



November 23, 2015

California Regional Water Quality Control Board  
North Coast Region  
ATTN: Rachel Prat  
5550 Skylane Blvd., Suite A  
Santa Rosa, CA 95406  
VIA EMAIL: NorthCoast@waterboards.ca.gov

Dear Ms. Prat:

On behalf of Wine Institute, I would like to register our concerns with the California Regional Water Quality Control Board, North Coast Region's (Regional Water Board) proposed General Waste Discharge Requirements for Discharges of Wine, Beverage, and Food Processor Waste to Land: Order No. R1-2016-0002.

Wine Institute serves as the voice for the California wine Industry, representing over 1,000 California wineries and affiliated members. Our members uphold a strong commitment to protecting the environment. The comments we are providing are intended to ensure an appropriate balance of environmental protection and practicability.

A table is attached which provides a comprehensive list of all comments and recommendations that we have developed. However, I'd like to highlight several of those comments in this letter:

- **Groundwater monitoring for all subsurface and at-grade treatment systems.** This proposed requirement fails to recognize well designed and operated septic systems. Rather than impose this "one-size-fits-all" requirement, the Board should attenuate the monitoring requirement with the environmental risk posed by the treatment system. We recommend eliminating the groundwater monitoring requirement for systems that include pre-treatment of screening, and aeration. Further, in light of the significant expense of groundwater monitoring systems (we estimate a minimum of \$40,000 to design, construct, and commission the wells), any imposition of this requirement should be limited to larger sized facilities, and include the option of participation in a regional groundwater monitoring program.
- **Effluent limits:** The requirement for sodium is unreasonably restrictive, and based upon an *advisory* for aesthetic properties of drinking water. This effluent limit seems arbitrary as no information is given to the back ground concentration of sodium in North Coast groundwater basins. In addition, the Order does not address the known process of groundwater blending with percolation through the root zone and the significant effects of dilution caused by the precipitation amounts and patterns in many parts of the North Coast. We propose instead that Regional Water Board remove the effluent limit for sodium, but keep sodium as a parameter to monitor in the MRP. By doing so, facilities will collect water quality data and based on that data, the Regional Water Board can set informed and balanced effluent limits in the future.

Alternatively, an effluent limit of 115 mg/l, which is an agricultural based standard should be considered. This standard is based upon work developed by Ayers, R.S. and D. W. Westcott. We believe it is reasonable to keep sodium as a parameter to be monitored.

- **Anti-Degradation Analysis.** The anti-degradation analysis in the Draft Order is not adequate for the reasons outlined below:
  1. The language throughout the Draft Order is confusing with respect to effluent limits, including BOD loading rates for land application. Specifically, there is confusion on when the BOD loading rate applies (i.e., above ground, at grade, subsurface, etc.). These provisions are in need of clarity.
  2. The anti-degradation provisions indicate that a nutrient analysis will be required rather than conducting such an analysis as part of the Draft Order. We are concerned that without such analysis, the anti-degradation provisions may not withstand legal scrutiny.
  3. As discussed above, the Order needs to reflect and address the process of groundwater blending with percolation and treatment through the root zone and the significant effects of dilution caused by the precipitation.
  4. The anti-degradation provisions set an agronomic rate as the effluent limit but there is no mechanism that allows dischargers to demonstrate that soil processes also treat and remove constituents. This mechanism should be recognized and incorporated into the Draft Order.

Thank you for your consideration of our comments and recommendations. If you need additional information, please do not hesitate to contact me.

Sincerely,



Tim Schmelzer  
Director of Legislative & Regulatory Affairs  
E: [tschmelzer@wineinstitute.org](mailto:tschmelzer@wineinstitute.org)  
O: 916-441-6974  
M: 916-397-7955

Attachment

**Table 1: Wine Institute Comments: Draft Order No. R1-2016-0002  
General Waste Discharge Requirements for Discharges of Wine, Beverage  
and Food Processor Waste to Land**

