

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2010-_____

WASTE DISCHARGE REQUIREMENTS
FOR
WILDHURST VINEYARDS
WASTEWATER TREATMENT FACILITY
LAKE COUNTY

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

1. Wildhurst Vineyards (hereafter Discharger) submitted a Report of Waste Discharge (RWD) dated 12 July 2005 for treatment and land application of wastewater generated at its wine processing and storage facility. The RWD includes information on plans to increase the amount of wine production at the facility. The Discharger submitted additional information on 5 April 2007, 29 May 2007, 14 March 2008, 6 June 2008, and 29 December 2008. The RWD was deemed complete by Central Valley Water Board staff on 25 September 2008.
2. Wildhurst Vineyards is located two miles north of Kelseyville, California in Lake County (Assessor's Parcel Nos. 008-025-21 and 008-026-21) T3N, R9W, Section 3 MDB&M. The location of the winery and associated treatment facility is shown on Attachment A, which is attached hereto and is made part of this Order by reference. The location of the parcel boundaries are shown on Attachment B, which is attached hereto and is made part of this Order by reference.
3. The Discharger owns the property where the facility is located. The facility was constructed in 1997. Activities at the winery facility include receiving, crushing and pressing, and fermentation of grapes. Wastewater is generated during crushing and equipment cleaning and sanitation activities.
4. The Discharger has been operating a septic tank and leachfield disposal system to treat winery wastewater. The Discharger is not currently regulated under Waste Discharge Requirements.
5. Domestic wastewater is treated with a septic tank and leachfield system regulated by the Lake County Environmental Health Department. This system is separate from the process winery wastewater septic tank and leachfield system.

FACILITY CHANGES

6. The Discharger is expanding their winery which will change the quantity and quality of the wastewater generated. The following are the expansion activities:
 - a. The Discharger plans to increase wine production from 10,000 cases of wine per year to approximately 60,000 cases of wine per year or approximately 144,000 gallons of wine per year (2.4 gallons of wine per case of wine).
 - b. The Discharger plans to install a pre-treatment plant to remove residual solids and two aerated wastewater treatment ponds to biologically treat the winery

wastewater. A process flow diagram of the plant is shown on Attachment C, which is attached hereto and made part of this Order by reference.

7. Treated wastewater will be pumped from the treatment ponds to the irrigation system and applied to Land Application Areas (LAA). Currently the LAA is cropped as pear orchards, but will be converted to vineyards. The location of the LAA is shown on Attachment D, which is attached hereto and made part of this Order by reference.
8. Grape pomace (skin, pulp, seeds, and stalks) are the organic solid wastes that are left over from the crushing and pressing operations. The pomace will be disced into the orchards and/or vineyards as a soil amendment.

WASTEWATER SYSTEM

9. Currently, wastewater is generated from the winery building and crush pad, where it is screened then gravity flows through a series of two 1,250 gallon septic tanks. The treated wastewater from the tanks gravity flows to 400 lineal feet of leachline. The capacity of the leachfield was designed for 1,818 gallons per day (gpd). The septic tank and leachfield system was constructed in 1999. The current method of a septic tank and leachfield system to treat winery wastewater is not protective of the groundwater quality.
10. Most of the wine process operations are conducted under covered areas to avoid stormwater commingling with wastewater and being discharged into the wastewater treatment system. The Discharger has a stormwater diversion system for the uncovered portion of the crush pad. During crushing operations and cleaning activities of the crush pad, stormwater that falls on the uncovered portion will mix with the wastewater and flow into the wastewater treatment system. During all other times, the diversion valve will be closed and stormwater from the crush pad will be managed as part of the facility's regulatory coverage for Discharges of Storm Water Associated with Industrial Activities Order No. 97-03-DWQ.
11. No ion-exchange units, water softeners or boilers are used at the winery.
12. In the construction of the pre-treatment plant system, wastewater will continue to be collected in a gravity drain system and stormwater will be diverted from the wastewater system if uncontaminated. The pre-treatment plant system will be installed on a concrete pad and will include the following components:
 - a. Wastewater from the winery building and the crush pad will gravity flow into Pump Station 1.
 - b. A mechanical screen will be used to filter and separate the pomace from the wastewater. The pomace will be collected in a storage bin and then disced into the orchards and/or vineyards as a soil amendment.
 - c. To control pH levels, wastewater from Pump Station 2 will be injected with aqueous ammonia and pumped to a series of tanks, Settling Tanks 1 and 2. Ammonia will be stored in a 500 gallon tank. The ammonia injection will be adjustable and controlled automatically by pH probe sensors.

- d. From the settling tanks, Pump Station 3 will pump the wastewater to a series of treatment ponds, Ponds 1 and 2. A meter will measure the inflow of wastewater entering the ponds.
 - e. Ponds 1 and 2 will be constructed with two individual layers of 40-mil liner and equipped with mechanical aerators. The two ponds combined will provide approximately 1.05 million gallons (Mgal) of treatment and storage capacity.
 - f. An irrigation/recirculation pump will be installed to allow treated wastewater to be applied to the LAA or re-circulated back into the treatment ponds. A meter located at the outflow of Pond 2 will measure the amount of treated wastewater applied to the LAA.
 - g. Treated wastewater taken from the ponds will be applied to the 17.5 acres of LAA through drip or spray irrigation.
13. The pre-treatment wastewater plant and treatment ponds will be designed to handle the following daily maximum parameters:
- a. BOD: 12,000 mg/L
 - b. TDS: 1,500 mg/L
 - c. Total Nitrogen: 50 mg/L
14. The treated wastewater will be below the following monthly average parameters before application onto the LAA:
- a. BOD: 425 mg/L
 - b. TDS: 1,300 mg/L
 - c. Total Nitrogen: 40 mg/L
15. The winery has begun crushing grapes since 1997. Wastewater generation rates for the production of 10,000 cases per year and the estimated rates for the production of 60,000 cases per year are presented below.

