CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION

ORDER NO. R1-2016-0002

GENERAL WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF WINE, BEVERAGE AND FOOD PROCESSOR WASTE TO LAND IN THE NORTH COAST REGION

The California Regional Water Quality Control Board, North Coast Region, (hereinafter Regional Water Board) finds that:

1. Order No. R1-2016-0002 serves as General Waste Discharge Requirements (hereafter General WDRs or Order) for eligible wine, beverage and food processing facilities in the North Coast Region that meet the requirements established in this Order.

2. For purposes of this Order, the types of wine, beverage and food (WBF) processing facilities that are eligible to apply for coverage under this Order include wineries, breweries, cider houses, non-alcoholic beverage producers, distilleries, post-slaughter cut and wrap meat processing facilities, fruit and vegetable processors, and dairy product manufacturers.

3. Discharges to land from such eligible WBF processing facilities have certain common characteristics, such as similar constituents, concentrations of constituents, flow ranges, and treatment, disposal and reuse techniques.

4. 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 or landscaping and the use of nonhazardous decomposable solid waste as a soil amendment pursuant to best management practices.

5. For the purpose of this Order, WBF processing waste includes but is not limited to pomace, lees, fruit and vegetable matter, soil, washwater, cooling water, and any stormwater sent to the WBF processor wastewater collection, treatment, and disposal system.

6. The discharge of WBF processing solids to land poses a minimal threat to waters of the state provided the Discharger complies with the conditions of this Order.

LEGAL AND REGULATORY FRAMEWORK

7. California Water Code (Water Code) section 13260 subdivision (a) requires that any person discharging waste or proposing to discharge waste, other than to a community sewer system, that could affect the quality of the waters of the state, to file a Report of Waste Discharge (ROWD) with the Regional Water Board to obtain coverage under

Waste Discharge Requirements (WDRs) or a waiver of WDRs. "Waste" is defined in Water Code section 13050 subdivision (d).

8. Water Code section 13263 subdivision (i) authorizes the Regional Water Board to prescribe general WDRs for a category of discharges if the discharges are produced by the same or similar operations, involve the same or similar types of waste, require the same or similar treatment standards, and are more appropriately regulated under general WDRs than individual WDRs.

9. Discharges to land from wine, beverage and food processor waste treatment and disposal systems have certain common characteristics, such as similar constituents, concentrations of constituents, disposal techniques, flow ranges and they require the same or similar treatment standards. These types of discharges are more appropriately regulated under General Waste Discharge Requirements (General WDRs).

10. The Regional Water Board has historically regulated such discharges through the adoption of individual WDRs, enrollments under Order No. R1-2002-0012, General Waste Discharge Requirements for Discharges of Winery Waste to Land (Winery Order), or through the issuance or adoption of waivers of WDRs. This Order establishes conditions and requirements for discharges of WBF processing wastewater to land.

11. The Regional Water Board adopted the Winery Order on March 28, 2002. The Winery Order authorizes discharges to land from enrolled facilities' winery process wastewater treatment and disposal systems. The Winery Order contains effluent limits, and regulates the application of treated wastewater to land for the purpose of frost protection and irrigation and the application of processing wastes at agronomic rates. Surface and subsurface wastewater disposal systems are eligible for coverage under the Winery Order. A General Monitoring and Reporting Program allows determination of compliance with effluent limits, receiving water limitations and discharge prohibitions. The Winery Order was developed in compliance with California Environmental Quality Act (CEQA). An Initial Study and Negative Declaration for the Winery Order were adopted by the Regional Water Board on March 28, 2002.

12. Discharges of process waste to land by beverage and food processing facilities, other than wineries, have historically been authorized under individual facility specific WDRs. These individual WDRs are on average 22 years old and in need of updating.

13. Subsurface disposal systems receiving WBF processing waste must comply with United States Environmental Protection Program (U.S. EPA), Underground Injection Control requirements. A subsurface disposal system receiving non-hazardous decomposable wastewater such as that generated by manufacturing, chemical processing, industrial fluid disposal, automotive repair, or recycling, and other than domestic wastewater, are classified as a Class V well. There are over 20 different Class V well types, including the subtype of Food Processing Disposal.

Disposal systems that are classified as Class V wells must be registered with U.S. EPA, Region 9, by completing the online form at:
http://www.epa.gov/uic/forms/underground-injection-wells-registration

BASIN PLAN

14. All Orders adopted by the Regional Water Board are required to implement the Water Quality Control Plan for the North Coast Region (Basin Plan). Therefore, this Order requires the Discharger to comply with all applicable Basin Plan provisions, including any prohibitions and water quality objectives governing the discharge.

15. Pursuant to the Basin Plan, the existing and potential beneficial uses of groundwater within the North Coast Region include: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Supply (IND), Industrial Process Supply (PROC), Freshwater Replenishment (FRSH), Aquaculture (AQUA), and Native American Culture (CUL).

ANTIDEGRADATION ANALYSIS

16. State Water Board Resolution 68-16, the Statement of Policy with Respect to Maintaining High Quality Waters of California (hereafter the Antidegradation Policy) requires the disposal of waste into waters of the state be regulated to achieve the highest water quality consistent with the maximum benefit to the people of the state. The quality of some waters is higher than established by adopted policies and that higher quality water shall be maintained to the maximum extent possible consistent with the Antidegradation Policy. The Antidegradation Policy requires the following:

a. Higher quality water will be maintained until it has been demonstrated to the state that any change will be consistent with the maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial use of the water, and will not result in water quality less than prescribed in the policies.

b. Any activity that produces a waste and discharges to existing high quality waters will be required to meet WDRs that will result in the best practicable treatment or control of the discharge necessary to assure pollution or nuisance will not occur, and the highest water quality consistent with the maximum benefit to the people of the state will be maintained.

17. 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.

18. This Order addresses discharges to numerous groundwater bodies, each with its own characteristics. If a discharge to high quality waters takes place, this Order limits degradation consistent with the Antidegradation Policy as described in the findings below.

19. Constituents of concern that have the potential to degrade groundwater include salinity, and nutrients and minerals released from soil. This Order contains effluent limits for aboveground discharges and groundwater limitations for both subsurface and aboveground discharges. This Order includes a Monitoring and Reporting Program (MRP) that ensures the Best Management Treatment or Control is effective, water quality objectives will not be exceeded, and confirms that water quality will be maintained at a level that is protective of beneficial uses. Each of the wastewater constituents of concern are discussed below:

a. Salinity is a measure of dissolved solids in water. Excessive salinity can impact the beneficial uses of water. Salinity can be affected by discharges of wastewater with elevated concentrations of Total Dissolved Solids (TDS). TDS consists of both volatile (organic) and fixed (inorganic) fractions. In a well operated land application system, volatile dissolved solids in the water that percolates through the soil will be reduced to negligible concentrations. Sodium and chloride are two major inorganic fractions that constitute salinity among other solutes. The Technical Information Form requires that WBFP facilities characterize sodium and chloride as a measure of salinity in the process wastewater to determine first if the facilities are eligible for the WDRs coverage. For those facilities that are eligible for the WDRs coverage, the Executive Officer will determine which facilities will be required to monitor sodium and chloride in effluent to demonstrate compliance with the effluent limitations prior to the discharge of treated process wastewater for the purpose of reuse or disposal. Additionally, this Order requires WBF processing facilities to identify and control sources of salinity and requires process wastewater treatment and disposal systems to be designed, operated and maintained to control salinity in the effluent.

b. Nitrogen is a nutrient present in WBF process waste at a concentration that can degrade groundwater quality. The potential for degradation depends upon the wastewater control and treatment method and the environment into which the wastewater effluent is discharged. Nitrogen concentration reduction is not required in every situation, such as when wastewater control and treatment and application are performed in a way that is protective of the beneficial uses of waters of the state.

When needed, nitrogen concentrations can be reduced in a number of ways, such as settling/clarifying, nitrification/denitrification, and/or by crop uptake and removal. The preferred method of nitrogen control is left to the wastewater system designer and must be documented in the ROWD. Discharges of treated process wastewater or process solids that rely on crop uptake and removal for reduction of nitrogen concentrations are required to submit a Facility-specific Nutrient Management Plan (FNMP) (Appendix D). 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. Crop nutrient application rates shall not approach a site's maximum ability to contain one or more nutrients through soil adsorption. 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 practices that will prevent impacts to surface water or groundwater due to application of excess nutrients. Such practices

may include obtaining access to additional land for nutrient application, or exporting the non-hazardous, decomposable processing solid waste to a permitted composting facility or landfill.

c. 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. This limitation is based on literature values for BOD loading in land disposal systems for food processing systems. 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. In a properly operated land application system, where the discharge complies with this Order, BOD overloading will likely not occur.