Current Language in Draft Order		Recommendations/Comments
<b>FINDINGS (pages 1 and 2)</b>		
#4	Reuse activities covered by this Order include the use of treated process wastewater as irrigation or frost protection water on agricultural land or landscaping and the use of nonhazardous decomposable solid waste as a soil amendment pursuant to best management practices.	<ul style="list-style-type: none"> <li>The list of reuse opportunities is incomplete. Please consider expanding the definition to include dust control on vineyard alleyways, clean-up wash down for certain areas, cooling towers, etc.</li> </ul>
<b>ANTIDEGRADATION ANALYSIS</b>		
#16	When seeking permit coverage under this Order, the Discharger must demonstrate the Best Practicable Treatment or Control necessary to maintain the highest water quality consistent with the maximum benefit to the people of the state will be implemented.	<ul style="list-style-type: none"> <li>Please provide language clarifying that a completed Technical Information Form (TIF) meets the BPTC requirements.</li> <li>Please provide language on the TIF that by completing the form, the discharge meets the BPTC requirements.</li> </ul>
#18a	Additionally, this Order requires WBF processing facilities to identify sources of salinity and to implement practices to minimize discharges of salinity.	<ul style="list-style-type: none"> <li>We are asking for the following replacement language: "Additionally, this Order requires WBF processing facilities to evaluate options that may be implemented to minimize discharges of salinity." Not all salinity reduction opportunities may be financially, technically, or operationally feasible.</li> </ul>
#18b	The FNMP must include Nutrient Budget Calculations that will establish the application practices for the reuse of WBF process wastewater or process solids based on the nutrient need of the vegetation being grown in the land application area.....If the nutrient budget shows that the nutrients in the process wastewater and process solids exceed the amount needed by crops in the land application area, then the Discharger must implement management	<ul style="list-style-type: none"> <li>It is not clear how this program will work with the Agricultural Waiver program as there maybe redundancy and overlap.</li> <li>Please note that packaged treatment systems, such as activated sludge, often only convert organic nitrogen to nitrate/nitrite. Thus, it may be difficult for facilities with package systems to meet the Nitrogen requirements without having to add expensive additional treatment processes.</li> </ul>

	practices that will prevent impacts to surface water or groundwater due to application of excess nutrients.	
#18c	Biochemical Oxygen Demand (BOD) is a measure of the amount of dissolved oxygen needed by aerobic organisms to break down the organic material present in wastewater. This Order establishes an effluent limit for BOD of 100 pounds per acre per day for aboveground reuse or disposal.	<ul style="list-style-type: none"> <li>Please provide absolute clarity that the BOD effluent limits do not apply to facilities that are using soil/land for treatment (e.g., spreading basins) or are using subsurface treatment systems (e.g., septic systems). A flow chart would be helpful.</li> </ul>
#19	This Order requires the characterization of the TDS content of the process wastewater and the nutrient content of the process wastewater and solids.	<ul style="list-style-type: none"> <li>The wine industry has supported several studies over the years and understands the challenges in collecting usable and meaningful data. We are asking that you work with industry and develop a thoughtful plan for data collection. Simply collecting a lot of data with uncertain value will be frustrating for your staff and frustrating for wineries.</li> <li>Item #18b above mentions fixed dissolved solids. This item should also use fixed dissolved solids rather than TDS</li> </ul>
#19	This Order requires that either nutrient effluent limitations based on water quality objectives be met prior to discharge; that the waste be applied at a rate equal to the nutrient up-take level of the vegetation being grown (i.e., the agronomic rate); or that the subsurface or at-grade treatment and disposal system be designed to treat nutrients to a level meeting water quality objectives.	<ul style="list-style-type: none"> <li>As noted above, packaged treatment systems, such as activated sludge, often only convert organic nitrogen to nitrate/nitrite. Thus, it may be difficult for facilities with package systems to meet the Nitrogen requirements without having to add expensive additional treatment processes.</li> </ul>
#19	Groundwater monitoring is required for all subsurface and at-grade treatment and disposal systems to confirm compliance with conditions and requirements in this Order.	<ul style="list-style-type: none"> <li>The Draft Order does not recognize that well designed and operated septic systems represent a low threat to groundwater quality. A well designed system includes (pre)treatment consisting of screening, and aeration.</li> <li>According to the OWTS policy, Tier 0 facilities should not need GW monitoring. Specifically, well designed systems should be able to meet the BOD requirement in Section 6.1.2 of the OWTS policy. Thus, groundwater monitoring requirement in this Draft Order should be discretionary.</li> <li>It costs a minimum of \$40,000 to design, construct, and commission three groundwater monitoring wells. This is a significant expense for smaller facilities.</li> </ul>

