



# California Regional Water Quality Control Board Central Coast Region



**Linda S. Adams.**  
*Acting Secretary for  
Environmental Protection*

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**Edmund G. Brown Jr.**  
*Governor*

Draft Agricultural Order  
Public Comments  
for  
March 17, 2011 Board Meeting

Public Agencies	
Letter No/Name	
70	County of Santa Cruz
72	University of California, Davis
75	University of California, Santa Cruz
78	Resource Conservation District
90	National Marine Fisheries Service
97	County of Santa Barbara
99	Monterey Bay National Marine Sanctuary



# County of Santa Cruz

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## HEALTH SERVICES AGENCY

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### ENVIRONMENTAL HEALTH

[www.co.santa-cruz.ca.us/eh/ehhome.htm](http://www.co.santa-cruz.ca.us/eh/ehhome.htm)

January 3, 2011

Mr. Roger Briggs, Executive Officer  
Regional Water Quality Control Board  
895 Aerovista Place, Suite #101  
San Luis Obispo, CA 939401-7906

Subject: Comments on November 19, 2010 Proposed Agricultural Order

Dear Mr. Briggs:

I am writing to comment on some elements of the proposed ag order. A lack of comments on many elements of the order should not be construed as endorsement, but deferral to others who are more knowledgeable on the topics I have not commented on.

Stormwater Runoff: The previous draft order distinguished between storm runoff and nonstorm runoff, but that distinction is not clear in the new proposed order. Table 1 of the staff report indicates that the order requires that "All dischargers must implement stormwater management practices to minimize stormwater runoff" immediately, but I could find little discussion of stormwater management in the actual order other than the requirement for management of runoff from non-cropped areas (p. 20, paragraphs 71 and 72) and requirements for monitoring.

Stormwater Monitoring: There is a requirement to complete stormwater sampling within 18 hours of a storm event. Given the extreme variability of water quality parameters during a storm event and the rapid improvement in water quality after peak flow, sampling within 18 hours would have limited utility in characterizing stormwater quality. It would be more appropriate to select a few key sites and use an auto-sampler or frequent sampling to characterize the water quality throughout a storm event, or to require that sampling be completed within no more than 3 hours of peak flow.

Groundwater Recharge: The order should not preclude the use of practices to capture and recharge stormwater for the benefit of increased groundwater storage. This approach is being pursued in the Pajaro Valley as a key element of a strategy to reduce groundwater overdraft and saltwater intrusion. The effect of the proposed order on such practices is unclear. Paragraph 34 of the draft order requires that retention basins be constructed and maintained to prevent the percolation of waste to groundwater that contributes to exceedences of water quality standards. A strict application of this provision could preclude the use of percolation ponds in areas where nitrate levels already exceed drinking water standards, even though the intent would be to manage the ponds in a way that nitrate in excess of drinking water standards would not percolate. Research conducted under the Harkins Slough percolation pond for the Pajaro Valley Water Management Agency has shown that

significant denitrification occurs in the bottom of the pond and the underlying strata. Again, it is critical that the Order not preclude the use of recharge practices that will benefit the groundwater basin.

Nitrate Hazard Index: I believe that the nitrate hazard index should include a factor for underlying soil and geology. Underlying conditions are critical for determining the potential for nitrate to be removed by denitrification or to percolate to groundwater. Aquifer susceptibility is discussed in Appendix G, but is not addressed in the Order.

Proximity to Impaired Water Bodies: I could not find any discussion of why 1000 feet from an impaired water body was used as a trigger for a higher level of risk. Why 1000 ft? That distance seems too excessive, but on the other hand it ignores operations along tributaries of impaired water bodies. I would suggest using a greatly reduced setback such as 100 ft. from the flood plain or bankfull flowline, but have that setback apply to any operations along impaired waterbodies and their perennial tributaries. Adequate protection of a waterbody can't be obtained without also addressing the significant tributaries whether or not they have been formally designated as impaired.

Definition of Tiers: I support a tiered approach, but with better definition of tiers, a greater range of approaches across the tiers, and more flexibility to move among tiers if onsite conditions can be demonstrated to pose lower or higher risk. The discussion of various tier options in Appendix D indicates a desire to not have too much complexity and to not focus too much on site conditions, but it seems that these types of factors are critical in determining risk, and to allowing a minimal level of oversight and regulatory burden for those operations that pose low risk. Paragraph 13 allows the Executive Officer to move an operation to a lower tier, but only if they show they meet the specific criteria for that tier. More general criteria should be included which would allow a discharger to demonstrate site or operational conditions which would allow them to be in a lower tier. Site factors which should be taken into consideration would be many of those listed in Appendix D, such as potential for irrigation runoff, presence of tile drains, and potential for percolation of nitrate and salts. Additionally, I would suggest that the tier should be based on a nitrate hazard index which includes site conditions, rather than just the type of crop grown.

Timetable for Compliance and Resources Available: Successful implementation of operational improvements needed to improve water quality will take time and substantial technical expertise. It does not appear that the expertise to assist growers with the wide range of Central Coast conditions is readily available at this time. It will take more time to develop appropriate practices and to develop the number of consultants and technical staff to assist growers with implementation. I would suggest that the timeline for compliance be extended to allow adequate time to develop the necessary resources.

Thank you for the opportunity to comment on this important topic.

Sincerely,



John A. Ricker  
Water Resources Division Director

To: Howard Kolb  
Agricultural Order Project Lead Staff

From: T.K. Hartz  
Department of Plant Sciences  
University of California-Davis

Subject: Comment of draft order R3-2011-0006

Dear Howard:

I have a number of questions and concerns regarding the latest draft order; for the sake of brevity I will confine these comments to the major issues regarding nitrate management. As written, I believe these proposed regulations would not fairly spread the burden of water quality improvement, and would cost coastal vegetable and strawberry growers huge amounts of money and management time for very little purpose.

**Establishing tiers based on risk:**

I agree with the concept of establishing tiers of growers, based on crop type; wine grape production clearly presents fewer water quality challenges than the production of multiple vegetable crops per year, for example. Proximity to an impaired waterbody and organophosphate pesticide use may be appropriate criteria for predicting toxicity and turbidity risk. However, these factors have nothing to do with nitrate risk to groundwater, yet they will be a factor in determining whether a grower is required to monitor groundwater discharges and develop an Irrigation and Nutrient Management Plan (INMP). The technical rationale for using the scale of an operation as a prime determinate of water quality risk is unclear. A substantial percentage of vegetable and strawberry acres are farmed by growers operating less than 1,000 acres; to place significant extra burdens on growers of 1,000 acres or more puts them at a substantial disadvantage with competitors whose water quality impacts may in some cases be more severe.

**Individual discharge monitoring:**

Individual discharge monitoring would be an onerous burden on Tier 3 growers, and the value of the data generated and reported would be suspect. Given the requirements specified, it is clear that growers will need to engage professionals to perform the monitoring and generate the reports. Whether sufficient professional expertise is available to fill this need is questionable, particularly given the short time for implementation. The cost to individual growers is likely to be extreme, particularly if toxicity testing of runoff and testing of leachate nitrate is required. The degree of variability in pollutant content observed from one field or one irrigation event to another can be extreme, and unless a large number of events are monitored, the data may not reflect water quality impacts representative of the grower operation. This also raises the possibility of 'strategic' monitoring, in which irrigation events are chosen for monitoring based on conditions most likely to show good water quality.

It is my opinion that individual discharge monitoring should be de-emphasized because the cost will be extreme, and the value of the data generated will be nebulous. The more valuable information regarding nitrate pollution potential will be annual N loading rate, which tier 2 and 3 growers are required to report.

**Irrigation and nutrient management plans:**

The requirement to development and implement an INMP is contingent on the calculation of the crop nitrate loading risk. For vegetable and strawberry growers who use sprinklers, at least for crop establishment (this includes the overwhelming majority of growers), the factor that triggers the INMP requirement comes down solely to nitrate concentration of the irrigation water. Water of 40 PPM  $\text{NO}_3^-$  gives a moderate risk (and no INMP), while water at 50 PPM triggers all the INMP requirements. This places too much emphasis on a factor that represents a small minority of potential N loading in the production of these crops. For example, a lettuce crop may receive an average of 160 lb/acre of fertilizer N, and 10 inches of irrigation water. At 50 PPM  $\text{NO}_3^-$ , that water input represents only 25 lb N/acre. Modifying the nitrate loading risk index, perhaps by increasing the irrigation nitrate concentration at which the rating of '2' is given, would balance the index more appropriately.

Regarding the INMP requirements, it is unclear what level of detail is required. As written it could be interpreted to require that irrigation and fertilization in each field be monitored, evaluated and recorded. Such detail would overwhelm farm management. The requirement to conduct preplant soil *nitrogen* sampling (by this I assume you mean nitrate sampling) is problematic, because all local research to date has been predicated on pre-sidedress, not preplant, soil nitrate testing. As previously discussed, the requirement to monitor nitrate leaching to groundwater is technically difficult and fraught with uncertainty; reduction of N input to the production system, and documentation of improved irrigation efficiency, should be the focus of effectiveness evaluation.



3 January 2010

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Jeffrey S. Young (Chair) and Members of the  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, California 93401

Dear Mr. Young and Colleagues,

I am writing to comment on the Draft Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands, Order No. R3-2011-006 ("Ag. Waiver") and the associated Monitoring and Reporting Program (MRP). I conduct research, teach, and provide technical assistance to regional groups, cities, and agencies concerned with water resources through my position as a Professor of Earth and Planetary Sciences at the University of California, Santa Cruz, where I have worked since 1995. I have some experience in studies of water supply (quantity and quality) associated with surface water – groundwater interactions and groundwater resources, but I'm not an expert in matters of irrigation management. The views presented in this letter are mine alone and are not intended to represent an official position by the University of California.