20. This Order is expected to improve water quality in the areas where discharges of WBF processing waste are currently taking place by addressing nutrients in the waste streams and requiring the monitoring of shallow groundwater to assess potential impacts. This Order will replace the Winery Order. The Winery Order did not identify nutrients or Total Dissolved Solids (TDS) as constituents of concern in winery processing waste and as such did not require Dischargers enrolled under the Winery Order to characterize the amount of nutrients or TDS in the process wastewater or process solids being discharged to land. This Order requires the characterization of the TDS content of the process wastewater and the nutrient content of the process wastewater and solids. 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. Groundwater monitoring is required for all subsurface and at-grade treatment and disposal systems to confirm compliance with conditions and requirements in this Order. Groundwater monitoring is additionally required for those WBF processing facilities that produce 10,000 gallons per day (gpd) or greater of process wastewater.

21. This Order is consistent with the Antidegradation Policy because it includes specific requirements and conditions of discharge to minimize water quality degradation. Information obtained as a result of the Monitoring and Reporting Program (MRP) will confirm that best practicable treatment and control methods are implemented.

22. Limited degradation of groundwater by some waste constituents associated with wine, beverage and food processor waste, after effective source control, treatment, and control measures are implemented, is consistent with the maximum benefit to the people of the state. The continued economic prosperity of communities and associated industry is of maximum benefit to the people of the state and provides sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this Order. The requirements of the Order are set as to avoid unreasonably affecting present and anticipated beneficial uses, and to prevent exceedances of water quality

objectives, and monitoring is established to ensure this compliance. Any change to water quality will be consistent with the maximum benefit of the people of the State, and the highest water quality consistent with maximum benefit to the people of the State will be maintained.

23. The Discharger is required to submit to the Regional Water Board a complete Form 200 (Appendix A) and Technical Information Form (TIF) (Appendix B) when applying for coverage under this Order. The technical information required in the TIF will disclose sufficient information about the operations of the facilities and the waste being generated to demonstrate best practicable treatment and control is being implemented and to allow Regional Water Board staff to determine whether the proposed discharge qualifies for coverage under this Order.

24. Reporting of the Discharger's efforts to achieve sustained water quality protection is required in the semiannual monitoring reports, as per MRP No. R1-2016-0002 (Appendix C) that are due to the Regional Water Board on a semiannual schedule. The Annual Summary, to be included with the first semiannual monitoring report, shall document compliance with the conditions of this Order.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

25. Waste discharges to land covered under this Order are subject to CEQA requirements. The Regional Water Board, acting as the lead agency, adopted an Initial Study and Negative Declaration for the Winery Order on March 28, 2002. This Order is intended to replace the previously issued Winery Order and to expand coverage to other beverage and food processors (Project).

26. The Regional Water Board, as the lead agency, is required to prepare a new or subsequent CEQA document if there is a substantial change in the Project that could cause new significant environmental effects or a substantial increase in the severity of previously identified effects. (Pub. Resources Code § 21166; Cal. Code Regs., tit. 14, § 15162.) While compliance with this Order is not expected to result in any significant physical changes to the environment or impacts that are substantially different than those described and analyzed in the 2002 adopted Negative Declaration and Initial Study, the Regional Water Board has developed a new Initial Study and Draft Mitigated Negative Declaration to document this conclusion.

27. In accordance with the mitigation measures included in the Initial Study, this Order limits the concentration of constituents in effluent to either water quality objectives in the WBF processing wastewater or at agronomic rates for the WBF processing wastewater that is reused for irrigation in the land application area. Subsurface discharges to disposal fields or flood application discharges to spreading basins are required to meet a minimum separation to groundwater and be designed for the unique characteristics of the process wastewater. All discharges are required to meet groundwater water quality objectives. This Order includes specific prohibitions and conditions of discharge that will protect the beneficial uses of surface water or groundwater.

28. Existing WBF processing facilities that expand or new WBF processing facilities that are constructed after adoption of this Order are subject to local agency approvals, permits, and possibly a project-level CEQA review, at which time potential adverse impacts to other resources must be evaluated and appropriate mitigation measures implemented.

29. The Regional Water Board, as lead agency, provided notice of intent to adopt a mitigated negative declaration for this Order on October 23, 2015(Cal. Code Regs., tit. 14, § 15072). The mitigated negative declaration reflects the Regional Water Board's independent judgment and analysis. After considering the document and comments received during the public review process, the Regional Water Board hereby determines that the Project, with mitigation measures, will not have a significant effect on the environment and adopts the mitigated negative declaration. The documents or other materials, which constitute the record, are located at 5550 Skylane Blvd, Suite A, Santa Rosa, CA 95403. The Regional Water Board will file a Notice of Determination within five days from the issuance of this Order. Mitigation measures necessary to reduce or eliminate significant impacts on the environment and monitoring and reporting are incorporated as conditions of approval below.

TITLE 27 EXEMPTION

30. The wastewater treatment, storage, and disposal activities described in this Order are exempt from the requirements of Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste, as set forth in California Code of Regulations, title 27, section 20005, et seq. (hereafter title 27). The activities are exempt from title 27 requirements pursuant to section 20090 so long as the activity meets, and continues to meet, all preconditions listed:

a. Subparagraph (b) Wastewater—Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, spreading basins or subsurface leach fields if the following conditions are met:

i. the applicable Regional Water Board has issued WDRs, reclamation requirements, or waived such issuance;

ii. the discharge is in compliance with the applicable water quality control plan; and

iii. the wastewater does not need to be managed according to California Code of Regulations, title 22, chapter 11, division 4.5, as a hazardous waste.

b. Subparagraph (f) Soil Amendments—Use of nonhazardous decomposable waste as a soil amendment pursuant to applicable best management practices, provided that Regional Water Boards may issue waste discharge or reclamation requirements for such use.

MONITORING AND REPORTING PROGRAM

31. The monitoring and reporting program requirements in this Order and MRP No. R1-2016-0002 (Appendix C) are necessary to determine compliance with the conditions of this Order and to determine the discharges impacts, if any, on groundwater.

32. As such, the burden, including costs, of this monitoring bears a reasonable relationship to the need for that information and the benefits to be obtained from that information.

PUBLIC NOTIFICATION

33. The Regional Water Board has notified the public, all known potential Dischargers and all other known interested parties of the intent to adopt this Order.

PUBLIC MEETING

34. The Regional Water Board conducted a public hearing on January 28, 2016, in Santa Rosa, California and considered all evidence concerning this matter.

THEREFORE, IT IS HEREBY ORDERED that pursuant to Water Code sections 13263, subdivision (a), and 13267, the Regional Water Board adopts this "General Waste Discharge Requirements for the Discharge of Wine, Beverage and Food Processor Waste to Land" and requires Dischargers subject to this Order shall comply with the following*:*

APPLICATION PROCESS

1. A Discharger seeking authorization to discharge under this Order shall submit to the Regional Water Board, a complete Form 200 and Technical Information Form (TIF). For new and expansion of existing facilities, the TIF shall include the appropriate documentation of facility specific CEQA compliance. The Form 200 and TIF are included as Appendix A and B of this Order. The information required with the Form 200 and TIF is equivalent to a ROWD.

2. Upon review of the Form 200 and TIF, Regional Water Board staff will determine if coverage under this Order is appropriate. The Regional Water Board Executive Officer will issue a Notice of Coverage (NOC) letter when coverage under this Order has been authorized. Coverage under this Order will take effect on the issue date of the NOC letter.

3. A Discharger seeking authorization to discharge under this Order and either: 1) applies treated process wastewater to land at concentrations exceeding the effluent limits in Table 1 for ammonia, nitrate or nitrite; or 2) applies 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.

