CENTRAL COAST VINEYARD TEAM
Promoting Sustainable Winegrowing

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Via Email
AgOrder@waterboards.ca.gov

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

Re: Staff Proposal for the Ag Order Draft (November 19)

Dear Mr. Young & Mr. Briggs:

Thank you for the opportunity to comment on the Draft Order No R3-2011-0006 Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands.

The Central Coast Vineyard Team is a non-profit grower group dedicated to sustainable winegrowing since 1994. Our members represent 80,000 acres and are actively engaged in our programs: research projects, demonstration sites, grower-to-grower education, self-assessment. Over the years we have studied various practices affecting water quality (cover cropping, filter strips, reduced risk pest management, roads management) and have outreached these results to tens of thousands of growers.

I personally have a Masters Degree in agriculture specializing in soil-plant-water relations, and prior to working with the Vineyard Team, I was a lecturer at Cal Poly, researcher at the Irrigation Training & Research Center, and co-authored a text book. My comments are based both from my technical expertise and 13 year history with the Vineyard Team.

Review Board Direction to Staff from May and July Workshops

We were very pleased with the Board's comments and directions to staff during the May and July workshops. The following represents specific Board comments, questions, and directions and should be used as a framework for assessing the Staff and other proposals:

1. Staff should not try to do everything in 5 years; consider this Order as a "stage". This might justify developing a 10 year program.
2. Staff should consider top two priorities (surface water nitrates & organophosphates); secondary sediment and riparian issues should be addressed later.
3. Staff should prioritize location; the 303d list could be one approach, but it still might still be too broad to effectively narrow the focus.
4. Order should ensure that the costs and efforts (to farmers and state) are justified by the results.
5. Is there enough staff to analyze the information required?

6. Growers should be given credit for good faith efforts that are specified in the Order and should be able to easily prove it.
7. Consider a *minimum* threshold for scale – perhaps growers under X acres should not be in the program.

Sustainability in Practice (SIP) Certification

We are very disappointed that the SIP Certification program was not mentioned in the current draft to qualify for a low tier based on a few comments from people who either misunderstood and/or misrepresented the program.

SIP Certification should absolutely qualify for the lowest tier in the Ag Waiver because of its clear connection to practices that protect water quality and rigorous inspection and audit components. Among other things, SIP Certification *requires* several practices that directly relate to protecting water quality. These practices are then verified by an independent inspector to confirm the growers' meeting the strict eligibility requirements:

- Prohibits the use of chlorpyrifos and diazinon
- Requires the use of soil and plant measurements to determine irrigation scheduling to reduce deep percolation of irrigation water
- Requires the use of a nutrient budget to minimize inputs and maximize nutrient efficiency
- Requires the use of vegetation and additional practices during rainy season to protect the soils, minimize erosion, reduce stormwater runoff, and filter the stormwater
- Complete records and on-site inspection of operations by independent inspector
- Final certification is granted by an independent advisory committee – free from conflict of interest – consisting of industry representatives, university experts and agency staff (Ag Department and RWQCB staff)

Recommendation:
I strongly urge Board and Staff to include SIP as being eligible in the lowest tier and that documentation of SIP Certification serve as any and all compliance documents for this order. SIP Certification is a perfect example of Board Comment #6 directing the program to recognize grower efforts. I encourage Board and Staff to contact me directly with questions or concerns or visit our website to learn more (http://www.vineyardteam.org/sip/standards-and-rules.php).

Current Draft Proposal – Appropriateness of Proposed Tier Criteria

For water quality impacts to occur, both the *transport method* and *constituent* need to be present. Several of the staff's proposed tier triggers do not account for either of these mechanisms and do not make sense in terms of prioritizing operations based on risk to water quality.

- 1000 acre threshold
- 1000 feet proximity to 303d waterbody

In addition, the 1,000 acre threshold and 1,000 ft proximity thresholds are not factors that a grower has control over – they can not be changed. As a result in the current proposed staff draft, there are few opportunities for a grower to move to a lower tier based on changing farming practices that protect water quality.

