

INFORMATION SHEET

R5-2012-XXXX
QUADY WINERY, INC.
MADERA COUNTY

Quady Winery, Inc. ([Winery](#)) has owned and operated the Quady Winery in Madera County near the City of Madera since 1977. The Winery is at the northwest corner of Road 24 and Avenue 13 and the property contains a total of about 16 acres of land. The Winery property contains a 10 acres grape vineyard, part of which (6.5 acres) is used for the reuse of wastewater. The Winery was regulated by waivers of waste discharge requirements for small food processors since 1997, but submitted a Report of Waste Discharge ([RWD](#)) for expansion of the winery in 2008. The higher discharge flows associated with the facility expansion require individual waste discharge requirements ([WDRs](#)).

Operations

The winery has the potential to crush up to 825 tons of grapes annually, which would produce about 425,000 gallons of wastewater per year. The majority of the wastewater is produced during the crush season, which is typically from early August through the middle of October, with the majority of the crush being in August and September of each year. There is no distillation at the winery.

Wastewater is screened, routed to a sump, and then to an adjacent vineyard for recycling. The sump is a polyethylene tank enclosed in a concrete secondary containment structure and has a capacity of about 1,100 gallons. A pump turns on automatically when about half full and pumps the wastewater to the vineyard.

The wastewater is primarily wash water generated from the washing of various tanks, barrels, pumps, hoses, and filters, and the surface areas around various wine making areas. More than 10,000 gallons per year is from rinsing new bottles prior to bottling the wine. Various cleansers are used in the cleaning and the sanitation of the wine making equipment.

The ground surfaces around the wine making areas are washed and sanitized between the equipment cleaning events. Several of these areas are outside and the resulting runoff and/or wastewater is routed to area drains and discharged into the sump. In addition, storm water from these surfaces is directed to drains that discharge to the sump. During the wet season, the Winery estimates that an average of 50,000 gallons per year of storm runoff from paved surfaces used for wine processing enters the wastewater sump. The 50,000 gallons of rainwater produced annually is included in the estimated 425,000 gallons of wastewater potentially generated per year.

Wastewater Reuse

The Winery reuses its wastewater to flood irrigate the adjacent 10-acre vineyard designated the Land Application Area, but it reports it only uses about two of the available 10 acres, as the wastewater infiltrates into the subsurface prior to it spreading out over the entire 10 acres due to the small volume and the high permeability of the underlying soils. Additionally, the southern 6.5 acres of the vineyard contain soils that drain well, while the northern 3.5 acres contain soils that cause water to pond. Provision F. 10 of this Order requires the Winery to

submit a Wastewater Irrigation Management Plan that will detail its proposed methods to evenly apply its wastewater to the southern 6.5 acre Land Application Area. The flows average about 4,000 gallons per day during the crush and about 500 gallons a day during the remaining nine months of the year.

Solids Disposal

Solids greater than 1/8 inch in diameter are screened out of the wastewater prior to the discharge. The screenings consists of approximately 100 tons of grape pomace plus diatomaceous earth mixed with grape solids from wine product filtration. This material is composted onsite along with approximately 100 tons of purchased manure and used as a soil amendment in the vineyard. The Winery produces about 250 to 400 cubic yards of compost annually.

Based on the requirements presented in Title 14, Section 17855 (a) (4), facilities that produce less than 500 cubic yards of compost annually are exempt from permitting requirements and as such, the Winery does not need a permit for its composting operation.

Groundwater Conditions

The Winery does not have an existing groundwater monitoring well network around its facility. However, Constellation Wines, Inc., operates the Mission Bell Winery that is south/southeast of the Quady Winery and it has a groundwater monitoring well network present for its operations. The depth to first encountered groundwater in 2011 was about 140 feet below the ground surface (bgs) and the direction of flow is to the northwest. Background water quality upgradient off the Mission Bell Winery is good to fair with respect to electrical conductivity as results range from 700 to 850 micromhos per centimeter. Nitrate as nitrogen concentrations range from five to 13 milligrams per liter.

