

Central Valley Regional Water Quality Control Board
21 June 2024 Board Meeting

Response to Written Comments on
Tentative Waste Discharge Requirements for E. & J. Gallo Winery,
Turner Road Vintners
San Joaquin County

At a public hearing scheduled for 21 June 2024, the Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) will consider adoption of Tentative Waste Discharge Requirements (WDRs) for the E. & J. Gallo Winery for the Turner Road Vintners located in Lodi, California. This document contains responses to written comments received from interested persons and parties in response to the Tentative Order. Written comments from interested parties were required to be received by the Central Valley Water Board by 29 April 2024 in order to receive full consideration. Comments were received prior to the deadline from:

1. E. & J. Gallo Winery (Discharger)
2. Jo Anne Kipps

Written comments from the above interested parties are summarized below, followed by the response of Central Valley Water Board staff.

DISCHARGER (E. & J. Gallo Winery) COMMENTS

COMMENT 1: Tentative WDRs, Findings, Page 23, Item #69.

Please revise the language for the performance-BOD loading to 60 milligram per liter (mg/L) (annual flow-weighted average).

RESPONSE:

The text has been corrected.

COMMENT 2: Tentative WDRs, Findings, Page 25, Item #80.

Please revise the language to reflect the definitions of treat and complexity of discharge to correspond with "3C".

RESPONSE:

The threat and complexity of the discharge are reevaluated each time the WDRs are amended or revised. The threat to water quality was changed based on historic and current impacts to groundwater. The discharge has impacted groundwater and continues to pose a threat to groundwater quality. The volume and quality of the

effluent has the potential to impair designated beneficial uses of the receiving water. The “2B” category for this Facility is appropriate.

COMMENT 3: Tentative Monitoring and Reporting Program (MRP), A. Quarterly Monitoring Reports, Page 7, Item #5.

Please provide the definition of “Vsi” (is this volume of storm water): Perhaps a moot point as storm water is commingled with wastewater. Recommend elimination of “Vsi” in the corresponding formula.

RESPONSE:

The Vsi refers to the volume of supplemental irrigation water applied to the LAAs. However, the total dissolved solids (TDS) effluent limit for this Facility is based on the concentrations at the compliance point (sample location S2 within the Wetland). The formula should not have included Vsi and text has been corrected.

COMMENT 4: Tentative WDRs, Attachment B, Page 37.

Please update Attachment B to accurately reflect the land application areas (LAAs). Attached (to these comments) Figure X from the RWD accurately denotes all of the LAAs (same as previous WDRs).

RESPONSE:

Attachment B has been corrected to accurately reflect all the LAAs.

PUBLIC (J. Kipps) COMMENTS

COMMENT 1:

Please revise Finding 20 to include effluent disposal as a Wetlands function, as was done in the current order.

RESPONSE:

The finding was revised as follows: The Wetland is used for polishing treated wastewater as well as storage and disposal.

COMMENT 2:

Please revise the tentative order to correct the acreage cited in Finding 25 for the Discharger’s available LAA and cite the LAA acreage used in the RWD’s water balances in Finding 30. Also, describe LAA landscaping (e.g., mature deciduous trees, grasses), estimate its annual demands for water (ft/year) and nitrogen (lbs/acre/year), and describe the type and spacing of sprinklers installed in each of the three LAAs.

RESPONSE:

The land application acreage is correct as stated in Finding 25 in the tentative Order and as described in the 2023 RWD. However, smaller LAAs were inadvertently not shown on Attachment B. These additional areas have been added to Attachment B, but the total LAA acreage remains at 12 acres.

As described in Finding 25, the LAAs consist of landscaped areas (no agricultural crops), which can include a wide variety of plants and trees including mature deciduous trees and grasses. The Discharger is allowed to change the plant types in the landscaped areas, as long as they remain in compliance with their WDRs. The LAA acreage was added to Finding 30. WDRs do not regulate the type, number, or spacing of sprinklers so the requested information is not added in the WDRs.

