliminary Draft Order Attachment A- Applicable Water Quality Control Plans And Definitions.</p>	<p>Central Coast Basin Water Quality Control Plan (Basin Plan); SWRCB Anti-Degradation Policy (Res. No. 68-16);</p>	<p><CLARIFICATION, ADDITIONS> SWRCB <i>Water Quality Control Policy for the Enclosed Bays and Estuaries of California</i> Res. No. 74-43; SWRCB <i>Sources of Drinking Water Policy</i> Res. No. 88-63; SWRCB <i>Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program</i>, May 2004, SWRCB <i>Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP)</i>, February 2005; SWRCB <i>Water Quality Control Plan for Ocean Waters of California (CA Ocean Plan)</i>, April 2005; SWRCB <i>Water Quality Enforcement Policy</i>, February 2002, USEPA <i>National Toxics Rule</i>, 40 CFR 131.36, 57 FR 60848, December 1992; USEPA <i>California Toxics Rule</i>, 40 CFR 131.38, 65 FR 31682, May 2000. These regional, state and federal water quality plans are implemented and required by reference in the Basin Plan.</p>
<p>Definitions; See Preliminary Draft Order Attachment A- Applicable Water Quality Control Plans And Definitions</p>	<p>Defines Discharge, Dischargers, Farm Plans, Irrigated Lands, Irrigation Return Flow, Low-Threat Discharge, Tailwater, Stormwater Runoff, Subsurface Drainage, Discharge, Discharger, Requirement of Applicable Water Quality Control Plans, Monitoring, Waters of the</p>	<p><CLARIFICATION AND ADDITIONS> Anti-degradation, Aquatic Habitat, Basin Plan, Beneficial Uses, Concentration, Discharge, Discharger, Discharges of Waste from Irrigated Lands, Ephemeral Stream, Erosion, Erosion and Sediment Control</p>

Topic	Existing 2004 Conditional Waiver	Proposed Changes Preliminary Draft Agricultural Order
	State	Practices, Exceedance, Farm Plans, Groundwater, Groundwater Protection Practices, Integrated Pest Management Program, Intermittent Stream, Irrigated Lands, Irrigation, Irrigation Management Practices, Irrigation Runoff or Return Flow, Irrigation System Distribution Uniformity, Load, Low-Risk Discharge, Monitoring, Nitrate Hazard Index, Nonpoint Source Pollution, Nonpoint Source Management Measures, Nutrient, Nutrient Management Practices, Operational Spill, Perennial Stream, Pesticides with a High Potential to Degrade/Pollute Surface Water, Pesticide Management Practice, Point Source, Pollutant, Quality of the Water, Receiving Waters, Requirements of Applicable Water Quality Control Plans, Riparian Area, Riparian Buffer, Stormwater, Subsurface Drainage, Subsurface Runoff, Sustainable Land Management, Tailwater, Tile Drains, Total Maximum Daily Load, Waste, Water Quality Control, Water Quality Criteria, Water Quality Objectives, Water Quality Standard, Waters of the State, Wetland.
Water Quality Standards; See Preliminary Draft Order Attachment A- Applicable Water Quality Control Plans And Definitions, and Attachment B- Terms and Conditions, Part D.	Findings that generally reference applicable water quality standards: "Dischargers must comply with all requirements of applicable water quality control plans", "Dischargers shall not cause or contribute to exceedances of any Regional, State, or Federal numeric or narrative water quality standard".	<CLARIFICATION > Findings and table that explicitly clarify applicable water quality standards. No additional standards. General numeric interpretations included for narrative standards for temperature, toxicity, and biostimulatory substances.
Discharge Prohibitions; See Preliminary Order Attachment B- Terms and	Discharge of any waste not regulated by the 2004 Conditional Waiver was prohibited.	<CLARIFICATION AND ADDITIONS> 1. (Clarification) Landowners and operators of irrigated cropland are prohibited from discharging waste that

Topic	Existing 2004 Conditional Waiver	Proposed Changes Preliminary Draft Agricultural Order
Conditions, Part B.		<p>could affect the quality of any surface water or groundwater, if the Discharger does not have WDRs or has not enrolled in this Conditional Waiver.</p> <p>2.(Clarification) The discharge of any waste not specifically regulated by the Conditional Waiver described herein is prohibited.</p> <p>3. (Clarification) 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.</p> <p>4. (Clarification) The discharge of waste that creates conditions of pollution or nuisance is prohibited.</p> <p>5. (Clarification) Discharge of waste from irrigated lands 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.</p> <p>6. (Addition) Excessive use or over-application of fertilizer in excess of crop needs is prohibited.</p> <p>7. (Addition) The discharge of agricultural rubbish, refuse, irrigation tubing, or other solid wastes into surface waters or at any place where they would contact or where they could be eventually transported to surface waters is prohibited.</p>