<u>Wastewater generation rates (cases/year)</u>	<u>Wine Produced (gallons)</u>	<u>PWW¹ (gallons)</u>	<u>Grapes Processed (tons/year)</u>	<u>Average PWW (gpd)²</u>	<u>Average Harvest PWW (gpd)</u>
10,000	24,000	120,000	137	461	800
60,000	144,000	720,000	823	2,769	3,600

¹ PWW denotes process wastewater.

² gpd denotes gallons per day.

16. Monthly wastewater generation rates estimated by the Discharger are presented below. The 100-year stormwater generation rates were obtained from the Department of Water Resources Rainfall Depth-Duration Frequency Tables. The highest winery wastewater flow rates occur in September and October which is typically the crush season.

<u>Month</u>	<u>Units</u>	<u>Average Wastewater Flow</u>	<u>100-year Stormwater</u>	<u>Total Wastewater Flow</u>
January	Mgal	0.051	0.179	0.230
February	Mgal	0.049	0.130	0.179
March	Mgal	0.056	0.106	0.162
April	Mgal	0.044	0.054	0.098
May	Mgal	0.026	0.017	0.043
June	Mgal	0.040	0.005	0.045
July	Mgal	0.035	0.002	0.037
August	Mgal	0.047	0.004	0.051
September	Mgal	0.118	0.017	0.135
October	Mgal	0.145	0.050	0.195
November	Mgal	0.070	0.119	0.189
<u>December</u>	<u>Mgal</u>	<u>0.039</u>	<u>0.149</u>	<u>0.188</u>
Total	Mgal	0.720	0.831	1.551

17. The Discharger will use a number of chemicals in the wine-making process and the cleaning and sanitation activities at the facility. The following chemicals currently used are malic acid, tartaric acid, citric acid, 15% sodium hydroxide, cream of tartar, dominium phosphate, potassium meta-bisulfate, yeast, bentonite, and chlorine. The protein fining agents are gelatin, egg whites, isinglass, and potassium carbonate. In addition to the chemicals mentioned above, the Discharger plans to use Diatomaceous Earth PUPP (DE) in the wine clarification process.

SOURCE CONTROL

18. The RWD describes the following Best Practicable Treatment and Control (BPTC) measures that will be incorporated into the design of the facility:
- a. The treatment ponds will be constructed with two individual layers of 40-mil liner to protect water quality. A leak detection system of perforated pipe and observation ports will be installed underneath the top liner and above the bottom liner. The Order requires the Discharger to submit a design report to include installation procedures for the construction of the treatment ponds for approval by the Executive Officer.
 - b. The Discharger expects to service the treatment ponds after five to ten years of continuous use. Winery sludge and other solids will be removed from the ponds as needed to ensure optimal operation and adequate hydraulic capacity. Sludge and other solids removal will be accomplished in a manner that ensures the continued integrity of the pond liner. Sludge will be evaluated as described in Section E, Solids/Sludge Disposal Requirements. The Order requires the Discharger to complete and implement an Operations and Maintenance Plan that will include routine pond inspections and maintenance.

- c. Crops will be planted in the LAA. Crops will take up some of the waste constituents in the treated wastewater. Pear orchards currently make up the crops in the LAA. The Discharger plans to convert the orchards to vineyards or other crops in the future to improve crop uptake rates.
- d. In the event of a power outage equipment will be operated by a diesel generator.
- e. Each pump station will utilize dual, alternating pumps. In the event of a pump failure, an alarm will notify treatment staff and the remaining pump will perform until such time the failed pump is placed back online.
- f. In the event the mechanical screening system is offline, an existing basket strainer will be used to manually separate the winery solids.
- g. The Discharger will refrain from irrigating with treated wastewater 24 hours prior, during or 24 hours after a precipitation event. Irrigation with treated wastewater will not take place at times when the soil is saturated.
- h. The Discharger will not temporarily store pomace in concentrated areas and allow seepage of wastewater to discharge to land. Pomace collected at the crush pad and at the mechanical screen will be placed in water tight containers for later use as a soil amendment. These containers will be stored at a temporary one-day location between the treatment ponds and crush pad. The pomace will be disced daily into the orchards and/or vineyards during the crush period. The Order requires the Discharger to apply solid wastes at agronomic rates and excess solid wastes be returned to the grape growers as a soil amendment or properly disposed of as specified in Section E, Solids/Sludge Disposal Requirements.
- i. The stormwater diversion system for the uncovered portion of the crush pad will be operated and maintained in a manner to allow wastewater flow into the wastewater treatment system and prevent comingling of uncontaminated stormwater with wastewater. The valve will remain open during the crushing and cleaning operations of the crush pad and will remain closed during all other times. The Order requires the Discharger to complete and implement an Operations and Maintenance Plan that will include routine flush times and the necessary cleaning procedures to remove residual wastewater from the crush pad, drainage area, and piping and prevent any on-site surface drainage of wastewater or contaminated stormwater.

WATER BALANCE

- 19. A revised water balance was submitted as an RWD addendum on 29 December 2008 for the wastewater treatment, pond storage, and land application system. The water balance was based on an annual wastewater discharge of 1.1 Mgal, 100-year annual return rainfall amounts of 45.46 inches, and a total of 17.5 acres of LAA.
 - a. The revised water balance was based on evapotranspiration and crop coefficients for pear orchards. The RWD states that the Discharger plans to convert the pear orchards to vineyards. The Order requires the Discharger to submit a revised water balance to reflect the evapotranspiration and crop coefficients for any new crop activities.