4. A Discharger seeking authorization to discharge under this Order for the land application of treated process wastewater for the purpose of reuse or disposal, and which demonstrates during the application process that the discharge will not be able to meet the treated process wastewater effluent limitations for sodium, chloride, pH or BOD, the groundwater limitations or other Order requirements has the option to either (1) apply for coverage under individual waste discharge requirements that includes an approved schedule for compliance with Order requirements, or (2) make the appropriate modifications to the treatment and disposal system so that the discharge meets Order requirements **no later than six months after the date of Order adoption**.

5. Wineries currently enrolled under the Winery Order shall submit to the Regional Water Board a Form 200 and TIF for authorization to discharge under this Order, no later than 6 months after the date of the adoption of this Order.

6. WBF processing facilities subject to this Order shall submit an updated Form 200 and TIF to the Regional Water Board when there is a change in activities at the facility that may affect the quality or quantity of the waste discharge.

7. This Order does not authorize the discharge from facilities that have not submitted a Form 200 and TIF, and have not received an NOC letter from the Regional Water Board.

8. Enrollment in this Order: (a) is conditional; (b) may be terminated at any time; (c) does not permit an illegal activity; (d) does not preclude the need for permits which may be required by other local or governmental agencies; and (e) does not preclude the Regional Water Board from administering enforcement remedies (including civil penalties) pursuant to the Water Code and other applicable law.

DISCHARGE PROHIBITIONS

1. Discharge of any waste not specifically regulated by this Order is prohibited.

2. Discharge of wastes to surface waters or surface water drainage courses is prohibited.

3. Discharge of hazardous waste to the WBF processing wastewater treatment and disposal system is prohibited.

4. Discharge of domestic waste to the WBF processing wastewater treatment system is prohibited.

5. Bypass or overflow of untreated or partially treated WBF processing waste from anywhere within the collection, treatment, or disposal system is prohibited.

6. The use of treated WBF process wastewater on land application areas not under the control of the Discharger is prohibited, except as described and documented in an FNMP, as approved by the Regional Water Board Executive Officer in the NOC letter.

7. The use of WBF processing solid waste as a soil amendment on agricultural land that is not under the control of the Discharger is prohibited, except as described and documented in the FNMP, as approved by the Regional Water Board in the NOC letter.

8. The application of treated WBF process wastewater or processing solids to the land application area is prohibited during the following times:

a. Within 24 hours of a forecasted precipitation event with a greater than 50-percent probability of occurring;

b. During a precipitation event;

c. Within 24 hours after a precipitation event of a ½ inch or more precipitation that results in a storm water discharge from the land application area; and

d. When the land application area surface soil is saturated.

9. The discharge of leachate from the storage of WBF processing solid waste to groundwater is prohibited.

10. The discharge of leachate or WBF process solids from the WBF process solid waste storage area to surface waters, or storm water runoff that has come into contact with the solids being stored, is prohibited.

11. Creation of pollution, contamination, or nuisance as defined by section 13050 of the Water Code is prohibited.

EFFLUENT LIMITATIONS FOR ABOVE GROUND REUSE OR DISPOSAL

1. 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.

a. The treated effluent shall not contain constituents of BOD, Sodium, or Chloride in excess of the limits in Table 1.

b. The treated effluent shall not contain constituents of ammonia, nitrate, and nitrite in excess of limits in Table 1 or, alternatively, in excess of the agronomic rate in a FNMP approved by the Executive Officer.

c. The treated effluent shall not have an instantaneous pH of less than 6.0 or greater than 9.0.

Table 1 – Effluent Limitations

Constituent	Unit	Average Monthly Effluent Limit	Average Quarterly Effluent Limit
Biochemical Oxygen Demand	pounds/acre/day	100[1]	--
Ammonia as N	mg/l	1.5[2]	--
Nitrate as N	mg/l	10.0[3]	--
Nitrite as N	mg/l	1.0[3]	--
Sodium	mg/l	--	60[4]
Chloride	mg/l	106[5]	--

GROUNDWATER LIMITATIONS

1. The following groundwater limitations apply to all facilities covered under this Order including those that dispose or reuse treated effluent aboveground and those that dispose process wastewater effluent at grade or below ground to a spreading basin, leachfield or other type of dispersal system for final effluent treatment and subsurface discharge.

2. The collection, treatment, storage, reuse and disposal of process wastewater and solids shall not cause groundwater to:

a. Exceed a total coliform organism level of 1.1 MPN/100mL as a 7-day median.

b. Exhibit an instantaneous pH of less than 6.5 or greater than 8.5 pH units.

3. The collection, treatment, storage, reuse and disposal of process wastewater and solids shall not cause groundwater designated for domestic or municipal supply to contain levels of chemical constituents in excess of the limits specified in California Code of Regulations, title 22, division 4, chapter 15, article 4 and article 5.5.

[1] Nuisance threshold, Pollution Abatement in the Fruit and Vegetable Industry, United States Environmental Protection Agency (USEPA Publication 625/3-77-0007)
[2] Odor threshold, Amoore and Hautala 1983 and World Health Organization 2003
[3] Drinking water threshold, California Primary Maximum Contaminant Level (MCL) for drinking water
[4] Taste and odor threshold, USEPA Drinking Water Advisory
[5] Agricultural supply threshold, Ayers, R. S. and D. W. Westcott, Water Quality for Agriculture, Food and Agriculture Organization of the United Nations - Irrigation and Drainage Paper No. 29, Rev. 1, Rome (1985)

4. The collection, treatment, storage and disposal of process wastewater and solids shall not cause groundwater designated for agricultural supply to contain concentrations of chemical constituents in amounts that adversely affect its use for agriculture.

5. The collection, treatment, storage, reuse and disposal of process wastewater and solids shall not cause groundwater designated for domestic or municipal supply to contain levels of radionuclides in excess of the limits specified in California Code of Regulations, title 22, division 4, chapter 15, article 5, section 64443.

6. The collection, treatment, storage, reuse or disposal of process wastewater and solids shall not cause groundwater to contain substances in concentrations that cause nuisance or adversely affect beneficial uses.

WASTEWATER DISCHARGE SPECIFICATIONS

1. The average daily flow of process wastewater shall not exceed the designed monthly average daily flow for the treatment or disposal system, as stated in the TIF.

2. The average daily flow of process wastewater shall not exceed the designed maximum daily flow for the treatment or disposal system, as stated in the TIF.

3. Process wastewater shall be captured, and treated separately from domestic wastewater.

4. Process wastewater ponds shall be operated and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

5. The dissolved oxygen concentration in the treatment/holding ponds shall not be less than 1.0 mg/l at any time.

6. Process wastewater ponds without an overflow pipe shall maintain at least two (2) feet of freeboard, defined as the elevation difference between the liquid level in the pond and the top of the bank, at all times, except with prior authorization from the Regional Water Board Executive Officer. Process wastewater ponds with an overflow pipe shall maintain at least two (2) feet of freeboard, defined as the elevation difference between the liquid level in the pond and the bottom of the overflow pipe, at all times, except with prior authorization from the Regional Water Board Executive Officer.

7. Land application areas that receive treated process wastewater shall be managed to prevent ponding, runoff and erosion.

8. For subsurface disposal systems, the following discharge requirements apply:

a. The subsurface wastewater disposal system(s) shall be maintained so that at no time will wastewater surface at any location.

b. The solids accumulation in the septic tanks shall be managed in accordance with sections IV. A and B of MRP No. R1-2016-0002.

9. For at-grade spreading basins, the following discharge requirements apply:

a. Spreading basins shall be operated in a regular rotating sequence.

b. Wastewater contained in the spreading basins shall be no deeper than four inches.

c. The spreading basin shall not contain ponded wastewater for a period of time exceeding twenty four hours.

d. Spreading basins shall maintain at least two (2) feet of freeboard, defined as the elevation difference between the liquid level in the basin and the top of the bank, at all times, except with prior authorization from the Regional Water Board Executive Officer.

DESIGN SPECIFICATIONS

1. Process wastewater treatment and disposal systems shall be designed for the maximum daily flow of wastewater and organic loading generated, including flows from precipitation.

2. Process wastewater treatment ponds that are constructed or expanded, by footprint area or capacity, following the adoption date of this Order shall be lined with either a relatively impermeable membrane or two feet of soil with a permeability of less than 10^{-6} centimeters per second, or an equivalent engineered alternative approved by the Regional Water Board Executive Officer in the NOC letter.