COMMENT 3:

Please revise the tentative order to explain why the Regional Board should authorize wastewater discharge flows that are substantially greater than current flow conditions, especially since the Discharger does not propose any significant increase in processing capacity. Consider revising Flow Limitations C.1 to prescribe a Monthly Average Daily Flow of 0.50 million gallons per day (MGD) and (b) Total Annual Discharge Flow of 70 MG. These values represent a 50% increase over current flow conditions and should be more than adequate to provide the Discharger with operational flexibility.

RESPONSE:

The Facility's current WDRs (Order 99-103), specifies a monthly average flow limitation of 0.65 MGD. The tentative WDRs carry over this limitation and furthermore establishes an annual limitation of 86 million gallons per year. Therefore, the tentative WDRs establish a more restrictive flow than in the current WDRs.

The Discharger adequately demonstrated that the Facility could comply with these flow limitations as part of the submitted technical report(s), including a water balance, which was stamped and signed by a professional engineer. The water balance demonstrates the treatment system can manage the flow limit proposed in the tentative WDRs of 0.65 mgd. Therefore, staff proposes no changes to the flow limitation.

COMMENT 4:

Revise the tentative order to include estimates from the RWD's average and 100-year water balances of percolation losses from the Wetlands and Storage Lake and leaching fraction losses from the LAA.

RESPONSE:

Additional details from the water balance, including percolation losses, for the AIPS, Wetland, Storage Lake, and LAAs were added to Finding 30 for the 100-year water balance.

COMMENT 5:

Please revise the tentative order to disclose the base elevations of Advanced Integrated Pond System (AIPS) ponds, Wetlands (its Bullrush and Cattail segments and its Aerated Lake), and Storage Lake, and the vertical separation distances between these base elevations and highest anticipated groundwater elevation. If separation distances are less than 5 feet, provide technical justification that a smaller separation will not pose a threat to water quality.

RESPONSE:

The base elevations are not available. A review of the available information, including the depth of the AIPS, depths to the highest anticipated groundwater levels at MW-1 and MW-5, and an estimate of the elevation difference between the tops of the well casings and the pond surface (based on a site visit), it is likely that there is less than 5 feet of separation. It has already been demonstrated that groundwater has been impacted from the discharge, specifically salts and nitrate, and as long as the discharge is occurring, groundwater will continue to be impacted. However, Central Valley Water Board staff determined that since the degradation has stabilized, the discharge is not degrading groundwater beyond current conditions, and the Discharger is controlling and managing the discharge, further evaluations are not necessary at this time. If concentrations in effluent or groundwater show statistically significant increases, in violation of the Salt and Nitrate Control Programs, further evaluations of the wastewater treatment system may be required and could include a more in-depth separation evaluation.

COMMENT 6:

Please explain why Woodbridge Irrigation District (WID) water is discharged to the Storage Lake when existing effluent discharge flows and Storage Lake capacity are more than adequate to meet LAA water demand. Is the justification for routine WID water discharges simply to keep the Storage Lake at a certain water depth. If so, why? Explain the “irrigation needs” used to justify this dilution practice.

RESPONSE:

Since issuance of the tentative Order, the Discharger provided information clarifying the use of the WID water. WID water is used intermittently on an as needed basis to support the health of the established ecological habitat in the Wetland and Storage Lake. This habitat requires generally consistent water levels, which is done using WID water that can be added to the AIPS and/or Storage Lake. The water balance included in the RWD accounted for the use of the WID water during the dry season. The Order has been revised to include this information. The MRP was modified to include reporting requirements for the use of the WID water.

COMMENT 7:

Revise the tentative order to characterize the frequency, duration, and volume of WID water discharges to AIPS ponds and the Storage Lake, and to disclose when this practice began. Explain why this practice does not constitute a violation of the current order's Discharge Prohibition A.5, as well as the MRP requirement for effluent samples to "be representative of the volume and nature of the discharge." Also explain why this practice does not represent an unreasonable use of water that should be prevented pursuant to California Constitution Article X Section 2.

RESPONSE:

See response to comment 6. WDRs Order 99-103 is out of date and no longer accurately reflects the Discharger's wastewater treatment system practices, which is part the reason for this revision.