I appreciate the care and effort that have been required for preparation of the Draft Ag. Waiver, MRP, Staff Report, and associated documents by the Central Coast Regional Water Quality Control Board ("Regional Board") and staff. Clearly it is challenging to balance agricultural, municipal, industrial and environmental water resource needs, particularly during a time of increasing demand, economic uncertainty, climate variability, and skepticism about the role of government in managing natural resources. That said, I fear that the Draft Ag. Waiver and associated documents may present some unintended problems for the Regional Board going forward, and for constituencies subject to the Board's regulation, particularly with regard to the availability and quality of groundwater resources. I summarize my concerns in the rest of this letter, with an emphasis on conditions in the Pajaro Valley, but many of these concerns will apply more broadly to the Central Coast Hydrologic Region.

One fundamental goal of the proposed regulations is *to restore hydrologic and ecosystem function* to water systems associated with irrigated agriculture, so as to improve the quality and sustainability of these resources for coming generations. The hydrologic cycle is impacted by agricultural and other human activities, and some of these impacts have degraded the quality of both surface water and groundwater resources. One likely impact of extensive urbanization and agricultural development is to limit the extent of groundwater recharge, the percolation of surface water through the vadose zone and across the water table. For this reason, the improvement of recharge function should be considered an important part of restoring regional

hydrologic conditions. Reductions in recharge can occur because of shorter retention times for surface runoff and lowering of the infiltration capacity of shallow soils. A combination of increased pumpage and reduced recharge can lead subsequently lead to groundwater overdraft, as has occurred in the Pajaro Valley Groundwater Basin. Overdraft can lead, in turn, to a lowering of water levels, reduced water quality, loss of baseflow to streams, degradation of critical aquatic habitat, ground subsidence, and seawater intrusion. The full extent by which groundwater recharge has been reduced by development in the Pajaro Valley (and in other groundwater-dependent basins that have undergone extensive development) is difficult to quantify, in part because the recharge process itself is cryptic. Nevertheless, it is clear that an important part of bringing the Pajaro Valley Groundwater Basin back into hydrologic balance will involve *restoring some of the groundwater recharge function that has been lost as a result of decades of urbanization and agricultural development*. Reducing pumpage alone likely will not be sufficient to secure reliable, long-term supplies for the Central Coast Hydrologic Region – improving recharge conditions will be required as well. In addition, enhanced surface water infiltration and groundwater recharge can help to achieve essential water quality goals, as described below.

Managed aquifer recharge (MAR) has been applied successfully in the Pajaro Valley Groundwater Basin through the Harkins Slough project and associated management practices and infrastructure developed by the Pajaro Valley Water Management Agency (PVWMA), serving to improve both water supply and water quality in the basin. There are likely to be opportunities for enhancing recharge in other parts of the Pajaro Valley, particularly when linked to low impact development and stormwater capture. Colleagues and I are currently working on a GIS-based analysis of surface and subsurface conditions that might be conducive to MAR on a distributed basis throughout the Pajaro Valley, in collaboration with local growers, landowners, the Santa Cruz County Resource Conservation District, the PVWMA, and other stakeholders. The next step in this effort will be conducting a series of local pilot studies to provide "groundtruth" to GIS-based analyses, and to assess improvements to water supply and quality that can be achieved through distributed MAR. MAR-based improvements to water quality in the Pajaro Valley may come from two distinct mechanisms.

First, water applied to percolation basins from stormwater capture during and immediately after the wet season will have a high quality relative to that in underlying aquifers in many locations. Getting some of this water into the ground is important for improving and maintaining water quality in critical aquifers. Second, considerable improvement in water quality can be achieved during percolation of surface water because of beneficial microbial and filtering processes that occur during passage of water through the vadose zone. Recent studies of the Harkins Slough MAR percolation system have demonstrated a removal of ~50% of nitrate from surface water (~500 to 600 kg NO<sub>3</sub>-N removed from ~600–800 acre-feet of infiltration), an efficiency commensurate with that achieved from vegetative buffer strip applications. Research shows that most of this removal is attributable to denitrification, which represents complete removal of nitrate from the aquatic system. The extent to which similar water quality benefits can be achieved during MAR at other sites around the Pajaro Valley remains to be determined, but colleagues and I are planning for a series of pilot studies that will help to assess the potential for water quality improvements through MAR. It is important to achieve as much denitrification as possible during infiltration and recharge because relatively little occurs once the water enters underlying aquifers (due to a lack of available carbon, the introduction of excess air, and other

factors). Current and planned studies should provide information that is useful for evaluating what kinds of MAR approaches are most beneficial. As part of finalizing the draft Ag. Waiver, I urge that opportunities for enhancing groundwater recharge, and improving both water supply and water quality, not be stifled. Please consider designing the Ag. Waiver so as to encourage the development of field-scale pilot studies that can provide information needed to assess the efficacy of MAR to augment water supply and improve water quality. Pilot and operational systems will need to rely on adaptive management strategies, applied flexibly based on local field conditions, to achieve maximum benefit. Studies will need to be completed site by site because hydrologic, soil, and other conditions are highly variable in space and time.

The development of distributed MAR projects around the Pajaro Valley, and in similar basins within the Central Coast Hydrologic Region, has the potential to improve both water supply and water quality conditions more broadly. Benefits could extend to surface water systems such as streams and wetlands, flows in which can be enhanced by raising the local water table and/or introducing secondary supply (for example, water discharged from recycling and other treatment systems). The latter can help to achieve simultaneous benefit to surface water and groundwater systems by increasing surface flows late in the water year, and taking advantage of recharge that occurs naturally from losing streams. Enhancing and maintaining groundwater recharge through streams is also encouraged through reductions in sediment delivery to streams: fine-grained sediments that collect on streambeds during low flow conditions serve to reduce infiltration and "disconnect" surface water conveyances from underlying aquifers. In addition, the movement of surface water into the streambed and back out again ("hyporheic flow"), which is common in many streams, helps to speed nutrient cycling and regulate stream temperature, both of which can benefit aquatic habitat. Capturing a small amount of excess winter runoff for recharge will reduce sediment and nutrient loading of streams. Maintaining elevated flows in streams during the second half of the water year, when flows tend to be low (and dry gaps can develop), contributes to improvement to both surface water and groundwater conditions by enhancing surface water – groundwater interactions. Flexibility in management of stream flows will be helpful in finding appropriate supplies of water that can be introduced to streams to benefit basin hydrologic conditions for the long term. Available water may not meet drinking water standards at all times, but there can be a significant net benefit to introducing available water if the quality is *sufficiently good* so as to improve conditions relative to what would occur in its absence.

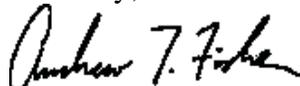
My final concern has to do with draft sampling, analysis, and reporting requirements as described in the Draft MRP. I have overseen and participated in several water sampling, measurement, and analysis projects, involving specially trained and supervised personnel, and a surprisingly high fraction of the samples and data collected through these projects is of poor quality. As a rule of thumb, I have found that generally 10-20% of data and samples collected are "bad" or otherwise inconsistent with the majority of data and samples, despite the best efforts to drive down the number of errors in practice. In some cases, it is possible to resolve inconsistencies based on poor instrument calibration, incorrect field practices, or other factors, but it is often not possible to determine exactly why a particular sample or data point is invalid. This is the nature of working with complex natural–human water systems. My reading of the Draft MRP suggests that an enormous sampling and data collection effort will be required to assess many aspects of irrigation management and associated water quality. The more samples and data are collected, the more bad values likely will be introduced in the composite data set (particularly if there are hundreds or thousands of separate individuals responsible for collection

of samples and data). It is not clear who will decide which data or samples are good or bad. It is often necessary to assess results by cross-plotting multiple constituents or ratios between conservative and non-conservative solutes to determine, for example, whether an apparent improvement to water quality might result from source control versus dilution. In addition, although the draft MRP includes requirements for development of a Quality Assurance Project Plan, and specific requirements for laboratory analytical methods, other aspects of sample collection and monitoring are likely to be highly variable in quality and their representative nature. For example, measuring the discharge of small streams, ditches, drains, and similar conveyances is difficult and imprecise, and errors of 50-100% at flows  $\leq 1$  cfs are common. Numerous choices will be made in how field samples are collected, e.g., how deep a water bottle is placed when it is filled, whether wells in adjacent fields are on or off when sampling from another well, and these decisions are likely to influence the chemistry of recovered samples. And collection of samples and data is only the beginning – considerable analyses, hydrologic assessment, modeling, and other work will be required to interpret data sets from individual sites and aggregates of sites. Managing these analytical requirements will comprise a significant burden to Regional Board staff, landowners, growers, and others, and results will likely be subject to multiple interpretations.

This last concern relates to the issue of developing MAR projects, as discussed earlier in this letter. The success of pilot studies of MAR sites will depend, in part, on results of field monitoring, sample analysis, and modeling. For these assessments, the sampling frequencies likely will be more extensive than the basic level of monitoring outlined in the MRP, at least for brief periods. But at other times, sampling requirements may be more modest. The extent of the sampling program associated with pilot studies of MAR should be developed based on local conditions, including ambient water quality at the time when projects are developed. Adaptive management is essential for achieving the greatest water quality benefits. If water quality standards and sampling requirements are overly prescriptive for development of these systems, both water supply and water quality will suffer in the long term. Managed aquifer recharge can contribute to widespread water supply and quality improvements in the Central Coast Hydrologic Region, but some flexibility will be required to implement viable MAR pilot studies and implementation projects.