3. Process wastewater treatment ponds constructed prior to the adoption date of this Order where the type of existing lining systems is unknown shall be evaluated for permeability within 5 years of the date of the NOC letter. The Permeability Evaluation shall take place when the pond is emptied for operational and maintenance activities such as solids removal. Results of the Permeability Evaluation shall be submitted to the Regional Water Board. Ponds found to be leaking will be required to comply with Design Specifications 2 of this Order no later than 1 year following submittal of the Permeability Evaluation. As an alternative to lining the pond, the Discharger may have a registered professional engineer or geologist propose and conduct groundwater monitoring to demonstrate that any vertical and lateral leakage from the pond does not adversely impact the underlying groundwater quality. Prior to conducting a groundwater study, the Discharger must propose a groundwater monitoring and reporting plan for review and approval by the Regional Water Board Executive Officer. The groundwater monitoring and reporting plan shall be submitted to the Regional Water Board no later than 1 year following submittal of the Permeability Evaluation. The Regional Water Board Executive Officer may require the submittal of a treatment pond Permeability Evaluation every 10 years for all treatment ponds for the purpose of verifying the ponds do not leak.

4. Process wastewater treatment and storage ponds shall be designed with a storage capacity adequate to contain process wastewater flows, precipitation falling directly on the ponds, and storm water flows directed to the ponds.

5. Process wastewater ponds shall have the physical integrity 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.
6. For subsurface disposal systems, the following design requirements apply:
   a. The system shall be designed for the unique characteristics of the process wastewater, and shall include the removal of screenable solids prior to discharge to the tank and adequate detention time for solids separation.
   b. The distance between any soil absorption system's trench bottom and groundwater shall not be less than five feet, unless approved by the Regional Water Board Executive Officer in the NOC letter.
   c. Infiltration surface shall be sized based on organic loading, or hydraulic loading, whichever results in a more conservative design.
   d. No part of the disposal system(s) shall extend to a depth where waste may pollute groundwater.
   e. New subsurface disposal systems shall reserve sufficient land area for possible future 100 percent replacement of the subsurface disposal area.

7. For at-grade spreading basins, the following design requirements apply:
   a. The distance between the bottom of the spreading basins and groundwater shall not be less than five feet, unless approved by the Regional Water Board Executive Officer in the NOC letter.
   b. The bed slope of the spreading basins shall be maintained to ensure even distribution of wastewater and prevent standing water.

8. Process wastewater treatment and disposal systems should be designed to minimize chemical addition and maintenance.

SOLIDS DISCHARGE SPECIFICATIONS

1. All screenings, sludges and other solid waste removed from process wastewater shall be collected from screens, sumps, ponds, and tanks as needed to ensure optimal system operation.

2. Collected screenings, sludges, and other solids removed from process wastewater that will not and/or cannot be used agronomically shall be disposed of at a legal point of disposal, and in accordance with the State Water Resources Control Board promulgated provisions of title 27, division 2 of the California Code of Regulations.

3. Land application areas that receive non-hazardous, decomposable, solid WBF processing wastes as a soil amendment shall be managed to prevent ponding, runoff and erosion.

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 or tarped, solids storage area. The storage area shall be managed to prevent discharges of leachate to groundwater and discharges of leachate or solids to surface waters, or stormwater runoff that has come in contact with the solids.

5. If accumulated sludge from a WBF processor wastewater treatment pond is to be used as a soil amendment on agricultural lands, a proposal containing, at a minimum, the following information shall be submitted to the Regional Water Board for approval:

- **a.** The physical properties of the sludge to be removed from the pond, including the volume and percent solids of the sludge.
- **b.** A summary of laboratory results on an analysis of a composite sample of the stockpiled sludge. The constituents of concern are: cadmium, chromium, copper, lead, nickel, zinc and total nitrogen. If deemed necessary by the Regional Water Board Executive Officer, additional constituents of concern may need to be monitored and/or a leachability test of the sludge may be required.
- **c.** A statement verifying that neither hazardous waste nor domestic waste has been discharged to the ponds.
- **d.** A description of the proposed land application areas, including a map denoting water courses, acreage and the crops to be grown thereupon.
- **e.** Calculations showing that the sludge will be applied at agronomic rates (based on nutrient uptake of the crop).
- **f.** A project schedule. Sludge application shall be confined to the dry season, which is generally between April 15th and October 15th of each year. Sludge shall be spread and incorporated into the soil in a manner to prevent erosion, runoff or any nuisance conditions.

GENERAL PROVISIONS

Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from the permitted WBF processing facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities. The Discharger shall comply with the following provisions:

1. **Availability**
   A copy of this Order and the associated MRP shall be maintained at the WBF processing facility and be available at all times to operating personnel.

2. **Enforcement**
   The Discharger shall implement the project as described in the Form 200 and TIF. Violation of any requirements contained in this Order subject the Discharger to enforcement action, including civil liability, under the Water Code.

3. **Severability**
   Provisions of these waste discharge requirements are severable. If any provision of these requirements is found invalid, the remainder of these requirements shall not be affected.

4. **Operation and Maintenance**
   The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with this Order. Proper operation and maintenance includes appropriate standard operating procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order.

   The Discharger shall maintain an updated Operation and Maintenance Manual (O&M Manual) for the systems of treatment and control that are installed or used by the Discharger to achieve compliance with this Order. The Discharger shall update the O&M Manual, as necessary, to conform to changes in operation and maintenance of the wastewater treatment and disposal systems. The O&M Manual shall be readily available to operating personnel on-site. The O&M Manual shall include the following:

   a. A detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation, and equipment.

   b. All process and equipment inspection and maintenance schedules.

   c. A description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Discharger will be able to comply with requirements of this Order.

   d. A description of preventive and contingency plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources (such as loading and storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage.

5. **Change in Discharge**
   The Discharger shall promptly report to the Regional Water Board any material change in the character, location, or volume of the discharge. The Discharger shall submit an

updated Form 200, TIF and design proposals for the new process wastewater treatment system to the Regional Water Board for review prior to the change in discharge.

6. Change in Ownership

The Discharger is required to notify the Regional Water Board of any change in ownership or control of land or waste discharge facilities presently covered by this Order. Coverage under this Order is not transferable. In the event of any change in control or ownership, the Discharger shall also notify the succeeding owner or operator of the existence of this Order by letter and shall inform the new owner or operator of the requirement to submit a Form 200 at least 120 days before commencing operation of the facility. A copy of the letter shall be immediately forwarded to the Regional Water Board Executive Officer.

The succeeding owner or operator, in order to obtain authorization for discharges regulated by this Order, must apply in writing to the Regional Water Board Executive Officer, requesting coverage under this Order. This request must include the submittal of a complete Form 200 which includes identification of the new owner or operator, the reasons for the change, and effective date of the change. Discharges conducted without submittal of this request will be considered discharges without waste discharge requirements, which are violations of the Water Code section 13260.

7. Vested Rights

This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the Discharger from liability under federal, state, or local laws, nor create a vested right for the Discharger to continue the waste discharge.

8. Monitoring and Reporting

The Discharger shall comply with the MRP and any modifications to these documents as specified by the Regional Water Board Executive Officer. Chemical analyses shall be conducted at a laboratory certified for such analyses by the State Water Resources Control Board, Division of Drinking Water (DDW) and shall conform to DDW guidelines. The Discharger shall comply with the MRP and future revisions thereto, in Appendix C of this Order.

9. Records Retention

The Discharger shall maintain records of all monitoring information, including calibration and maintenance records and all strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer.

10. Signatory Requirement

All ROWD applications submitted to the Regional Water Board shall be signed by a principal executive officer, ranking elected official, or responsible corporate officer.

a. For purposes of this provision, a responsible corporate officer means:

i. A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or

ii. The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b. Reports required by this Order and other information requested by the Regional Water Board may be signed by a duly authorized representative provided:

i. The authorization is made in writing by a person described in paragraph (a) of this provision;

ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the entity; and

iii. The written authorization is submitted to the Regional Water Board prior to or together with any reports, information, or applications signed by the authorized representative.

c. Any person signing a document under paragraph (a) or (b) of this provision shall make the following certification:

"*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*"

11. Inspections

The Discharger shall permit authorized staff of the Regional Water Board the following:

a. Entrance to the premises in which treatment, collection or management of waste occurs, where an effluent source is located or in which any records required by this Order are kept;

b. Access to inspect and copy any monitoring equipment or records required for compliance with terms and conditions of this Order; and

c. Access to sample any discharge or monitoring location associated with the Facility.