As to the reference to California Constitution Article X Section 2, WID water is used intermittently as needed and is not an unreasonable use of the water. It is "reasonably required for the beneficial use to be served", which in this case the potential beneficial uses include irrigation and habitat support for the constructed wetland. Allowing discharges from this Facility and the resulting managed groundwater degradation is consistent with the maximum benefit to the people of California.

COMMENT 8:

Because there are alternatives for increasing the dissolved oxygen (DO) concentration in AIPS ponds without the addition of WID water and since there is no apparent need for WID water for LAA irrigation, please revise the tentative order to prohibit the discharge of WID water to wastewater undergoing treatment and or to the Storage Lake.

RESPONSE:

The Discharger will not be prohibited from using WID water. See responses to comments 6 and 7.

COMMENT 9:

Does the Discharger still add ammonia to raise winery wastewater pH prior to AIPS treatment? If so, how much? If not, explain why proper AIPS treatment is not adversely impacted by the acidity of winery wastewater.

RESPONSE:

The practice of adding ammonia to the winery wastewater was used by a previous owner and it is unknown when this practice was discontinued. Turner Road Vintners does not add ammonia to the wastewater. Effluent data collected between 2020 and 2023 show average pH levels at 7.41 (AIPS), 7.29 (Wetland), and 7.96 (Storage

Lake). As of now, the analytical data do not show that pH is an on-going and consistent issue in the AIPS. If pH levels start resulting in effluent or groundwater limit violations, pH levels would be addressed at that time and would require the submittal of a new or revised RWD. The use of ammonia by the Discharger under the proposed Order would be a violation of the Order because it would be considered a material change in the character of the discharge (Standard Provisions and Reporting Requirements). Because this was a practice conducted by the previous owner and is no longer a reflection of the current discharge practices, this information is not included in the Order.

COMMENT 10:

Please revise the tentative order to include a finding mentioning the previous use of ammonia to raise wastewater pH prior to AIPS treatment, to disclose if this practice continues, and, if not, when it ended. If ammonia is no longer added for pH control, explain why it is no longer deemed necessary for proper AIPS treatment when it was at the time of order adoption.

RESPONSE:

See the response to comment 9.

COMMENT 11:

The RWD's discharge characterization should have included total Kjeldahl nitrogen (TKN) and ammonia, especially if ammonia is still used for pH control. And, it should have cited value(s) for discharge total nitrogen used to characterize annual LAA nitrogen loading rates. Accordingly, please revise the tentative order to include this information and, if it is not in the RWD, cite reasonable ranges for total nitrogen in winery wastewater from comparable wineries with winery wastewater treatment (e.g., nearby Sutter Home Winery West Facility regulated by WDRs Order R5-2015-0085). Then, update its evaluation of the discharge's potential to impact groundwater from total nitrogen in the seepage discharge from the Wetlands and Storage Lake, and re-evaluate the accuracy of Finding 30's last sentence.

RESPONSE:

The Discharger does not add ammonia to the wastewater. Nitrogen loadings are generally used to manage LAAs where crop health is dependent on wastewater quality. The water balance in the 2023 RWD included a nitrogen loading evaluation for the LAAs based on inches of irrigation and average nitrate-N in the Storage Lake and concluded that the nitrogen loading is significantly lower than landscaping demands and additional fertilizer may be necessary. Based on the low BOD₅ concentrations and the lack of odor issues, excessive organic loading does not appear to be occurring at this Facility. Low BOD₅ concentrations (or more specifically low organic loading) can indicate low levels of organic nitrogen or TKN, which is a surrogate for total nitrogen. Although effluent and groundwater were not analyzed for total nitrogen, low levels of organic loading can indicate that TKN is not a concern at

this time. However, the Nitrate Control Program will address legacy and on-going impacts to groundwater from nitrate and other forms of nitrogen speciation, including TKN. The Discharger has indicated they will join a Management Zone for the Nitrate Control Program and is required to enroll in this program by 26 February 2025.