Source Water

The Winery's water source is an on-site well. As the Winery had been operating under a waiver, it was not required to monitor the well and there is no data available for review. This Order contains a requirement to sample the onsite well semi-annually.

Basin Plan, Beneficial Uses, and Regulatory Considerations

The *Water Quality Control Plan for the California Regional Water Quality Control Board Central Valley Region, Fourth Edition* (Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin. The beneficial uses for the groundwater in the Winery area are municipal and domestic supply, agricultural supply, industrial process and service supply. The beneficial uses for the surface water in the Winery area (San Joaquin River) are municipal and domestic supply, agricultural supply, industrial process supply, water contact recreation, non-contact water recreation, warm freshwater habitat, migration of warm and cold water fishes, spawning for warm and cold water fishes, and wildlife habitat.

Antidegradation

State Water resources Control Board Resolution No. 68-16 (hereafter Resolution 68-16) requires the Regional Water Board to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with the maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in State and Regional Water Board policies (e.g., quality that exceeds water quality objectives).

Using the 2011 data, the discharge is estimated to add BOD to the application area at rates ranging from 2.5 to 22.2 pounds per acre per day (lbs/ac/day). Total dissolved solids loading rates range from 85 to 754 pounds per acre per year (lbs/ac/yr) and total nitrogen loading rates range from 1.4 to 12.6 lbs/ac/yr. Based on these low numbers, the discharge has a very low potential to degrade the underlying groundwater.

Title 27

Title 27, CCR, Section 20005 et seq. (Title 27) contains regulations to address certain discharges to land. Unless exempt, release of designated waste is subject to full containment pursuant to Title 27 requirements. Here, the discharge is exempt from the requirements of Title 27 pursuant to provisions that exempt wastewater and reuse. Title 27, section 20090 states in part:

The following activities shall be exempt from the SWRCB-promulgated provisions of this subdivision, so long as the activity meets, and continues to meet, all preconditions listed:

...

(b) Wastewater - Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:

- (1) the applicable RWQCB has issued WDRs, reclamation requirements, or waived such issuance;
- (2) the discharge is in compliance with the applicable water quality control plan; and
- (3) the wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste.

...

(h) Reuse - Recycling or other use of materials salvaged from waste, or produced by waste treatment, such as scrap metal, compost, and recycled chemicals, provided that discharges of residual wastes from recycling or treatment operations to land shall be according to applicable provisions of this division.

CEQA

Madera County issued a Conditional Use Permit for the proposed increase in flow in 2008. A negative declaration was certified when Conditional Use Permit 2008-010 was issued on 17 June 2008.

Order Terms and Conditions

Discharge Prohibitions, Effluent Limitations, Discharge Specifications, and Provisions

The Order prohibits discharge to surface waters and water drainage courses.

The Order prescribes effluent limits that restrict the discharge to no more than 450,000 gallons per year.

The WDRs prescribe groundwater limitations that implement water quality objectives for groundwater from the Basin Plan. The limitations require that the discharge not cause or contribute to exceedance of these objectives or natural background water quality, whichever is greatest.

Monitoring Requirements

Section 13267 of the CWC authorizes the Central Valley Water Board to require monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State. In recent years there has been an increased emphasis on obtaining all necessary information, assuring the information is timely as well as representative and accurate, and thereby improving accountability of any discharger for meeting the conditions of discharge. Section 13268 of the CWC authorizes assessment of civil administrative liability where appropriate.

The proposed Order includes effluent, water supply, and Land Application Area monitoring. The monitoring is necessary to evaluate the extent of the potential degradation from the discharge.

Reopener

The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. The Order sets limitations based on the information provided thus far. If applicable laws and regulations change, or once new information is obtained that will change the overall discharge and its potential to impact groundwater, it may be appropriate to reopen the Order.