

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

WASTE DISCHARGE REQUIREMENTS ORDER R5-2012-XXXX
FOR
GOLDEN STATE VINTNERS, INC.
FRESNO WINERY
FRESNO COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Central Valley Water Board), finds that:

1. Golden State Vintners, Inc., a California based corporation (hereafter GSV or Discharger), operates a Winery at 7409 West Central Avenue in Fresno County. The Winery is in Sections 30 and 31, T14 South, R19 East, MDB&M, as shown on [Attachment A](#), which is attached hereto and made part of this Order by reference.
2. The Winery, which was constructed in 1977, operates year round. The discharge of winery process wastewater is currently regulated by Waste Discharge Requirements (WDRs) Order 95-156, which authorizes an average daily discharge of 0.167 million gallons per day (mgd) for the crush season (June - December) and 0.065 mgd for the non-crush season (January - May) to 630 acres of vineyards.
3. In May 2007, GSV submitted a Report of Waste Discharge (RWD) to address increased flows and growth of Winery operations due to expansion of its tank farm and the increasing demand for California wines. Supplemental information to address future growth of the Winery was submitted in May 2012. The RWD and supplemental information propose the following to accommodate changes in the Winery's operation and current and projected flow increases:
 - a. Increase the average daily discharge to 0.45 mgd for the months of August through January (crush season) and to 0.175 mgd for the months of February through July (non-crush season); and
 - b. Increase the available land application area by 270 acres, bringing the total available land application area to 900 acres to accommodate the higher flows.

In addition, the Discharger has reconfigured its treatment system to add a screen to remove solids from the wastewater and bypassed the wastewater holding pond to tie directly into the irrigation system. Wastewater discharge to the holding pond was discontinued in October 2010. All wastewater lines from the Winery to the pond have been capped. The pond has the ability to receive Fresno Irrigation District water.

4. Update of Order 95-156 is needed to reflect changes and expansion of the Winery's operation and discharge, and to ensure that the discharge is consistent with the Regional Water Board's plans and policies.

Wastewater

5. Winery process wastewater is a combined waste stream comprised of ion exchange waste, cooling water, tank and equipment wash water, and boiler blowdown. The Winery does not distill and does not discharge stillage waste.
6. Wastewater is collected and drains into a concrete sump. A mechanical screen is used to separate pomace and other solids from the wastewater. Pomace and other solids removed from the waste stream are then collected in storage bins and hauled off-site by an outside contractor for use as a soil amendment.
7. The chemical makeup of the wastewater varies over the year depending on operations at the Winery. Sampling data shows that the discharge contains high concentrations of Biochemical Oxygen Demand (BOD), nitrogen, and dissolved solids during the crush season, and relatively minor concentrations of these constituents during the rest of the year. The table below presents a summary of wastewater data in the record for samples collected from 2007 through 2011:

<u>Constituents</u>	<u>Units</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Average</u>
pH	std.	4.0	7.8	6.7
Electrical Conductivity (EC)	umhos/cm	400	1,350	768
Total Dissolved Solids (TDS)	mg/L	350	2,700	1,220
Fixed Dissolved Solids (FDS)	mg/L	130	800	420
Biochemical Oxygen Demand (BOD)	mg/L	300	6,000	2,100
Total Nitrogen	mg/L	5	81	28

8. Domestic wastewater from the Winery is discharged separately to a septic tank/leachfield system regulated by Fresno County.

Disposal and Reuse

9. The Discharger uses its winery process wastewater on adjacent farmland (Use Area) for irrigation of crops. The 900 acre Use Area immediately west of the Winery consists of a wine grape vineyard owned by the Discharger. The Use Area is bounded by Central Avenue to the north, West Lawn Avenue to the west, the west side of the Winery to the east, and American Avenue to the south. The Winery and Use Area include several parcels (Assessor's Parcel Numbers 035-040-002, 005, 006, 007, 008, and 020; 327-040-016, and 037; and 327-040-015, 018, 019, and 038).
10. After treatment, the wastewater is pumped directly into the irrigation system. According to the Discharger, the winery wastewater is blended with irrigation water at approximately a 4:1 ratio (four parts irrigation water to one part wastewater) and spread between the vineyard rows via flood irrigation. Supplemental irrigation water to meet crop demand is supplied via drip irrigation.

11. Based on information obtained from the *Western Fertilizer Handbook, 9th edition*, grapes take up about 125 lbs/acre/year of nitrogen. The average total nitrogen concentration in the wastewater is about 28 mg/L. With an estimated annual nitrogen load of about 30 lbs/acre/year (based on the average total nitrogen concentration of the discharge and a maximum total discharge of 115 million gallons, to the 900-acre Use Area), the discharge would account for about 25% of the crops nitrogen requirement. This Order requires the Discharger to prepare and implement a Wastewater and Nutrient Management Plan, and to monitor effluent nitrogen and nitrogen loading rates for wastewater and any additional fertilizers to ensure agronomic loading rates will be maintained.
12. According to the RWD, winery operations will occur year round. By discontinuing discharge to the holding pond, the Discharger no longer has the capacity to store wastewater during periods of wet weather. The Water Balance submitted with the RWD addresses the need to continue discharge during wet weather by increasing the daily application area to minimize the potential to cause oversaturated conditions. The RWD concludes that expansion of the daily application area during wet weather will result in an insignificant increase in hydraulic loading rates. This Order proscribes irrigation with treated wastewater in a manner that would cause runoff onto adjacent properties, ponding for greater than 24 hours, or exceedance of agronomic application rates and requires the Discharger to submit a technical report including a revised water balance to provide an appropriate plan to accommodate allowable wastewater flow and seasonal precipitation with a time schedule to provide adequate wet weather storage, if required.

Other Considerations for Food Processing Waste

13. Excessive application of food processing wastewater to land can create objectionable odors, soil conditions that are harmful to crops, and degradation of underlying groundwater by overloading the soil profile and causing waste constituents (i.e., organic carbon, nitrates, other salts, and metals) to percolate below the root zone. It is reasonable to expect some attenuation of various waste constituents that percolate below the root zone within the vadose (unsaturated) zone. Specifically, excess nitrogen can be mineralized and denitrified by soil microorganisms, organic constituents (measured as both BOD and volatile dissolved solids) can be oxidized, and the cation exchange capacity of the soil may immobilize some salinity constituents.
14. Irrigation with high strength wastewater can result in high BOD loading on the day of application. If the rate of oxygen transfer into the soil is not adequate, anaerobic and/or reducing conditions may result and cause nuisance conditions. In addition, anaerobic conditions in soil can cause dissolution and leaching of metals. Loading of BOD will be limited to prevent nuisance conditions. The maximum BOD loading rate that can be applied to land without creating nuisance conditions can vary significantly depending on the operation of the land application system. *Pollution Abatement in the Fruit and*

Vegetable Industry, published by the United States Environmental protection Agency (USEPA Publication 625/3-77-0007), cites BOD loading rates for irrigation purposes in the range of 36 to 100 lbs/acre/day, but indicates that loading rates can be even higher under certain conditions. The *Manual of Good Practice for Land Application of Food Processing/Rinse Water*, a report commissioned by the California League of Food Processors, suggests organic loading less than 50 lbs BOD/acre/day (given even distribution) is de minimis and indistinguishable from common agronomic conditions. The manual categorizes this loading rate with the lowest Risk Category of 1.

15. At the proposed flow rates, the average BOD loading to the Use Area, on the day of application (assuming a hydraulic loading of approximately 6 inches per acre with four parts irrigation water to one part wastewater), would be between 200 and 525 lbs/acre. With a minimum resting period of 30 days between applications, the cycle average BOD loading rate would be between 6 and 20 lbs/acre/day. At these loading rates the discharge will be below those intended to prevent nuisance conditions and described for Risk Category 1.
16. Food processing wastewater may also contain elevated concentrations of TDS resulting from the fruit and vegetable products or materials used for production. Typically a percentage of the TDS is organic, which will generally decompose into its component elements and can be utilized by plants and microorganisms in the soil. In contrast the FDS is that portion of the TDS which consists of inorganic constituents which can accumulate in the soil. Excessive salt is then leached to groundwater where it can degrade groundwater quality. Growing and harvesting crops provides a means to remove some of these constituents, particularly calcium, magnesium, potassium, phosphorus, nitrate, and ammonia.
17. A comparison of the average TDS concentration of the discharge of 1,220 mg/L to the FDS concentration of 420 mg/L shows an average ratio of organic to inorganic materials in the waste stream of about 3:1. Assuming the average FDS concentration of 420 mg/L, the maximum annual inorganic salt load to the Use Area from the process wastewater at 115 million gallons would be about 450 lbs/acre/year.