Topic	Existing 2004 Conditional Waiver	Proposed Changes Preliminary Draft Agricultural Order
		<p>8. (Addition) Application of any chemical directly to surface waterbodies designated in the Basin Plan, for the purposes of breaking down applied pesticides or reducing associated toxicity, is prohibited, unless approved by the Executive Officer.</p> <p>9. (Addition) Degradation of existing perennial, intermittent, or ephemeral streams or riparian or wetland area habitat that results in discharges of waste to waters of the state is prohibited, unless authorized by the Central Coast Water Board.</p> <p>10. (Addition) The discharge of waste that results, or has reasonable potential to result in degradation of existing high quality water is prohibited.</p>
Enrollment; See Preliminary Draft Order Attachment B- Terms and Conditions; Part C.	All Dischargers were required to enroll.	<CLARIFICATION AND ADDITION > Additions to content of Notice of Intent (NOI). Additional focus on landowner (in addition to operator).
Education; See Preliminary Draft Order General Findings.	All Dischargers were required to complete 15 hours of education.	<DELETION> Water quality education encouraged rather than required.
Farm Plan; See Preliminary Draft Order Attachment B- Terms and Conditions; Part C.	All Dischargers were required to submit a Farm Plan. Farm Plan must include implementation of practices to address irrigation management, pesticide management, nutrient management, and erosion control to protect water quality. Farm Plan must include schedule for implementation of practices.	<CLARIFICATION AND ADDITION > Farm Plan must focus on resolving priority water quality issues related to individual operations and the watershed. Farm Plan must include irrigation management, pesticide management, nutrient management, salinity management, sediment and

Topic	Existing 2004 Conditional Waiver	Proposed Changes Preliminary Draft Agricultural Order
	Dischargers were required to keep Farm Plan on site and available for inspection by operating personnel.	<p>erosion control, and aquatic habitat protection. Farm Plan must identify and schedule implementation of practices to eliminate or minimize discharge of waste using best practicable treatment or control. Farm Plan nutrient management plan element must be certified by professional to be protective of water quality. Farm Plan must be updated at least annually. Upon notice by the Executive Officer, Farm Plan must be submitted to the Water Board. Discharger must modify Farm Plan upon notice by the Executive Officer.</p> <p>Farm Plan must include photo documentation of aquatic habitat.</p>
Management Practice Implementation Requirements Discharge Elimination; See Preliminary Draft Order Attachment B- Terms and Conditions; Part E.	Farm Plans include management measures to protect water quality and an implementation schedule.	<p><CLARIFICATION AND ADDITION> Minimum management measures and implementation schedule specified.</p> <p>1. Within 2 years from the adoption of this Order, all Dischargers adjacent, in close proximity (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**.</p> <p>2. Within 2 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</p>

Topic	Existing 2004 Conditional Waiver	Proposed Changes Preliminary Draft Agricultural Order
		<p>eliminate toxicity in irrigation runoff or eliminate the discharge of irrigation runoff from their farming operation **.</p> <p>3. 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 sediment and turbidity above water quality standards in irrigation runoff or eliminate the discharge of irrigation runoff from their farming operation **.</p> <p>4. 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 **.</p> <p>5. 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 **.</p> <p>** Alternatively, Dischargers may provide water quality data and information to demonstrate that any irrigation</p>

Topic	Existing 2004 Conditional Waiver	Proposed Changes Preliminary Draft Agricultural Order
		runoff has been sufficiently treated or controlled to meet water quality standards for the specific impairment or is of sufficient quality where it will maintain existing high quality water, and not cause or contribute to exceedances of any water quality standards in waters of the State.
Management Practice Implementation; See Preliminary Draft Order Attachment B- Terms and Conditions; Part E.	Farm Plans required to include any necessary management practices needed to address water quality. References provided for management practices. Specific selection of appropriate management practices not stated in Order. Various general practices were recommended including irrigation efficiency, nutrient budgeting and nutrient management, erosion control, and integrated pest management. Dischargers were required to identify management practices in Farm Plans and include schedule for implementation.	<p><CLARIFICATION AND ADDITIONS></p> <p><i>Irrigation Management</i>-1.Dischargers must install and maintain irrigation systems to minimize or eliminate irrigation runoff and percolation to groundwater beyond the root zone that may transport pollutants 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.</p> <p>2.Dischargers must implement appropriate irrigation scheduling duration and frequency, in consideration of weather factors such as wind and precipitation, to reduce or eliminate the discharge of irrigation runoff and to minimize percolation of water and waste below the root zone.</p> <p>3.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.</p>

Topic	Existing 2004 Conditional Waiver	Proposed Changes Preliminary Draft Agricultural Order
		<p><i>Pesticide Runoff/Toxicity Elimination-</i></p> <p>4.To protect surface water from pesticide drift, the following agricultural uses of pesticides are prohibited, consistent with any related requirements of DPR; Dischargers using pesticides with a high potential to contaminate surface water and persons performing pest control using such pesticides for the Discharger, must comply with the following prohibitions:</p> <ul style="list-style-type: none"> 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; <p>5. Dischargers must not apply any chemical directly to surface waterbodies designated in the Basin Plan, for the purposes of breaking down applied pesticides or reducing associated toxicity, is prohibited, unless approved by the Central Coast Water Board.</p> <p><i>Nutrient and Salt Management –</i></p> <p>6. Dischargers that use leaching to control salt in the soil profile must not cause or contributes to exceedance of water quality standards. Leaching must not be performed to wash nitrate based salts from the soil profile.</p> <p>7. 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</p>

Topic	Existing 2004 Conditional Waiver	Proposed Changes Preliminary Draft Agricultural Order
		<p>event has occurred.</p> <p>8. Dischargers must implement proper handling, storage, disposal and management of fertilizer to prevent discharge of waste to waters of the State.</p> <p>9. Dischargers must report nitrate concentration of irrigation water.</p>
Commercial Nursery, Nursery Stock Production and Greenhouse Requirements; See Preliminary Draft Order Attachment B- Terms and Conditions; Part E.	Commercial Nursery, Nursery Stock Production and Greenhouse operations generally covered.	<p><ADDITIONS></p> <p>1. 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.</p> <p>2. Commercial nursery, nursery stock production and greenhouse operation Farm Plans must comply with any applicable stormwater permit.</p> <p>3. 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.</p>
Groundwater Protection Requirements;	Discharges included discharges to groundwater through percolation.	<UNCHANGED>.