The current Order did not require effluent to be analyzed for total nitrogen. The tentative MRP requires the Discharger to analyze effluent and groundwater for total nitrogen, nitrate as nitrogen, and TKN. If total nitrogen concentration trends, including TKN, in effluent and/or groundwater show an increasing trend, the Discharger would be in violation of the proposed Order.

COMMENT 12:

Please revise the tentative order to describe efforts by the Discharger to estimate the current hydraulic conductivity of the AIPS ponds' clay liner, now 25 years old. Revise the MRP to require annual reports to contain the results of any pond liner performance evaluation undertaken during the reporting year comparable to that required by the General Winery Order's MRP. And, include a new provision requiring the Discharger to submit within one year of order adoption, a technical report describing the results of a liner performance test (e.g., seepage/leak test, water balance, liner leak detection testing, or geologic evaluation). The technical report should estimate the liners' hydraulic conductivity and demonstrate that they are operating with minimal leaking. If liner modifications or repairs are needed to continue AIPS operation, the technical report should propose repairs or replacement and an implementation schedule not to exceed three years.

RESPONSE:

While hydraulic loadings and percolation rates can indicate an impact to groundwater has occurred, there is sufficient analytical data available for this Facility to conclude the discharge has impacted groundwater.

Percolation rates from the AIPS may have increased over time due to its age and continued use; however, the impact on groundwater quality has not "caused significant degradation using at least 5 years of groundwater data from an active groundwater monitoring well network designed for the pond" (see Winery General Order Discharge Specifications D.2.c.ii.b.(3)). MW-5 is located downgradient of the AIPS. Concentration trends for nitrate as nitrogen, EC, and TDS in MW-5 show no statistically significant trends for the last 5 years, indicating significant degradation beyond current conditions is not occurring. Sufficient information is available to appropriately regulate this discharge and therefore, no additional technical evaluations or investigations are currently necessary.

COMMENT 13:

Revise Finding 35 to include rural residential as an area land use, identify the approximate number of residences with 1,000 feet of wastewater treatment and

disposal operations, and disclose the proximity of the winery wastewater treatment and disposal operation at Sutter Home Winery West Facility 1.5 miles northwest.

RESPONSE:

Based on San Joaquin County's zoning map, the winery and surrounding areas are classified as "General Agricultural". The location of Sutter Home Winery was added to Finding 35. While there are a few residences (under 7) located near the winery, the main uses of the area are not rural residential. The following text was added to Finding 35: "...less than 7 residents located near the treatment system."

COMMENT 14:

Revise Finding 36 to include the current order's description of surface water drainage (Finding 25); disclose the presence of irrigation delivery canals along TRV West's southern and western boundaries; describe their containment, if any, and seasonality of use; and disclose canal seepage, particularly in the vicinity of two monitoring wells (MW-1 and MW-2), can complicate the interpretation of groundwater gradient and quality data.

RESPONSE:

The requested information was added to Finding 36.

The following text was added to Finding 51: An irrigation canal runs along the TRV West's western boundary. There are no direct surface water connections between the Facilities and the Sycamore Slough and South Fork Mokelumne River, and no uncontrolled connections to the irrigation canal.

The following text was added to the Antidegradation Section: Due to the close proximity of MW-1 and MW-2 to the irrigation canal, there is some uncertainty in using these upgradient wells to compare upgradient to downgradient groundwater quality to evaluate groundwater impacts. The better-quality water in the irrigation canal percolating to shallow groundwater can result in diluting the shallow groundwater near the monitoring wells. The groundwater quality reported in MW-1 and MW-2, which may be influenced by the better-quality canal water, would not be considered representative of true upgradient/background groundwater quality in the area. In addition to comparing upgradient groundwater conditions to downgradient conditions, intrawell evaluations were conducted on all five monitoring wells to determine if concentration trends in each well were stable. Stable concentration trends can indicate ongoing, significant groundwater degradation is not occurring and the Discharger is maintaining current efforts to control levels of salinity in the discharge, as required by the Alternative Salinity Approach for the Salt Control Program.