Site-Specific Conditions

18. The Winery and Use Area are in an arid climate characterized by hot dry summers and mild winters. The rainy season generally extends from November through April. Occasional rains occur during the spring and fall months, but summer months are dry. Average annual precipitation and evaporation (Class "A" pan) in the area is about 11.23 inches and 62 inches, according to information published by the Western Regional Climate Center for Fresno. The California Irrigation Management Information System (CIMIS) database reports an annual average potential evapotranspiration (ET_o) of 57.3 inches for the Fresno area.

19. United States Department of Agriculture Natural Resources Conservation Service (NRCS) soil survey maps characterize approximately the top six feet of soil. Soils in the Use Area are El Peco fine sandy loam, Fresno fine sandy loam, and Pachappa loam. These soils are described as well drained with a moderate to very low water holding capacity. The land capability classifications for the El Peco fine sandy loam, Fresno fine sandy loam, and Pachappa loam are IV-s, III-s, and II-s, respectively. The duripan (hardpan) layer at depths of 20 to 40 inches, and the low water holding capacity in the El Peco and Fresno fine sandy loams, can affect the feasibility of irrigated agriculture. These soils pose no other significant use restrictions.
20. Land use in the vicinity is primarily agricultural and rural residential. According to a 2000 land use survey from the Department of Water Resources, primary crops grown in the area include grapes, alfalfa, cotton, corn, and almonds. Irrigation water is supplied primarily by groundwater. One mile north of the Winery and Use Area is the Fresno-Clovis Metropolitan Regional Wastewater Treatment Facility (Fresno-Clovis WWTF) and its percolation ponds. The area surrounding the Winery and Use Area is agricultural farmland. Many of the surrounding parcels use recycled water from the Fresno-Clovis WWTF to supplement irrigation water.
21. In the past the Discharger has utilized undisinfected secondary recycled water from the Fresno-Clovis WWTF in accordance with Title 22 for irrigation of crops within the Use Area. This practice ceased due to recommendations made by the California Department of Public Health (DPH) in a 2003 memo that recommended recycled water meet minimum requirements of disinfected secondary-2.2 for irrigation of vineyards and orchards. The Discharger has stated its intention to use recycled water in the future for irrigation of its grape vineyards, once the Fresno-Clovis WWTF completes upgrades to provide an appropriate level of treatment and disinfection. Prior to initiating the use of recycled water for irrigation within the Use Area, the Discharger will need to submit to the Central Valley Water Board a Title 22 Engineering Report with an approval letter from DPH for its proposed recycled water use. It will also need to submit a Report of Water Reclamation that accounts for the use of recycled water in addition to the winery wastewater within the Use Area, including monthly and annual loading calculations.
22. According to the Federal Emergency Management Agency (FEMA) maps the Winery and Use Area lie outside of the 100-year flood zone.
23. The Discharger is not required to obtain coverage under the National Pollutant Discharge Elimination System Industrial Storm Water Permit since all storm water runoff at the Winery and in the Use Area is reportedly retained on-site and does not discharge into a water of the US.

Groundwater Considerations

24. Regional groundwater underlying the area is first encountered at about 60 feet below ground surface (bgs) and flows to the south- southwest, according to Lines of Equal Elevation of Water in Wells, Unconfined Aquifer, published by DWR in Spring 2009.
25. The Discharger does not have a monitoring well network in place to monitor groundwater beneath the Use Area. However, the Fresno-Clovis WWTF's groundwater monitoring well network covers the area around the Use Area. From the Fresno-Clovis WWTF monitoring reports, groundwater in the vicinity of the Use Area is first encountered at about 75 to 116 feet bgs. Groundwater flow is to the south-southwest, making the WWTF's ponds approximately 4,000 feet up-gradient of the Use Area. Some mounding is observed up-gradient of the site in the vicinity of the WWTF's ponds.
26. Groundwater quality up-gradient of the Fresno-Clovis WWTF is relatively good with EC and TDS concentrations of about 300 umhos/cm and 220 mg/L, respectively, and nitrate (as N) ranging from 4 to 8 mg/L.
27. It appears that groundwater down-gradient of the WWTF, but immediately up-gradient of the Use Area, has been degraded, likely a result of WWTF operations, with average EC and TDS concentrations of about 800 umhos/cm and 500 mg/L, respectively. In addition, the monitoring wells immediately down-gradient of the WWTF show some evidence of reducing conditions with manganese concentrations in excess of the secondary Maximum Contaminant Level (MCLs) of 0.05 mg/L.
28. Groundwater monitoring by the Fresno-Clovis WWTF shows increasing salinity down-gradient of the Use Area with EC and TDS concentrations of about 1,000 umhos/cm and 700 mg/L, respectively. However, the only monitoring well situated down-gradient of the Use Area is approximately 3,000 feet south from the southern boundary of the Use Area, and it is unclear if this monitoring well truly reflects groundwater conditions associated with the discharge of winery wastewater.
29. This Order includes a Provision requiring the Discharger to install a monitoring well network to monitor groundwater within and immediately down-gradient of the Use Area as part of its Monitoring and Reporting Program (MRP).

Basin Plan, Beneficial Uses, and Water Quality Objectives

30. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition, revised January 2004* (Basin Plan) designates beneficial uses, establishes narrative and numerical water quality objectives, contains implementation plans and policies for protecting all waters of the Basin, and incorporates, by reference, plans and policies of the State Water Board. In accordance with Water Code section 13263(a), these requirements implement the Basin Plan.

31. The Winery and Use Area are within the Fresno Hydrologic Area (No. 551.30) of the Kings River Basin, as depicted on interagency hydrologic maps prepared by the State Water Resources Control Board and the Department of Water Resources, revised in August 1986. The Basin Plan identifies the beneficial uses of groundwater as municipal and domestic supply, agricultural supply, and industrial service and industrial process supply.
32. Surface water drainage is to the Fresno Irrigation District's (FID) Central Wasteway, within the South Valley Hydrologic Unit. The Central Wasteway is hydraulically connected to the Fresno Slough and during periods of heavy rain or snowmelt may drain to the San Joaquin River, both waters of the US. The Fresno Slough is a Valley Floor Water, and according to the Basin Plan designated beneficial uses of Valley Floor Waters are agricultural supply; industrial service and process supply; water contact and non-contact recreation; warm freshwater, wildlife, and rare, threatened, or endangered species habitat; and groundwater recharge.
33. The Basin Plan establishes narrative water quality objectives for Chemical Constituents, Taste and Odors, and Toxicity. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses.
34. The Basin Plan Chemical Constituents water quality objective requires, at a minimum, waters designated as domestic or municipal supply to meet the MCLs specified in Title 22 of CCR. The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.
35. The Basin Plan identifies the greatest long-term problem facing the entire Tulare Lake Basin as the increase in salinity in groundwater, which has accelerated due to the intensive use of soil and water resources by irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. Until then, the Basin Plan establishes several salt management requirements, including:
 - a. The incremental increase in salt from use and treatment must be controlled to the extent possible. The maximum EC of the effluent discharged to land shall not exceed the EC of the source water plus 500 umhos/cm. When the source water is from more than one source, the EC shall be a weighted average of all sources.
 - b. For municipal discharges to areas that may recharge good quality groundwater, the Basin Plan states that they shall not exceed an EC of 1,000 umhos/cm, a

chloride content of 175 mg/L, or boron content of 1.0 mg/L. The Basin Plan also states that “generally”, the effluent limits established for municipal discharges will apply to industrial wastes.