Topic	Existing 2004 Conditional Waiver	Proposed Changes Preliminary Draft Agricultural Order
See Preliminary Draft Order Attachment B- Terms and Conditions; Part F.	<p>Wastewaters percolated to groundwater were required to be of such quality at the point where they enter the ground so as to assure the protection of all actual or designated beneficial uses of all groundwaters of the basin.</p> <p>Wastes discharged to groundwater were required to be free of toxic substances in excess of maximum contaminant levels (MCLs) for primary and secondary drinking water standards established by USEPA and CDPH, whichever is more stringent; taste, odor, or color producing substances; and nitrogenous compounds in quantities which could result in a groundwater nitrate concentration (as nitrate) above 45 mg/L.</p> <p>Dischargers required to include nutrient management practices in Farm Plans to ensure that current discharges to groundwater do not further degrade groundwater. Farm Plans required to account for specific nitrate concentrations in irrigation water in determining agronomic nitrogen application rates.</p> <p>Statement that Dischargers will not be held liable for historical groundwater quality</p> <p>Groundwater monitoring not required.</p>	<p><UNCHANGED></p> <p><CLARIFICATION OF EXISTING> Discharge of waste from irrigated lands 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, are prohibited.</p> <p><UNCHANGED></p> <p><DELETION></p> <p>< ADDITIONS> 1. 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</p>

Topic	Existing 2004 Conditional Waiver	Proposed Changes Preliminary Draft Agricultural Order
		<p>of waste to groundwater.</p> <p>2. Dischargers must destroy all abandoned groundwater wells, exploration holes or test holes, as defined by DWR Bulletin 74-81 as revised in 1988, in such a manner that they will not produce water or act as a conduit for mixing or otherwise transferring of groundwater between permeable zones or aquifers.</p> <p>3. Dischargers must construct and maintain ponds, reservoirs or other water containment structures to avoid leaching of waste to groundwater.</p> <p>4. 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.</p>
Aquatic Habitat Requirements; See Preliminary Draft Order Attachment B- Terms and Conditions; Part G.	Requires protection of beneficial uses, including aquatic life (warm or cold freshwater habitat, wildlife habitat). No specific requirements related explicitly to aquatic habitat.	<p><ADDITIONS></p> <p>Proposed requirements include 1) protection of existing perennial, intermittent, or ephemeral streams or riparian or wetland area habitat; 2) minimum buffers widths for perennial and intermittent streams; 3) Minimum buffer widths for lakes, wetlands, and estuaries. OPTION to</p>

Topic	Existing 2004 Conditional Waiver	Proposed Changes Preliminary Draft Agricultural Order
		minimum buffer requirements is development and implementation of a Riparian Function Protection and Restoration Plan; 4) identification of aquatic habitat on ranch maps and photo documentation.
Monitoring and Reporting; See Preliminary Draft Order General Findings and Attachment B- Terms and Conditions; Part A, Part C, Part E and Part F.	<p>Watershed scale monitoring implemented by a Cooperative Monitoring Program (CMP) to evaluate water quality trends in agricultural areas. Additional requirement to conduct follow-up monitoring.</p> <p>Individual discharge (e.g., irrigation runoff) monitoring and groundwater monitoring (e.g., irrigation source water from wells) not required.</p>	<p><ADDITIONS></p> <p>1. 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.</p> <p>2. 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.</p> <p>3. 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).</p> <p>4. 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,</p>

Topic	Existing 2004 Conditional Waiver	Proposed Changes Preliminary Draft Agricultural Order
		<p>Dischargers must report individual monitoring data collectively as a group (including average, minimum, and maximum values for flow volume and waste concentrations or loads).</p> <p>5. Dischargers must sample their irrigation source water for total nitrogen and report the nitrate concentration of irrigation source water on their NOI and Annual Acreage Update.</p> <p>6. Dischargers must report information on groundwater wells (location, use, construction, and monitor water quality).</p> <p>7. Dischargers must monitor and report on water quality for any containment structures.</p>
Compliance Time Schedule; See Preliminary Draft Order Attachment B- Terms and Conditions; Part H.	<p>Compliance time schedule required for enrollment, education, development of Farm Plans, and initiation of CMP.</p> <p>No compliance time schedule included for water quality standards are implementation of specific management practices to eliminate or reduce discharges of waste</p>	<p>< ADDITION> Time schedule added that specifies when requirements must be implemented or conditions met; requires compliance sooner for discharges to impaired surface waterbodies.</p> <p>The compliance time schedule identifies when water quality objectives must be met in irrigation. All other water quality objectives must be met in receiving. This Order anticipates timeframes beyond the term of this Order to achieve water quality objectives in receiving water.</p>