An effective Ag Order program would be structured to incentivize practices that protect water quality, not one that punishes growers (in terms of compliance and administration) based on scale and location without regards to actual water quality risk.

In addition**, the 303d List (specific to Toxicity, Nutrients, Pesticides, Toxicity, and Water Temperature as defined in the Draft Order) represents 122 unique waterbodies and over 36,000 unique miles.** (Source: Analysis from http://www.waterboards.ca.gov/water_issues/programs/tmdl/2010state_ir_reports/2010_combo303d.xls)
Clearly the proposed definitions in the Draft Order do NOT narrow the focus and create a framework to prioritize efforts. An efficient Ag Order would prioritize based on the most predominant impairments and would be consistent with the Board comments and direction from the May workshop (Comment #2 and #3).

Recommendation:
Reconfigure Tier triggers to reflect both prioritized transport and constituents; define triggers that growers have control over so practices/conditions can be rewarded by moving them to a less burdensome tier. The Ag Proposal prioritizes growers in the coalition based on larger nitrate hazard index or tailwater discharges (Ag Proposal, pg 13).

If using a geographic focus for prioritization to define tiers, narrow the list to include 303d waterbodies specifically listed for chlorpyrifos, diazinon, and nitrate. Using this definition would affect 55 unique waterbodies representing over 700 unique miles. Over half of these 55 listed waterbodies have multiple listings, so it would be an efficient way to prioritize locations. In addition, any geographically based list that is referenced in the order as a trigger should be included in the Order itself to eliminate any possibility of confusion.

Overview of Water Quality Issues as They Relate to Agriculture

Examples of How Growers Could Fall Into a Higher Tier Despite Lack of Risks to Water Quality

To have a productive discussion regarding the framework of a regulatory program that will result in water quality improvements, we should review the overarching operational factors (*method of transport and constituents*) that impact ground and surface water quality.

1. Groundwater

- Transport: Deep percolation of water
- Constituent: Nitrate

Vineyard Specific Conditions Relating to Groundwater

- Transport: Vineyards almost exclusively use drip irrigation, applied periodically throughout the dry, growing season. Most growers irrigate LESS than what the vine needs (deficit irrigation) to minimize over growth of the canopy and leaves (which is undesirable) and to promote the vine's energy for producing high quality fruit. This results in minimal irrigation water flowing past the rootzone.
- Constituent: Based on conversations with Mark Battany, UCCE Farm Advisor, vineyards may apply up to 25 lbs N per acre per year. In fact most growers apply much less than this. How is this possible? 1. Wine grapes have a low N requirement; 2. Commonly used cover crops and crop residue provide a portion, *if not all*, of the crop's nitrogen requirement; and 3. Excess nitrogen can produce overly vigorous canopies, which is undesirable (because growers want the vine's growth focused on quality fruit).

Yet, ALL growers in the proposed order (regardless of Tier and/or nitrate risk index) are required to submit groundwater testing results, collected by a PE or equivalent professional. These requirements are overly burdensome, both for growers and staff, and do not make sense with regards to 'prioritization'.

2. Surface Water

- Transport: Irrigation water runoff, stormwater
- Constituent(s): Nutrients, organophosphate and diazinon, sediment

Vineyard Specific Conditions Relating to Surface Water

- Transport: Vineyards primarily use drip irrigation; there is no irrigation water runoff; many use cover crops in both the cropped and non-cropped areas of the field which reduces stormwater volumes running off the field, protects the soil from being disrupted and moving, and filters the stormwater runoff to capture and hold sediment.
- Constituent:
    - Nutrients: Because small amounts of nutrients are applied during the non-rainy months (see previous discussion), and growers irrigate vineyards with drip irrigation, 1. Nutrients can not be transported on the surface via irrigation because there is no irrigation runoff; 2. They are *not available* for transport via stormwater during the rainy season because of their uptake earlier in the season.
    - Sediment: Vineyards use cover crops and resident vegetation throughout their farms, both in cropped and non-cropped areas. Rainy season cover crops protect water quality by 1. Reducing stormwater runoff volumes because they increase the amount of rain that enters the soil due to improved infiltration rates from improved soil structure; 2. Stabilizing the soil to prevent its movement/transport; and 3. Filtering the stormwater itself.
    - Chlorpyrifos and diazinon: Because of the lack of irrigation tailwater, presence of cover crops during the rainy season, and dry season applications of these materials, likelihood of transport off site is limited.