36. The Basin Plan allows exceptions to the EC limit of source water plus 500 umhos/cm where the discharge exhibits a disproportionate increase in EC over the EC of the source water due to unavoidable concentrations of organic dissolved solids from the raw food product, provided water quality objectives are met. With an average TDS concentration of 1,220 mg/L and an average FDS concentration of 420 mg/L, the discharge meets the Basin Plan exception. Additionally, given that the discharge meets the incremental EC limit exception, the organic contributors to the effluent EC will break down in the soil, and the overall salt load due to the discharge is low (e.g., 450 lbs/acre/year), it is unnecessary to “generally” apply the Basin Plan effluent EC limit cap of 1,000 umhos/cm.
37. The Basin Plan encourages the reuse of wastewater and identifies crop irrigation as a reuse option where the opportunity exists to replace an existing or proposed use of fresh water with recycled water, provided beneficial uses are maintained.
38. Groundwater Limitations are set at the naturally occurring background water quality or applicable limits based on the following:
 - a. Beneficial uses of Groundwater in the area include MUN. The Title 22 Primary MCL for nitrate as nitrogen (NO₃-N) is 10 mg/L. Therefore, the Groundwater Limitation for NO₃-N in this Order is set at 10 mg/L.
 - b. Waste Discharge Requirements for the Fresno-Clovis WWTF up-gradient of the site allows for some degradation and sets a groundwater limit for EC of 990 umhos/cm. To allow for some degradation and still protect beneficial uses for agricultural and municipal supply this Order sets a Groundwater Limitation for EC of 1,000 umhos/cm.

According to the *Western Fertilizer Handbook, 9th edition*, grapes, which are the most salt sensitive crops currently grown in the area can handle irrigation waters with an EC of up to 1,000 umhos/cm without a significant drop in yield. Further, this EC limit is within the range of secondary MCLs of 900 and 1,600 umhos/cm consistent with beneficial uses for municipal and domestic supply.

With an average effluent EC of 768 umhos/cm, the EC of the discharge is less than underlying groundwater or the 1,000 umhos/cm EC Groundwater Limitation and will not unreasonably threaten present and anticipated beneficial uses.

- c. Consistent with the Basin Plan, as described in [Finding 34](#), this Order limits the chemical constituent concentrations in groundwater to, at a minimum, the MCLs specified in Title 22.

- d. Also consistent with the Basin Plan, this Order prohibits the discharge from causing or contributing to groundwater containing taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

Antidegradation Analysis

39. State Water Board Resolution No. 68-16, the *Policy with Respect to Maintaining High Quality Water of the State* (the "Antidegradation Policy"), prohibits the Board from permitting the degradation of groundwater unless it has been shown that:
 - a. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives;
 - b. The degradation will not unreasonably affect present and anticipated future beneficial uses;
 - c. The Discharger employs Best Practicable Treatment or Control (BPTC) to minimize degradation; and
 - d. The degradation is consistent with the maximum benefit to the people of the state.
40. Constituents of concern in the discharge (those with the greatest potential to affect beneficial uses of receiving water) include organics, nutrients, and salts.
 - a. For organics, the average cycle BOD loading rate to the Use Area at the proposed flow rates would be between 6 and 20 lbs/acre/day. This is significantly below the USEPA recommended application rate to avoid nuisance conditions of 100 lbs BOD/acre/day (Publication No. 625/3-77-007, *Pollution Abatement in the Fruit and Vegetable Industry*). This loading rate is also below the loading rate of 50 lbs/acre/day established in the California League of Food Processors *Manual of Good Practices* for Risk Category 1 as that which poses a de minimis risk to groundwater indistinguishable from regular farming practices. At the estimated loading rates, the discharge is not expected to cause groundwater degradation or nuisance conditions due to organic overloading.
 - b. For nitrogen, the annual nitrogen load to the Use Area would be about 30 lbs/acre/year. With a nitrogen uptake of 125 lbs/acre/year for grapes, it is estimated that the discharge would contribute about 25% of the nitrogen requirement of the crop. With proper management of the wastewater and the proper application of additional fertilizers, the discharge should not cause degradation of groundwater for nitrates.

- c. For salinity, with an average EC of 768 umhos/cm, the EC of the discharge is below the recommended secondary MCL for EC of 900 umhos/cm and is less than underlying groundwater up-gradient of the Use Area. Thus the discharge, if properly managed, should not contribute significantly to salinity in groundwater.

As discussed previously, under Groundwater Conditions, groundwater monitoring down-gradient of the Use Area shows an increase in EC levels and TDS concentrations in groundwater. Due to the location of the monitoring well (approximately 3,000 feet from the boundary of the Use Area) it is unclear if this monitoring well truly reflects groundwater conditions associated with the discharge of the winery wastewater, change due to irrigated agriculture, or natural mineralization. To ensure the ongoing quality of the effluent with respect to salinity, this Order requires the Discharger to prepare and implement a Salinity Control Plan. It also requires the Discharger to establish a groundwater monitoring network to monitor groundwater within and immediately down-gradient of the Use Area. In addition, the Order also requires the Discharger to monitor the effluent for salinity constituents and loading rates.

Treatment and Control Practices

41. The Discharger will provide treatment and control of the discharge that incorporates:
 - a. Use of cleaning chemicals according to labeled instructions;
 - b. Screening and removal of solids prior to discharge to the Use Area;
 - c. Removal of solids off-site by an outside contractor for use as soil amendment or feed supplement;
 - d. Reuse of wastewater for crop irrigation, and application of wastewater at agronomic rates;
 - e. Preparation and implementation of a Wastewater and Nutrient Management Plan and a Salinity Control Plan, as required by this Order; and
 - f. Source water and discharge monitoring required by Monitoring and Reporting Program [R5-2012-XXXX](#), a part of this Order.
42. The treatment and control measures described in [Finding 41](#) above, represents a level of water quality protection comparable to industry standards and similar facilities in the Central Valley, and the Board finds that these treatment and control measures represent BPTC for the discharges regulated herein.

Antidegradation Conclusions

43. This Order establishes terms and conditions to ensure that the discharge does not unreasonably affect present and anticipated future beneficial uses of groundwater or result in groundwater quality worse than the water quality objectives set forth in the Basin Plan.
44. The Discharger aids in the economic prosperity of the region by direct employment of about 43 full time and 63 seasonal personal, and support for local businesses and the community through purchase of equipment and supplies, support of local farmers and trucking operations, as well as providing a tax base for local and county governments. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State and, therefore, provides sufficient reason to allow limited groundwater degradation to occur. In addition, the use of process wastewater for irrigation in place of high quality groundwater will preserve a needed resource, which is of further benefit to people of the State.
45. These WDRs are consistent with the Antidegradation Policy since: (a) GSV has implemented BPTC to minimize degradation, (b) the limited degradation allowed by this Order will not unreasonably affect present and anticipated future beneficial uses of groundwater, or result in water quality less than water quality objectives, and (c) the limited degradation is of maximum benefit to people of the State.

CEQA

46. On 26 May 1977, Fresno County, in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et, seq.) and the State CEQA guidelines (Title 14, Division 6, California Code of Regulations, as amended) adopted a Negative Declaration in conjunction with a Conditional Use Permit (CUP) for commercial operation of a bulk winery at the site and discharge of winery wastewater to the adjacent vineyard.
47. On 26 June 2008, Fresno County adopted a Mitigated Negative Declaration for expansion of Winery operations, the tank farm, and Use Area. The Mitigated Negative Declaration concluded that the increased discharge of winery process wastewater would be compensated by the expansion of the Use Area, and therefore, would have a less than significant impact on water quality provided the applicant complies with the provisions of the California Regional Water Quality Control Board including submittal of a Report of Waste Discharge for expanded operations at the Winery. Staff with the Central Valley Water Board reviewed and concurred with the findings in the 2008 Mitigated Negative Declaration.

This Order includes specific conditions intended to mitigate or avoid environmental effects on water quality. Specifically, this Order:

- a. Sets limits for flow and BOD loading;
- b. Establishes groundwater limits;
- c. Establishes a monitoring and reporting program;
- d. Requires the Discharger to prepare a Wastewater and Nutrient Management Plan to ensure application of wastewater at agronomic rates; and
- e. Requires the Discharger to prepare a Salinity Control Plan and manage salt loading to the Use Area.