12. Noncompliance

In the event the Discharger is unable to comply with any of the conditions of this Order due to breakdown of waste treatment equipment, accidents caused by human error or negligence, or other causes such as acts of nature, the Discharger shall notify the Regional Water Board staff by telephone as soon as it or its agents have knowledge of the incident and confirm this notification in writing within five (5) business days of the telephone notification. The written notification shall include pertinent information explaining reasons for the noncompliance and shall indicate the steps taken to correct the problem and the dates thereof, and the steps being taken to prevent the problem from recurring.

13. Revision Requirements

The Regional Water Board will review this Order periodically and may revise requirements when necessary.

COMPLIANCE DETERMINATION

Compliance with the effluent limitations, the groundwater limitations, and the discharge specifications contained in this Order will be determined as specified below.

1. Average Monthly Effluent Limitation (AMEL)

The arithmetic mean of all samples collected in a calendar month, calculated as the sum of all samples in a calendar month divided by the number of samples. If only one sample is collected in a calendar month, that sample result will constitute the monthly average and daily maximum results for the purpose of determining compliance with effluent limitations.

If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs.

2. Instantaneous Minimum Effluent Limitations

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day

that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

3. Instantaneous Maximum Effluent Limitations

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

4. BOD Effluent Limitation

The mass of BOD discharged to land shall not exceed a daily maximum of 100 pounds per acre per day. Compliance with this requirement shall be determined using the following formula:

$$M = \frac{C \times V \times (8.345)}{A}$$

Where:

M = BOD mass for a given field in pounds per acre per day (lb/ac/day);
C = reported BOD monitoring result for the last calendar month in milligrams per liter (mg/L);
V = total volume of effluent discharged to the field on that day in millions of gallons (MG);
A = Area of the field irrigated in acres; and 8.345 = units conversion factor for converting the product of mg/L and MG to pounds.

5. Bacteriological Limitations

The median is the central tendency concentration of the pollutant. The data set shall be ranked from low to high, ranking the Non-Detect (ND) concentrations lowest, Detected, Not Qualified (DNQ) determinations next, followed by quantified values. The order of the individual ND and DNQ determinations is not important. The median value is determined based on the number of data points in the data set. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, the median is the average of the two middle values, unless one or both points are ND or DNQ, in which case the median value shall be the lower of the two middle data points. DNQ is lower than a detected value, and ND is lower than DNQ. Compliance with the 7-day median will be determined as a rolling median during periods when sampling occurs more frequently than weekly. During periods when sampling is weekly, this requirement shall apply to each weekly sample.

6. Average Daily Treatment System Flow

The average daily treatment system flow is the total volume of WBF processing wastewater sent through the treatment system during a calendar month divided by the number of days in the month. The number shall be reported in gallons per day. Compliance will be determined by comparing the computed average daily treatment

system flow to the design average daily treatment system capacity reported in the TIF. If the computed average daily treatment system flow exceeds the design average daily treatment system capacity, the Discharger will be considered out of compliance for that parameter for that month.

7. **Average Daily Disposal System Flow**
   The average daily disposal system flow is the total volume of WBF processing wastewater being disposed during a calendar month divided by the number of days in the month. The number shall be reported in gallons per day. Compliance will be determined by comparing the computed average daily disposal system flow to the design average daily disposal system capacity reported in the TIF. If the computed average daily disposal system flow exceeds the design average daily disposal system capacity, the Discharger will be considered out of compliance for that parameter for that month.

8. **Maximum Daily Treatment System Flow**
   Compliance shall be determined by comparing the computed average daily treatment system flow to the design maximum daily treatment system flow capacity reported in the TIF. If the computed average daily treatment system flow exceeds the design maximum daily treatment system capacity, the Discharger will be considered out of compliance for that parameter for that month.

9. **Maximum Daily Disposal System Flow**
   Compliance shall be determined by comparing the computed average daily disposal system flow to the design maximum daily disposal system flow capacity reported in the TIF. If the computed average daily disposal system flow exceeds the design maximum daily disposal system capacity, the Discharger will be considered out of compliance for that parameter for that month.

I, Matthias St. John, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on January 28, 2016.

Matthias St.John 2016.02.09 11:58:55 -08'00'

Water Boards

Matthias St. John
Executive Officer

16_0002_WBFP_WDR

Appendices

Appendix A: Form 200
Appendix B: Technical Information Form (TIF)
Appendix C: Monitoring and Reporting Program (MRP)
Appendix D: Facilities Nutrient Management Plan (FNMP)

APPENDIX A – FORM 200

An electronic .pdf version of the Form 200 can be found on the State Water Resource Control Board website at http://www.waterboards.ca.gov and clicking on the Publications/Forms Tab at the top of the page, then clicking on the Forms link.

Additionally, the Form 200 can be accessed at the following pathway http://www.waterboards.ca.gov/publications_forms/forms/index.shtml or by clicking on the following hyperlink Form 200 Hyperlink.

16_0002_WBFP_WDR_AppendixA_Form200

APPENDIX B – TECHNICAL INFORMATION FORM (TIF)

Complete all applicable sections of this form and attach the required maps, diagrams, laboratory data, etc. A Notice of Coverage letter will not be issued unless the Report of Waste Discharge is complete and demonstrates that Order No. R1-2016-0002 (Order) is applicable to the proposed discharge.

1. PROCESSING FACILITY INFORMATION

Facility Name (as provided on Form 200):
Facility Address (as provided on Form 200):

2. LOCATION MAP

Provide a map or accurately scaled and labeled drawing showing the location of the Wine, Beverage, or Food (WBF) processing facility in the context of the general vicinity.

3. FACILITY SITE PLAN OR MAP

Provide a map or an accurately scaled and labeled drawing showing a plan view of the WBF processing facility showing all relevant site features and locations of the WBF process wastewater system, including storage structures, and discharge location(s). Also include on the map the location of the process solids storage area, on-site wells, on-site drainage courses and nearby surface waters.

4. OTHER MAPS OR PLANS (Optional)

Provide other maps, plans, or sketches, as desired, to illustrate the WBF processing wastewater treatment and disposal system location or design features.

5. FACILITY TYPE AND PRODUCTION CAPACITY ☐ Additional information attached

Type of Processing facility:

☐ Winery ☐ Brewery ☐ Cider House ☐ Distillery

☐ Olive Oil ☐ Cannery ☐ Fruit or Vegetable Processing

☐ Cut & Wrap Meat Packaging ☐ Dairy product

☐ Other beverage_____ ☐ Other food _____

6. PRODUCTION INFORMATION ☐ Additional information attached

Processing Season: (include start and end dates)
Annual Processing Volume of Produce or Commodity: (e.g. grapes, malt, olives, milk) Weight (tons): _____ or Volume (gallons): _____
Annual Production Volume: Cases of Wine: _____ Gallons of other Liquid: (e.g. beer, olive oil, etc.) _____ Pounds of Product: (e.g. meat, cheese, potatoes, etc.) _____

7. REGIONAL WATER BOARD DISCHARGE COVERAGE ☐ Additional information attached

Identify whether the WBF processing facility is new or existing. For existing facilities identify the current Regional Water Board permit coverage authorizing the discharge of process wastewater and solids to land in a manner protective of water quality. If the discharge has not been authorized by a Regional Water Board permit or action, check the "No coverage" box.

☐ New WBF Processing Facility (no operations to date)

Planned Operations Start Date: _____ Planned date of first Discharge: _____

☐ Existing WBF Processing Facility

Currently (check one): ☐ In operation Or ☐ Not in operation

Current or historical discharge authorization: (check all applicable boxes)

☐ Issued Facility Specific Waste Discharge Requirements (WDR)

WDR Order No.: _____

☐ Enrolled under General Winery WDR Order R1-2002-0012

☐ Issued Small Winery Waiver Letter

☐ Other: _____

☐ No Coverage

8. EXISTING PERMITS - OTHER AGENCIES ☐ Additional information attached

Identify the following for all permits issued by other agencies for the facility and/or the facility wastewater system (e.g. conditional use permit, building permit, grading permit):

Permit Type or Subject	Permit Agency	Permit Number	Date of Issue
1.			
2.			
3.			
4.			