Nevertheless, based on the proposed tier triggers, there are several situations where vineyards would fall into Tier 2 or 3, even though they do not have either the *transport or constituent* factors that could potentially affect water quality. For example, a 1,000 acre vineyard or a vineyard within 1,000 feet of a 303d listed waterbody would not be in Tier 1 regardless of their not using OP's, not having tailwater, and not being a crop with a high loading potential. **This does not make sense.**

When questioned about these issues, staff responded that growers could apply to the Executive Officer to be in a lower tier (Order, pg 11, #13). But if application to a lower tier is the answer to moving growers to a different tier based on their operational practices as they potentially affect water quality, then the **Tier definitions do not adequately address potential risks to water quality and are not appropriate for this program**.

In addition, many of the monitoring requirements specified in the MRP for Tier 3 dischargers specifically refer to tailwater – yet the presence or absence of tailwater are not defined anywhere as a Tier trigger.

Recommendation:
Reconstruct the tiering priorities consistent with the Ag Proposal Coalition definitions that address both transport (Tailwater) and constituent (Nitrate Hazard Index). Scale the farm plan and reporting requirements for operators with lower transport and constituent risk accordingly. A low risk grower should not have to read 49 pages of an Order and 24 pages of an MRP to know how to comply.

Ag Alternative

The Revised Ag Alternative addresses both surface and groundwater quality with measurable and meaningful milestones and timelines (Ag Proposal, p 19). There are several components of the Ag Alternative that directly address water quality issues and accountability that should be strongly considered:

- Prioritizes based on water quality risk (tailwater, high nitrate hazard index) (Revised Ag Proposal, p 13)
- Addresses both transport and constituent related to potential water quality risk, as defined by the Coalition definitions (Revised Ag Proposal , p 13)
- Incentivizes adopting practices that affect water quality (inherently through coalition membership)

- Specifies unique actions required by operations with a higher potential risk to water quality based on their site specific issues – not all growers are treated equally
- Provides mechanisms for technical support to growers (Revised Ag Proposal, p 17)
- Provides accountability through auditing of 20% of the coalition membership (Revised Ag Proposal, p 14)

Final Recommendations

- Include SIP Certification as qualifying into the lowest Tier designation
- Reconfigure Tier definitions and triggers to identify potential risks to water quality based on transport and constituent, as outlined in the Ag Proposal
- Remove groundwater testing and reporting for growers in lower tiers and/or growers with a low nitrate risk index
- Use the nitrate hazard index as defined by UCCE, not a modified version as presented in the Staff's Proposed Draft Order
- If prioritization based on location is pursued, narrow the 303d list to specify chlorpyrifos, diazinon or nitrate listings; clarify confusing or ambiguous language throughout the document(s) referring to the 303d list; define the list within the Order's body
- Simplify low tier requirements and document organization so that growers don't have to read through the entire Order and MRP to determine how to comply
- Consider a low acreage threshold for the Order; growers with less than 10 acres are not covered under this order

As we move forward in trying to develop a program that will be more than an administrative exercise and actually result in improved water quality, please remember the Board comments and directives from the workshops:

- Prioritize for constituents and regions – address sediment and riparian issues later
- Justify the costs (to growers & state) with results
- Create a program to give growers credit for implementation, incentivize adoption of practices, and make it easier to show that they're doing a good job

Sincerely,

Kris O'Connor, M.S.
Executive Director
Central Coast Vineyard Team