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Exhibit 4

MONTEREY COUNTY



THE BOARD OF SUPERVISORS

SIMÓN SALINAS, SUPERVISOR - THIRD DISTRICT

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April 6, 2010

Chairman Jeffrey Young
Central Coast Regional Water Quality Control Board
895 Aerovista Place, Ste 101
San Luis Obispo, CA 93401-7906

RE: Central Coast Regional Water Quality Control Board's Preliminary Draft Agricultural Order to Control Discharges from Irrigated Lands

Dear Chairman Young:

Thank you for the opportunity to review and provide comment on the Preliminary Draft Agricultural Order. Our Monterey County Agricultural Advisory Committee reviewed the proposed Agricultural Order in detail. While we recognize the importance of water quality protection and fully support efforts to protect water quality, our preliminary economic analysis, provided in detail below, indicates that the proposed Agricultural Order's regulatory framework may result in substantial economic impacts to Monterey County. The regulatory parameters may likely put tremendous economic pressure on the agricultural industry, public agencies, and the local economy. We ask the Central Coast Regional Water Quality Control Board (RWQCB) to consider our comments carefully, and in doing so, develop a regulatory approach that meets water quality protection goals and is economically feasible.

Each of the nine RWQCBs in California has the discretion to create a regulatory framework appropriate for their unique region of the State. However, the Central Coast RWQCB's proposed regulatory approach appears to be far more costly and burdensome to agricultural producers within the Central Coast RWQCB area than the Agricultural Waivers which have been developed and/or proposed for other regions. This discrepancy of regulatory standards and requirements may put the agricultural industry in Monterey County at a significant competitive disadvantage to other regions of the State.

There are issues of both technical and economic feasibility with the proposed Agricultural Order. It is the understanding of County Staff that the technical and agronomic considerations are being addressed by other organizations, associations, and industry. We hope that your Board will take

technical and agronomic feasibilities into consideration. Our letter is focused specifically on some of the economic implications associated with the Agricultural Order that may directly impact the economy of Monterey County.

Our analysis indicates that the proposed Agricultural Order could significantly impact the County of Monterey, including:

1. Significant loss of farmland, including prime farmland and farmland of statewide importance: in the three watersheds analyzed, 14,343.36 acres would be taken out of agricultural production;
2. Impacts to the local economy, including loss of gross crop production value of over \$237 million and loss of property tax revenue due to changes in land use;
3. Potential increase in demand for social services due to loss of jobs and personal income;
4. Costs and unanticipated impacts associated with invasive species and management of buffers;
5. Jurisdictional overlap with local government and other regulatory agencies, particularly related to land use, planning, and zoning, which is governed locally by numerous public agencies and boards.

To our knowledge, these potentially significant impacts have not yet been analyzed or considered in detail by the Central Coast RWQCB.

1. Loss of Farmland: The proposed regulation would result in the loss of farmland, including prime farmland and farmland of statewide importance. Specifically, the proposed Agricultural Order requires up to a 100 feet of riparian buffer to be actively installed and maintained along rivers and streams. The installation of new riparian habitat would result in significant loss of agricultural land in Monterey County. In addition to the required riparian buffer itself, common farming practices ensure that crops have a 50 foot buffer from adjacent riparian habitat (Ag Advisory Committee, 03/25/2010). To minimize wildlife intrusion and food safety risks, bare ground buffers, roads, and/or filter strips are installed between the crops and the riparian habitat (Central Coast RWQCB Preliminary Draft Report, 02/01/2010).

County of Monterey Staff conducted a Geographic Information Systems (GIS) analysis to determine an estimate of the number of acres that would be taken out of agricultural production as a result of the proposed buffer requirements. Due to the magnitude of the project and time constraints, our analysis was limited to three watersheds: Pajaro River Watershed (within Monterey County only), Alisal and Elkhorn Sloughs, and the Salinas River Watershed. Areas along the rivers and creeks were overlaid with the Monterey County Agricultural Commissioner's 2008 Ranch Map to determine agricultural acreage impacted by the required riparian habitat buffer. The proposed Draft Agricultural Order includes "tiers" of riparian buffer widths, based on daily natural flows. The Salinas and Pajaro Rivers are in Tier 3 (100 foot buffer); buffer widths for Alisal and Elkhorn Slough watersheds are not specified; accordingly we assumed the 100 foot buffer would also

apply in these watersheds. For the purposes of this analysis, a 150 total buffer was analyzed to capture both the Central Coast RWQCB's proposed riparian habitat/buffer as well as a crop production/food safety buffer that the proposed Agricultural Order would necessitate (Agricultural Advisory Committee, 03/25/10).

The GIS analysis indicates that in these three Monterey County watersheds, which comprise the majority of irrigated agricultural land in the County, 14,343.36 acres would be taken out of production. Please refer to the Table 1 below. It should be noted that our analysis is for only three watersheds and is not inclusive of the full loss of crop acreage in Monterey County, or the Central Coast region.