9. TREATMENT, DISPOSAL and/or REUSE ☐ Additional information attached

Check all that apply. In addition, provide a detailed description of processes and practices for treatment, disposal, and/or reuse of solid and liquid waste streams. Include engineering design information.

<table>
<tr><td>Initial Treatment</td><td>☐ Solids Separation Method:</td><td>☐ pH Neutralization Method:</td></tr>
<tr><td rowspan="3">Treatment/Storage</td><td colspan="2">☐ Septic Tank
Tank Volume (gallons): _____ Equipped with Effluent Filter? Yes ☐ No ☐
Detention Time (days): _____ Equipped with Septic Tank Riser? Yes ☐ No ☐</td></tr>
<tr><td colspan="2">☐ Pond
Total Volume (gallons): _____ ☐ Facultative ☐ Aerobic with Aerators Yes ☐ No ☐
Detention Time (days): _____ number of aerators: _____
Number of Ponds: _____ Pond Lining? Yes ☐ No ☐
Type of liner: _____</td></tr>
<tr><td colspan="2">☐ Constructed Wetland Detention Time: _____</td></tr>
</table>

Disposal	Treated or Untreated Wastewater	☐ Aboveground Disposal Use: ☐ Irrigation Water ☐ Frost Protection Disposal Area Size (acres): _____ Irrigation Method: Drip ☐ Spray ☐ Other Irrigation Method: _____
		☐ Subsurface Disposal and At Grade Disposal: Type: ☐ Conventional Leach field; ☐ Spreading Basin; ☐ Subsurface Drip; ☐ Other: _____ Inspection Ports: Yes ☐ No ☐ 100% Replacement Area: Yes ☐ No ☐ Total Leachline Length: _____ Depth of trench: _____ Depth to groundwater (feet below ground surface): _____ Number of spreading basins: _____ Total basin acreage: _____
	Method and Location of Processing Solids Disposal:	
☐ Other Treatment and/or Disposal Methods:		

10. FLOW DIAGRAM

Provide a flow chart or schematic diagram showing the WBF process wastewater system components and the path of process wastewater flow throughout the system, from source water to final disposal.

11. WASTEWATER FLOWS and DESIGN FLOWS ☐ Additional information attached

	Average Daily Flow (gallons per day)	Maximum Daily Flow (gallons per day)
Wastewater Flow, Peak Production Period		
Wastewater Flow, Non-Peak Production Period		
Treatment System Design Flow		
Disposal System Design Flow		

12. CHARACTERIZATION OF DISCHARGE

Attach a sheet with known or estimated quality of:

The treated process wastewater discharged to land for reuse or disposal;
AND
The septic tank effluent, or process wastewater being discharged to a spreading basin or overland flow treatment system

At a minimum, include information on the following constituents of concern:
pH, BOD, TDS, Ammonia (as N), Nitrite (as N), Nitrate (as N), Sodium and Chloride

13. GROUNDWATER PROTECTION ☐ Additional information attached.

Information Provided:

☐ Water Balance ☐ Engineering Plans ☐ Soil Borings

☐ Significant Separation to Groundwater (include date of determination)

☐ Percolation Test ☐ Monitoring Wells

☐ Other: _____

Explain how above cited information demonstrates protection:

14. INDUSTRIAL STORM WATER PERMIT COVERAGE ☐ Additional information attached

For facilities currently regulated under the statewide Industrial Storm Water Permit, identify the following:

WDID No.:	Stormwater Program NOI Date:
Has a "No Exposure Certification" been issued for this facility? ☐ Yes ☐ No	If yes, date:
Has a "Notice of Non Applicability" been issued for this facility? ☐ Yes ☐ No	If yes, date:
Has a "Notice of Termination" been issued for this facility? ☐ Yes ☐ No	If yes, date:

15. SIGNATURE and CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision, in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Signature: _____ Date: _____

Printed Name: _____

Title: _____

16_0002_WBFP_WDR_AppendixB_TIF

APPENDIX C– MONITORING AND REPORTING PROGRAM No. R1-2016-0002

Dischargers regulated under the General WDRs for Discharges of Wine, Beverage, and Food Processor Waste to Land, Order No. R1-2016-0002 (Order) shall be subject to the following monitoring and reporting requirements, unless such requirements are modified by the Executive Officer. California Water Code section 13267 authorizes the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement California regulations. Any person failing to furnish technical or monitoring reports or falsifying any information therein is guilty of a misdemeanor, and may be subject to civil liability. (Wat. Code, § 13268.)

I. GENERAL MONITORING PROVISIONS

A. If the Discharger monitors any pollutant more frequently than required by this Order, using test procedures as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the semiannual self-monitoring reports.

B. Laboratories analyzing monitoring samples shall be certified by the California Environmental Laboratory Accreditation Program (ELAP), in accordance with Water Code section 13176, and must include quality assurance/quality control data with their reports.

C. Compliance monitoring analyses shall be conducted using commercially available and reasonably achievable detection limits that are lower than the applicable effluent limitation. If no minimum level (ML) value is below the effluent limitation, the lowest ML shall be selected as the reporting level (RL).

II. PROCESS AND PRODUCTION VOLUME

A. Monitoring

The processing season, processing volume and production volume of the facility shall be recorded as listed below.

Parameter	Units
Processing Season	Start & End Dates (If processing takes place year round, report as "All Year")
Processing Volume	Tons/Year; Pounds/Year; or Gallons/Year (Use Units most appropriate for Type of Facility)
Production Volume	Cases/Year; Barrels/Year; Gallons/Year; Tons/Year; or Pounds/Year (Use Units most appropriate for Type of Facility)

B. Reporting

The annual process and production volume measurements shall be included in the second semiannual monitoring report. The due dates for the semiannual monitoring reports are listed in Section X.A of this MRP.

III. CHEMICAL USAGE

A. Monitoring

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.

B. Reporting

Annual chemical usage estimates shall be included in the second semiannual monitoring report. The due dates for the semiannual monitoring reports are listed in Section X.A of this MRP.

IV. SEPTIC TANK(S) AND DISPOSAL LEACH FIELD(S)

A. Septic Tank Monitoring

Sludge and scum accumulation in all septic tanks shall be inspected and measured annually for the following parameters listed below. An inspection is not required during the year the septic tank is pumped.

Parameter	Units	Measurement	Frequency
Date of Inspection.	Date	------	Annually
Sludge depth and scum thickness in each compartment of each septic tank.	Feet	Staff Gauge	Annually
Distance between bottom of scum layer and bottom of outlet device.	Inches	Staff Gauge	Annually
Distance between top of sludge layer and bottom of outlet device.	Inches	Staff Gauge	Annually

B. Septic Tank Maintenance

The septic tank(s) shall be pumped when any of the following conditions exist.

Parameter	Condition
Combined sludge and scum thickness	Exceeds one third (1/3) of the tank depth of the 1st compartment
Bottom of floating scum layer	Within 3 inches of the outlet device
Top of sludge layer	Within 8 inches of the outlet device

C. Disposal Field Monitoring

The disposal leach fields(s) shall be monitored for the parameters listed below.

Parameter	Units	Sample Type	Sampling Frequency
Average Daily Flow	Gallons/Day (gpd)	Metered, Recorded Pumping Hours or Estimated based on water usage[1]	Monthly[2]
Field condition	Dry or Saturated	Visual[3]	Monthly

Table Notes:

1. Water usage for processing activities only. Explanation of how this estimate was calculated must be included with the reported value.
2. As measured during the first seven days of the month.
3. Ponded wastewater on surface of leach field or wetness of ground surface.

D. Disposal Field Maintenance

Systems designed with multiple disposal leach fields shall be alternated on a specified schedule, no less than semiannually, to prevent clogging and surfacing effluent.

E. Septic Tank and Disposal Field Reporting

Septic tank and disposal leach field monitoring measurements shall be included in the semiannual monitoring report that reports on the time period when the measurement was taken. The due dates for the semiannual monitoring reports are listed in Section X.A of this MRP.

V. OTHER TREATMENT SYSTEMS (NON SEPTIC TANK LEACH FIELD SYSTEMS)

A. Treatment Pond System Monitoring

The Discharger shall monitor the following parameters of the process wastewater pond treatment system.