Designated Waste and Title 27

48. California Code of Regulations, title 27 (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of waste, which includes designated waste, as defined by Water Code section 13173. However, Title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from Title 27 pursuant to a provision that exempts wastewater under specific conditions. This exemption, found at Title 27, section 20090, is described below:

- (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 regional water quality control board has issued WDRs, reclamation requirements, or waived such issuance;
 - (2) The discharge is in compliance with 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.

49. The discharge authorized herein is exempt from the requirements of Title 27 in accordance with Title 27, section 20090(b) because:

- a. The Central Valley Water Board is issuing WDRs.
- b. The discharge is in compliance with the Basin Plan, and;
- c. The treated effluent discharged to the Use Area does not need to be managed as hazardous waste.

In addition, the reuse of treated process wastewater for irrigation as authorized by this Order is exempt from Title 27 under section 20090(h) for Reuse, since the wastewater is treated to make it suitable for direct beneficial reuse and is discharged in a manner consistent with crop requirements. This Order sets terms and conditions of discharge including discharge specifications and monitoring to ensure that the discharge will not impact present and anticipated beneficial uses of groundwater.

Other Regulatory Considerations

50. The annual fee for the discharge is based on a Threat to Water Quality rating of 2 and Complexity of B (CCR, title 23, § 2200.). The Threat rating is based on the potential of the discharge to degrade groundwater beyond water quality objectives protective of beneficial uses. The Complexity rating is based on the use of screening to remove solids and reuse of the wastewater, which are forms of physical and biological treatment that add complexity to staff assessment.

General Findings

51. Pursuant to Water Code section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.
52. Water Code section 13267(b) states that:

In conducting an investigation specified in subdivision (a), the Central Valley Water Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Central Valley Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Central Valley Water Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.
53. The technical reports required by this Order and monitoring reports required by the attached MRP R5-2012-XXXX are necessary to assure compliance with these waste discharge requirements. The Discharger operates the Winery that discharges the waste subject to this Order.
54. The DWR sets standards for the construction and destruction of groundwater wells, as described in California Well Standards Bulletin 74-90 (June 1991) and Water Well Standards: State of California Bulletin 94-81 (December 1981). These standards, and any more stringent standards adopted by the State or county pursuant to Water Code section 13801, apply to all monitoring wells.
55. All the above and the supplemental information and details in the [attached Information Sheet](#), which is incorporated by reference herein, were considered in establishing the conditions of discharge in this Order.

Public Notice

56. The Discharger and interested agencies and persons have been notified of the intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
57. All comments pertaining to the discharge were heard and considered in a public meeting.

IT IS HEREBY ORDERED that, Waste Discharge Requirements Order 95-156 is rescinded and that, pursuant to sections 13263 and 13267 of the Water Code, Golden State Vintners, Inc., its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted thereunder, shall comply with the following:

A. Prohibitions

1. Discharge of waste, including storm water containing waste, to surface waters or surface water drainage courses is prohibited.
2. Bypass or overflow of untreated or partially treated wastes, except as allowed by [Standard Provisions E.2](#) in *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991, is prohibited.
3. Discharge of waste classified as 'hazardous', as defined in section 2521(a) of title 23, CCR, section 2510 et seq., is prohibited. Discharge of waste classified as 'designated', as defined in Water Code section 13173, in a manner that causes violation of groundwater limitations, is prohibited.
4. Discharge of wastewater in a manner or location other than that described herein is prohibited.
5. Storage of solids on areas without means to prevent leachate generation and infiltration into the ground is prohibited.

B. Discharge Specifications

1. The monthly average daily discharge shall not exceed 175,000 gallons per day (gpd) for the months of February through July (non-crush season) and 450,000 gallons per day (gpd) for the months of August through January (crush season).
2. No waste constituent shall be released, discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of Groundwater Limitations of this Order.

3. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.
4. The discharge shall remain within the permitted waste treatment/containment structures and land application areas at all times.
5. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.
6. Objectionable odors shall not be perceivable beyond the limits of the Winery or Use Area at an intensity that creates or threatens to create nuisance conditions.
7. All conveyance, treatment, storage, and disposal units shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
8. The Winery shall have sufficient treatment, storage, and disposal capacity to accommodate allowable wastewater flow and design precipitation. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.
9. No physical connection shall exist between any wastewater piping and any domestic water supply, or domestic well, or between wastewater piping and any irrigation well that does not have an air gap or reduced pressure principle device.

C. Use Area Specifications

1. For the purpose of this Order, "Use Area" means an area with defined boundaries where wastewater is used or discharged.
2. The perimeter of the Use Area shall be graded to prevent ponding along public roads or other public areas and prevent runoff or overspray onto adjacent properties not owned or controlled by the Discharger.
3. Average BOD loading to the Use Area shall not exceed 100 lbs/acre/day, both long term and over the course of any discharge cycle (i.e., the time between successive applications.)
4. The Discharger shall maximize the use of available land application areas to minimize waste constituent loading rates.
5. Hydraulic loading of wastewater and irrigation water to the Use Area shall be at reasonable agronomic rates designed to minimize the percolation of waste constituents below the root zone (i.e., deep percolation).

6. Application of waste constituents shall be at reasonable agronomic rates to preclude creation of nuisance and degradation of groundwater, considering the crop, soil, climate, and irrigation management. The annual nutrient loading to the Use Area, including the organic and chemical fertilizers and the wastewater, shall not exceed the annual agronomic rate for the crop.
7. Wastewater shall not be discharged to the Use Area in a manner that causes wastewater to stand for greater than 24 hours.
8. The resulting effect of the discharge on soil pH shall not exceed the buffering capacity of the soil profile.
9. The Use Area shall be managed to prevent breeding of mosquitoes. More specifically:
 - a. All applied irrigation water must infiltrate completely within 24-hours;
 - b. Ditches not serving as wildlife habitat shall be maintained free of emergent, marginal, and floating vegetation; and
 - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store recycled water.

D. Solids Specifications

1. Any handling and storage of residual solids on property of the Discharger shall be temporary, and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate the groundwater limitations of this Order.
2. Collected screenings and other solids removed from the liquid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, rendering plants, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements adopted by a regional water quality control board will satisfy this specification.
3. Any proposed change in solids use or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

E. Groundwater Limitations

1. Release of waste constituents from any treatment, reuse, or storage component associated with the discharge shall not cause or contribute to groundwater:
 - a. Containing constituent concentrations in excess of the concentrations specified below or natural background quality, whichever is greater:
 - (i) Nitrate (as N) of 10 mg/L.
 - (ii) Electrical Conductivity of 1,000 umhos/cm.
 - (iii) For constituents identified in Title 22, the MCLs quantified therein.
 - b. Containing taste or odor-producing constituents, toxic substances, or any other chemical constituents in concentrations that cause nuisance or adversely affect beneficial uses.

F. Provisions

1. The Discharger shall comply with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991 (Standard Provisions), which are part of this Order.
2. The Discharger shall comply with MRP R5-2012-XXXX, which is part of this Order, and any revisions thereto as adopted by the Central Valley Water Board or approved by the Executive Officer.
3. The Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.
4. In the event of any change in control or ownership of land or waste treatment and storage facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the appropriate Central Valley Water Board office (currently, the Fresno office).
5. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the address and telephone number of the persons responsible for contact with the Central Valley Water Board and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. If approved by the Executive Officer, the transfer request will be submitted to the

Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

6. The Discharger shall keep at the Winery a copy of this Order, including its MRP, Information Sheet, attachments, and Standard Provisions, for reference by operating personnel. Key operating personnel shall be familiar with its contents.
7. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Central Valley Water Board on or before each report due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
8. The Discharger must 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 the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This Provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger only when the operation is necessary to achieve compliance with the conditions of this Order.
9. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with this Order.
10. The Discharger shall maintain and operate surface impoundments sufficiently to protect the integrity of containment levees and prevent overtopping or overflows. Unless a California registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard shall never be less than two feet (measured vertically). As a means of management and to discern compliance with this Provision, if a pond is used for wastewater storage the Discharger shall install and maintain a permanent marker with calibration that indicates the water level at the design capacity and enables determination of available operational freeboard.
11. The Discharger shall submit the technical reports and work plans required by this Order for Central Valley Water Board staff consideration and incorporate comments they may have in a timely manner, as appropriate. The Discharger shall proceed with all work required by the following provisions by the due dates specified.