I remain optimistic that improved water resource conditions can be developed throughout the Central Coast Hydrologic Region while preserving agricultural, economic, social, and environmental benefits. Focusing on the goal of *restoring hydrologic and ecosystem function* is essential for developing rigorous and practical requirements and monitoring programs. I wish you and your colleagues success in your efforts.

Sincerely,



Andrew T. Fisher



RCD of Santa Cruz County  
Capitola, California

RCD of Monterey County  
Salinas, California

Monday, January 3, 2011

Mr. Jeffrey Young (Chair) and Members of the  
Central Coast Regional Water Quality Control Board (CCRWQCB)  
895 Aerovista Place, Suite #101  
San Luis Obispo, CA 939401-7906

RE: November 19, 2010 Staff Recommendations for a new Agricultural Order

Dear Mr. Young and Colleagues,

The Resource Conservation Districts of Santa Cruz and Monterey Counties (RCDSCC and RCDMC) appreciate the opportunity to comment on the CCRWQCB staff recommendations released on November 19, 2010 regarding regulation of waste discharges associated with agriculture. We appreciate the extensive work your staff and board has put into addressing the very complex and controversial questions that must be considered in crafting strong policy to protect water quality on the Central Coast. The following comments are meant to summarize some key points that RCDs see as critical to the success of that policy.

First, we would like to highlight the importance of an adaptive management approach to solving water quality pollution problems on agricultural lands. Adaptive management entails the application of scientific methodology to management, including design, planning, implementation and evaluation.<sup>1</sup> Through iterative and well-defined cycles of revision, it allows us to improve our effectiveness in implementing environmental management practices. Of special note, this approach continually seeks “to understand the impact of incomplete knowledge.”<sup>2</sup> Adaptive management is especially important given the uniquely diverse and dynamic nature of the working landscapes of Central Coast agriculture. Research literature is frequently specific to very different conditions than those we face. We need the support of a regulatory policy that is flexible enough to allow for a wide variety of land management practices and treatments to adapt as new research emerges and on-the-ground trials and observations enable us to refine our approach to agricultural water quality pollution.

Second, the order should not preclude the use of practices to capture and recharge stormwater for the benefit of increased groundwater storage. This approach is being pursued in the Pajaro Valley as a key element of a strategy to reduce groundwater overdraft and saltwater intrusion. The effect of the proposed order on such practices is unclear. On the one hand, Table 1 of the staff report indicates that the order requires that “All dischargers must implement stormwater management practices to minimize stormwater runoff” immediately (although we

<sup>1</sup> Moir W.H. and Block W.M. (2001) Adaptive management on public lands in the United States: Commitment or rhetoric? *Environmental Management*

<sup>2</sup> Schreiber E. S. G., Bearlin A. R., Nicol S. J., Todd C.R. (2004) Adaptive management: a synthesis of current understanding and effective application.

couldn't find this provision in the draft order itself). On the other hand, Paragraph 34 of the draft order requires that retention basins be constructed and maintained to prevent the percolation of waste to groundwater that contributes to exceedences of water quality standards. A strict application of this provision could preclude the use of percolation ponds in areas where nitrate levels exceed drinking water standards, even though the intent would be to manage the ponds in a way that nitrate in excess of drinking water standards would not percolate. Research conducted under the Harkins Slough percolation pond for the Pajaro Valley Water Management Agency has shown that significant denitrification occurs in the bottom of the pond and the underlying strata. Again, it is critical that the Order not preclude the use of such practices that will benefit the groundwater basin.

Third, we would like to urge the Board to recognize the inadequate supply of technical assistance providers currently available to support growers in implementation of the waiver's requirements. Along with many other agencies that provide technical assistance, RCDs have seen significant reductions in staff levels and decreased availability of up-to-date staff training in the wake of multiple economic setbacks in recent years. Such shortages are a source of concern to us as we anticipate growing demand for technical support to growers seeking to make improvements to their management of water quality. Consultants in the private sector (CCA's and PCA's, etc.) are rarely trained to deal with the range of 'output'-related (as opposed to input) issues that growers will need to address under the proposed revised waiver, and there will be a necessary lag-time as private sector supply catches up with demand for services beyond the levels RCDs and NRCS can provide. We ask the Regional Board to track and respond to the impact this reality will have on growers' ability to meet the requirements of the waiver, particularly in regards to the timelines proposed.

We look to the Regional Board to adopt a regulatory approach that will foster flexibility, creativity and widespread application of diverse resource management practices as we work together to solve Region 3's complex nonpoint source pollution problems.

We thank you in advance for your consideration of these points. Please don't hesitate to contact us with any further questions.

Best regards,

Marti Johnson  
RCD Coordinator for the Agriculture Water Quality Alliance (AWQA)  
awqa.rcd@gmail.com  
(805) 610-1044

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CC: Roger Briggs, Regional Water Quality Control Board  
CC: Howard Kolb, Regional Water Quality Control Board  
CC: Rich Casale, NRCS District Conservationist in Capitola  
CC: Robert LaFleur, NRCS District Conservationist in Salinas  
CC: Daniel Mountjoy, NRCS Assistant State Conservationist



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Southwest Region  
777 Sonoma Ave., Room 325  
Santa Rosa, California 95404-4731

Roger Briggs  
Executive Officer  
895 Aerovista Place, Suite 101  
San Luis Obispo, California 93401

Mr. Briggs,

Thank you for the opportunity to provide comments on the draft order for a revised conditional waiver of waste discharge requirements regulating discharges from irrigated lands (Draft Order) and its associated monitoring and reporting program (MRP). This Draft Order and MRP were released by the Central Coast Regional Water Quality Control Board (Water Board) staff on November 19, 2010. The Southwest Region of the National Marine Fisheries Service (NMFS) is charged with managing Endangered Species Act (ESA) listed coho salmon and steelhead trout found in your agency's territory. We also manage Essential Fish Habitat (EFH) as designated by the Magnuson-Stevens Fishery Conservation and Management Act which includes areas occupied by coho salmon and numerous marine species that utilize the estuaries, embayments and other nearshore areas found along the Central California coast. EFH is defined as "Those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Our areas of responsibility are comparable to your beneficial use designations for COLD, MIGR, RARE, SPWN, EST, FRESH, MAR and BIOL.

The Draft Order represents a significant improvement to the existing conditional waiver for irrigated lands that was adopted by the Water Board in 2004. However, it is considerably less protective than the preliminary staff recommendation for updating the conditional waiver that was publically released in February 2010 and which NMFS supported. The Draft Order needs strengthening to become an implementation plan with enough regulatory certainty that it will achieve and maintain water quality objectives and beneficial uses as required by the State's Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program.

If the Draft Order is passed and implemented as proposed, it may result in some water quality improvements for the impacted designated beneficial uses which include ESA listed species, their designated critical habitats, and EFH. Widespread contamination of Central Coast waterways by pesticides and nutrients, including impacts to near-shore, coastal habitats is well documented in the scientific literature and in the Draft Order, its supporting documents and appendices. We agree with the Water Board's assessment that it is time to implement actions to solve the problems and protect water quality for all



beneficial uses. Preventing the extinction of listed salmonids, and achieving their recovery on the Central Coast, depends on the success of these actions.

NMFS generally supports the following components of the Draft Order as summarized in the Staff Report:

- Implementation of pesticide management practices to reduce toxicity in discharges and receiving waters,
- The requirement for individual discharge monitoring and reporting to identify specific discharges of pollutants and contribution to impacts,
- Continued watershed monitoring supported by all dischargers,
- The addition of compliance schedules for pollutant and impact reductions and verification of compliance at both the farm and the watershed scale,
- The development of farm plans that identify management measures and include a requirement to verify implementation,
- The requirement for farm operations to protect existing riparian and wetland systems and their associated beneficial uses,
- The requirement for some operations to develop a Water Quality Buffer Plan,
- The requirement to improve irrigation management, sediment and erosion control to improve aquatic conditions including nutrient levels in groundwater,
- The requirement to prepare nutrient management plans to protect both groundwater and surface water quality, and
- Addressing the perceived conflict between environmental stewardship, best management practices that reduce water quality impacts and the causes of food safety concerns.

NMFS also has numerous recommendations that are needed to improve the Draft Order to fully protect the designated beneficial uses discussed below in a timely manner, especially those beneficial uses that include ESA listed salmonids, their designated critical habitats and EFH. When NMFS finds that a federal or state action would adversely affect EFH, it is required to provide conservation recommendations.

According to the Draft Order, one of the criteria used for determining which Tier the operation qualifies for is whether or not the operation is located within 1,000 feet of a surface waterbody listed for toxicity, pesticides, nutrients, or sediment on the Clean Water Act section 303(d) 2010 List of Impaired Waterbodies. In order to fully protect designated beneficial uses, NMFS encourages the Water Board to also include tributaries, such as drainage ditches, intermittent or ephemeral streams, and other non-listed waterways that drain directly to 303 (d) listed waterbodies. Such tributaries were included in the February 2010 Preliminary Draft Order (see items 50, 53, 57, and 64).

NMFS strongly recommends the inclusion of pyrethroids in the group of insecticides considered in the definitions of Tiers 1, 2, and 3. As the Draft Order and its supporting documentation correctly and repeatedly note, the use of pyrethroids is widespread in the Central Coast region. Their contribution to toxicity in the region's waterbodies is also well known and documented in the scientific literature and by the Water Boards own

monitoring efforts. This toxicity is a significant contributor to the decline of ESA listed salmonids in the region and addressing it promptly is crucial in preventing their extirpation from Central Coast waterbodies.

Regarding the requirements for Tier 1 monitoring, NMFS recommends that the Water Board add a requirement that Tier 1 dischargers document that their discharges are free of excess sediment and nutrients. This can be accomplished through relatively inexpensive means such as nitrate test strips and photo monitoring of the discharge points, although turbidity monitoring of a discharge as a surrogate for suspended sediment monitoring is preferable. The Tier 1 dischargers would not need to report this information to the Water Board at this time, but should be required to record the results in their farm plan for future use if necessary. Just requiring the gathering of this information to inform on-farm decision making is likely to yield benefits to water quality.

