

TO
Rachel Prat
State of California Regional Water Quality Control Board
North Coast Region
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95403

JOB NO. 0005.00
DATE November 23, 2015

SUBJECT:

Copies	Date	Description
1	November 2015	Memorandum: Draft Order No. R1-2016-0002 Comments

REMARKS

The attached are comments prepared by Brelje & Race on behalf of Sonoma West Holdings regarding the Draft Order No. R1-2016-0002: General Waste Discharge Requirements for Dischargers of Wine, Beverage and Food Processor Waste to Land.

The revised draft WDRs were released for public comment on October 23, 2015 and comments are being accepted through November 23, 2015. The WDRs have be scheduled for public hearing on January 28, 2016. Brelje & Race provided general comments in 2014 when the original draft General Order was released for review as well.

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COPY TO
Mike Babbini, SWH

SIGNED 
Richard Ingram

MEMORANDUM

TO: Regional Water Quality Control Board, Region 1

FROM: Sophia Grubb; Richard Ingram, Brelje & Race Consulting Civil Engineers

SUBJECT: Draft Order No. R1-2016-0002: General Waste Discharge Requirements for Discharges Of Wine, Beverage And Food Processor Waste To Land
B&R File No. 0005

DATE: November 23, 2015

On behalf of Sonoma West Holdings, Brelje & Race is submitting comments on the revised draft General Waste Discharge Requirements (WDRs) for discharges of wastes to land by wine, beverage and food processors. The proposed General WDRs would replace the existing General WDRs for wineries as well as be applied to all other processors of beverages and food who discharge to land. The revised draft WDRs were released for public comment on October 23, 2015 and comments are being accepted through November 23, 2015. The WDRs have been scheduled for public hearing on January 28, 2016. Brelje & Race provided general comments in 2014 when the original draft General Order was released for review as well.

The attached questions and comments are offered in the hope that the final general WDRs will be a clear document that is effective in protecting groundwater quality without imposing unnecessary financial burden on food and beverage processors. Our major concerns about the document include a lack of clarity regarding who is subject to these WDRs, confusion regarding who is subject to submitting a Facility-specific Nutrient Management Plan and required to monitor groundwater, and that the new constituent limits, specifically for Sodium and Chloride, may not be appropriate for all dischargers. The Regional Board staff may need more time to clarify the document and come to an understanding with the community of food and beverage processors as to what requirements are appropriate before the Order is adopted and any of its ambiguities become onerous for the dischargers and the Board staff.

Sonoma West Holdings is a multi-tenant food and beverage processing facility that discharges process waste to land. Highlighted areas of concern for Sonoma West Holdings in the attached list of comments include:

1. How the draft General Order applies to land treatment systems (No. 1 and 2)
2. Inappropriate Sodium and Chloride limits (No. 1 and 4)
3. Facility-specific Nutrient Management Plans – when required? (No. 9)
4. Unreasonable costs for monitoring (No. 5, 7 and 12)

5. Ambiguities in draft document generating uncertainty regarding cost for compliance (No. 6, 7, 8, 9, and 10)

Brelje & Race would recommend the Board's consideration of the draft be delayed until the issues discussed in the comments can be comprehensively addressed. Further, the draft General Permit should be amended to allow those existing non-winery discharges with existing individual WDRs to opt out in favor of continuing with new individual WDRs if, in the opinion of the discharger, the new General Permit cannot be reasonably applied.

Comments by Brelje & Race Consulting Civil Engineers:

Draft General Waste Discharge Requirements for Discharges Of Wine, Beverage And Food Processor Waste To Land

No.	Subject	Draft language	Comments
1.	WDRs for Land Treatment Systems	The permit states “This Order covers the discharge of WBF processing waste to land for the purpose of disposal or reuse. Reuse activities covered by this Order include the use of treated process wastewater as irrigation or frost protection water on agricultural land”	It is not clear from this and other language in the draft permit if this Order would cover facilities relying on land treatment systems, such as overland flow, which dispose of water that would be considered untreated process wastewater. If land treatment systems are covered under this Order, effluent limitations for these systems should be imposed in a way to reflect that the land application is part of the treatment process. Three ways that land treatment could be recognized: 1.) Establish land treatment system specific limits imposed on the effluent being applied to land, 2.) Imposing effluent limits in the Order to water collected from the subsurface and therefore after treatment or 3.) developing individual WDRs for the specific discharger
2.	Individual permits	The draft WDR does not address dischargers who are currently operating under individual permits	Under what conditions may a permittee retain individual WDRs? Will permittees currently permitted for overland treatment be required to change to the General WDRs? If permittees have individual WDRs and are required to be permitted under this general order, what will be the time frame and submittal requirements for conversion to the General Permit? Will a 6 month time period to submit the Form 200 and TIF, similar to wineries currently enrolled under the Winery Order be required?