- b. Based on the water needs of pear orchards, the revised water balance concludes that the treated wastewater will not provide adequate water to meet the crop demands. The Discharger anticipates supplemental irrigation water will be required for crop health in the months of April, May, June, July, August, and September. The source of the supplemental irrigation water is the water supply well, which produces a water quality with a TDS value of 180 mg/L.
 - c. The wastewater storage and treatment ponds will allow storage of wastewater through the winter and application only during the growing season.
20. The winery is located in a relatively flat site, less than 1% slope.
- a. There are no drainage swales or ditches on the site. Currently, runoff from impervious surfaces sheet flows off the site in the northerly direction, and flow into Kelsey Creek. The Order requires the discharger to apply for coverage and submit a Notice of Intent under the NPDES General Permit for Discharges of Storm Water Associated with Industrial Activity Water Quality Order (WQO) 97-03-DWQ.
 - b. The treatment ponds will slope to the northeast, away from Kelsey Creek. Surface water will flow around the treatment ponds and flow in the northeast direction. The Order requires the Discharger to install a tailwater collection system that allows the Discharger to collect runoff of the applied treated wastewater for reapplication and infiltration.

LAND APPLICATION SYSTEM

21. 17.5 acres of pear orchards is designated as the LAA for treated wastewater. The location of the LAA is presented on Attachment D.
22. Treated wastewater will be applied by drip or spray irrigation system. The irrigation systems are acceptable as long as treated wastewater applications are performed consistent with the requirements in this Order, allow even distribution, and prevent spills outside the LAA.
23. The maximum total nitrogen concentration in wastewater was estimated to be 50 mg/L. Based on the anticipated total annual process wastewater of 720,000 gallons, the Discharger estimates the maximum annual amount of nitrogen in winery wastewater (295 lb) plus the nitrogen from the injected aqueous ammonia (1,639 lb) to be 1,934 lb. With a LAA of 17.5 acres, a maximum of 110.5 lb/ac/year of nitrogen will be discharged onto the ground. The RWD states the vegetation's nitrogen demand is approximately 200 lb/ac/year and therefore the total nitrogen concentrations in the treated wastewater will not impact the water quality. Based on information obtained from *The Western Fertilizer Handbook*, pear orchards will take up about 85 lb/ac/year of nitrogen. The Order requires the Discharger to submit a report that will use site specific data and in addition to other items, determine the pounds per acre of process wastewater that may be applied to the LAA that will not cause nitrogen concentrations in underlying groundwater to increase over background groundwater quality and identify the appropriate protocol for the application of any supplemental fertilizer.

24. TDS is composed of both Volatile Dissolved Solids (VDS) and Fixed Dissolved Solids (FDS). The proportion of VDS to FDS in wastewater varies with the source, but 50 percent of TDS in winery wastewater may be in the volatile form. The VDS can be biologically treated by soil microorganisms in a well-managed wastewater treatment and land application system, when wastewater is not over-applied. Based on the anticipated total annual process wastewater of 720,000 gallons and an estimated 1,300 mg/L of TDS in winery wastewater, approximately 7,800 lbs of TDS will be applied or 450 lbs/acre/year.
25. Application of treated wastewater to the LAA will occur during the months between April and October. Applications will be managed to minimize over-application, which could result in more rapid leaching of wastewater constituents. Therefore, the Order prohibits irrigation with treated wastewater during, or within 24 hours after a rain event, or when soils are saturated.

SOLID WASTE

26. Grape pomace (skin, pulp, seeds, and stalks) are the organic solid wastes collected at the crush pad and mechanical screen and stored in water-tight containers. The containers will be collected as needed throughout the day during the crushing period and stored in a temporary one day location between the treatment ponds and crush pad. On a daily basis during the crushing period, the pomace will be disced into the orchards and/or vineyards as a soil amendment. The disposal location for the pomace was not specified in the RWD. The Order requires the Discharger to submit a *Solids Management Plan* that details a facility map showing all available areas and the proposed protocols for on-site pomace disposal. Possible disposal areas for pomace are presented in Attachment B. The plan must be approved by the Executive Officer before the Discharger is allowed to dispose of solids on-site. All waste solids will be contained and hauled off-site for proper disposal at permitted facilities.
27. Lees, DE, and other finer organic material that has passed through the mechanical screen will be collected in the settling tanks. Removal of this material will take place as needed to ensure optimal operation and adequate hydraulic capacity. The material will be removed and disposed of as specified in Section E, Solids/Sludge Disposal Requirements.

GROUNDWATER CONDITIONS

28. The winery is served by an existing groundwater production well located on the parcel directly south of the winery. The well is 270 feet deep with a surface seal that extends to a depth of 25 feet below ground surface (bgs). Four screen intervals were recorded as the following: 100-150, 150-180, 180-200, and 200-230 depth in feet. The depth to groundwater is 20 feet.
 - a. Groundwater samples were collected from the production well on 27 December 2005. The production well groundwater quality is presented in the table below.