For Tier 2 and Tier 3 monitoring, NMFS recommends that individual riparian and wetland photomonitoring be required for operations adjacent to a waterbody listed as impaired by nutrients, pesticides or toxicity in addition to those listed as impaired by temperature, turbidity or sediment conditions. In particular, properly sized and developed riparian areas that include trees serve an important function in blocking the drift of pesticides applied to adjacent fields into waterbodies. Numerous studies have also shown that appropriately sized riparian buffers that include trees can be effective at absorbing nutrients in agricultural discharges (Mayer *et. al.* 2005). There are 21 waterbodies listed in Table 3 of the Draft Order as impaired by pesticides or toxicity that are not included in Table 1 which lists waterbodies noted as impaired by temperature, turbidity or sediment. Several of the Table 3 waterbodies that are not cross listed on Table 1 support ESA listed salmonids (Arana Gulch, Carpinteria Creek, Glen Annie Creek, Llagas Creek, Mission Creek, Old Salinas River Estuary, Salinas River Lagoon North, San Antonio Creek, and San Luis Obispo Creek) and are in need of immediate protection from pesticide impacts. Requiring photomonitoring of these areas to protect and improve their riparian zones is crucial in these protection efforts.

Additionally, for Tier 2 and Tier 3 properties, photomonitoring should be required annually and should include the listed waterbodies as well as associated perennial and intermittent tributaries. A requirement to measure the size and determine the quality of the riparian or wetland area could be established at a less frequent interval, such as the once every three years proposal in the Draft Order. Getting dischargers into the habit of paying attention to the condition of their riparian areas and gathering timely information to use in management decisions will lead to subsequent improvements to the water quality parameters these areas influence.

For Tier 3 dischargers, individual discharge monitoring for the pesticides diazinon and chlorpyrifos will take place once or twice per year depending upon the size of the farm. NMFS recommends that the required pesticide testing include pyrethroid insecticides, as the Draft Order documents widespread sediment toxicity in Central Coast waterbodies due to the discharge of pyrethroids, for tailwater, tile drain and stormwater monitoring. This testing could be contingent upon an examination of the discharge quality. If the

discharge includes significant sediments, and the discharger is using pyrethroids on site, this analysis should be required.

In order to provide a solid baseline, NMFS recommends the individual discharge monitoring requirements for tailwater, tile drain and stormwater discharges be more frequent during the initial implementation phase of the Draft Order. All Tier 3 dischargers should conduct monitoring at least twice during the primary irrigation season during the first year of implementation for tailwater or tile drain discharges as well as twice for stormwater discharges during the wet season. If the results show that pesticide loadings are low enough to not cause toxicity in the algae or *Ceriodaphnia* testing, then the schedule could be cut back to once per year for the smaller operations as proposed in the Draft Order.

According to Table 2 of the MRP, receiving water monitoring for pesticides in the water column and the sediments will only be required in the second year of the Order term. This is not sufficient to address the numerous toxicity and pesticide impairment listings present throughout the Central Coast. NMFS recommends that a second round of pesticide testing be required, occurring in the fifth year of the Draft Order term. This will also serve to document if the Draft Order has successfully triggered implementation of management measures that prevent the discharge of toxic waste products.

The Annual Compliance Document required of Tier 2 and Tier 3 dischargers includes a requirement to describe the method and location of chlorpyrifos and diazinon applications relative to surface water. This requirement should be modified to include pyrethroid pesticide applications so that drift of these insecticides or transport of sediments mobilized by runoff from fields into impaired waterbodies is prevented.

Tier 3 dischargers are required to prepare a Water Quality Buffer Plan if they are within 1,000 feet of a waterbody listed as impaired for temperature or turbidity. This requirement should be expanded to include listings for impairments by sediments, nutrients, pesticides and toxicity. As mentioned in our comments on the February 2010 Preliminary Draft Order dated April 1, 2010 (Attachment A), properly sized and developed riparian areas are important in preventing the drift of pesticides into waterways during application and there are 21 waterbodies found on Table 3 of the Draft Order that are not found on Table 1. However, it is also important to note that Table 1 includes 28 waterbodies that are listed as impaired by sediments, but not turbidity or temperature, and these include some streams listed as designated critical habitat for ESA listed salmonids such as Chorro Creek, Los Osos Creek and the San Benito River. These waterbodies also need the protection that will come from the development of a Water Quality Buffer Plan.

NMFS recommends that Tier 2 dischargers should also be required to prepare Water Quality Buffer Plans. The number of Tier 3 dischargers in the Central Coast region, estimated in the supporting documentation for the Draft Order, is believed to number only between 150 to 300 properties. Regulation of only these sites is likely to leave significant gaps along the impacted waterways where a riparian buffer is not continuous enough to protect water quality. NMFS recognizes the Water Boards' concerns regarding

staffing limitations and the ability to handle the volume of information that may be generated as a result of this Draft Order, however the Water Board could prioritize the areas where additional Water Quality Buffer Plans are required initially to include those areas most impacted by agricultural operations such as the Lower Salinas and Santa Maria river areas and which are designated critical habitat for ESA listed salmonids. The designated critical habitat listings from the Federal Register are readily available on the NMFS website at <http://www.nmfs.noaa.gov/pr/species/criticalhabitat.htm>. GIS data for designated critical habitat is available for downloading at <http://swr.nmfs.noaa.gov/salmon/layers/finalgis.htm>.

NMFS strongly disagrees with the revised minimum riparian buffer width recommendation of 30 feet provided in the Water Quality Buffer Plan. This width is not well supported in the scientific literature nor is it adequately supported in the Draft Order and its supporting documents. Appendix D of the Draft Order clearly outlines that the proposed 30 foot minimum buffer width is not compliant with multiple established protocols including EPA and USGS methodologies (Page 65), nearly all county ordinances in the region (Page 66), and the California Forest Protection Act (Page 67). The February 2010 Preliminary Draft Order proposed more acceptable minimum buffer widths of 50, 75, and 100 feet which were compliant with the EPA and USGS methodologies and were supported by NMFS. A response to comments document that clearly explains why the better supported and more protective buffer widths were abandoned is not available for review prior to the Draft Order's January 3, 2011 comment deadline. Therefore, NMFS reiterates its support for the February 2010 provisions by resubmitting our April 1, 2010 letter as Attachment A.

Appendix D of the Draft Order also acknowledges that the 30 foot minimum buffer width recommendation falls within the lower range of minimum requirements assembled by two literature reviews, one conducted by the Army Corps of Engineers (Fischer and Fischenich 2000) and the other conducted as a comparison of methods to map California riparian areas (Collins *et al.*, 2006). Collins *et al.*, (2006) noted the number of riparian area functions increased with greater riparian area, and recommended the maximum buffer widths as the preferred buffer width. Their lower maximum observed buffer width was 49 feet for both bank stabilization and aquatic habitat cooling functions, and 98 feet for both chemical filtration or transformation and aquatic life support functions. The improvement of these riparian area functions is consistent with the goals of the Draft Order, but is unlikely to be achieved by a 30 foot buffer zone.

The rate of nitrogen removal from surface and groundwater flow is extremely variable depending on local conditions including soil composition, surface versus subsurface flow, riparian zone width, and riparian composition (Mayer *et al.*, 2005). In 2005, the USEPA conducted an extensive review to investigate the qualities of a riparian zone that effectively limit nutrient pollution (Mayer *et al.*, 2005). A meta-analysis of all of the studies revealed that riparian zones removed nutrients through subsurface flow more effectively than surface flow (Mayer *et al.*, 2005). Nitrate retention from surface runoff was related to riparian zone width, where 50%, 75%, and 90% surface nitrate retention was achieved at widths of 110 ft, 389 ft, and 815 ft respectively (Mayer *et al.*, 2005).

This suggests that surface water infiltration in the riparian zone should be a priority to promote effective nutrient filtration. Mayer *et al.* (2005) also found that the composition of the riparian zone affected the efficiency of nutrient removal. Forested riparian zones (ranging from 33 ft to 725 ft) removed nutrients from subsurface flow more efficiently than grass riparian zones, and the nitrogen filtering capacity of grass and grass/forested riparian zones increased with width (Mayer *et al.*, 2005). Grass riparian zones less than 33 ft actually contributed to nitrogen loading in some cases (Dillaha *et al.*, 1987; Mayer *et al.*, 2005). As with sediment, narrow riparian zones appear to become saturated with nutrients over time. Dillaha *et al.*, (1987) found that 15 and 30 ft grass riparian zones with over 11 and 16% hillslopes effectively reduced total nitrogen and phosphorus in initial trials, but by the sixth trial, more nutrients were entering the stream than were being added to the riparian zone. This suggests that many studies may overestimate the long-term nutrient filtering capacity of riparian zones.

Based on this review, a grassy area outside of a forested zone, as recommended by the USDA (1997), would be useful to help slow and distribute surface flow evenly to aid in infiltration and allow forested riparian zones to maximally filter nutrients. Mayer *et al.*, (2005) concluded riparian zones over 98 ft wide would be expected to retain nutrients consistently well across different sites. Similarly, Wenger and Fowler (2000) conducted a literature review and concluded, “The most effective buffers are at least 30 meters, or 100 feet wide, composed of native forest, and applied to all streams, including very small ones.” The authors recommended including riparian zones on smaller streams to reiterate the importance of buffering the effects of nutrient delivery to upper headwater areas. In summary, most riparian zones reduce subsurface nutrient loading, but extensive distances are needed to reduce nutrients in surface runoff. Grass and grass/forested riparian zones do not function effectively at widths less than 33 ft, and they should be greater than 98 ft to ensure consistently effective nutrient retention. Nitrogen filtering capacity decreases with increasing loads (Mayer *et al.*, 2005).