Table 1: Total acreage of 150' buffer per watersheds intersecting with selected ranches

Watershed	Stream Buffer Acreage in Selected Ranches
Pajaro	417.31
Alisal-Elkhorn Sloughs	5002.77
Salinas	8923.28
Total Acres	14,343.36

2. Economic implications to local and regional economies: According to the Monterey County 2008 Crop Report, the gross production value of crops in Monterey County is over \$3.8 billion; for the purposes of the economic analysis, Staff subtracted livestock, poultry, and apiary categories, bringing the gross production value to just over \$3.7 billion (\$3,786,517,400). Economic analysis indicates the proposed Agricultural Order could result in a significant impact on the economy of Monterey County, as follows:
 - a. Loss of Gross Crop Production Value (over \$237 million): Gross production value in Monterey County is \$16,585 per acre (228,315 irrigated acres (California Department of Water Resources) divided by the gross production value of \$3,786,517,400 (2008 Monterey County Crop Report)). Loss of gross production value totals \$237,879,168.
 - b. Loss in Rental Income from change of land use (over \$20 million): Land values and corresponding rent values would decline to reflect the changes in land use from agricultural to wildlife/riparian/conservation uses. Applying the average rent value of \$1,400/acre (County of Monterey Assessor's Office, Pers. Comm. 3/30/10), the proposed buffer would result in a direct economic impact totaling \$20,080,704.

- c. **Loss of Property Tax Revenue Due to Changes in Land Use:** We anticipate that the changes in land uses required by the proposed Agricultural Order could have an impact on property values and could result in the loss of property tax revenue for local governments. The County of Monterey is currently facing over a \$30 million budget deficit; additional decrease in tax revenue could have implications on the local budget.
 - d. Agriculture is the top economic driver in Monterey County. A recent study for the County of Monterey (conducted by Applied Development Economics) showed that a \$2.9 billion crop production sales value expands to about \$5.2 billion in direct, indirect and induced economic activity. We ask the Central Coast RWQCB to consider not only the direct economic implications, but also the economic multiplier affect of the proposed Agricultural Order.
 - e. The cost of plant materials, design, labor and irrigation for the installation of new riparian habitat would also be costly and should be analyzed by the Central Coast RWQCB.
3. Our local communities rely on the agricultural economy. It is reasonable and prudent to anticipate that the financial impact on local residents (loss of jobs, loss of health insurance, reduced work hours, etc.) may result in an increased demand for County social services, further straining local budgets and jurisdictions. We ask the Central Coast RWQCB to analyze and consider such impacts.
 4. Costs and impacts associated with the management of riparian buffers and habitat, including the management of invasive species should be analyzed and considered. Riparian habitat restoration would first require the management and eradication of invasive species; doing so is critical for successful native re-vegetation and would be a significant cost. For example, *Arundo donax* is one invasive plant prevalent along the Salinas River that chokes out native riparian species. It is estimated to cost over \$3 million to treat *Arundo* along the Salinas River (Monterey County Weed Management Area, 2009).
 5. Overlap with local land use and regulatory agencies. It appears as though the proposed Agricultural Order may go beyond the jurisdiction and common practice of the Central Coast RWQCB by attempting to indirectly regulate *land use*. Land use is regulated by a myriad of local agencies and governing boards including but not limited to: the Board of Supervisors, Planning Commission, LAFCO, County of Monterey and other local agencies. We ask the Central Coast RWQCB to address how the proposed Agricultural Order's effects on riparian buffers and the loss of farmland will overlap with the jurisdiction of local land use and regulatory agencies and affect local land use policies.

A healthy vital agricultural sector is critical to the economy of Monterey County. Our economic analysis was preliminary and only accounts for one component of the proposed Agricultural Order. Our analysis clearly indicates that the proposed regulatory parameters could have a

significant impact on our local economy. We hope that the Central Coast RWQCB will take such potentially significant impacts into consideration and further examine the costs, benefits, and economic implications of the proposed Agricultural Order in its entirety. To do so, it is vital that the Central Coast RWQCB engage and work with the regulated community to develop a regulatory framework that meets water quality protection goals and is both economically and technically feasible.

Sincerely,



Simón Salinas
Chair

Monterey County Board of Supervisors



Eric Lauritzen
Monterey County Agricultural Commissioner

CC:

Roger Briggs, Executive Officer, Central Coast RWQCB

Russell Jeffries, Vice Chairman, Central Coast RWQCB

John Hayashi, Board Member, Central Coast RWQCB

David Hodgins, Board Member, Central Coast RWQCB

Charles Hoppin, Chairman, State Water Resources Control Board

Monica Hunter, Board Member, Central Coast RWQCB

Eric Lauritzen, Agricultural Commissioner, Monterey County

Tom O'Malley, Board Member, Central Coast RWQCB

Lisa McCann, Watershed Protection Section Manager, Central Coast RWQCB

Monterey County Agricultural Advisory Committee

Angela Schroeter, Agricultural Regulatory Program Manager, Central Coast RWQCB

Gary Shallcross, Board Member, Central Coast RWQCB

Exhibit 5



CALIFORNIA FARM BUREAU FEDERATION

NATURAL RESOURCES AND ENVIRONMENTAL DIVISION

2300 RIVER PLAZA DRIVE, SACRAMENTO, CA 95833-3293 • PHONE (916) 561-5665 • FAX (916) 561-5691

April 1, 2010

Via US Mail and Email

*cjones@waterboards.ca.gov
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Jeffrey S. Young, Chairman of the Board
Roger Briggs, Executive Officer
California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401

Re: *Preliminary Alternative Agricultural Proposal in Response to Preliminary Staff Recommendations for an Agricultural Order to Control Discharges from Irrigated Lands*

Dear Mr. Young and Mr. Briggs,

Please find the attached Preliminary Agricultural Proposal submitted in response to the Central Coast Regional Water Quality Control Board's "Preliminary Staff Recommendations for an Agricultural Order to Control Discharges from Irrigated Lands." This Preliminary Agricultural Proposal is submitted on behalf of 7 County Farm Bureaus, as well as numerous additional entities listed at the conclusion of the proposal. Given the draft nature of this agricultural proposal, the agricultural community respectfully requests future and continuing collaboration with Regional Board staff and Board members as a new discharge program is developed.