Parameter	Units	Sample Type	Sampling Frequency
Average Daily Flow to Pond System	Gallons/Day (gpd)	Metered, Recorded Pumping Hours or Estimated based on water usage[1]	Monthly[2]
Freeboard of each pond	Feet	Measured	Monthly
Dissolved Oxygen	mg/l	Grab	Monthly
Odors	- - - -	Observation	Monthly
Berm Condition	- - - -	Observation	Monthly
Depth of Settled Solids in pond	Feet	Measured	5 years

Table Notes:
1. Water usage for processing activities only. Explanation of how this estimate was calculated must be included with the reported value.
2. As measured during the first seven days of the month.

B. Non-pond Treatment System Monitoring

The Discharger shall monitor the following parameters of the process wastewater treatment system.

Parameter	Units	Sample Type	Sampling Frequency
Average Daily Flow to Treatment System	Gallons/Day (gpd)	Metered, Recorded Pumping Hours or Estimated based on water usage[1]	Monthly[2]
Odors	- - - -	Observation	Monthly
Operation & Maintenance Activities	- - - -	Reported	Monthly
Freeboard of each basin[3]	Feet	Measured	Monthly

Table Notes:
1. Water usage for processing activities only. Explanation of how this estimate was calculated must be included with the reported value.
2. As measured during the first seven days of the month.
3. Applies to spreading basins only.

C. Effluent Monitoring Other Treatment Systems

The Discharger shall monitor the following parameters of the treated process wastewater prior to reuse as crop or landscape irrigation water.

Parameter	Units	Sample Type	Sampling Frequency
Biochemical Oxygen Demand (BOD)	mg/l	Grab	Monthly[1]
BOD loading	pounds/acre/day	Calculated	Monthly[1]
Dissolved Oxygen	mg/l	Grab	Monthly[1]
pH	pH Units	Grab	Monthly[1]
Total Dissolved Solids	mg/l	Grab	Monthly[1]
Ammonia (as N)	mg/l	Grab	Monthly[1]
Nitrite (as N)	mg/l	Grab	Monthly[1]
Nitrate (as N)	mg/l	Grab	Monthly[1]
Chloride[2]	mg/l	Grab	Monthly[1]
Sodium[2]	mg/l	Grab	Monthly[1]
Fats, Oil & Grease[2]	mg/l	Grab	Monthly[1]

Table Notes:

1. When irrigation, re-use, or other type of land disposal is anticipated.
2. Applies only to those processing facilities identified in the Notice of Coverage letter as being required to monitor for these constituents.

D. Effluent Load Monitoring

The discharge of treated effluent to land for the purpose of reuse as irrigation water or disposal, and the discharge of process wastewater to an at-grade land treatment system such as to a spreading basin or overland flow treatment system, shall be monitored for the parameters listed below.

Parameter	Units	Sample Type	Sampling Frequency
Land application area	Acres	N/A	Monthly[1]
Volume of effluent applied to land	Millions of gallons	Metered or Recorded pumping hours	Monthly[1]
Mass of BOD applied to land (including spreading basins)	Pounds/acre/day	Calculated	Monthly[1]
Wetting cycle duration[2]	Hours	Measured	Continuous[1]
Wetting cycle volume[2]	Gallons/acre/cycle	Measured	Continuous[1]

Table Notes:

1. When irrigation, re-use, or other type of land disposal is anticipated.
2. Applies to spreading basins only.

E. Other Designed Treatment System Reporting

Other designed treatment system monitoring measurements shall be included in the semiannual monitoring report that reports on the time period when the measurement was taken. The due dates for the semiannual monitoring reports are listed in Section X.A of this MRP.

VI. GROUNDWATER

A. Groundwater Monitoring

Facilities discharging process wastewater to an at-grade spreading basin or below ground to a disposal field, for wastewater treatment, are required to monitor groundwater for the purpose of assessing compliance with the conditions of the Order. Additionally, Regional Water Board staff may require in the Notice of Coverage (NOC) letter that any other Discharger monitor groundwater if deemed necessary to verify compliance with the Order. The Discharger shall monitor groundwater as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency
Depth to Groundwater	0.1 feet	Measurement	Quarterly
Groundwater Elevation	0.1 feet MSL	Measurement	Quarterly
pH	std units	Grab	Quarterly
Nitrate (as N)	mg/L	Grab	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly
Chloride	mg/L	Grab	Quarterly
Sodium	mg/L	Grab	Quarterly

B. Groundwater Reporting

Groundwater monitoring measurements shall be included in the semiannual monitoring report covering the time period when the measurement was taken. The due dates for the semiannual monitoring reports can be found in Section X.A of this MRP.

C. Monitoring Wells

A minimum of three monitoring wells (one up-gradient and two down-gradient) shall be used as described in the design plans submitted with the Technical Information Form (TIF). The Discharger shall submit a report that includes but is not limited to relevant subsurface stratigraphy and lithology; a diagram of each well showing total drilled depth, well installation depth, and construction details including screened interval and top of casing elevation; and location map of all installed wells. For new wells the report shall be submitted within 60 days of completion of construction. For existing wells the report shall be included in the TIF.

D. Monitoring Well Locations

Within one year of the issuance of the NOC letter, the Discharger shall begin groundwater monitoring at appropriate locations and depths to yield groundwater samples to assess whether changes in groundwater quality are occurring as a result of the discharge to the disposal field. Samples shall be collected from the wells for the constituents as specified in Section VI.A.

VII. LAND APPLICATION AREA

A. Land Application Monitoring

The Discharger shall inspect the land application area(s) at least once daily during each irrigation event with treated process wastewater effluent and each reuse event of process solid waste as a soil amendment. Evidence of erosion, field saturation, runoff, or the presence of nuisance conditions (e.g., flies, odors, etc.) shall be noted in a field log. The field log should include the time and date of the inspection and the name of the individual performing the inspection.

The Discharger shall retain precipitation records, for times of wet weather when land application occurred. The precipitation records should include, but not be limited to;

1. A printed copy of a precipitation event[1] forecast from the National Weather Service Forecast Office (i.e., by entering the zip code of the land application area at http://www.srh.noaa.gov/forecast);
2. The time, date, and rain gauge reading of the precipitation event;
3. The date, time, and location of visual observations;
4. The individual(s) who performed the visual observation.

B. Land Application Area Reporting

Land application area inspections shall be included in the semiannual monitoring report covering the time period when the inspection took place. The due dates for the semiannual monitoring reports can be found in Section X.A of this MRP.

VIII. FACILITY-SPECIFIC NUTRIENT MANAGEMENT PLAN

A. Content

A Facility-specific Nutrient Management Plan (FNMP) is required for those facilities that either; 1.) Apply treated process wastewater to land at concentrations exceeding effluent limits for ammonia, nitrate or nitrite or 2.) Apply solid non-hazardous, decomposable processor waste to land as a source of nutrients and a soil amendment. The FNMP shall include the components described in Appendix D of this Order.

B. Revisions

Changes or updates to the original FNMP, approved by Regional Water Board staff in the Notice of Coverage (NOC) letter, shall be submitted to the Regional Water Board for approval prior to making the change or update.

C. Groundwater Monitoring

Facilities producing greater than 10,000 gpd of process wastewater, as averaged over a calendar month, that land apply treated process wastewater for the purpose of reuse or disposal, and apply nutrients above the treated process wastewater effluent limits, at agronomic rates, in accordance with an approved facility specific nutrient management plan (FNMP), are required to monitor groundwater for the purpose of assessing compliance with conditions of the Order. Within one year of the issuance of the NOC letter, the Discharger shall begin groundwater monitoring at appropriate locations and depths to yield groundwater samples to assess whether changes in groundwater quality are occurring as a result of the discharge.

The Discharger shall monitor groundwater as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency
Depth to Groundwater	0.1 feet	Measurement	Quarterly
Groundwater Elevation	0.1 feet MSL	Measurement	Quarterly
Nitrate (as N)	mg/L	Grab	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly

Alternatively, ground water monitoring requirements may be met by participation in a regional monitoring program approved by the Regional Water Board or Executive Officer.

[1] The National Oceanic and Atmospheric Administration (NOAA) defines a chance of precipitation as a probability of precipitation of 30% to 50% chance of producing precipitation in the project area. Precipitation is water that falls to the ground as rain, snow, etc. at a measurable amount of 0.01 inch or more.