<u>Constituents</u>	<u>Analytical Results</u>
pH	7.6
Total Dissolved Solids	180 mg/L
Kjeldahl Nitrogen	<1.0 mg/L ¹
Nitrate (NO ₃)	<1.0 mg/L ¹

¹ Detection limits were not reported in the RWD. Typical detection values for Kjeldahl Nitrogen and Nitrate are 1.0 mg/L

29. Three groundwater monitoring wells (MW-1, MW-2, MW-3) were installed in December 2007 as part of a baseline groundwater quality assessment study prior to the initiation of the land application of processed wastewater. The location of the groundwater monitoring wells is shown in Attachment D. Groundwater monitoring took place on the following dates: December 2007, February 2008, May 2008, August 2008, and November 2008. The Discharger is not currently monitoring groundwater. The well construction details are presented below.

<u>Well ID</u>	<u>Date Constructed</u>	<u>Relative Well Elevation¹ (feet)</u>	<u>Average Depth to Groundwater (feet, btoc²)</u>	<u>Relative Well Elevation (feet, MSL³)</u>
MW-1	12/19/07	102.6	25.7	77.0
MW-2	12/19/07	101.7	25.2	76.6
MW-3	12/19/07	100.0	24.1	75.9

¹ Monitoring well casings were surveyed relative to a marked point on the southwest corner of the shop building.

² btoc denotes below top of well casing.

³ MSL denotes mean sea level.

Construction details from Table 2, Quarterly Report-Fourth Quarter 2008, Wildhurst Vineyards, Advanced GeoEnvironmental, Inc., 13 January 2009.

30. In general, the groundwater monitoring wells monitor the following:
- MW-1 is located upgradient of the LAA.
 - MW-2 is located within the LAA.
 - MW-3 is located downgradient of the LAA.
31. A summary of the historical groundwater monitoring results are presented below. The average values are presented.

<u>Constituents</u>	<u>Units</u>	<u>MW-1</u>	<u>MW-2</u>	<u>MW-3</u>
Depth to Groundwater	(bgs)	25.7	25.2	24.1
pH	-	6.9	6.9	6.9
Chloride	Mg/L	19.3	7.4	6.7

Nitrate (as N)	Mg/L	5.2	4.7	6.5
Total Kjeldahl Nitrogen	Mg/L	1.4	1.7	0.8
Total Dissolved Solids	Mg/L	274	224	250
Calcium	Mg/L	67.8	56.8	56.2
Magnesium	Mg/L	165	147	125
Boron	Mg/L	0.1	0.1	0.1
Iron	Mg/L	230	238	167
Potassium	Mg/L	10.9	9.3	9.0
Sodium	Mg/L	17.9	10.6	9.5
Sulfate	Mg/L	11.9	7.3	8.6
Total Alkalinity	Mg/L	226	200	222
Carbonate Alkalinity	Mg/L	<5.0	<5.0	<5.0
Bicarbonate Alkalinity	Mg/L	226	200	222
Hydroxide Alkalinity	Mg/L	<5.0	<5.0	<5.0
Hardness as CaCO ₃	Mg/L	844.8	746.8	644.4

Groundwater values from Table 3, Quarterly Report – Fourth Quarter 2008, Wildhurst Vineyards, Advanced GeoEnvironmental, Inc., 13 January 2009.

32. No additional groundwater monitoring results have been submitted to the Central Valley Water Board since the November 2008 sampling event.

SITE SPECIFIC CONDITIONS

33. The location of the new pre-treatment wastewater plant and treatment ponds will be located within the 100-year flood zone of Kelsey Creek at Flood Zone AO, depth 2 feet. The estimated 100-year flood zone is presented on Attachment E, which is attached hereto and made part of this Order by reference. The treatment ponds will be adequately sized and elevated to ensure no commingling of floodwaters and treated wastewater. The ponds will accommodate the winery discharge, precipitation, and inflow that will likely occur during a 100-year flood event. The Order requires the pond berms be 2 feet above the 100-year flood levels and be designed and constructed to prevent inundation or washout due to floods with a 100-year return frequency.
34. Land use in the vicinity of the site consists of vineyards and pear and walnut orchards. The topography of the surrounding area is level (less than 1% slope).
35. Based on the Monitoring Well Installation and Quarterly Report dated 21 March 2008, shallow subsurface soils encountered in the soil borings consisted of two units: a fine-grained unit and a coarse-grained unit. The upper-most unit consisted predominately of fine-grained material composed of clayey silt, silt, silty clay, and clay, from ground surface to depths ranging from approximately 25 to 28 feet bgs. The fine-grained unit is underlain by a unit of relatively coarse-grained material composed of layers of medium to coarse sand, sandy gravel, and sandy gravel with silt, extending from approximately 28 feet bgs to the total depth of each soil boring.
36. Based on the California Department of Water Resources rainfall data, the mean annual rainfall is approximately 25.09 inches; the 100-year return annual precipitation is 45.46 inches. The water balance submitted by the Discharger estimated the

evapotranspiration to be 55.86 inches per year based on data obtained from the Pear Irrigation Management by Greg Vogel.

37. The facility currently employs two full time employees and three seasonal employees. With the proposed increase in wine production, the number of full time employees is expected to remain at two and the number of seasonal employees will increase by six.
38. The winery does not have a tasting room on-site, nor are there plans to build one in the near future.
39. The winery does not have a distillery.
40. Domestic wastewater is discharged to a conventional septic tank and leachfield system regulated by the Lake County Environmental Health Department.