		<ul style="list-style-type: none"> <li>Rather than making smaller facilities spend upwards of \$40,000 to develop groundwater wells, the Regional Water Board should encourage wineries to maintain and/or develop (pre) treatment on their septic systems. Larger sized facilities should be given the option to join a regional groundwater monitoring program.</li> </ul>
#19	Groundwater monitoring is additionally required for those WBF processing facilities that produce 10,000 gallons per day (gpd) or greater of process wastewater.	<ul style="list-style-type: none"> <li>The Draft Order does not include a timeline or schedule for developing the groundwater monitoring wells. Please propose a reasonable time schedule guideline for compliance.</li> </ul>
n/a		<ul style="list-style-type: none"> <li>Suggest additional paragraph to be added between items #20 and #21 as follows:  Consistent with SWRCB's Administrative Procedure Update (APU #90-004) "Antidegradation Policy Implementation for NPDES Permitting" (available at <a href="http://www.swrcb.ca.gov/water_issues/programs/npdes/docs/apu_90_004.pdf">http://www.swrcb.ca.gov/water_issues/programs/npdes/docs/apu_90_004.pdf</a> , see the section on Simple Antidegradation Analysis Sufficient) we recommend that the following additional Finding be added to the Antidegradation Section of Proposed Order No. R1-2016-0002:  <i>This Order is consistent with the Antidegradation Policy because, to the extent the discharger has also demonstrated that any lowered water quality occurs, the reduction in water quality will be spatially localized or limited with respect to the waterbody <u>or</u> it will not result in any long term deleterious effects on water quality <u>or</u> will not result in a significant reduction of water quality <u>or</u> has been approved in the General Plan of a political subdivision.</i></li> </ul>
#22	Reporting of the Discharger's efforts to achieve sustained water quality protection is required in the quarterly monitoring reports, as per MRP No. R1-2016-0002 (Appendix C) that are due to the Regional Water Board on a quarterly schedule. The Annual Summary, to be	<ul style="list-style-type: none"> <li>Please consider semiannual reporting. Given the nature and timing of winery operations, no increase in water quality protection is achieved from quarterly versus semiannual reports. The additional work associated with developing two additional reports a year will add little value to water quality protection.</li> </ul>

	included with the first quarter monitoring report, shall document compliance with the conditions of this Order.	
<b>APPLICATION PROCESS</b>		
#3	A Discharger proposing to either: 1) apply treated process wastewater to land at concentrations exceeding effluent limits for ammonia, nitrate or nitrite; or 2) apply non-hazardous solid, decomposable processor waste to land as a source of nutrients and a soil amendment; shall submit a FNMP for approval by the Regional Water Board Executive Officer.	<ul style="list-style-type: none"> <li>We recommend that the Regional Water Board involve a third party group with expertise in farming and nutrient balance to assist in reviews. Or, provide clear non-subjective guidelines as to what is approved.</li> </ul>
<b>DISCHARGE PROHIBITIONS</b>		
#8c	Within 24 hours after a precipitation event of a ½ or more or that results in a storm water discharge from the land application area; and	<ul style="list-style-type: none"> <li>Please note the word “inch” is missing from this sentence.</li> </ul>
#8c	<p>The application of treated WBF process wastewater or processing solids to the land application area is prohibited during the following times:</p> <ol style="list-style-type: none"> <li>Within 24 hours of a forecasted precipitation event with a greater than 50-percent probability of occurring;</li> <li>During a precipitation event;</li> <li>Within 24 hours after a precipitation event of a ½ or more or that results in a storm water discharge from the land application area; and</li> <li>When the land application area surface soil is saturated.</li> </ol>	<ul style="list-style-type: none"> <li>Suggested modification to further clarify what qualifies as a “precipitation event” (and differentiate fog events) by adding underlined: <ul style="list-style-type: none"> <li>“The application of treated WBF process wastewater or processing solids to the land application area is prohibited during the following times: <ol style="list-style-type: none"> <li>Within 24 hours of a forecasted precipitation event of a ½ inch or more precipitation with a greater than 50-percent probability of occurring;</li> <li>During a precipitation event of a ½ inch or more precipitation;</li> <li>Within 24 hours after a precipitation event of a ½ inch or more precipitation or that results in a storm water discharge from the land application area; and</li> <li>When the land application area surface soil is saturated.</li> </ol> </li> </ul> </li> </ul>
<b>EFFLUENT LIMITATIONS FOR ABOVE GROUND REUSE OR DISPOSAL</b>		