Those facilities participating in an approved regional monitoring program shall begin groundwater monitoring within two years of WBFP WDRs adoption date.

IX. SOLIDS MONITORING REQUIREMENTS

A. Solids Monitoring

The Discharger shall monitor the following parameters of process solid waste generated during wine, beverage or food processing activities:

1. Amount of process solids generated annually;
2. Amount of solids stored annually (including location of storage and measures implemented to prevent leachate generation or control and disposal of any leachate that is generated);
3. Amount of process solids land applied as a soil amendment, reported as cubic feet per acre ; and
4. If applicable, the annual amount of solids disposed off-site at an appropriate permitted facility (including amount disposed off-site, location of disposal site, and hauler identification).

B. Solids Monitoring Reporting

Solids monitoring measurements shall be included in the semiannual monitoring report covering the time period when the measurement was taken. The due dates for the semiannual monitoring reports can be found in Section X.A of this MRP.

X. REPORTING REQUIREMENTS

A. Monitoring Periods and Reporting Schedule

All monitoring results shall be reported in the semiannual monitoring reports which are to be received by the Regional Water Board by the first day of the second month after the six-month reporting period. Therefore, monitoring reports are due as follows:

Report Title	Reporting Period	Due Date
1st Semiannual Report	January 1 through June 30	August 1
2nd Semiannual Report	July 1 through December 31	February 1, following year

B. Annual Summary

The second semiannual monitoring report shall include a discussion, or annual summary, of how the treatment and disposal system functioned the previous year. The summary should discuss compliance (or non-compliance) with effluent limits and other Order requirements and the corrective actions taken or planned to bring the discharge into full compliance with the Order.

C. Electronic Reporting

The semiannual monitoring reports shall be submitted to the Regional Water Board via e-mail to NorthCoast@waterboards.ca.gov or on disk (CD or DVD) in a Portable Document Format (PDF) file in lieu of paper-sourced documents. The guidelines for electronic submittal of documents can be found on the Regional Water Board website at http://www.waterboards.ca.gov/northcoast.

D. Transmittal Letter

A transmittal letter, identifying the Facility name, address and WDID number shall accompany each monitoring report. The transmittal letter shall discuss any violations that occurred during the reporting period and all actions taken or planned for correcting the violations, such as operation or system modifications. If the Discharger previously submitted to the Regional Water Board a report describing the corrective action or time schedule for implementing the corrective actions, reference to the previous report is satisfactory.

E. Report Format

The Discharger shall arrange the monitoring results in tabular form so that the date, the constituents, and the concentrations are readily discernible. The results shall be summarized in such a manner as to illustrate clearly whether the discharge complies with the Order. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurement(s);
2. The individual(s) who performed the sampling or measurement(s);
3. The date(s) analysis were performed;
4. The individual(s) who performed the analysis;
5. The analytical techniques or method used;
6. The results of such analysis; and
7. The complete laboratory data sheets for each analysis.

F. Signature and Submittal

The semiannual monitoring reports shall be signed by a duly authorized representative, as specified in General Provision 10, of the Order. The person signing the semiannual report shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

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APPENDIX D - FACILITY-SPECIFIC NUTRIENT MANAGEMENT PLAN (FNMP)

Owners and operators of wine, beverage and food processors (hereinafter identified as "Dischargers") seeking coverage under the General Waste Discharge Requirements for Discharges of Wine, Beverage, and Food Processor waste to Land, Order No. R1-2016-0002(Order) and who propose to either; 1.) Apply treated process wastewater to land at concentrations exceeding the effluent limits in Table 1 of the Order for ammonia, nitrate or nitrite or 2.) Apply solid non-hazardous, decomposable processor waste to land as a source of nutrients and a soil amendment; are required to develop and implement a Facility-specific Nutrient Management Plan (FNMP).

I. FNMP purpose and implementation

The purpose of the FNMP is to identify practices that will be used to minimize adverse impacts to groundwater and surface water from the land application of nutrients found in process wastewater and process solids.

The FNMP describes the agronomic rate application of the process wastewater and process solids to land and documents compliance with the Order requirements. It identifies the land application area, the crop or vegetation being grown, the nutrient requirements of that crop or vegetation, and the land application method.

The FNMP will be submitted when applying for coverage under the Order. Regional Water Board staff will review the FNMP to document the use of agronomic application rates, the application method and compliance with the requirements of the Order. Approval of the FNMP shall be referenced in the Notice of Coverage (NOC) letter. The approved FNMP shall be kept at the Facility for use by Facility staff and review by Regional Water Board staff during inspections.

The FNMP shall be revised if changes in conditions or practices at the Facility require modification of the FNMP. Conditions that may require modification of the FNMP include but are not limited to, changes in effluent nutrient concentration, changes in type of crop/vegetation grown, designation of a new land application area and any needed modification of land application practices to prevent the off-site movement of process wastewater or process solids.

Records on the timing and amounts of process waste water and process solids applied to land shall be collected and submitted in accordance with the Monitoring and Reporting Program (MRP) associated with the Order, MRP No. R1-2016-0002.

II. CONTENTS OF FNMP

At a minimum, the FNMP must contain the following components:

A. Contact Information

The name and phone number of (a) the facility owner, (b) the facility operator who is responsible for implementing the FNMP (if different from the owner), and (c) the developer of the FNMP.

B. Specific dates

The date that the FNMP was completed and the most recent annual review date.

C. Facility and Land Application area information

The following information must be included:

1. Name of the facility;
2. Facility address;
3. Assessor's Parcel Number(s) for the facility location and land application area;
4. The total acreage of the land application area; and the acreage used for the application of (a) process wastewater, (b) non-hazardous, decomposable, processing solids , or (c) both;
5. The type of crop(s) or vegetation being grown within the land application area; and
6. Copies of any written agreements that authorize the Discharger to apply process wastewater and process solids on property not owned or operated by the Discharger.

D. Maps and Drawings:

One or more United States Geological Survey quadrangle maps or equivalent showing the location of the facility and the land application area. One or more aerial photos or scaled map drawings showing the entire land application area. The aerial photo(s) and/or drawing(s) of the land application area should include a map legend and identify the locations of all of the following: surface water courses, drainage ditches and drainage controls (berms, levees, etc.); subsurface (tile) drainage systems and associated discharge points; groundwater wells and type (domestic, industrial, agricultural, or monitoring); and septic systems and leachfields.

E. Nutrient Budget Calculations

The FNMP must include a data table showing the total annual nitrogen load in pounds/acre/year being applied to the land application area from the reuse of process wastewater and process solids. The table should identify the annual load of nitrogen associated with both the process wastewater and the process solids. The average nutrient content and total annual volume of process wastewater and process solids being land applied shall be included in the table. The data table shall also include the annual agronomic nutrient need, of the crop(s) or landscape vegetation grown in the land application area.

An annual agronomic rate calculator for various types of crops and vegetation can be found on the Regional Water Board website at the following link:

http://www.waterboards.ca.gov/northcoast/water_issues/programs/wine_beverage_food/. The calculator may be used to determine the annual nutrient need of the crop. The calculator will be updated, as needed.

The data table must clearly demonstrate how the annual nitrogen agronomic nutrient rate for the crop(s) or vegetation will not be exceeded through the land application of the process wastewater and process solids. The data table must be reviewed annually and updated if there are any significant changes in conditions or practices at the facility that necessitate changes in the FNMP. The data table and calculations may be reviewed by Regional Water Board staff during inspections.

F. Land application practices and water quality protection

The FNMP must describe how and when process wastewater and solid non-hazardous, decomposable processor waste will be applied to the land application area(s). If the nutrient budget shows that the nutrients generated by the Facility exceed the amount needed by crops in the land application area, then the Discharger must include in the FNMP management practices that will be implemented to prevent impacts to surface water or groundwater due to application of excess nutrients. Such practices may include obtaining access to additional land for nutrient application, or exporting the solid non-hazardous, decomposable processing waste to a permitted composting facility or landfill.

III. RECORD-KEEPING AND FNMP REVIEW

The Discharger should maintain records for each land application area and use the records as a basis for revisions to the FNMP. The FNMP must be available for Regional Water Board staff review during inspections.

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