OTHER CONSIDERATIONS FOR FOOD PROCESSING WASTE

41. Excessive application of wine processing wastewater to land application areas can create objectionable odors, soil conditions that are harmful to crops, and degradation of underlying groundwater by overloading the shallow soil profile and causing waste constituents (organic carbon, nitrate, other salts, and metals) to percolate below the root zone. Ordinarily, 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 some salinity species will undergo cation exchange with clay minerals, effectively immobilizing them.
42. Loading of BOD should 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 (US EPA Publication No. 625/3-77-0007) (hereafter *Pollution Abatement*), cites BOD loading rates in the range of 36 lbs/acre/day to 600 lbs/acre/day but indicates the loading rates can be even higher under certain conditions. In no case shall the loadings cause a nuisance.
43. Acidic and/or reducing soil conditions can be detrimental to land treatment system function, and may cause groundwater degradation if the buffering capacity of the soil is exceeded. If soil pH decreases below 5 and the soil remains in a reducing state for prolonged periods, naturally occurring metals (including iron and manganese) could dissolve and degrade underlying groundwater. In practice, prolonged reducing conditions may not occur because: a) the annual cycle of lowered pH during loading with either wastewater or fertilizer is followed by pH recovery during cropping and organic matter cycling and; b) the dose and rest cycling for wastewater application either in spreading basins or using irrigation creates alternate anoxic and aerobic conditions. *Pollution Abatement* recommends that water applied to crops have a pH within 6.4 to 8.4 to protect crops. The soils and underlying groundwater are expected to adequately buffer the discharge.

BASIN PLAN, BENEFICIAL USES, AND REGULATORY CONSIDERATIONS

44. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Resources Control Board. Pursuant to Section 13263(a) of the California Water Code (CWC), waste discharge requirements (WDRs) must implement the Basin Plan.
45. Surface water drainage is to Kelsey Creek, which is a tributary to Clear Lake.
46. The beneficial uses of Clear Lake are municipal and domestic supply; agricultural supply; water contact recreation; non-contact water recreation; warm freshwater habitat; spawning, reproduction, and/or early development; and wildlife habitat.
47. The beneficial uses of underlying groundwater are municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply.
48. State Water Resources Control Board (State Board) Resolution No. 68-16 (the Antidegradation Policy) requires that the Regional Water Board, in regulating the discharge of waste, must maintain the high quality of waters of the state until it is demonstrated that any change in quality will be consistent with 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 the Regional Water Board's policies (e.g., quality that exceeds water quality objectives). Resolution No. 68-16 also requires that waste discharged to high quality waters be required to meet WDRs that will result in the best practicable treatment or control of the discharge. Resolution 68-16 prohibits degradation of groundwater quality as it existed in 1968, or at any time thereafter that groundwater quality was better than in 1968, other than degradation that was previously authorized. An antidegradation analysis is required for an increased volume or concentration of waste.
49. The Discharger has not submitted any information showing that it should be allowed to degrade the groundwater as described in State Board Resolution No. 68.16, and therefore no degradation is allowed. This discharge of waste should not degrade surface water or groundwater quality. The wastewater will be treated and stored in lined ponds and later land applied as irrigation water. The Order establishes effluent limitations that are protective of the beneficial uses of the underlying groundwater, requires an *Antidegradation Analysis Report, Salinity Source Reduction Study and Workplan*, and requires the sampling of groundwater monitoring wells to assure that the discharge of the waste is not impacting the underlying groundwater.
50. Application of the winery wastewater to the LAA should not cause an increase in the salt (measured as specific conductivity, TDS, or chloride concentrations) in the underlying groundwater. The TDS component of the wastewater is composed of both VDS and FDS. The proportion of VDS to FDS in wastewater varies with the source, but often 50-percent of the TDS in winery wastewater is in the volatile form. These VDS should be biologically treated in the pond or a well managed land application system and should not reach groundwater. Because the crops will take up some salt, the Discharger maintains that the proposed loading rate should not degrade the

underlying groundwater. However, success is highly dependent on wastewater management, extensive LAA, and the blending of irrigation water. Accordingly, groundwater monitoring is appropriate to detect whether management of the LAA ensures that groundwater degradation does not occur.

51. Limited degradation of high-quality groundwater by some of the typical constituents released with discharge from a winery (after source control, treatment, and control) may be consistent with maximum benefit to the people of the State at appropriate sites. When allowed, the degree of degradation permitted depends upon many factors (e.g.,) background water quality, the waste constituent, the beneficial uses and water quality objectives, management practices, source control measures, and waste constituent treatability.
52. The Discharger cannot fully evaluate actual impacts to groundwater quality until implementation of new or planned facility upgrades. The groundwater quality is very high and the Discharger will need to 1) add additional LAA, 2) blend its treated wastewater with supplemental irrigation water, or 3) improve its cropping to fully utilize the wastewater, in order to reduce groundwater impacts from the applied wastewater. The Order allows the Discharger to blend wastewater with supplemental irrigation water to achieve effluent limits. Effective immediately as groundwater limitations, the discharge, in combination with other sources, shall not cause underlying groundwater to contain waste constituents in concentrations greater than existing water quality criteria or degradation beyond existing groundwater quality. The Order requires the Discharger to submit an *Antidegradation Analysis Report* to verify no groundwater degradation or quantify limited groundwater degradation.
53. The Order imposes effluent limitations, and limits land application of nitrogen to agronomic rates. The Order establishes requirements to ensure the discharge 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. The Order establishes effluent limitations that are protective of the beneficial uses of the underlying groundwater, requires a groundwater evaluation and determination of the need for salinity source reduction, requires a schedule to implement achievable salinity reduction management practices, and requires the sampling of groundwater monitoring wells to quantify any impacts on the underlying groundwater quality. Following completion of this work, the Order will be reopened if necessary to reconsider effluent limitations and other requirements to comply with Resolution 68-16. Completion of these tasks, and implementation of the approved strategies developed from that work, will ensure that BPTC and the highest water quality consistent with the maximum benefit to the people of the State will be achieved.
54. The Discharger expects the facility to provide six additional seasonal jobs. Prohibiting discharges pending completion of the required facility expansion could eliminate some or all those jobs. In addition, it is reasonable to assume that the facility provides an economic benefit to equipment suppliers, transportation companies, and to the growers that will supply grapes to the crushing facility. The use of winery wastewater to irrigate crops in place of higher quality surface or ground water supplies is a benefit to the people of the State. Any limited, short-term degradation that may result while

the Discharger completes the required studies is consistent with maximum benefit to the people of the State.