12. All technical reports and work plans required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. As required by these laws, completed technical reports and work plans must bear the signature(s) and seal(s) of the registered professionals(s) in a manner such that all work can be clearly attributed to the professional responsible for the work. All reports required herein are required pursuant to Water Code section 13267.
13. **By (3 months following adoption of this Order)**, the Discharger shall submit a technical report containing the results of a study re-evaluating the need to incorporate wastewater storage and/or implement other structural or operational measures into its treatment and disposal system design to ensure continuous compliance with this Order. At a minimum, the technical report shall include a revised, detailed water balance prepared by and properly signed and stamped by a California registered engineer. Calculations to accommodate allowable wastewater flow and seasonal precipitation shall use annual precipitation with a return period of 100 years. The water balance shall demonstrate that wastewater reuse can be accomplished in a manner that complies specifically with [Prohibitions A.1, A.2, and A.4](#); [Discharge Specifications B.3, B.4, and B.8](#); and [Use Area Specifications C.5, and C.7](#). All assumptions shall be properly documented and example calculation shall be provided. The adequacy of study results shall be subject to the approval of the Executive Officer.

If study results indicate that additional storage is necessary, the technical report shall include a work plan and proposed time schedule to design and construct the necessary storage capacity. Storage units shall be designed and constructed to preclude groundwater degradation. If ponds will be used to provide the necessary storage, the work plan shall include the following; (a) design calculations demonstrating adequate containment will be achieved and that the pond liner will be protective of groundwater quality; (b) details on the pond liner and the leachate collection and removal system (if applicable); and (c) a construction quality assurance plan describing testing and observations needed to document construction of the liner in accordance with the design criteria.

Upon written acceptance of the work plan by the Executive Officer, the Discharger shall begin construction to be completed by the date in the **approved schedule**. The Discharger shall submit a post-construction report within 30-days of completion of the pond improvements.

14. **By (6 months following adoption of this Order)**, the Discharger shall submit a Wastewater and Nutrient Management Plan for the Use Area. At a minimum the Plan must include procedures for daily monitoring of the Winery's operations and land application area, an action plan to deal with objectionable odors and/or nuisance conditions, a discussion on blending of wastewater and supplemental irrigation water,

supporting data and calculations for monthly and annual water and nutrient balances, and management practices that will ensure wastewater, irrigation water, and commercial fertilizers are applied at agronomic rates.

15. **By (6 months following adoption of this Order)**, the Discharger shall submit a Salinity Control Plan, with salinity source reduction goals and an implementation time schedule for Executive Officer approval. The control plan should identify any additional methods that could be used to further control the salinity of the discharge to the maximum extent feasible, include an estimate on load reductions that may be attained through the methods identified, and provide a description of the tasks, cost, and time required to investigate and implement various elements in the salinity control plan. The Discharger shall implement the plan in accordance with the approved schedule.
16. **Groundwater Tasks:** The Discharger shall install and maintain a groundwater monitoring well network to monitor ongoing changes in groundwater quality associated with its discharge operations. At a minimum, the Discharger shall install at least one monitoring well within the Use Area and one monitoring well immediately down-gradient of its Use Area and coordinate with the Fresno-Clovis WWTF to utilize its existing monitoring well network to provide additional monitoring points. As part of this Provision, the Discharger shall submit a Work Plan and proposed time schedule to install the required monitoring wells.

The Work Plan shall satisfy the information needs specified in the monitoring well installation section of [Attachment B, Standard Requirements for Monitoring Well Installation Work Plans and Monitoring Well Installation Reports](#). The monitoring wells shall comply with appropriate standards as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981), and any more stringent standards adopted by local agencies pursuant to Water Code section 13801.

The Discharger shall comply with the following compliance schedule in implementing the work required by this Provision:

<u>Task</u>	<u>Compliance Date</u>
a Submit Work Plan and Time Schedule for monitoring well installation.	<120 days> following adoption of the Order
b Commence implementation of the Work Plan	<30 days> following approval of Work Plan
c Submit technical report describing installation procedures and the results of the first sampling event.	<90 days> following installation

Technical reports and Work Plans submitted pursuant to this Provision shall be subject to the requirements of [Provision F.12](#).

17. If the Central Valley Water Board determines that the discharge has a reasonable potential to cause or contribute to an exceedance of a water quality objective, or to create a condition of nuisance or pollution, this Order may be reopened for consideration of additional requirements.
18. The Central Valley Water Board is currently implementing the CV-SALTS initiative to develop a Basin Plan amendment that will establish a salt and nitrate management plan for the Central Valley. Through this effort the Basin Plan will be amended to define how the narrative water quality objectives are to be interpreted for the protection of agricultural use. If new information or evidence indicates that groundwater limitations different than those prescribed herein are appropriate, this Order will be reopened to incorporate such limits.
19. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, and may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order or with the WDRs may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality/

or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____.

PAMELA C. CREEDON, Executive Officer

Order Attachments:

- A Site Location Map
 - B Standard Requirements for Monitoring Well Installation Work Plans and Monitoring Well Installation Reports
- Monitoring and Reporting Program R5-2012-XXXX
Information Sheet
Standard Provisions (1 March 1991)

KC/WDH: 7/2/2012

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2012-XXXX
FOR
GOLDEN STATE VINTNERS, INC.
FRESNO WINERY
FRESNO COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to Water Code section 13267.

The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts, or the Executive Officer issues, a revised MRP. Changes to sample location, shall be established with concurrence of Central Valley Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. All analyses shall be performed in accordance with **Standard Provisions and Reporting Requirements for Waste Discharge Requirements**, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as pH) may be used provided that the operator is trained in the proper use of the instrument and each instrument is serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions.

Analytical procedures shall comply with the methods and holding times specified in the following: *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA); *Test Methods for Evaluating Solid Waste* (EPA); *Methods for Chemical Analysis of Water and Wastes* (EPA); *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA); *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125). Approved editions shall be those that are approved for use by the United States Environmental Protection Agency or the California Department of Public Health's Environmental Laboratory Accreditation Program). The Discharger may propose alternative methods for approval by the Executive Officer.

If monitoring consistently shows no significant variation in magnitude of a constituent concentration or parameter after at least 12 months of monitoring, the Discharger may request this MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

A glossary of terms used within this MRP is included on [page 9](#).

EFFLUENT MONITORING

Effluent samples shall be collected at a point after screening but prior to blending with irrigation water and discharge to the Use Area. Time of collection of the sample shall be recorded. Discharge monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Daily	Flow	mgd	Metered
Monthly	pH	pH Units	Grab
Monthly	EC	umhos/cm	Grab
Monthly	BOD ₅	mg/L	24-hr Composite
Monthly	TDS	mg/L	24-hr Composite
Monthly	FDS	mg/L	24-hr Composite
Monthly	Nitrate (as N)	mg/L	24-hr Composite
Monthly	Total Kjeldahl Nitrogen	mg/L	24-hr Composite
Monthly	Ammonia	mg/L	24-hr Composite
Monthly	Total Nitrogen	mg/L	Computed
Quarterly	General Minerals ¹	mg/L	24-hr Composite

¹ At a minimum the General Mineral analysis shall include alkalinity, bicarbonate, calcium, carbonate, chloride, hardness, magnesium, potassium, phosphorus, sodium, sulfate, TDS, and a cation/anion balance.