<p>#1a.</p>	<p>The following effluent limitations apply to facilities covered under this Order that discharge treated WBF process wastewater effluent to the ground surface for the purpose of reuse or disposal.</p> <p>a. The treated effluent shall not contain constituents in excess of the following limits:</p>	<ul style="list-style-type: none"> <li>• Suggested modification to clarify when the FNMP may modify the limits, as follows:             “The treated effluent shall not contain constituents in excess of the following limits, with the exception of the ammonia, nitrate, and nitrite limits which may be modified as identified in the FNMP with a reasonable, articulated basis for such modification:” and then delete the “OR as identified in the FNMP” from the table.</li> </ul>
<p>#1a. Table 1</p>	<p>a. The treated effluent shall not contain constituents in excess of the following limits:</p> <ul style="list-style-type: none"> <li>• Ammonia as N = 1.5 mg/l</li> <li>• Nitrate as N = 10 mg/l o</li> <li>• Nitrite as N = 1.0 mg/l</li> </ul>	<ul style="list-style-type: none"> <li>• Packaged treatment systems (e.g., activated sludge), often only convert organic nitrogen to nitrate/nitrite. It will be difficult for facilities with package systems to meet the Nitrogen limits.</li> </ul>
<p>#1a. Table 1</p>	<p>a. The treated effluent shall not contain constituents in excess of the following limits:</p> <ul style="list-style-type: none"> <li>• Sodium = 60 mg/l</li> <li>• Chloride = 106 mg/l</li> </ul>	<ul style="list-style-type: none"> <li>• The Monitoring and Reporting Program (MRP) states that Chloride and Sodium only apply to those facilities identified in the Notice of Coverage letter as being required to monitor for these constituents. Is it our understanding that these constituents will apply to non-winery facilities, only. Please confirm or clarify in the Order.</li> <li>• The proposed effluent limit for sodium is very restrictive and based on an advisory. Drinking water regulations do not currently contain a primary or secondary maximum containment level (MCL) for sodium. And, footnote #4 in Table 1 is from Ayers, R. S. and D. W. Westcott, which allows for a 115 mg/l for agriculture.</li> <li>• We recommend the Regional Water Board remove the effluent limit for sodium, but keep sodium as a parameter for monitoring in the MRP. By doing so, facilities will collect water quality data and based on that data, the Regional Water Board can set informed and balanced effluent limits in the future.</li> </ul>
	<p>The treated effluent shall not contain constituents in excess of the following limits:</p> <ul style="list-style-type: none"> <li>• BOD = 100 lbs/ac/day</li> <li>• Ammonia as N = 1.5 mg/l</li> </ul>	<ul style="list-style-type: none"> <li>• We recommend the Regional Water Board use its discretion in applying effluent limits in cases where the background concentrations of the constituents are near or above the proposed limits. For example, sodium</li> </ul>

	<ul style="list-style-type: none"> <li>• Nitrate as N = 10 mg/l o</li> <li>• Nitrite as N = 1.0 mg/l</li> <li>• Sodium = 60 mg/l</li> <li>• Chloride = 106 mg/l</li> </ul> <p>pH between 6 and 9</p>	<p>and chloride effluent limits stated in the draft Order could be exceeded in some locations with geothermal or marine deposit influences.</p>
#1c	<p>The following effluent limitations apply to facilities covered under this Order that discharge treated WBF process wastewater effluent to the ground surface for the purpose of reuse or disposal.</p> <p>c. The treated effluent shall not have an instantaneous pH of less than 6.0 or greater than 9.0.</p>	<ul style="list-style-type: none"> <li>• As written, the language in the draft Order does not take into account dilution or recognize the buffering capacity of soil. The language needs to exclude “instantaneous.” As written, instantaneous pH readings could result in exceedances and/or result in the unintended consequence of increasing salinity in discharge water as pH adjustment in most systems is accomplished by adding salts.</li> </ul>
<b>GROUNDWATER LIMITATIONS</b>		
#2	<p>The collection, treatment, storage, reuse and disposal of process wastewater and solids shall not cause groundwater to:</p> <ol style="list-style-type: none"> <li>a. Exceed a total coliform organism level of 1.1 MPN/100mL as a 7-day median.</li> <li>b. Exhibit an instantaneous pH of less than 6.5 or greater than 8.5 pH units.</li> </ol>	<ul style="list-style-type: none"> <li>• As written, the language in the draft Order does not define which groundwater this refers to. Please provide clarification.</li> <li>• It is not clear why coliform organisms are included in the Order. Typically, this is used when there are concerns about pathogens in septic waste. Is this necessary for a facility that discharges process water with no domestic waste? Additionally, there are naturally occurring soil coliform bacteria that may show up in analytical sample results. The Order needs to provide clarity and guidance on what facilities will be held to this coliform organism standard and on how to differentiate coliform bacterial results.</li> <li>• Also, the MRP does not address coliform organisms.</li> <li>• See response to #1c regarding “instantaneous” pH readings.</li> </ul>
<b>DISCHARGE SPECIFICATION</b>		
#8	<p>Disposal systems that are classified as Class V wells must be registered with U.S. EPA either by completing the online form at: <a href="http://www.epa.gov/region9/water/groundwater/uic.html">http://www.epa.gov/region9/water/groundwater/uic.html</a>, or by completing and submitting Form 7520-16: Inventory of Injection Wells.</p>	<ul style="list-style-type: none"> <li>• It seems inappropriate for the draft Order to single out this particular registration.</li> </ul>
<b>DESIGN SPECIFICATION</b>		