55. Based on the threat and complexity of the discharge, the facility is determined to be classified 2-B as defined below:
 - a. Category 2 threat to water quality, defined as, "Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short term violation of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance."
 - b. Category B complexity, defined as, "Any discharger not included above that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal) or any Class 2 or Class 3 waste management units."
56. California Water Code Section 13267(b) provides that: *"In conducting an investigation specified in subdivision (a), the regional 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 regional 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 regional 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."*

The technical reports required by this Order and the attached Monitoring and Reporting Program No. R5-2010-____ is necessary to assure compliance with these WDRs. The Discharger owns and operates the facility that generates the waste subject to this Order.

57. State regulations that prescribe procedures for detecting and characterizing the impact of waste constituents from waste management units on groundwater are found in Title 27. The data analysis methods of Title 27 may be appropriate for determining whether the discharge complies with the terms for protection of groundwater specified in this Order.
58. California Department of Water Resources standards for the construction and destruction of groundwater wells is 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 CWC Section 13801, apply to all monitoring wells.
59. The treatment and effluent recycling facilities associated with the discharge authorized herein, are exempt from two of three requirements of consolidated *Regulation for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, California Code of Regulations, Division 2, Subdivision 1, Section 20005 et seq. (hereafter Title 27). The exemption is based on the following.

- a. The wastewater treatment ponds are unconditionally exempt from Title 27 pursuant because the Regional Water Board has issued waste discharge requirements.
 - b. As this treatment does not currently exist as proposed in the Order, wastewater characterization and management practices were developed based upon best professional judgment. Applicability of Title 27 exemption will not be known until the Discharger completes the necessary studies to evidence their assertions of not degrading groundwater and be in compliance with the Basin Plan. Applicability of Title 27 for the facility will be determined and, if needed, the Order will be reopened and further revisions to the Order will be made to protect groundwater quality following the submittal and review of the following documents.
 - i. The Discharger is required to submit an *Antidegradation Analysis Report*,
 - ii. The Discharger is required to provide a *Salinity Source Reduction Study and Workplan*.
 - c. The wastewater does not need to be managed according to Title 22 CCR, Division 4.5, and Chapter 11, as a hazardous waste.
60. Federal regulations for storm water discharges were promulgated by the U.S. Environmental Protection Agency on 16 November 1990 (40 CFR Parts 122, 123, and 124). The State Board adopted Order No. 97-03-DWQ (General Permit No. CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers. The Discharger is required to submit a Notice of Intent under the NPDES General Permit for Discharges of Storm Water Associated with Industrial Activity (WQ Order No. 97-03-DWQ).
61. A Mitigated Negative Declaration was approved by the Lake County Community Development Department on 26 June 2007 for the Wildhurst Vineyards Use Permit per the provisions of the California Environmental Quality Act (CEQA). Mitigation measures related to water quality are described below. Compliance with this Order's Prohibitions, Effluent Limitations, and Groundwater Limitations should mitigate the discharge and protect water quality. The following mitigation measures were identified.

<u>Issue Identification</u>	<u>Environmental Issue</u>	<u>Mitigation Requirements</u>
Item 8.a Water Quality	Violation of any water quality standards or waste discharge requirements.	Prior to the winery construction activities and operation of wastewater treatment system, the Discharger will submit a Report of Waste Discharge to the Central Valley Water Board for review and approval.

Item 8.c Drainage Patterns- erosion or siltation	Construction activities for the winery facility may have the potential to alter the existing drainage patterns on-site in a manner that would result in substantial erosion or siltation on-site or off-site.	The Discharger will submit a final engineered drainage plan to be reviewed and approved by the Water Resources Engineer prior to the issuance of a grading or building permit.
Item 8.d Drainage Patterns- flooding	Construction activities for the winery facility may have the potential to alter the existing drainage patterns on-site in a manner that would result in flooding on-site or off-site.	The Discharger will submit a final engineered drainage plan to be reviewed and approved by the Water Resources Engineer prior to the issuance of a grading or building permit.
Item 8.g Flood Zone- facility location	A portion of the project is located in the 100-year flood plane at Flood Zone AO, depth 2 feet.	The new facilities will be constructed in accordance with Section 25-5.2 of the Lake County Code-Floodplain Ordinance.
Item 8.h Flood Zone- impede or redirect flood flows	A portion of the project is located in the 100-year flood plane at Flood Zone AO, depth 2 feet.	The new facilities will be constructed in accordance with Section 25-5.2 of the Lake County Code-Floodplain Ordinance.

62. Pursuant to CWC 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.

PUBLIC NOTICE

63. All the above and the supplemental information and details in the attached Information Sheet, incorporated by reference herein, were considered in establishing the following conditions of discharge.
64. The Discharger and interested agencies and persons were notified of the intent to prescribe WDRs for this discharge and provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
65. In a public meeting, all comments pertaining to the discharge were heard and considered.

IT IS HEREBY ORDERED that pursuant to Section 13263 and 13267 of the California Water Code, Wildhurst Vineyards, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted there under, shall comply with the following:

Note: Other prohibitions, conditions, definitions, and the method of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991.