USE AREA MONITORING

The Discharger shall perform the following routine monitoring and loading calculations for the Use Area. Data shall be collected and presented in tabular format and shall include the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Daily	Application Area	acres	n/a
Daily	Wastewater flow	gallons	Metered
Daily	Wastewater loading	inches/day	Calculated
Daily	Supplemental irrigation	gallons	Metered
Daily	Precipitation	inches	Rain gage ¹
Monthly	Total Hydraulic Loading ²	inches/acre-month	Calculated
<u>BOD loading³</u>			
Daily	Day of application	lbs/acre	Calculated
Monthly	Cycle Average	lbs/acre-day	Calculated
<u>Nitrogen loading⁴</u>			
Monthly	From wastewater	lbs/acre	Calculated
Monthly	From fertilizers	lbs/acre	Calculated
Annually	Cumulative nitrogen loading	lbs/acre-year	Calculated

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
<u>Salt loading⁴</u>			
Monthly	From wastewater	lbs/acre	Calculated
Annually	Cumulative salt loading	lbs/acre-year	Calculated

- ¹ National Weather Service or CIMIS data from the nearest weather station is acceptable.
² Combined loading from wastewater, irrigation water, and precipitation.
³ Loading rates shall be calculated using the applied volume of wastewater, applied acreage, and average effluent BOD concentration. The BOD loading rate shall be divided by the #days between applications to determine the cycle average.
⁴ Nitrogen and salt loadings shall be calculated using the applied volume of wastewater, applied acreage, and average effluent concentrations for total nitrogen and FDS.

In addition, the Discharger shall inspect the Use Area on a weekly basis. Evidence of erosion, field saturation, runoff, or the presence of nuisance conditions (i.e., flies, ponding, etc.) shall be noted in field logs and included as part of the quarterly monitoring reports.

GROUNDWATER MONITORING

After measuring water levels and prior to collecting samples, each monitoring well shall be adequately purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water. Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging is typically from 3 to 5 well casing volumes.

The Discharger shall monitor the wells installed in accordance with the Work Plan and Time Schedule for Monitoring Well Installation, and any subsequent additional wells, for the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Quarterly	Depth-to-Water	Feet ¹	Measured
Quarterly	Groundwater Elevation	Feet ²	Computed
Quarterly	pH	s.u.	Grab
Quarterly	EC	umhos/cm	Grab
Quarterly	Nitrate (as N)	mg/L	Grab
Quarterly	Total Kjeldahl Nitrogen	mg/L	Grab
Quarterly	Total Nitrogen	mg/L	Computed
Quarterly	Iron ³	mg/L	Grab
Quarterly	Manganese ³	mg/L	Grab
Quarterly	Total Organic Carbon	mg/L	Grab
Quarterly	General Minerals ^{3,4}	mg/L	Grab

- ¹ To nearest tenth of a foot
² Groundwater elevation shall be determined based on depth-to-water measurement from a surveyed measuring point. Note: Monitoring wells installed by the Discharger need to be surveyed to the same datum as those utilized by the Fresno-Clovis WWTF to ensure that groundwater elevation information between the two monitoring well networks is compatible.
³ Samples collected for metals shall be filtered with a 0.45 micron filter prior to preservation, digestion, and analysis.
⁴ At a minimum the General Mineral analysis shall include alkalinity, bicarbonate, calcium, carbonate, chloride, hardness, magnesium, potassium, phosphorus, sodium, sulfate, TDS, and a cation/anion balance.

SOURCE WATER MONITORING

The Discharger shall monitor all sources (either well or surface supply) to the Winery facility and land application area for EC and general minerals according to the following Table. Measurements for EC supplied to the facility shall be a flow-weighted average concentration of all sources supplying the Winery.

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
<u>Supply Water</u>			
Quarterly	Flow-Weighted EC	umhos/cm	Computed Average
Annually	General Minerals ^{2,3}	mg/L	Grab
<u>Irrigation Water</u>			
Annually	EC	umhos/cm	Grab
Once every 3 years ¹	General Minerals ^{2,3}	mg/L	Grab

1. The first sampling event shall occur in the year that the Order is adopted
2. Samples collected for metals shall be filtered with a 0.45 micron filter prior to preservation and analysis.
3. At a minimum the General Minerals analysis shall include alkalinity, bicarbonate, calcium, carbonate, chloride, hardness, magnesium, potassium, phosphorus, sodium, sulfate, TDS, and a cation/anion balance.

REPORTING

All monitoring results shall be reported in **Quarterly Monitoring Reports** which are due by the first day of the second month after the calendar quarter. Therefore, monitoring reports are due as follows:

First Quarter Monitoring Report:	1 May
Second Quarter Monitoring Report:	1 August
Third Quarter Monitoring Report:	1 November
Fourth Quarter Monitoring Report:	1 February.

A transmittal letter 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 violations, such as operation or Plant modifications. If the Discharger has previously submitted a report describing corrective actions or a time schedule for implementing the corrective actions, reference to the previous correspondence is satisfactory.

The following information is to be included on all monitoring and annual reports, as well as any report transmittal letters, submitted to the Central Valley Water Board:

Golden State Vintners, Inc.
 Fresno Winery
 R5-2012-XXXX
 Contact Information (telephone number and email)

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly, whether the Discharger complies with waste discharge requirements.

In addition to the details specified in Standard Provision C.3, monitoring information shall include the method detection limit (MDL) and the Reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated.

Laboratory analysis reports do not need to be included in the monitoring reports; however, the laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3.

All monitoring reports shall comply with the signatory requirements in Standard Provision B.3. For a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

All monitoring reports that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1.

At any time henceforth, the State or Central Valley Water Board may notify the Discharger to electronically submit monitoring reports using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>) or similar system. Until such notification is given, the Discharger shall submit hard copy monitoring reports.

A. All Quarterly Monitoring Reports, shall include the following:

Wastewater reporting

1. The results of effluent monitoring specified on [page 2](#).
2. For each month of the quarter, calculation of the monthly average daily flow, and cumulative annual flow.
3. A summary of the notations made in the pond monitoring log during each quarter, if applicable. The entire contents of the log do not need to be submitted.

Groundwater reporting

1. The results of groundwater monitoring specified on [pages 3](#). If there is insufficient water in the well(s) for sampling the monitoring well(s) shall be reported as dry for the quarter.

2. For each monitoring well, a table showing groundwater depth, elevation, and constituent concentrations for a least five previous years, up through the current quarter.
3. A groundwater contour map based on groundwater elevations for that quarter. The map shall show the gradient and flow direction of groundwater flow. The map shall also include the locations of all monitoring wells and wastewater storage and/or disposal areas.

Use Area reporting

1. The results of the routine monitoring and loading calculations specified on [pages 2 and 3](#).
2. For each month of the quarter, calculation of the monthly hydraulic load for wastewater and supplemental irrigation water in millions of gallons to each discrete irrigation area.
3. A summary of the notations made in the Use Area monitoring log during each quarter. The entire contents of the log do not need to be submitted.

Source water reporting

1. The results of quarterly monitoring for EC specified on [page 4](#). Results must include supporting calculations.

B. Fourth Quarter Monitoring Reports, in addition to the above, shall include the following:

Facility information

1. The names and general responsibilities of all persons in charge of wastewater management.
2. The names and telephone numbers of persons to contact regarding the discharge for emergency and routine situations.
3. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4).
4. A summary of any changes in processing that might affect waste characterization and/or discharge flow rates.

Solids reporting

1. Annual production totals for solids (excluding trash and recyclables) in dry tons or cubic yards.
2. A description of disposal methods, including the following information related to the disposal methods used. If more than one method is used, include the percentage disposed of by each method.
 - a. For landfill disposal, include: the name and location of the landfill, and the Order number of WDRs that regulate it.
 - b. For land application, include: the location of the site, and the Order number of any WDRs that regulate it.
 - c. For incineration, include: the name and location of the site where incineration occurs, the Order number of WDRs that regulate the site, the disposal method of ash, and the name and location of the facility receiving ash (if applicable).
 - d. For composting, include: the location of the site, and the Order number of any WDRs that regulate it.
 - e. For animal feed, include: the location of the site, and the Order number of any WDRs that regulate it.