Sincerely,

A handwritten signature in black ink, appearing to read "Kari E. Fisher".

Kari E. Fisher
Associate Counsel

Attachment



CALIFORNIA FARM BUREAU FEDERATION

NATURAL RESOURCES AND ENVIRONMENTAL DIVISION

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Jeffrey S. Young, Chairman of the Board
Roger Briggs, Executive Officer
California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401

Re: *Preliminary Alternative Agricultural Proposal in Response to Preliminary Staff Recommendations for an Agricultural Order to Control Discharges from Irrigated Lands*

Seven county Farm Bureaus comprising the counties within the jurisdiction of the Central Coast Regional Water Quality Control Board (“CCRWQCB”) have met with representatives of other agricultural groups and individuals on numerous occasions to consider alternative elements to be included in a new agricultural discharge program. At the request of the CCRWQCB Board, we submit this conceptual proposal for revision of the current Conditional Agricultural Waiver of Waste Discharge Requirements (“Conditional Ag Waiver”). Members of the Central Coast agricultural community recognize that the quality of agricultural water discharges can and will improve through implementation of on-farm practices. During presentations by agricultural representatives at CCRWQCB Board meetings in October and December 2009, growers requested an opportunity to present an alternative concept (“Ag Proposal”) for the new Ag Waiver to the CCRWQCB Board prior to the formal commencement of the Conditional Ag Waiver renewal process. The CCRWQCB Board established a timeline for agriculture to submit a proposal by April 1, 2010, to be followed by a CCRWQCB Board workshop on May 12, 2010. The concepts set forth herein are the result of numerous area meetings with growers who all understood that the objective is to improve water quality attributable to commercial irrigated agriculture, which constitutes the largest industry and employer on the Central Coast. Farmers have reviewed the CCRWQCB’s Draft Conditional Ag Waiver (“Staff Draft Waiver”) which was distributed for comment on February 1, 2010, and will provide extensive independent individual comment prior to April 1, 2010.

The true goal of the Conditional Ag Waiver is to improve water quality. The State Water Code and the CCRWQCB Basin Plan provide the authority for CCRWQCB to impose regulations on dischargers to improve water quality. Farmers are equally concerned about water quality and the

understanding of local aquifer diversity, it is not possible to design a groundwater monitoring program within two years.

Ag Proposal: Groundwater

It would be more effective to spend time assembling existing groundwater research from the counties and academic researchers who have worked in the Central Coast and then design a proposal based upon that information. Existing county resource agencies or a third-party could develop groundwater quality management plans (“GQMPs”) designed to minimize waste discharge to groundwater from irrigated agricultural lands. As part of GQMP development, they would collect and evaluate available groundwater data, identify groundwater management areas (“GMAs”) of concern, identify constituents of concern within the GMAs, prioritize the GMAs and constituents of concern, identify agricultural practices that may be causing or contributing to the problem, and identify agricultural management practices that should be employed by local growers to address the constituents of concern. Where local agencies have developed local groundwater management plans (e.g., AB 3030, SB 1938, Integrated Regional Water Management plans), the local groundwater management plan may be substituted for the GQMP.

LAND USE REGULATION

Regulating land use is not within the purview of the Regional Water Quality Control Board. The Water Code and the Basin Plan focus on water quality and activities which may impair water quality. While there is authority to prohibit an act which may result in discharge, there is no authority to require an act which is unrelated to discharges to waters of the state.

Riparian vegetation: The regional Farm Bureaus chose not to address this issue as it is clearly beyond the jurisdiction of the CCRWQCB and the California Water Code provides no authority to regulate the usage of land beyond consideration of implementation of practices at the election of the discharger that maintain water quality within established parameters for the regulated industry. Riparian vegetation is a regulatory taking of land by restricting its use without any relationship to water quality.

Prior existing legal use of land, such as farming, cannot be terminated through a regulatory change without compensation for the permanent loss of use of the land. It may be appropriate for a county government, with zoning authority granted by the Government Code, to regulate the expansion of an industry into an area where it has not previously operated, but not to restrict an existing use. However, there is no similar authority granted to the CCRWQCB pursuant to the State Water Code, or any other state law.

A simple due process illustration shows why the possible imposition of this concept may be dispensed with before it clouds the entire Ag Waiver process. Water by its nature flows to the lowest point on property, where it is discharged, off the property into a ditch or waterway. Thereafter the water flows down gradient past another farmer’s property. The concept of mandatory vegetative treatment in the mutually used ditch imposes a huge financial and legal liability on the downstream landowner to deal with water generated by their neighbor. Therefore the impact of this mandate falls on a party not responsible for the discharge in any manner. There is no possible way to refashion this proposed regulation so that there is any causal relation

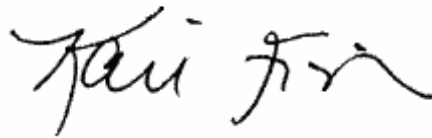
to the party bearing the burden of the regulation. As such, the concept is not only a taking of property but clearly inequitable and discriminatory in its potential enforcement.