The Draft Order describes the 30 foot minimum buffer width as a “good first step”, but cautions that an increase in the minimum buffer width may become necessary in the future in order to better protect water quality. NMFS would like to point out that the scientific literature already dictates a larger buffer width in order to achieve a conservative level of protection. It will be exceedingly difficult and expensive to get an operation to move its infrastructure away from adjacent waterways and then move it again in a few years when a more scientifically rigorous buffer width is found to be necessary.

Furthermore, the Draft Order states that minimum riparian buffer widths will not be required for ephemeral and artificial channels. Both ephemeral creeks and artificial channels transport pollutants to downstream waterbodies. Although often dry, ephemeral channels can accumulate fine sediments within the channel which can then become re-suspended and delivered to perennial downstream waterbodies during subsequent storms or irrigation events. Many artificial ditches and agricultural drainage systems discharge directly to natural and often perennial waterways. Typically, these channels are not vegetated and therefore have little or no capability of absorbing or retaining pollutants.

Therefore, in order to better protect water quality and other beneficial uses, NMFS recommends developing a required minimum buffer width for ephemeral and artificial channels.

NMFS suggests the use of rainbow trout in the three-species water column toxicity tests required as part of the MRP, rather than the use of fathead minnows. Rainbow trout are in the same genus (*Oncorhynchus*) as coho salmon and are the freshwater equivalent of steelhead trout. NMFS believes that the use of rainbow trout will give a more accurate indication of potential acutely toxic conditions to the ESA listed salmonids found in the Central Coast area. EPA protocols for the use of rainbow trout in toxicity testing are readily available and the practice is increasingly common.

In addition, NMFS recommends adding the following sentence to item 66 in the Draft Order, "Absolutely no sidecasting of sediments into waterbodies is authorized as a result of agricultural practices (*e.g.*, field leveling, raised bed preparation, road installation or repair, *etc.*)."

NMFS also recommends prohibiting the application (*i.e.*, spraying) of herbicides directly onto the banks of streams, sloughs, ponds or other waterbodies with surface water present, particularly those that are perennial or that have been listed on the 2010 303(d) list of impaired water bodies. For an example of this practice, see Figure 6, at [http://www.ccamp.net/ag/index.php/Main\\_Page](http://www.ccamp.net/ag/index.php/Main_Page).

In closing, we want to thank you for your continued effort towards developing an agricultural order that will lead to better control of discharges from irrigated lands and improved water quality throughout the Central Coast area. The draft staff report and associated documentation very clearly lays out the water quality issues facing the Central Coast area due to agriculture. The current Draft Order attempts to address some of these issues and, if implemented, may lead to some improvements. However, NMFS is less optimistic that the present Draft Order will have as much success solving these long standing issues as the more robust February 2010 Draft. NMFS looks forward to working with the Water Board this coming year as the program advances. Please contact Joe Dillon, NMFS Southwest Region Water Quality Coordinator, at (707) 575-6093 or [Joseph.J.Dillon@noaa.gov](mailto:Joseph.J.Dillon@noaa.gov) with any questions or comments regarding this letter or with further requests regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Steve Edmondson', with a stylized flourish at the end.

Steve Edmondson  
Northern California Habitat Supervisor  
Habitat Conservation Division

Cc: Bob Hoffman, NMFS, Long Beach, California  
Chris Yates, NMFS, Long Beach, California  
Dick Butler, NMFS, Santa Rosa, California  
Joyce Ambrosius, NMFS, Santa Rosa, California  
Karen Grimmer, Monterey Bay NMS, Monterey, California  
Bridget Hoover, Monterey Bay NMS, Monterey, California  
Lisa Lurie, Monterey Bay NMS, Monterey, California  
Janet Parrish, U.S. EPA Region IX, San Francisco, California  
Angela Schroeter, CCRWQCB, San Luis Obispo, California  
Lisa McCann, CCRWQCB, San Luis Obispo, California

#### References:

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UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE

Southwest Region  
777 Sonoma Ave., Room 325  
Santa Rosa, CA 95404-4731

April 1, 2010

In response, refer to:  
SWR/F/SWR3:JD

Angela Schroeter  
Agricultural Regulatory Program Manager  
895 Aerovista Place, Suite 101  
San Luis Obispo, California 93401

Dear Ms. Schroeter:

Thank you for the opportunity to provide early, informal comments on the preliminary staff recommendations for an agricultural order to control discharges from irrigated lands. These preliminary recommendations were released by the Central Coast Regional Water Quality Control Board (Water Board) staff on February 1, 2010. The Southwest Region of NOAA's National Marine Fisheries Service (NMFS) is charged with managing Endangered Species Act (ESA) listed coho salmon and steelhead trout found in your agency's territory. We also manage Essential Fish Habitat (EFH) as designated by the Magnuson-Stevens Fishery Conservation and Management Act which includes areas occupied by coho salmon and numerous marine species that utilize the estuaries, embayments, and other nearshore areas found in your agency's territory. Our areas of responsibility are comparable to your beneficial use designations for COLD, MIGR, RARE, SPWN, EST, FRESH, MAR and BIOL.

NMFS is very impressed and supportive of the Water Board's preliminary recommendations and willingness to tackle these chronic water quality problems in the Central Coast area. The problems of pesticide and nutrient contamination and their sources are widely documented in the area and they have been impacting ESA listed salmonids, EFH, and designated beneficial uses for many years. The 2004 Conditional Agricultural Waiver program was focused on enrollment, education, outreach, development of farm plans to address impacts and monitoring of water quality at the watershed scale. The program was successful in documenting the problems and making sure that all growers are aware of the problems. It is shocking to see the widespread contamination of Central Coast waterways by pesticides and nutrients, including probable impacts to near-shore, coastal habitats, when the information is laid out so clearly. We agree with the Water Board's assessment that it is time to implement actions to solve the problems and protect water quality for all beneficial uses.



In particular, NMFS wants to support on the record the following components of the preliminary agricultural order to control discharges:

- the requirement for individual discharge monitoring and reporting to identify specific discharges of pollutants and contribution to impacts in addition to continued watershed monitoring;
- the addition of compliance schedules for pollutant and impact reductions and verification of compliance at both the farm and the watershed scale;
- the development of farm plans that identify management measures and include schedules for their implementation and verification;
- the requirement for farm operations to support a functional riparian system and its associated beneficial uses;
- the requirement to improve irrigation management, sediment and erosion control to improve aquatic conditions including nutrient levels in groundwater;
- the requirements for container nurseries to prevent contamination of local waterways by preventing exposure of rainfall runoff to their products;
- the requirement to prepare nutrient management plans to protect both groundwater and surface water quality; and
- addressing the perceived conflict between environmental stewardship, best management practices that reduce water quality impacts and the causes of food safety concerns.

Regarding functional riparian systems and buffer sizes, NMFS conducted a literature review in 2009 that focused on this issue for a project in the Russian River watershed in Sonoma and Mendocino counties. Like the proposed agricultural order, a range of buffer sizes was supported to produce benefits such as stream bank stability, temperature regulation (shade), pollutant filtration (sediments and pesticides), large woody debris recruitment, detritus inputs, and invertebrate diversity and maintenance of the water table, hyporheic flow, and flood mitigation. We found that buffer size effectiveness is variable based upon the benefit the buffer is being asked to produce as well as the environmental variables within its watershed or specific site (*e.g.*, size, slope, etc.). For example, streambank stability may be achieved by a forested buffer between 33 and 125 feet, largely depending upon watershed size and the slope of the specific site. In contrast, a 98-foot wide riparian zone is needed to consistently and effectively decrease nutrient concentrations entering an adjacent watercourse. Connectivity to the floodplain is required to recharge shallow aquifers that provide cool, summer base flows to adjacent streams that support the COLD beneficial use.

In general, we recommended that a width of at least one tree site potential be reserved for the immediate riparian zone to maximize the mix of riparian area benefits to a waterbody. This recommendation is meant for all waterbodies that support salmonids, and it is accepted that less space is generally needed for ephemeral streams or seasonal streams that did not support fish populations. We also recommend connectivity to the floodplain to provide the aquifer recharge benefits mentioned above as well as providing for low velocity refugia for fish during flood flows in the main channel. If the Water Board is interested in receiving a copy of this draft report for the development of the agricultural order, please contact the NMFS staff member identified at the end of this letter.

Regarding the perceived conflict between food safety, natural features that have significant benefits to water quality (e.g., riparian areas, vegetated swales) and installed water quality control systems (e.g., infiltration ponds, vegetated treatment systems within drainage ditches), we agree with the Water Board that the practice of removing non-crop vegetation needs to be stopped and the losses reversed. We suggest that the Water Board continue mandatory education requirements for growers (rather than only encouraging continuing education) and explore a means of requiring purchasing company buyers/auditors to receive this education as well. We suggest that the Water Board make it clear to the purchasing companies that their “recommendations” may cause violations of State and/or Federal laws and determine if there is a means to require the reporting of such recommendations to the Water Board. Inappropriate recommendations should be followed-up with an appropriate enforcement action.