Use Area reporting

1. The type of crop(s) grown, planting and harvest dates, and the quantified nitrogen and fixed dissolved solids uptakes (as estimated by technical references or, preferably, determined by representative plant tissue analysis).
2. The monthly and annual discharge volumes during the reporting year expressed as million gallons and inches.
3. A monthly balance for the reporting year that includes:
 - a. Monthly average ET_o (observed evapotranspiration) – Information sources include California Irrigation Management Information System (CIMIS) <http://www.cimis.water.ca.gov/>
 - b. Monthly crop uptake
 - i. Crop water utilization rates are available from a variety of publications available from the local University of California Davis extension office.

- ii. Irrigation efficiency – Frequently, engineers include a factor for irrigation efficiency such that the application rate is slightly greater than the crop utilization rate. A conservative design does not include this value.
 - c. Monthly average precipitation – this data is available at <http://www.cimis.water.ca.gov/> or at <http://www.ncdc.noaa.gov/oa/climate/online/ccd/nrmlprcp.html>.
 - d. Monthly average and annual average discharge flow rate.
 - e. Monthly estimates of the amount of wastewater percolating below the root zone (i.e., amount of wastewater applied in excess of crop requirements)
- 4. A summary of average and cycle BOD loading rates.
 - 5. The total pounds of nitrogen applied to the reuse area(s), as calculated from the sum of the monthly loadings, and the total annual nitrogen loading to the reuse area(s) in lbs/acre-year.
 - 6. The total pounds of fixed dissolved solids (FDS) that have been applied to the reuse area(s), as calculated from the sum of the monthly loadings, and the total annual FDS loading to the reuse area(s) in lbs/acre-year.

The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Ordered by: _____
Pamela C. Creedon, Executive Officer

(Date)

KC/WDH: 7/2/2012

GLOSSARY

BOD ₅	Five-day biochemical oxygen demand		
CBOD	Carbonaceous BOD		
DO	Dissolved oxygen		
EC	Electrical conductivity at 25° C		
FDS	Fixed dissolved solids		
NTU	Nephelometric turbidity unit		
TKN	Total Kjeldahl nitrogen		
TDS	Total dissolved solids		
TSS	Total suspended solids		
Continuous	The specified parameter shall be measured by a meter continuously.		
24-Hour Composite	Samples shall be a time-proportioned composite consisting of at least eight aliquots.		
Daily	Samples shall be collected every day.		
Twice Weekly	Samples shall be collected at least twice per week on non-consecutive days.		
Weekly	Samples shall be collected at least once per week.		
Twice Monthly	Samples shall be collected at least twice per month during non-consecutive weeks.		
Monthly	Samples shall be collected at least once per month.		
Bimonthly	Samples shall be collected at least once every two months (i.e., six times per year) during non-consecutive months.		
Quarterly	Samples shall be collected at least once per calendar quarter. Unless otherwise specified or approved, samples shall be collected in January, April, July, and October.		
Semiannually	Samples shall be collected at least once every six months (i.e., two times per year). Unless otherwise specified or approved, samples shall be collected in April and October.		
Annually	Samples shall be collected at least once per year. Unless otherwise specified or approved, samples shall be collected in October.		
mg/L	Milligrams per liter		
mL/L	Milliliters [of solids] per liter		
ug/L	Micrograms per liter		
umhos/cm	Micromhos per centimeter		
mgd	Million gallons per day		
MPN/100 mL	Most probable number [of organisms] per 100 milliliters		
General Minerals	Analysis for General Minerals shall include at least the following:		
	Alkalinity	Chloride	Phosphorus
	Bicarbonate	Hardness	Sodium
	Calcium	Magnesium	Sulfate
	Carbonate	Potassium	TDS
	General Minerals analyses shall be accompanied by documentation of cation/anion balance.		

INFORMATION SHEET

INFORMATION SHEET - ORDER R5-2012-XXXX
GOLDEN STATE VINTNERS, INC.
FRESNO WINERY
FRESNO COUNTY

Background

Golden State Vintners operates a Winery at 7409 West Central Avenue in Fresno. This Winery has been in operation since 1977. The Winery operates year-round and produces bulk wine. The Winery does not distill and does not discharge stillage waste.

The discharge of winery process wastewater is currently regulated by Waste Discharge Requirements (WDRs) Order 95-156, which authorizes an average daily discharge of 0.167 million gallons per day (mgd) for the crush season (June - December) and 0.065 mgd for the non-crush season (January - May) to 630 acres of vineyards.

In May 2007, GSV submitted a Report of Waste Discharge (RWD) to address increased flows and growth of Winery operations due to expansion of its tank farm and the increasing demand for California wines. Supplemental information to address future growth of the Winery was submitted in May 2012. The RWD and supplemental information proposed the following to accommodate changes in Winery operations and projected future increases in discharge volume:

- a. Increase the average daily discharge to 0.45 mgd for the months of August through January (crush season) and 0.175 mgd for the months of February through July (non-crush season); and
- b. Increase the available land application area by 270 acres bringing the total available land application area to 900 acres to accommodate the higher flows.

In addition, the Discharger reconfigured its treatment system to add a screen to remove solids from the wastewater and bypassed the wastewater holding pond to tie directly to the irrigation system. Wastewater discharge to the holding pond was discontinued in October 2010 and all wastewater lines from the Winery have been capped. The pond still has the ability to receive water from the Fresno Irrigation District.

Wastewater Quality

Winery process wastewater is a combined waste stream comprised of ion exchange waste, cooling water, tank and equipment wash water, and boiler blowdown. The chemical makeup of the wastewater varies over the year depending on operations at the Winery. Sampling data shows that the discharge contains high concentrations of Biochemical Oxygen demand, nitrogen, and dissolved solids during the crush season and relatively minor concentrations of these constituents during the rest of the year.

The following table presents a summary of wastewater data in the record for samples collected from 2007 through 2011:

<u>Constituents</u>	<u>Units</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Average</u>
pH	std.	4.0	7.8	6.7
Electrical Conductivity (EC)	umhos/cm	400	1,350	768
Total Dissolved Solids (TDS)	mg/L	350	2,700	1,220
Fixed Dissolved Solids (FDS)	mg/L	130	800	420
Biochemical Oxygen Demand (BOD)	mg/L	300	6,000	2,100
Total Nitrogen	mg/L	5	81	28

According to the supplemental information provided by the Discharger the wastewater will be blended with irrigation water at a ratio of approximately 4:1 and applied to the checks between the grape vines of the 900-acre Use Area via flood irrigation. To ensure sufficient coverage of each check the daily application area will cover approximately 2 to 15 acres depending on the volume of wastewater. According to the Discharger irrigation of the fields will be carefully managed to prevent oversaturation or ponding for longer than 24-hours. Additional irrigation water to meet crop requirements during the growing season will be well water applied via drip irrigation.

Groundwater Conditions

The Winery and Use Area overly East Side waters and are east of the Corcoran Clay. The map titled *Lines of Equal Elevation of Water in Wells, Unconfined Aquifer*, published by the California Department of Water Resources in spring 2009 show regional groundwater underlying the area is at about 60 feet below ground surface (bgs) and flows to the south- southwest . WDRs Order 95-156 does not require groundwater monitoring. However, the Fresno-Clovis Metropolitan Regional Wastewater Treatment Facility (Fresno-Clovis WWTF) north and east of the site has a groundwater monitoring well network that covers immediately up-gradient and around the Use Area.

Groundwater data from the Fresno-Clovis WWTF monitoring wells indicates that first-encountered groundwater in the vicinity of the Use Area is about 75 to 116 feet below grade. Groundwater flow is to the south-southwest, making the ponds for the Fresno-Clovis WWTF up-gradient of the site. Some mounding is observed up-gradient of the site in the vicinity of the Fresno-Clovis WWTF ponds.

Groundwater quality up-gradient of the Fresno-Clovis WWTF is relatively good with EC and TDS concentrations of about 300 umhos/cm and 220 mg/L, respectively and nitrate (as N) ranging from 4 to 8 mg/L. It appears that groundwater down-gradient of the WWTF but immediately up-gradient of the Use Area has been degraded, likely a result of WWTF operations, with average EC and TDS concentrations of about 800 umhos/cm and 500 mg/L, respectively. In addition, the monitoring wells down-gradient of the WWTF show evidence of reducing conditions with manganese concentrations in excess of its respective secondary Maximum Contaminant Level (MCLs) of 0.05 mg/L.