A. Discharge Prohibitions:

1. Discharge of wastes, including irrigation tailwater, to surface waters or surface water drainage courses is prohibited.
2. Bypass or overflow of untreated or partially treated wastewater is prohibited.
3. Discharge of waste classified as "hazardous," defined in Section 20164 of Title 27, CCR, or "designated," as defined in Section 13173 of the CWC, is prohibited.
4. The discharge of wastewater in a manner other than as described in the findings is prohibited.
5. The discharge of toxic substances into the Discharger's treatment ponds such that biological mechanisms are disturbed is prohibited.
6. The discharge of treated wastewater other than to the approved LAA identified in Finding No. 21 is prohibited.
7. The discharge of domestic wastewater to the winery wastewater treatment system and ponds is prohibited.
8. By **15 September 2010**, the discharge of winery wastewater to a septic tank and leachfield system is prohibited.
9. The discharge of winery wastewater to the domestic wastewater system is prohibited.
10. Land application of wastewater to the LAA that does not have a fully functional tailwater return and runoff control system is prohibited.
11. Operation of a distillery at the facility is prohibited.
12. Discharge of stormwater not consistent with the procedures described in Finding No. 10 or more stringent measures if developed and approved by the Executive Officer, is prohibited.

B. Discharge Specifications:

1. The discharge to the wastewater treatment ponds shall not exceed 0.182 Mgal per month. In addition, the discharge to the wastewater treatment ponds shall not exceed an annual total of 1.1 Mgal of wastewater and/or stormwater mixtures for the calendar year.
2. Neither the treatment nor the discharge of wastewater shall cause a nuisance or condition of pollution as defined by the CWC, Section 13050.

3. The discharge shall not cause the degradation of any groundwater.
4. The Discharger may blend treated wastewater with supplemental irrigation water to achieve effluent limitations.
5. No wastewater constituent shall be released or discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations.
6. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the property owned by the Discharger.
7. Sufficient dissolved oxygen must be maintained in the upper zone (one foot) of any pond in order to prevent objectionable odors.
8. The Discharger shall operate all systems and equipment to maximize treatment of wastewater and optimize the quality of the discharge.
9. All ponds shall be lined and managed to prevent the breeding of mosquitoes. In particular:
 - a. An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.
 - b. Weeds shall be minimized through control of water depth, harvesting, and/or use of herbicides.
 - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
10. The LAA shall be managed to prevent the breeding of mosquitoes.
11. The wastewater treatment ponds shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
12. No physical connection shall exist between wastewater piping and any domestic water supply, domestic/industrial supply well, irrigation water pipeline, or irrigation canal without an air gap or approved reduced pressure device.
13. The freeboard in each pond shall never be less than two feet, as measured vertically from the water surface to the lowest point of overflow.
14. The wastewater treatment and land application system shall have sufficient capacity to accommodate wastewater flow and seasonal 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.
15. On or about **1 November** each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specifications No. B.13 and No. B.14.
16. Storage of pomace and DE on areas not equipped with means to prevent leachate generation and infiltration into the ground is prohibited.

C. Effluent Limitations:

1. Treated or blended wastewater applied to land shall not exceed the following effluent limits to ensure compliance with the Groundwater Limitations.

<u>Constituent</u>	<u>Units</u>	<u>Daily</u>	<u>Monthly Average</u>	<u>Annual Average</u> ¹
Biochemical Oxygen Demand	mg/L	NA	425	NA
Total Dissolved Solids	mg/L	450	NA	NA
Total Fixed Solids	mg/L	NA	450	NA
Total Nitrogen	lbs/acre/year	NA	NA	85 ²

¹ Annual average for Fixed Dissolved Solids shall be calculated as described in the Monitoring and Reporting Program and shall be based on calendar year.

² Based on nitrogen uptake values for pear orchards.
NA denotes not applicable.

2. Wastewater applied to the LAA shall not have a pH of less than 6.5 or greater than 10.0.

D. Land Application Area Requirements:

1. The discharge shall be distributed uniformly on adequate acreage in compliance with the Discharge Specifications and Effluent Limitations.
2. Crops shall be grown on the LAA. Crops shall be selected based on nutrient uptake capacity, tolerance to high soil moisture conditions, consumptive use of water, and irrigation requirements. Cropping activities shall be sufficient to take up the nitrogen applied, and crops shall be harvested and removed from the land at least on an annual basis.
3. Pomace or DE shall not be stored on unpaved ground. Acceptable alternatives include storage on paved areas or water tight containers that are equipped with liquid collection systems or other alternatives that prevent generation of leachate, such as roofed areas or use of agricultural bags for well-drained materials.
4. Discharge of treated wastewater, including runoff, spray or droplets from the irrigation system, shall not occur outside the boundaries of the approved LAA. Treated wastewater application using sprinklers, flood, or drip irrigation is acceptable if the discharge complies with all requirements of this Order.
5. Hydraulic loading of treated wastewater and irrigation water shall be at reasonable agronomic rates designed to minimize the potential impact to groundwater quality by percolation of wastewater and irrigation water below the root zone (i.e., deep percolation).
6. Wastewater conveyance lines shall be clearly marked as such. Wastewater controllers, valves, etc. shall be affixed with reclaimed water warning signs; quick couplers and sprinkler heads shall be of a type, or secured in such a manner, that permits operation by authorized personnel only.
7. Irrigation systems shall be labeled as containing reclaimed wastewater. If treated wastewater and irrigation water utilize the same pipeline, then backflow prevention devices shall be installed to protect the potable/irrigation water supply.