In addition to the items above, NMFS has several other suggestions to improve the developing agricultural order or concerns with provisions of the preliminary recommendations. In particular, the buffer sizes for pesticide applications are not likely sufficient to prevent water body contamination by drift, particularly the ground application buffer of only 50 feet. Two of the primary pesticides identified as problematic in the preliminary agricultural order, diazinon and chlorpyrifos, have undergone ESA consultation between NMFS and the EPA. Malathion was also covered by this biological opinion which determined that the registration of these organophosphate insecticides jeopardized the continued existence of numerous ESA listed salmonid species, including those found in the Water Board’s territory. As part of the Reasonable and Prudent Alternative to avoid jeopardy, NMFS prescribed that ground applications of these pesticides should not occur within 500 feet of salmonid habitats, and that aerial applications should not occur within 1,000 feet of them (NMFS 2008). A more detailed presentation of the terms and conditions of this biological opinion was presented to the Water Board as part of our February 4, 2009, letter submitted during scoping for the development of the Total Maximum Daily Load (TMDL) plan for Pesticides/Priority Organics in the Lower Salinas Valley and Elkhorn Slough. We have included this document as an enclosure to this letter.

In September 2009, EPA responded (EPA 2009) that they would implement the 2008 biological opinion but intended to alter the spray drift buffer size to better account for application rate, spray droplet size, and water body size. Although EPA has yet to release final buffer sizes, their letter (EPA 2009) states that the no-spray buffer will not be less than 100 feet in any case. The final buffer sizes from EPA, when issued, will likely require additional review and perhaps additional ESA consultation.

There are also buffer sizes mandated by the U.S. District Court for the Western District of Washington from the case of Washington Toxics Coalition (WTC) v. EPA. The court established buffer zones around certain water bodies in California, Oregon, and Washington for numerous pesticides in addition to those already mentioned (see the EPA web page at <http://www.epa.gov/espp/litstatus/wtc/> for the complete list). The court mandated buffers are 20 yards for ground applications, and 100 yards for aerial applications. The buffers are in effect until EPA completes its consultation obligations. NMFS Southwest Region can assist the Water Board in determining the status of these national level consultations if necessary.

While the buffer size issue is obviously unsettled at the moment, NMFS recommends that its recommendation of 500 feet for ground applications, and 1,000 feet for aerial applications be followed. All proposed or mandated buffer widths (60 feet mandated by the court, 100 feet proposed by EPA, 500 feet prescribed by NMFS to EPA) for ground applications are greater than that proposed by the Water Board. Furthermore, NMFS recommends that the structure of the agricultural order be designed to automatically defer to newer, more stringent requirements as they are put in place by appropriate agencies or through litigation. The Water Board could develop a specialized webpage as part of this process and refer regulated individuals to source for the latest requirements.

NMFS also has concerns regarding the assertion that 21°C is considered the upper end of a desirable range to support steelhead trout. One 34-year old citation (Moyle, 1976) is given for this assertion. If this was ever considered acceptable in the field, please be aware that is no longer the case. As the science of fishery management has advanced, the acceptable temperature ranges for salmonids have been revised. In 2003, EPA Region X finished developing a temperature guidance meant to be consistent with both the Clean Water Act and the ESA (EPA 2003). NMFS endorsed this guidance later in 2003. This guidance recommends a summer maximum temperature (based on a 7-day average of the daily maximum values) of 16°C for salmon and trout “core” juvenile rearing areas and 18°C for salmon and trout migration and “non-core” juvenile rearing areas. Coho salmon rearing should not exceed 16°C to be protective of a fully attained COLD and RARE beneficial use.

Here in the Southwest Region of NMFS, EPA Region IX has not conducted a similar exercise, but the temperature guidance from EPA Region X is considered valid. The different environment conditions (ideal temperatures at fewer locations for shorter periods of time) in Central Coastal California are reflected biologically by the fact that there are fewer salmonid species present and that they do not utilize all portions of the Central Coast watersheds all year long.

NMFS also has some concerns with the designation of “low risk” discharges in the preliminary agricultural order. In particular, we are concerned by the blanket designation of the Central Coast Vineyard Team (CCVT) Sustainability in Practice program as low risk.

Although traditional tailwater discharges are expected to be exceedingly rare for a vineyard, stormwater discharges containing pesticide residues (particularly the legacy organochlorine pesticides that are still frequently detected in Central Coast waterbodies) may be present. Individual testing of soil and sediments in a vineyard drainage system for pesticide residues should be required to make sure that any discharges from these properties do not contain problematic pesticide residues. Vineyard systems in the Central Coast are also noted in the preliminary order document as being major applicators of chlorpyrifos. Therefore, in addition to erosion control practices to keep these residues on the property, vineyards with surface water bodies on or bordering their properties need to ensure that they have a proper functioning riparian area that will serve to filter out sediments and drift from their operations. The CCVT standards only call for a 25-foot vegetated perimeter buffer which is half the minimum requirement of the preliminary agricultural order and will not provide for other essential riparian area benefits needed to achieve an unimpaired COLD beneficial use.

NMFS recommends that the CCVT analyze its membership properties and submit the subset that meets the functional riparian system criteria and which conduct soil testing to ensure that they are not discharging pesticides designated by the Water Board in the enclosure for initial inclusion in the "low risk" discharge category. As more of their member properties conduct this testing and expand their riparian systems to meet the agricultural order's criteria, they can also be recognized as low risk properties.

Regarding the list of five practices that farming operations other than CCVT properties must undertake to be recognized as "low risk", it would be beneficial to clarify the definition of "impaired surface waterbody" in this section. As the section is written now, it could be interpreted to only include the named waterbodies and not tributaries to those waterbodies. We believe it is the Water Boards intent to designate only those properties that are not within 1,000 feet of a tributary waterbody as automatically being "low risk".

Finally, enclosure three of the preliminary order refers to a minimum filter strip width of 30 feet for construction activities. This section should be updated as appropriate to reflect the functioning riparian system sizes that are being proposed in this order.

In closing, we want to reiterate our support for the proposed agricultural order to control discharges from irrigated lands. This preliminary staff report and associated documentation very clearly lays out the water quality problems facing the Central Coast area due to agriculture and presents an ambitious, but necessary, plan for solving these long-standing issues. NMFS looks forward to working with the Water Board this summer as the program advances. Please contact Joe Dillon, NMFS Southwest Region Water Quality Coordinator, at (707) 575-6093 or [Joseph.J.Dillon@noaa.gov](mailto:Joseph.J.Dillon@noaa.gov) with any questions or comments regarding this letter or with further requests regarding this matter.

Sincerely,



Steven A. Edmondson  
Northern California Habitat Supervisor  
Habitat Conservation Division

Enclosure: February 4, 2009 letter to Larry Harlan, CCRWQCB

cc: Bob Hoffman, NMFS, Long Beach, California  
Chris Yates, NMFS, Long Beach, California  
Dick Butler, NMFS, Santa Rosa, California  
Joyce Ambrosius, NMFS, Santa Rosa, California  
Karen Grimmer, Monterey Bay NMS, Monterey, California  
Bridget Hoover, Monterey Bay NMS, Monterey, California  
Lisa Lurie, Monterey Bay NMS, Monterey, California  
Janet Parrish, U.S. EPA Region IX, San Francisco, California  
Scott Hecht, NMFS, Lacey, Washington  
Tony Hawkes, NMFS, Lacey, Washington

### References

EPA 2009. Letter to Jim Lecky, Director, Office of Protected Resources, National Marine Fisheries Service, Silver Spring, MD. September 10, 2009. 21 pages. Available at: <http://www.epa.gov/espp/litstatus/wtc/nmfs-signedresponse.pdf>

EPA 2003. EPA Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards, United States Environmental Protection Agency, Region 10 Office of Water. EPA 910-B-03-002, April 2003. 57 pages. Available at: <http://yosemite.epa.gov/r10/water.nsf/6cb1a1df2c49e4968825688200712cb7/b3f932e58e2f3b9488256d16007d3bca!OpenDocument>

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# COUNTY OF SANTA BARBARA



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January 3, 2011

EXECUTIVE OFFICE

Email: [AgOrder@waterboards.ca.gov](mailto:AgOrder@waterboards.ca.gov)

Howard Kolb, Agricultural Order Project Lead Staff  
California Regional Water Quality Control Board - Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401-7906

**Re: Subsequent Environmental Impact Report for the Regulation of Waste Discharges from Irrigated Lands (Order No. R3-2011-0006)**

Dear Mr. Kolb:

The County is cognizant of the important responsibility that the Central Coast Regional Water Quality Control Board has in protecting the State's water and ensuring that the opinions of the many different stakeholders are taken into consideration. Accordingly, the County wishes to be part of the ongoing dialog regarding the regulation of waste discharges from irrigated lands and help facilitate opportunities for its varied constituents to participate in the process.

As the first step in such a process, the County is submitting comments from the Planning and Development Department and Public Works Department-Santa Barbara County Flood Control and Water Conservation District regarding the SEIR for your consideration. In addition, the County would appreciate the opportunity to review and comment on any forthcoming revisions to the SEIR.

In order to help engage the community on this issue, the County respectfully requests that the Central Coast Regional Water Quality Control Board extend the time period for submittal of comments on the Draft Agricultural Order No. R3-2011-0006 and Draft Monitoring and Reporting Program by 90 days. The additional time will provide County staff with an opportunity to consult with the agriculture community, environmental groups and other interested organizations.

Thank you for the opportunity to submit these comments. The County looks forward to continued dialog on this matter. If you should have further questions, please do not hesitate to contact my office directly at (805) 568.3400.