CONCLUSION In cooperating and collaborating with the CCRWQCB, agricultural interests are fundamentally interested in ensuring the long term improvement of water quality in the region. We recognize that these improvements may not occur in discrete five year windows so we encourage the Board to work with us to establish a long term "program" with benchmarks and milestones that can be utilized to evaluate progress over time.

Agriculture is also concerned with the release or sharing of confidential and proprietary data in ways that will undermine the competitive position of area growers. We encourage the CCRWQCB to work with agriculture to bring relevant and necessary data forward in ways that advance water quality objectives while at the same time preserving the confidentiality of individual grower data. Using third party facilitators to aggregate data and allowing for data to be inspected on farm rather than requiring its submission to the CCRWQCB protect confidentiality, increase efficiencies, and will inform water quality improvement without compromising a grower's livelihood.

Agriculture remains committed to water quality improvements. The above concepts combined with a phased long-term approach to achieving mutual goals for water quality improvement will result in significant and measurable improvements in water quality during the term of the new long-term Ag Program.

Very truly yours,



Kari E. Fisher
Associate Counsel

Submitted on behalf of the following entities that support this proposal:

California Farm Bureau Federation
Monterey County Farm Bureau
San Benito County Farm Bureau
San Luis Obispo County Farm Bureau
San Mateo County Farm Bureau
Santa Barbara County Farm Bureau
Santa Clara County Farm Bureau
Santa Cruz County Farm Bureau
Western Growers
Grower-Shipper Association of Central California

Letter to Jeffrey S. Young and Roger Briggs, CCRWQCB
April 1, 2010

The Grower-Shipper Association of Santa Barbara and San Luis Obispo Counties
California Strawberry Commission
Central Coast Vineyard Team
San Luis Obispo County California Women for Agriculture
The Upper Salinas-Las Tablas Resource Conservation District
United Vegetable Growers
Paso Robles Wine Country Alliance
Central Coast Agricultural Water Quality Coalition
The California Artichoke Advisory Board
Central Coast Greenhouse Growers Association
Kendall Jackson
Monterey County Vintners and Growers Association
Salinas Valley Water Coalition
Christensen & Giannini
William Tarp, Triangle Farms, Inc.
Neil Bassetti Farms
Candi DePauw, California Poppy Company
Mark Pisoni, Pisoni Farms
Richard Sauret, President - Independent Grape Growers of the Paso Robles area
Jeff Frey, Frey Farming
Bob Martin, Rio Farms
Frank Capurro & Son
Tim Buffalo, Buffalo Land Management
Bill De Vor, Greenheart Farms
Ocean Mist Farms – Castroville, California
Sea Mist Farms – Castroville, California
Boutonnet Farms – Castroville, California
Laguna Mist Farms – Castroville, California
Sea Breeze Harvesting – Castroville, California
Valley Pride – Castroville, California
Ag Services – Salinas, California
Kleen Globe Inc – Castroville, California
Francis Giudici - L.A. Hearne Company
Giudici Family Properties
Mark Mitani and Douglas Iwamoto, MKM Farms, Inc.
Gary Tanimura, Tanimura & Antle
Luis Scattini & Sons
Premium Packing Inc.
Paraiso Vineyards
Mary Ann Martinus
Mike Manfre
Ann R. Myhre

Exhibit 6

Phase 6: Regulatory Action Selection

Final Project Report

**Pajaro River Total Maximum Daily Loads for
Sediment (including Llagas Creek, Rider Creek,
and San Benito River)**

November 2005

Regional Water Quality Control Board
Central Coast Region

895 Aerovista Place, Suite 101
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1 INTRODUCTION

The following Project Report presents Sediment Total Maximum Daily Loads (TMDLs) for the Pajaro River including, Llagas Creek, Rider Creek, and the San Benito River. The Central Coast Regional Water Quality Control Board (Water Board) staff (staff) has prepared this report. Much of the information contained in this TMDL Project Report has been obtained from a document titled, “Technical Support Document for Establishment of a Suspended Sediment Total Maximum Daily Load for the Pajaro River Watershed,” prepared by Tetra Tech, Inc., in May 2004 (Tetra Tech, 2004). The Tetra Tech document presents detailed information pertaining to suspended sediment characteristics of the Pajaro River watershed for the protection of fish habitat. In addition to addressing suspended sediment issues, staff has determined that numeric targets for streambed sediment characteristics are necessary to protect invertebrate, amphibian, and fish habitat. A discussion of streambed characteristics is also included in this Project Report. Together, the numeric targets for both suspended sediment and streambed sediment characteristics will protect the beneficial uses of the Pajaro River watershed.

This Project Report has been structured to present the elements necessary for establishing sediment TMDLs for the Pajaro River including, Llagas Creek, Rider Creek, and the San Benito River, beginning with a chapter that provides a description of the problem. Following chapters include a discussion of water quality standards, numeric targets, source analysis, sediment TMDLs, and concluding with a chapter that presents TMDL implementation, tracking and evaluation.