Groundwater monitoring by the Fresno-Clovis WWTF shows increasing salinity down-gradient of the Use Area with EC and TDS concentrations of about 1,000 umhos/cm and 700 mg/L, respectively. However, the only monitoring well situated down-gradient of the Use Area is approximately 3,000 feet south of the Use Area and it is unclear if this monitoring well truly reflects groundwater conditions associated with the discharge of winery wastewater.

Basin Plan, Beneficial Uses, and Regulatory Considerations

The Basin Plan identifies the greatest long-term water quality problem facing the entire Tulare Lake Basin is increasing salinity in groundwater, a process accelerated by man's activities and particularly affected by intensive irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. Until then, the Basin Plan establishes several salt management requirements, including the following discharge limits:

- a. The incremental increase in salts from use and treatment must be controlled to the extent possible. The maximum EC of the effluent discharged to land shall not exceed the EC of the source water plus 500 umhos/cm. When the source water is from more than one source, the EC shall be a weighted average of all sources.
- b. Discharges to areas that may recharge good quality groundwater shall not exceed an EC of 1,000 umhos/cm, a chloride content of 175 mg/L, or boron content of 1.0 mg/L.

The Basin Plan Chemical Constituents water quality objective requires, at a minimum, waters designated as domestic or municipal supply to meet the MCLs specified in Title 22 of CCR. The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

Narrative objectives (as opposed to specific numeric objectives) for groundwater in the Basin Plan are the most limiting for this discharge. The Basin Plan establishes narrative water quality objectives for groundwater for Chemical Constituents, Taste and Odors, and Toxicity. The Toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses.

Antidegradation

As mentioned above, the groundwater up-gradient of the Winery and Use Area has already been degraded for salinity and manganese as a result of the discharge of domestic wastewater from the Fresno-Clovis WWTF.

Constituents of concern in the discharge (those with the greatest potential to affect beneficial uses of receiving water) include organics, nutrients, and salts.

- a. For organics, the average BOD loading rate to the Use Area at the proposed flow rates would be between 6 and 20 lbs/acre/day. This is significantly below the USEPA recommended application rate to avoid nuisance conditions of 100 lbs BOD/acre/day (Publication No. 625/3-77-007, Pollution Abatement in the Fruit and Vegetable Industry). This loading rate is also below 50 lbs/acre/day established in the California League of Food Processors Manual of Good Practices as that which poses a de minimis risk to groundwater indistinguishable from regular farming practices. At the estimated loading rates, the discharge is not expected to cause groundwater degradation or nuisance conditions due to organic overloading.
- b. For nitrogen, the annual nitrogen load to the Use Area would be about 30 lbs/acre/year. With a nitrogen uptake of 125 lbs/acre/year for grapes, it is estimated that the discharge would contribute about 25% of the nitrogen requirement of the crop. With proper management of the wastewater and the proper application of additional fertilizers, the discharge should not cause degradation of groundwater for nitrates.
- c. For salinity, with an average EC of 768 umhos/cm, the EC of the discharge is below the recommended secondary MCL for EC of 900 umhos/cm and is less than underlying groundwater up-gradient of the Use Area. Thus the discharge, if properly managed should not contribute significantly to salinity in groundwater.

As discussed previously, under groundwater conditions, groundwater monitoring down-gradient of the Use Area shows increasing EC and TDS concentrations in groundwater. Due to the location of the monitoring well (approximately 3,000 feet south of the Use Area) it is unclear if this monitoring well truly reflects groundwater conditions associated with the discharge of the winery wastewater. To ensure the ongoing quality of the effluent with respect to salinity, this Order requires the Discharger to prepare and implement a Salinity Control Plan and establish a groundwater monitoring well within and immediately down-gradient of the Use Area. In addition, the Order also requires the Discharger to monitor the effluent for salinity constituents and loading rates.

The discharge is not expected to cause groundwater degradation in excess of appropriate water quality objectives. Implementation of a Wastewater and Nutrient Management Plan and a Salinity Control Plan will further limit degradation. This Order establishes groundwater limitations that allow some degradation, but that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan. Monitoring and reporting requirements are designed to supply data for verification of antidegradation findings.

The Discharger implements treatment and control measures including use of cleaning chemicals at labeled rates, treatment to remove solids, reuse of wastewater for irrigation of crops, and application at agronomic rates.

This Order is consistent with the Antidegradation policy since: (a) The Discharger has implemented BPTC to minimize degradation, (b) the limited degradation allowed by this Order will not unreasonably affect present and anticipated beneficial uses of groundwater, or result in water quality less than water quality objectives, and (c) the limited degradation is of maximum benefit to people of the State, as the Winery employs up to 43 full time and 63 season people, supports the local economy and provides a tax base for local and county governments. In addition, the use of process wastewater for irrigation in place of higher quality groundwater will preserve a needed resource, which is of further benefit to people of the State.

CEQA

On 26 May 1977, Fresno County, in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et, seq.) and the State CEQA guidelines (Title 14, Division 6, California Code of Regulations, as amended) adopted a Negative Declaration in conjunction with a Conditional Use Permit (CUP) for commercial operation of a bulk winery at the site and discharge of winery wastewater to the adjacent vineyard.

On 26 June 2008, Fresno County adopted a Mitigated Negative Declaration for expansion of Winery operations, the tank farm, and Use Area. The Mitigated Negative Declaration concluded that the increased discharge of winery wastewater would be compensated by the expansion of the Use Area, and therefore, would have a less than significant impact on water quality provided the applicant complies with the provisions of the California Regional Water Quality Control Board including submittal of a Report of Waste Discharge for expanded operations at the Winery. Staff with the Central Valley Water Board reviewed and concurred with the findings in the 2008 Mitigated Negative Declaration.

Title 27

Unless exempt, the 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 the wastewater exemption found at Title 27, section 20090(b), since:

- a. The Central Valley Water Board is issuing WDRs.
- b. The discharge is in compliance with the Basin Plan, and;
- c. The treated effluent discharged to the Use Area does not need to be managed as hazardous waste.

In addition, the reuse of process wastewater for irrigation as authorized by this Order is exempt from Title 27 under section 20090(h) for Reuse, since the wastewater is contained and treated to make it suitable for direct beneficial reuse and is discharged in a manner consistent with crop requirements.

Proposed Order Terms and Conditions

Discharge Prohibitions, Specifications and Provisions

The proposed Order prohibits discharge to surface waters and drainage courses. The proposed Order limits the monthly average flow to 175,000 gallons per day (gpd) for the months of February through July (non-crush season) and 450,000 gallons per day (gpd) for the months of August through January (crush season) consistent with current and projected future flows. The proposed Order includes a BOD loading limit such that loading to the Use Area shall not exceed 100 lbs BOD /acre/day in order to prevent nuisance conditions and limit the potential for reducing conditions to develop in soil.

The proposed Order would 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 exceedances of these objectives. The proposed Order sets a groundwater limit for nitrate at the Primary MCL of 10 mg/L. The Order also includes narrative objectives from the Basin Plan for preservation of the AGR beneficial use of groundwater.

The proposed Order requires the Discharger to submit a Salinity Control Plan as well as a Wastewater and Nutrient Management Plan to minimize the salinity of the discharge and to ensure the application at agronomic rates. The proposed Order also requires the Discharger to install a groundwater monitoring well network and prepare a technical report and revised water balance to ensure adequate wet weather storage.

Monitoring Requirements

Water Code section 13267 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 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. Water Code section 13268 authorizes the assessment of administrative civil liability where appropriate. The proposed Order includes effluent monitoring requirements. In addition, the proposed Order requires monitoring of the Use Areas and loading calculations for organics, nutrients, and salts as well as groundwater monitoring. This monitoring is necessary to characterize the discharge, evaluate compliance with effluent limitations and discharge specifications prescribed in the Order.

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. It may be appropriate to reopen the Order if new technical information is provided or if applicable laws and regulations change.