Sincerely,

*for Sharon Friedrichsen*

Chandra L. Wallar  
County Executive Officer

cc: Glenn Russell, Director, Planning and Development Department  
Scott McGolpin, Director, Public Works Department  
Cathleen M. Fisher, Agriculture Commissioner/Director of Weights & Measures, Agricultural Commissioner's Office  
Nick Bruckbauer, Development Review Engineer, Flood Control Water Agency

Enclosures:

Planning and Development Department letter, December 20, 2010  
Public Works Department, Santa Barbara County Flood Control District letter, December 17, 2010

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# County of Santa Barbara Planning and Development

Glenn S. Russell, Ph.D., Director  
Dianne Black, Director of Development Services  
Jeff Hunt, Director of Long Range Planning

December 20, 2010

Howard Kolb  
Agricultural Order Project Lead Staff  
California Regional Water Quality Control Board  
Central Coast Region  
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San Luis Obispo, CA 93401-7906

Email: [AgOrder@waterboards.ca.gov](mailto:AgOrder@waterboards.ca.gov)  
Fax: (805) 543-0397

Re: Subsequent Environmental Impact Report for the Regulation of Waste Discharges from Irrigated Lands (Order No. R3-2011-0006)

Dear Mr. Kolb:

Thank you for the opportunity to comment on the Subsequent Environmental Impact Report (SEIR) for the Regulation of Waste Discharges from Irrigated Lands. The Planning and Development Department offers the following comments for your consideration:

### **General Comments**

The SEIR should include a Mitigation Monitoring and Reporting Program (MMRP) required pursuant to CEQA. The document should also profile the timeline showing the sequence of events for the proposed project since initial adoption of the 2004 Agricultural Order in July 2004 through release of the SEIR. The SEIR repeatedly refers to a prior staff report and appendices. The relationship of these documents should be discussed in the SEIR and any appendices used for analysis in the SEIR included in the document. There are multiple references in the SEIR when the reference is listed as see "Error! References source no found." This should be corrected to refer to the document title.

### **2.3. Project Location**

Figure 1. illustrates a regional map showing the general project area with irrigated agricultural lands with Prime, State and Unique Farmland in white shaded areas. The scale of this map, which includes the Santa Cruz, San Benito, Monterey, San Luis Obispo and Santa Barbara counties makes it difficult to identify the location of affected parcels for this proposed project. CEQA Section 15128(a) requires that a project description identify the precise location and boundaries of the proposed project shown on a detailed map, preferably topographic. The location of the project shall also appear on a regional map. The SEIR should contain individual detailed maps illustrating the precise location and boundaries of the proposed project for each

affected county. Additionally, a table listing all affected Assessor Parcel Numbers (APN's) for each County should be included in the SEIR. In the absence of a detailed map for Santa Barbara County identifying irrigated agricultural lands, and a listing of all affected APN's analyzed under this SEIR, the County is currently unable to ascertain affected parcels for the proposed project.

#### **2.4. Description of the Project (Renewed Order)**

The SEIR states that the proposed draft 2011 Agricultural Order groups farm operations, or dischargers, into three tiers with various compliance requirements. Countywide detailed maps identifying affected APN's within each distinct tier should be included in the SEIR. In the absence of such detailed maps, the County is unable to ascertain parcels affected by the proposed tier grouping for the proposed project.

#### **3. CEQA Authority for the Subsequent Environmental Impact Report**

Table 1. Changes in Environmental Checklist from 2004 Agricultural Order to the 2011 draft Agricultural Order should be expanded to include a column that identifies mitigation measures that will reduce impacts to "less than significant" with mitigation for agricultural resources. Furthermore, biological resource impacts and mandatory findings of significance which identify "potentially significant impacts" should clarify if these impacts can be reduced to a level of "less than significant" with mitigation. If mitigations are proposed, these should be included in the table. As currently written, it is not clear whether these impacts are "significant and unavoidable."

#### **4. Potential Impacts**

The SEIR presents contradictory statements concerning environmental impacts resulting from the proposed project, as noted below:

The approval of the proposed draft 2011 Agricultural Order generally will not result in adverse environmental impacts as contemplated in CEQA<sup>1</sup>...However, renewal of and revisions to the 2004 Agricultural Order could result in potentially significant adverse environmental impacts with respect to agricultural resources and biological resources<sup>2</sup>...The revisions to the project may, in fact, not result in new more severe environmental impacts<sup>3</sup>...The Water Board staff has not received any specific evidence by commenter's and has little evidence in the record to demonstrate conclusively that the proposed draft 2011 Agricultural Order will result in significant adverse environmental effects on agricultural or biological resources<sup>4</sup>...The Water Board staff expects that compliance with the proposed draft 2011 Agricultural Order will result in significant beneficial impacts on the environment<sup>5</sup>...The revisions to the project may, in fact, not result in new more severe environmental impacts<sup>6</sup>...There is not sufficient information to determine the scope of any changes in environmental effects and any potential

<sup>1</sup> Subsequent Environmental Impact Report for the Regulation of Waste Discharges from Irrigated Lands (Order No. R3-2011-0006), November 2010, at 7.

<sup>2</sup> Id at 8.

<sup>3</sup> Id at 8.

<sup>4</sup> Id at 8.

<sup>5</sup> Id at 8.

<sup>6</sup> Id at 8.

impacts are very speculative<sup>7</sup>...In addition, even if all dischargers take the same actions, the adverse environmental impacts may be less than significant.<sup>8</sup>

Table 1. Changes in Environmental Checklist from 2004 Agricultural Order to the 2011 draft Agricultural Order clearly identifies “potentially significant impacts” and impacts that can be reduced to “less than significant” with mitigation. This information should be reconciled with the above statements to definitively indicate what adverse environmental impacts will result from the proposed project. The SEIR should identify, disclose and mitigate for impacts resulting from this project.

## **Section 4.1 Agricultural Resources**

### **Section 4.1.1 Introduction**

The SEIR should include a table illustrating the number of acres of irrigated farmland categorized by Prime Farmland, Farmland of Statewide Importance, Farmland of Unique Importance for each county analyzed in this SEIR.

The SEIR states that potential impacts to Farmland of Local Importance were not considered “because these lands are not irrigated and therefore not included in the Agricultural Order.”<sup>9</sup> In Santa Barbara County, many dry farm crop areas have been converted to irrigated crops, especially in the central and northern part of Santa Barbara County. For example, from 1995 to 2005, wine grape acreage increased more than 12,000 acres while dry farming decreased more than 14,000 acres.<sup>10</sup>

The SEIR appears to only rely upon California Department of Conservation 2008 Important Farmland maps which provide data on soil type and land use for agricultural parcels. These maps are only updated every four years and as such the SEIR should include local agricultural land use data updated annually by municipalities in the affected counties. For example, the County of Santa Barbara Agricultural Commissioner’s GIS database crop layer should be used in analyzing the proposed project.

This information can be found at <http://www.countyofsb.org/agcomm/default.aspx?id=11588>.

### **Section 4.1.2 Williamson Act and Farmland Security Zone Contracts**

The section discusses the Williamson Act but does not address potential impacts to land enrolled in the Williamson Act. The SEIR should include analysis of the proposed project on lands enrolled in Williamson Act contracts within the project area.

#### **4.1.3. Analysis**

The SEIR references Appendix F of the Draft Staff Report for the Draft Agricultural Order as a source of information regarding analysis of proposed riparian habitat buffers. It is unclear if Appendix F is intended to substantiate the conclusions drawn in the environmental document as this information is not provided as an appendix to the SEIR. Analysis for this section should be

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<sup>7</sup> Id at 8.

<sup>8</sup> Id at 8.

<sup>9</sup> Id at 9

<sup>10</sup> Santa Barbara County AREA Study, 2007

included as an appendix in the SEIR with a discussion of the relationship of this information to pertinent sections of the document.

The SEIR should include analysis of the proposed project and recommended mitigation measures for operators that participate in the California Leafy Green Products Handler Marketing Agreements (LGMA). The California Department of Food and Agriculture (CDFA) provides oversight of the LGMA which promotes food safety practices designed to reduce the sources of potential contamination on farms or fields. Recommended methods for compliance with the proposed project include riparian habitat buffers and sedimentation basins. These options should consider compatibility with the requirements of the LGMA for operators in the proposed project area.

### **Riparian Habitat Buffers**

The SEIR acknowledges that agricultural resources and farmland could be converted to non-farm uses due to new conditions, such as requiring buffers, or due to economic impacts that result in selling of farmland for other uses.<sup>11</sup> The document further states that dischargers may choose to install riparian habitat buffer strips to comply with the Order which could result in taking land out of crop production.<sup>12</sup> The SEIR indicates that approximately 82 to 233 acres of agricultural lands would be taken out of production as a result of the installation of riparian habitat buffers. The SEIR should include a table documenting these 82 to 233 acres, identified by APN's and by county.

A total of four mitigation measures are presented that will reduce to a level of less than significant the conversion of farmland and agricultural resources:

Mitigation Measure #1 Dischargers could choose to install other practices besides buffers to insure turbidity, sediment and temperature water quality standards are met.<sup>13</sup>

This measure recommends "other practices" however presents no analysis or information as to what these practices might be and how they would effectively mitigate for the conversion of agricultural resources and farmland. The SEIR should include a description and analysis of these "other practices" with a discussion on their effectiveness in mitigating impacts to agricultural resources.

Mitigation Measure #2: Dischargers could plant ground cover, berry bushes and/or fruit/nutbearing trees which would serve as both agricultural land as well as a buffer. The land would not be converted to a non-agricultural use because it would still generate economically viable produce, but would function as a buffer. This buffer containing agricultural land would need to meet the requirements of the Agricultural Order.

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<sup>11</sup> Id at 8.

<sup>12</sup> Id at 12.

<sup>13</sup> Id at 13.

This statement assumes that planting ground cover, berry bushes and/or fruit/nut bearing trees on parcels subject to the requirements of this order would result in economically viable produce. There is no discussion of the cost to install, maintain and harvest these crops. Furthermore, it is unclear if any of these recommended buffer crops would require irrigation and as such be subject to the requirements of the Agricultural Order. Additional analysis of this measure should be included in the document.

The SEIR should further analyze this measure and provide a list of appropriate and acceptable buffer crops, identify cost to install, maintain and/or harvest for potential economic profit, and substantiate how this measure reduces the conversion of farmland or agricultural resources to a level of less than significant.