2 PROBLEM DESCRIPTION

This chapter contains a brief description of the geographic setting of the Pajaro River watershed and a presentation of the impairments related to each waterbody.

2.1 Geographic Setting

The Pajaro River watershed encompasses approximately 1,263 square miles (807,940 acres). It is about 60 miles southeast of San Francisco and Oakland and 120 miles southwest of Sacramento (Figure 2-1). The watershed is almost 90 miles in length and varies from 7 to 20 miles in width. The Pajaro River watershed drains into the Monterey Bay and is the largest coastal stream between San Francisco Bay and the Salinas River.

The watershed lies within Monterey, San Benito, Santa Cruz, and Santa Clara counties. The city of Watsonville is located in the watershed near the confluence of the Pajaro River with Monterey Bay. Major tributaries in the watershed are the San Benito River, Tres Pinos Creek, Santa Ana Creek, Pacheco Creek, Llagas Creek, Uvas Creek, and Corralitos Creek. The watershed is predominantly mountainous and hilly, and level lands are confined to the floodplains of the Pajaro River and its major tributaries (San Jose

7 TMDL IMPLEMENTATION, TRACKING AND EVALUATION

Implementation, implementation tracking, and TMDL evaluation activities are necessary to assure that the TMDLs will be successful. In addition, staff is recommending a Land Disturbance Prohibition for the Central Coast Regional Water Quality Control Board (Water Board) to consider and adopt as a Basin Plan Amendment. This section describes these activities and the proposed land disturbance prohibition.

7.1 Implementation

Implementation activities will be required to achieve sediment load reductions such that numeric targets are met. This section describes the various regulatory mechanisms, implementation methods, and parties that are responsible for the implementation as related to controllable sediment sources from crop, fallow, orchard, forest, pasture, rangeland, hydromodification, and urban land use activities, as well as roads, and sand and gravel mining operations.

The key regulatory mechanisms staff will rely upon include NPDES permits for stormwater discharges, waste discharge requirements for sand and gravel mining operations, waiver of waste discharge requirements for irrigated agriculture and timber harvest activities, and individual or cooperative nonpoint source pollution control programs for all other discharge types.

Nonpoint source implementation programs are required for all nonpoint source discharges pursuant to the Policy for the Implementation and Enforcement of the Nonpoint Source Pollution Control Program (NPS Policy), dated May 20, 2004. The NPS Policy requires all current and proposed nonpoint source discharges to be regulated under Waste Discharge Requirements (WDRs), waivers of WDRs, a basin plan prohibition, or some combination of these administrative tools. The Pajaro River Sediment TMDL will use the Pajaro River Watershed land disturbance prohibition to control nonpoint source discharges of sediment. To comply with the Pajaro River Watershed land disturbance prohibition, nonpoint source dischargers are required to either submit documentation that their activity does not cause sediment discharge within the watershed or submit a NPS Implementation Program that is consistent with the NPS Policy. The NPS Policy specifies that each NPS Implementation Program must include the following key elements:

Key Element 1: An NPS Implementation Program must explicitly acknowledge the beneficial uses and water quality requirements the programs are designed to protect and meet;

Key Element 2: The NPS Implementation Program shall include a description of the management practices (MPs) and other program elements that are expected to be implemented, along with an evaluation program that ensures proper implementation and verification;

Key Element 3: The Implementation Program shall include a time schedule and quantifiable milestones, should the Water Board so require;

Key Element 4: The Implementation Program shall include sufficient feedback mechanisms (e.g. reporting, inspection, monitoring, etc.) so that the Water Board, dischargers, and the public can determine if the implementation program is achieving its stated purpose(s), or whether additional or different MPs or other actions are required; and,

Key Element 5: Each Water Board shall make clear, in advance, the potential consequences for failure to achieve an NPS control implementation program's stated purposes.

7.1.1 Crop, Fallow, and Orchard Lands

Landowners and operators of crop, fallow, and orchard lands, where irrigated agricultural activities are conducted, will implement agricultural management measures and perform monitoring and reporting pursuant to the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands and the Monitoring and Reporting Program, Order No. R3-2004-0117 conditional waiver.

7.1.2 Forest Lands

Landowners and operators of timber lands, where timber harvest activities are conducted, will implement timber harvest management measures and perform monitoring and reporting pursuant to the General Conditional Waiver of Waste Discharge Requirements for Timber Harvest Activities and the Monitoring and Reporting Program, Order No. R3-2005-0066.

7.1.3 Pasture and Range Lands

Owners and operators of pasture and range lands, where grazing activities occur, must comply with the land disturbance prohibition.

Within one year following approval of the TMDLs by the Office of Administrative Law, the Executive Officer will notify the owners and operators of pasture and range lands of the prohibition and conditions for compliance with the prohibition. The Executive Officer will review and approve, or request modification of, the Nonpoint Source Pollution Control Implementation Program (Program) or documentation submitted in compliance with the prohibition within six months of the submittal date. Should the Program or documentation require modification, or if a party fails to submit a Program or documentation, the Executive Officer may issue a civil liability complaint pursuant to section 13268 or 13350 of the CWC, or alternatively, propose individual or general waste discharge requirements to assure compliance with the prohibition.

7.1.4 Urban Lands

Urban lands include the small communities of Watsonville, Hollister, Gilroy, and Morgan Hill (cities), rural properties throughout the watershed with farm animals or livestock