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No.	Subject	Draft language	Comments
3.	BOD loading	The permit states “Consequences of BOD overloading may result in an impact to groundwater quality by lowering the oxidation/reduction potential in the underlying soil resulting in potential mobilization of naturally present contaminants in soil such as iron and manganese.”	<p>We appreciate that the Regional Board staff is aware of issues with potential metals mobilization that can result from over-application of BOD-rich wastewater in soils that are prone to minerals leaching and recognize that the proposed limits have been increased from 60 pounds per acre per day to 100 pounds per acre per day since we last commented. However, land treatment of BOD in wastewater is a long-practiced and proven method. We are concerned that this valuable, low-tech, and low-energy-using method may be dismissed due to concerns about metals mobilization that may not be well-founded in science or recognition of particular dischargers’ practices.</p> <p>1.) Has the potential leaching of minerals due to changing oxidation/reduction potential from overloading with BOD been demonstrated to occur in Region 1? If so, at what location? Are conditions at this location applicable to all dischargers’ land application sites?</p> <p>2.) Could the limits be tailored to recognize the difference between different application methods (spray will oxidize the water as it is applied) and timing (application on an intermittent schedule can allow vadose zone to oxidize)?</p>

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No.	Subject	Draft language	Comments
4.	New constituent limits	The draft permit imposes limits for ammonia, nitrate, nitrite, sodium and chloride.	<p>1.) The draft Order lists references in order to provide a basis for each constituent limit. The basis for some of the limits appear to be misplaced and the setting of limits may be premature. Virtually none of the permittees have previously been required to test for these constituents in their effluent. Dischargers do not know whether they will be able to comply with the new limits. Based on our experience with permits for municipal dischargers, we suggest that the WDR establish an initial testing period of five years for gathering data, followed by an evaluation of the data, and if necessary a period to reach compliance prior to implementation of limits.</p> <p>2.) The limit placed on Sodium may be more appropriately based on the agricultural supply threshold (from Ayers and Westcott). The draft Order now includes a limit for Chloride that is based on the agricultural supply threshold.</p> <p>3.) Agricultural supply thresholds for setting limits for sodium and chloride appear appropriate but single limit values for Sodium and Chloride are viewed inappropriate. Thresholds are not the same for all crop types, as explained in Ayers and Westcott (1985). The limits listed in the draft Order are based on sensitive crops such as avocado, lentil, and cotton. It is unlikely that WBF processors discharging to land would be irrigating crops such as these. Therefore Chloride limits set based on the cover crop type would be more appropriate and Sodium would be more appropriately regulated through a sodium adsorption ratio (SAR) limit and/or crop specific limits on concentration. Using an SAR limit would reflect how Sodium toxicity can be reduced if sufficient calcium is available in the soil.</p>

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5.	Costs to dischargers	The draft WDR requires monthly testing for potential constituents in effluent, during months when discharge takes place.	<p>1.) Monthly costs for laboratory testing alone, disregarding costs of sample collection, travel, and reporting, have been quoted at \$350 for each month that land application is taking place. Land application can reasonably be expected to take place 12 months during a year, leading to an annual cost of \$4,200 for testing alone. For a 5,000 case winery producing wine that retails for \$35 per bottle, and operating at the industry average 6.9% profit, laboratory testing costs would reduce the net pre-tax income from wine sales by 6 percent. Is this reasonable? Additionally, this testing frequency is greater than required for some NPDES permits. Semiannual or quarterly testing would be viewed as adequate for year round land appliers.</p> <p>2.) If testing indicates that one or more of the subject constituents does not occur at levels in exceedance of the proposed limits, could the permit provide for testing frequency to be reduced after an initial year of sampling?</p>

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No.	Subject	Draft language	Comments
6.	Coliform Limits	<p>The permit requires that “collection, treatment, storage, reuse and disposal of process wastewater and solids shall not cause groundwater to:</p> <p>1. Exceed a total coliform organism level of 1.1 MPN/100mL as a 7-day median”</p>	<p>Coliform exists in the soil and groundwater to the depth where the groundwater is oxygenated. When there is no oxygen, coliform die. Title 22 recognizes the need to use shallow groundwater, and surface water, for drinking water, through the “Surface Water Treatment Rule.” Surface water treatment includes filtration and disinfection for coliform removal. Shallow groundwater is not expected to be free of coliform. When the Regional Board requires monitoring wells to assess the impact of discharges on groundwater, the wells are expected to be shallow, to pick up on immediate impacts. Groundwater from these shallow wells is virtually certain to contain coliform.</p> <p>1.) If the natural concentration of coliform in the groundwater exceeds 1.1 MPN/100mL, there is no concentration of coliform in the process wastewater that could “cause” the groundwater to exceed this limit? How would this situation be addressed?</p> <p>2.) The MRP does not require testing, monitoring, or reporting for coliform levels, so how would a discharger know if they were in compliance with the Order? How will it be determined that the reuse and disposal of process wastewater and solids caused groundwater to exceed this total coliform limit?</p>
7.	Other Groundwater Limitations	<p>The permit requires that the “collection, treatment, storage, reuse and disposal of process wastewater and solids shall not cause or contribute to levels of chemical constituents in groundwater that exceed the levels specified in California Code of Regulations”</p>	<p>1.) This statement is unclear. It could be interpreted in multiple ways and should be clarified regarding intent. Do the chemical constituents already have to exceed the “levels”? Could the process wastewater and solids cause levels up to the “levels” specified as long as they do not exceed them?</p> <p>2.) Again, how will causation be determined and regulated? This is an issue with all of the Groundwater limitations, especially since the MRP does not require monitoring of all chemical constituents and radionuclides listed in these articles of Title 22. Required monitoring of all constituents in the listed Title 22 articles would be viewed unreasonable, due to the high costs for testing.</p>