Mitigation Measure #3: Dischargers could eliminate any activities that cause erosion, generate sediment, or otherwise may cause or contribute to exceedances of water quality standards for turbidity, sediment and temperature, near a waterbody so may not need to install a buffer.

The SEIR should identify the types of activities for this measure that cause erosion, generate sediment, or otherwise may cause or contribute to exceedances of water quality standards for turbidity, sediment and temperature, near a waterbody which, when eliminated, effectively mitigate this impact to a level of less than significant. Additional analysis of this measure should be included in the document.

Mitigation Measure #4. Dischargers may choose to install a riparian habitat buffer and find that it decreases erosion on the farm and serves to help maintain soil and sediment on the farm (2000 Information Manual Riparian Vegetation Management for Pierce's Disease in North Coast California Vineyards).

The SEIR should identify the types of riparian habitat buffers that decrease erosion. There is no discussion of the type of vegetation, maintenance requirements, and/or irrigation needs for buffers that will help maintain soil and sediment on agricultural lands. Furthermore, there is no analysis demonstrating that this measure will effectively mitigate this impact to a level of less than significant. Additional analysis of this measure should be included in the document.

### **Sediment Basins**

It is unclear if the use of sediment basins is an agricultural resource impact or is presented as a mitigation measure. "Staff does not anticipate the installation of sedimentation basins taking a large amount of land out of production and does not find this impact to be significant."<sup>14</sup> The SEIR should clarify if sediment basins are proposed as a mitigation measure to reduce the conversion of farmland or agricultural resources to a level of less than significant. As a mitigation measure additional discussion should be included which defines the thresholds which trigger the use of a sediment basin, appropriate type, size, level of permanence, cost to install, maintain and/or remove etc.

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<sup>14</sup> Id at 13.

### **Conversion due to Economic Pressure**

It is unclear if conversion of agricultural resources or farmland due to economic pressure is considered an agricultural resource impact. It is possible that the economic burden of new requirements for the draft 2011 Agricultural Order (i.e. fees paid for required studies and monitoring) and compliance (implementation of mitigation measures) may result in some agricultural businesses ceasing operations. This may result in conversion of agricultural land to non-agricultural uses, particularly where those agricultural lands are nearby or adjacent to urban or suburban uses.

The SEIR presents five activities that operators may adopt to reduce the cost of compliance with the proposed project. No analysis is presented which substantiates the relationship between implementation of these five activities and mitigation for potential loss of farmland and agricultural resources. The SEIR should clarify whether conversion due to economic pressure is an impact and provide additional analysis on measures that will mitigate this impact.

### **4.2. Biological Resources**

This SEIR acknowledges that the proposed project "...could result in reduction in surface water flows that could in turn result in potentially significant adverse environmental effects on biological resources that would be more severe than identified in the Negative Declaration for the 2004 Agricultural Order."<sup>15</sup> This section also indicates

Staff finds that implementation of the Order will have a net positive impact on biological resources, including reduction of pollutants in receiving water and groundwater and overall habitat improvements.

It is unclear from the narrative presented in this section what impacts were identified and what, if any, mitigation measures are proposed. Table 1. Changes in Environmental Checklist from 2004 Agricultural Order to the 2011 draft Agricultural Order identified potentially significant impacts for Biological Resource areas A, B, C, and D. Table 1 should be expanded to include mitigation measures for potentially significant impacts to biological resources as well as beneficial impacts.

### **4.3. Mandatory Findings of Significance**

The SEIR recommends that Mandatory Findings of Significance be changed from no impact to potentially significant impact. The SEIR should analyze, disclose, and mitigate for the potentially significant impacts identified in this document.

### **5. Discussion of Climate Change**

This section contains a discussion that provides no analysis of greenhouse gas emissions associated with the proposed project and recommended mitigation measures. Furthermore, the document concludes that there will be "no impact" as a result of the proposed project. This section should be expanded to include a thorough discussion, analysis, disclosure and mitigation for any adverse environmental impacts associated with greenhouse gas emissions.

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<sup>15</sup> Id at 23.

## 6. Discussion of "No Impacts" Finding

Pursuant to CEQA Guidelines Section 15128 the SEIR should include a discussion of the issues that were found not to be significant associated with the revisions to the agricultural order. This section states

This SEIR addresses only those impacts found to be potentially more severe than previously identified in the 2004 Negative Declaration. See attached 2004 Negative Declaration for discussion of no impacts.

A new Initial Study or other analysis which explicitly addresses the findings in CEQA Section 15162 is necessary in order to substantiate the conclusion that no other impacts in the 2004 Initial Study and Negative Declaration for the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands remain less than significant. The information as presented in the SEIR is unsubstantiated and conclusory.

## 8. Alternatives

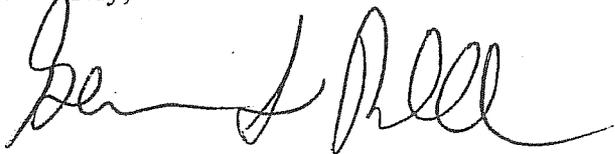
This section indicates that alternatives are discussed in Appendix I of the Draft Staff Report recommending the Draft Agricultural Order. Appendix I should be included in the SEIR as an appendix to the environmental document. The absence of this information as an appendix of the SEIR precludes substantive review of project alternatives.

## 9. Cumulative Impacts

This section refers to an evaluation of worst case scenarios with respect to agricultural and biological resources as discussed in a document that is not identifiable. The line item listing this document states "Error! Reference source not found." This section should be corrected to include the name of the document used to analyze cumulative impacts and this document should be attached as an appendix to the SEIR. The absence of this information as an appendix of the SEIR precludes substantive review of cumulative impacts

The County looks forward to continued dialogue on this project. If you should have further questions, please do not hesitate to contact my office directly, or Jeff Hunt, Director of Long Range Planning Division, at (805) 568-2072.

Sincerely,



Glenn Russell, Ph.D.

Director of Planning and Development



Santa Barbara County Public Works Department  
Flood Control & Water Agency

December 17, 2010

Howard Kolb, Agricultural Order Lead Staff  
California Regional Water Quality Control Board, Central Coast Region  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401-7906

**RE: Draft Order, Monitoring and Reporting Program, Staff Report,  
and Subsequent Environmental Impact Report  
for the Regulation of Waste Discharges from Irrigated Lands**

Dear Mr. Kolb:

Thank you for the opportunity to review the subject documents. The Santa Barbara County Flood Control District has the following comments.

The Santa Barbara County Flood Control District owns and maintains several drainage ditches, channels, and basins throughout the County that are adjacent to agricultural lands. We have concerns that the new regulations could put additional maintenance and/or monitoring responsibilities on the District that may be infeasible.

It would be helpful if the subject documents would identify more clearly what, if any, additional requirements would be placed on the local agencies and Flood Control Districts.

Please let us know if you have any questions or concerns.

Sincerely,

SANTA BARBARA COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT

By: 

Nick Bruckbauer  
Development Review Engineer

RAR\_Agricultural Order



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE

Monterey Bay National Marine Sanctuary  
299 Foam Street  
Monterey, California 93940

Mr. Jeffrey Young  
Chair  
Central Coast Regional Water Quality Control Board  
895 Aerovista Pl., Suite 101  
San Luis Obispo, CA 93401

January 3, 2011

Re.: Comments on the "Draft Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands"

Dear Chairman Young:

On behalf of Monterey Bay National Marine Sanctuary (MBNMS), I would like to acknowledge the Regional Board staff's effort to revise and improve the prior draft Irrigated Lands Agriculture Order and offer support as this process moves forward. This draft addresses many of the public comments and is responsive to the following recommendations that were outlined in our letter dated April 1, 2010:

<b>MBNMS Comments:</b>	<b>CCRWQCB Response:</b>
Need for further technical review of scientific feasibility	Staff consulted with technical partners and provided citations within supporting documentation
Need for further strategic prioritization of risk	Staff developed a tiered approach for defining risk categories and scaled requirements in accordance with those categories
Need for strategic prioritization of data collection and analysis	Staff developed tiered monitoring requirements that correspond to risk categories and a phased approach to when monitoring data must be reported.
Need for flexibility and recognition of the diversity within the agricultural industry	Staff attempted to provide multiple options for growers to demonstrate compliance with the requirements.

I am encouraged to see that the revised draft supports and rewards collaboration and coordination on the local or regional scale to implement water quality protection and treatment. There should be continued consultation with technical experts on feasible methods for growers to evaluate and minimize their impacts to water quality while meeting the regulatory requirements. We know there is a motivated community of Central Coast growers who have come a long way in their



ability to address these problems and have demonstrated success in improving water quality conditions.

Improving both surface and ground water quality on the Central Coast will require significant resources and commitment from all parties involved to support necessary research, adapt practices, document activities, analyze and report out on data, and ultimately show improvement to water quality conditions. As stated in the Staff report, the MBNMS Condition Report and most recently in the State Water Resources Control Board's Summary of Toxicity in California Waters 2001-2009, we do have significant water quality problems within these watersheds. While much has been done to improve conditions, a more strategic and enforceable approach is necessary to quantify both the efforts and the effectiveness of those efforts. I believe this draft is a step in the right direction.

I would also like to applaud staff for working to improve communication with the many stakeholder groups as this process has unfolded. MBNMS continues to be fully committed to working with the Regional Board, the agricultural industry, and all interested stakeholders to protect and enhance water quality, building upon the collaborative spirit that has been a hallmark of this region. Should you have any questions please contact me at (831) 647-4258.

Sincerely,

A handwritten signature in cursive script that reads "Paul Michel".

Paul Michel

Sanctuary Superintendent