#4	Process wastewater treatment and storage ponds shall be designed with a storage capacity adequate to contain process wastewater flows and precipitation.	<ul style="list-style-type: none"> <li>We suggest the following language change: "...adequate to contain process wastewater flows, precipitation falling directly on the ponds, and storm water flows that may be directed to the ponds.</li> </ul>
#5	Process wastewater ponds shall have a foundation or base capable of providing support for the structure and capable of withstanding hydraulic pressure gradients to prevent failure due to settlement, compression, or uplift and all effects of ground motions resulting from at least the maximum probable earthquake, as certified by a registered civil engineer or certified engineering geologist.	<ul style="list-style-type: none"> <li>Please clarify that this is for new systems that must show engineering support; however, this requirement is not required for existing systems. Also, we suggest that rather than the "foundation of the ponds," this requirement should focus on the embankments of the ponds.</li> </ul>
#6	Process wastewater treatment and storage ponds are prohibited from having an overflow pipe.	<ul style="list-style-type: none"> <li>Please note that this does not represent good engineering practice and may not be consistent with the standard of care. In some cases, ponds may need some control over where the overflow will occur to minimize collateral damage. Without an overflow pipe, it is possible to lose control of where the emergency overflow goes and may cause public safety issues.</li> </ul>
#7c	Infiltration surface shall be sized based on organic loading, or hydraulic loading, whichever results in a more conservative design.	<ul style="list-style-type: none"> <li>The Order should state and/or define guidelines for the required loadings.</li> </ul>
<b>SOLIDS DISCHARGE SPECIFICATIONS</b>		
#4	During wet weather conditions when the solid WBF processing wastes cannot be incorporated into the soil or hauled off-site for disposal, the wastes shall be temporarily stored in a designated, covered, solids storage area.	<ul style="list-style-type: none"> <li>Please clarify that a tarp is adequate to meet the covered requirement.</li> </ul>
<b>MONITORING AND REPORTING PROGRAM (MRP)</b>		
III A	<p>Chemical Usage</p> <p><b>A. Monitoring</b></p> <p>An estimate of the volume(s) and type(s) of chemical(s) used at the facility that could be either included in the process wastewater being treated and/or the process waste solids being reused on lands as a soil amendment</p>	<ul style="list-style-type: none"> <li>The wine industry has supported several studies over the years and understands the challenges in collecting usable and meaningful data. We are asking that you work with industry and develop a thoughtful plan for data collection. Simply collecting a lot of data with uncertain value will be frustrating for your staff and frustrating for wineries.</li> </ul>

Table 1: Draft Order No. R1-2016-0002

X A	<p><b>Monitoring Periods and Reporting Schedule</b> All monitoring results shall be reported in the quarterly monitoring reports which are to be received by the Regional Water Board by the first day of the second month after the three-month reporting period.</p>	<ul style="list-style-type: none"> <li>• Please consider semiannual reporting. Given the nature and timing of winery operations, no increase in water quality protection is achieved from quarterly versus semiannual reports. The additional work associated with developing two additional reports a year will add little value to water quality protection.</li> </ul>
<b>TECHNICAL INFORMATION FORM (TIF)</b>		
6.	Primary processing season	<ul style="list-style-type: none"> <li>• Please define "primary processing season." Some winery facilities do not receive fruit and may only accept wine. How does the Regional Water Board want to address facilities that barrel only or facilities that receive wine and bottle only?</li> </ul>
9.	Treatment, Disposal, and/or Reuse	<ul style="list-style-type: none"> <li>• Please add the words "and at grade disposal" following "subsurface disposal"</li> </ul>
12.	Characterization of Discharge	<ul style="list-style-type: none"> <li>• The wine industry has supported several studies over the years and understands the challenges in collecting usable and meaningful data. We are asking that you work with industry and develop a thoughtful plan for data collection. Simply collecting a lot of data with uncertain value will be frustrating for your staff and frustrating for wineries.</li> </ul>
14	Industrial Storm Water Permit Coverage	<ul style="list-style-type: none"> <li>• Please include facilities that qualify for a NONA (Notice of Non Applicability) in this section.</li> </ul>