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No.	Subject	Draft language	Comments
8.	Groundwater Monitoring	<p>The draft permit states “Groundwater monitoring is required for all subsurface and at-grade treatment and disposal systems” and “for WBF processing facilities that produce 10,000 gallons per day (gpd) or greater of process wastewater” Later in the document it states “groundwater limitations apply to all facilities covered under this Order including those that dispose or reuse treated effluent aboveground”. The draft permit also states “groundwater monitoring is required for those WBF processing facilities that produce 10,000 gpd or greater of process wastewater and discharge the wastewater at a rate equal to the agronomic rate.”</p>	<p>The wording from these different parts of the draft Order is confusing and potentially contradictory. Does the permit require all dischargers to monitor groundwater? Or do only select dischargers have to monitor groundwater quality? The wording requires clarification and reconciliation across the entire draft and associated documents.</p>
9.	Facility-specific Nutrient Management Plan (FNMP)	<p>The draft WDRs states “the preferred method of nitrogen control is left to the wastewater system designer and must be documented in the required Facility-specific Nutrient Management Plan”. The draft WDR then states “A Discharger proposing to either: 1) apply treated process wastewater exceeding limits for ammonia, nitrate or nitrite; ... shall submit a FNMP for approval by the Regional Water Board Executive Officer.” And then the draft Order later states that “The Discharger shall discharge process wastewater effluent in a manner consistent with the approved FNMP.”</p>	<p>1.) These statements about when an FNMP is required are contradictory. In two passages the draft WDR implies that all dischargers must submit a FNMP and in another location the draft WDR implies that only certain dischargers need to submit FNMPs. The wording requires clarification and reconciliation across the entire draft and associated documents as to who is required to submit FNMP to be covered under the new General Permit. 2.) The proposed requirement of developing FNMPs entails considerable effort on the permit-holder. We can see that the effort may lead to improvements in production practices that may reduce nutrient concentrations in wastewater, but Brelje & Race doubts the value of incremental changes to small discharges. It may be more reasonable to limit to FNMP requirement to larger producer-dischargers. 3.) The MRP still refers to a “Facility-Specific Salt and Nutrient Management Plan”.</p>

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No.	Subject	Draft language	Comments
10.	TDS Characterization and Salinity	The draft WDR states “This Order requires the characterization of the TDS content of the process wastewater” and “this Order requires WBF processing facilities to identify sources of salinity and to implement practices to minimize discharges of salinity”.	1.) What does it mean by “characterization of the TDS content”? How will this be regulated if there is no limit for TDS? How often does the TDS content have to be “characterized”? 2.) When and how are the sources of salinity reported? What does it mean to “minimize discharges of salinity” and how is this regulated other than through sodium and chloride limits? These issues need to be explained and clarified in the Order to ensure Dischargers can completely comply.
11.	Information collection	The draft MRP includes reporting of information such as processing season and volumes, production volumes, chemical use (types and volumes)	These requirements go beyond wastewater quality or flows. They impose additional information collection, organization and reporting on the processors. What is the purpose of these requirements? Under what authority is the Regional Board privileged to collect this sort of information?
12.	Sludge depth	The draft MRP requires measurement of the depth of solids accumulation in the bottom of each pond annually.	If a pond has accumulated a lot of settled solids, the effective processing volume can be reduced. This will become apparent as gradually decreasing effluent quality. Why is the measurement of solids needed each year? Measurement of the depth of sludge requires use of a boat and “sludge judge” or more elaborate and expensive means. To obtain an accurate assessment of the volume of accumulated solids, one must take multiple measurements. This not a task that a food or beverage processor can be expected to perform accurately, and the cost for a meaningful technical assessment could easily be several thousand dollars. Could the measurement be performed at longer intervals, perhaps five years? Could the requirement be based upon previous years’ results? If a pond is oversized, a deeper accumulation of solids may not cause deterioration of effluent quality. Could the requirement be based upon changes in pond effluent quality?