COMMENT 15:

Revise Finding 37 to describe the runoff and permeability characteristics of Acampo Sandy Loam soils.

RESPONSE:

Finding 37 was revised as requested.

COMMENT 16:

Please revise the tentative order to include the above in its findings on Groundwater Conditions. *(The suggested information requested to be included in the tentative Order can be found in the commentor's original file.)*

RESPONSE:

Additional information on groundwater conditions were added as new Finding numbers 40, 41, and 42.

COMMENT 17:

Please revise the tentative order to include one or more findings characterizing regional groundwater conditions (flow and quality), in a manner comparable to other WDRs (e.g., Sutter Home Winery West Facility). And, mention the discharge is in the groundwater subbasin monitored by the Eastern San Joaquin Groundwater Authority. Also, include in Table 10's characterization of groundwater average and maximum values for hardness and alkalinity, as well as for chloride (a useful discharge tracer constituent).

RESPONSE:

Additional information on groundwater conditions were added as Finding numbers 40, 41, and 42. Hardness, alkalinity, and chloride data were added to Table 10.

COMMENT 18:

And, revise MRP Table 5 to increase monitoring frequency of all constituents to quarterly in order to provide sufficient data in a reasonable amount of time to allow for proper characterization of groundwater. And, include quarterly monitoring for dissolved arsenic, TOC, and, since the winery wastewater is acidic, include annual monitoring for metals (total and dissolved forms of chromium, copper, lead, and nickel) to evaluate the extent to which acidic wastewater is leaching metals from metallic drains, pipes, tanks, etc.

RESPONSE:

The MRP was revised to include TOC, dissolved arsenic, and quarterly monitoring for Standard Minerals.

COMMENT 19:

Revise D. Performance Based Effluent Limitations to carry over the current order's Wetlands effluent BOD limitations of 40 mg/L monthly average and 80 mg/L daily maximum. Recognize that discharge quality is necessary to reduce the threat to groundwater posed by the percolation discharge, as pond disposal operations typically do not include the drying intervals required for soil treatment for BOD and nitrogen removal.

RESPONSE:

The Information Sheet provides information explaining and supporting the change in the BOD₅ effluent limit.

COMMENT 20:

Please amend the pond monitoring requirements to specify dissolved oxygen monitoring to be performed between the hours of 8:00 a.m. and 10:00 a.m.

RESPONSE:

The pond monitoring requirements were modified to recommend that DO monitoring be performed between 8:00 a.m. and 10:00 a.m.

Editorial comments received from Jo Anne Kipps were included in a separate email and were received before the comment due date.

COMMENT 1:

The Discharger's name is E. & J. Gallo Winery.

RESPONSE:

The correction has been made.

COMMENT 2:

Finding 1 mixes up the addresses for the two wineries. TRV West is the most westerly address, 5852 W. Turner Road.

RESPONSE:

The correction has been made.

COMMENT 3:

Finding 1's last sentence needs a period.

RESPONSE:

The correction has been made.

COMMENT 4:

Table 10, max TDS MW-5, missing a zero?

RESPONSE:

The maximum TDS concentration in MW-5 was incorrect and has been corrected.

COMMENT 5:

Finding 40, min and max groundwater elevations transposed.

RESPONSE:

The minimum and maximum depth to groundwater in feet mean sea level corresponds to the minimum and maximum depths of the groundwater in feet below ground surface. The table has been revised for clarity.

COMMENT 6:

fix: “The wastewater treatment system for used by Facilities”.

RESPONSE:

The text has been corrected.

COMMENT 7:

Finding 69 cites 40 mg/L as the tentative order’s proposed performance based BOD₅ annual average flow-weighted effluent limit, but the value is 60 mg/L on page 29.

RESPONSE:

The correct concentration limit is 60 mg/L. Finding 69 has been corrected.

COMMENT 8:

And, FEMA flood maps puts the Facilities in Shaded Zone X, which FEMA defines as between the limits of the 100-year and 500-year Floodplain, area with a 0.2% (or 1 in 500 chance) annual chance of flooding. This zone is also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.

RESPONSE:

The text has been updated.