8. Application of treated wastewater to the LAA using sprinkler irrigation is prohibited when wind velocities exceed 30 miles per hour.
9. Public contact with wastewater shall be precluded through such means as fences, signs, and/or irrigation management practices. Signs with proper wording of sufficient size shall be placed at areas of access and around the perimeter of the LAA to alert the public of the presence of wastewater.
10. The LAA 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 should be maintained free of emergent, marginal, and floating vegetation.
 - c. Low pressure pipelines, unpressurized pipelines, and ditches that are accessible to mosquitoes shall not be used to store wastewater.
11. The application of wastewater to the LAA shall comply with the following setback requirements:

<u>Setback Definition¹</u>	<u>Minimum Irrigation Setback (feet)</u>
Edge of land application area ² to public property boundary (e.g. street)	50 ¹
Edge of land application area ² to any watercourse.	50 ³
Edge of land application area ² to any properties with an occupied residence	50
Edge of land application area ² to any industrial or irrigation well	50 ³
Edge of land application area ² to domestic well	100 ³

¹ Additional setbacks may be needed to comply with other requirements of this Order.

² As defined by the wetted area produced during irrigation

³ Unless otherwise approved by the Executive Officer.

12. Discharges to LAA shall be managed to minimize both erosion and runoff from the irrigated area.
13. A berm shall be maintained around the perimeter of the LAA to prevent the runoff of treated wastewater or stormwater.
14. The resulting effect of the wastewater discharge on the soil pH shall not exceed the buffering capacity of the soil profile and shall not cause significant mobilization of soil constituents such as iron and manganese.
15. The Discharger may not discharge effluent to the LAA within 24 hours of a predicted storm event, during periods of precipitation, and for at least 24 hours after cessation of precipitation, or when soils are saturated.

16. Application of treated wastewater to the LAA via flood irrigation shall only occur on furrows graded or irrigation checks configured so as to achieve uniform distribution, minimize ponding, and provide for tailwater control. Furrow runs and irrigation checks shall not be longer and slopes shall not be greater than what permits reasonably uniform infiltration and maximum practical irrigation efficiency.
17. LAA Irrigation checks shall be allowed to dry for at least five days from the end of wastewater application before the next treated wastewater application.
18. There shall be no standing water in the LAA 24 hours after treated wastewater is applied, except during periods of heavy rains sustained over two or more consecutive days.

E. Solids/Sludge Disposal Requirements:

1. Collected screenings and other solids removed from winery wastewater shall be disposed of off-site in a manner that is consistent with Title 27, Division 2, Subdivision 1 of the CCR and approved by the Executive Officer.
2. Winery sludge and other solids shall be removed from sumps, screens, wastewater ponds, etc. as needed to ensure optimal operation and adequate hydraulic capacity. Winery solids drying operations, if any, shall be designed and operated to prevent leachate generation.
3. Sludge and other solids shall be removed from septic tanks as needed to ensure optimal operation and adequate hydraulic capacity. A duly authorized carrier shall haul sludge, septage, and domestic wastewater.
4. Any proposed change in solids use or disposal practice from a previously approved practice shall be reported to the Executive Officer at least 90 days in advance of the change.
5. All solids generated from the winemaking process shall be contained and hauled off-site for proper disposal until the Discharger has satisfied the requirement as specified in Provision G.1.c.

F. Groundwater Limitations:

1. Effective immediately as groundwater limitations, the discharge, in combination with other sources, shall not cause underlying groundwater to contain waste constituents in concentrations greater than existing background or water quality criteria. The groundwater quality objectives are presented below:

<u>Constituent</u>	<u>Units</u>	<u>Limitation</u>
Boron	mg/L	0.7
Chloride	mg/L	106
Iron	mg/L	0.3
Manganese	mg/L	0.05
Sodium	mg/L	69
Total Dissolved Solids	mg/L	450 ¹
Total Nitrogen	mg/L	10
Nitrate (as N)	mg/L	10
Ammonia (as NH ₄)	mg/L	1.5

<u>Constituent</u>	<u>Units</u>	<u>Limitation</u>
Bromoform	µg/L	4
Bromodichloromethane	µg/L	0.27
Chloroform	µg/L	1.1
Dibromochloromethane	µg/L	0.37

¹ A cumulative impact limit that accounts for several dissolved constituents in addition to those listed here separately [e.g., alkalinity (carbonate and bicarbonate), calcium, hardness, phosphate, and potassium].

G. Provisions:

1. All of the following reports shall be submitted pursuant to CWC Section 13267, and prepared by a California registered professional as described in Provision G.2.
 - a. By **23 July 2010**, the Discharger shall submit an *Antidegradation Analysis Report*. Food processing wastewater typically contains constituents in concentrations greater than water quality objectives. Groundwater degradation can be controlled by an appropriate screening, settling, and slow rate land application with cropping activities when crops are harvested and removed from the land application area. The report shall identify constituents of concern, propose a groundwater concentration for the identified constituents, and evaluate the effectiveness of facility improvements based on the *Salinity Source Reduction Workplan*. The report shall include the recommended loading rates for TDS, FDS, and nitrogen for the LAA. These loading rates shall be developed to prevent or limit groundwater degradation and shall limit "storage" of waste constituents in the soil for long-term sustainability. A nitrogen balance shall be included to demonstrate that the required amount of LAA for irrigation of treated wastewater will be protective of groundwater quality. The report shall include but not limited to crop selection, nutrient uptake capacity, tolerance of anticipated soil conditions, consumptive use of water and irrigation requirements, evapotranspiration rates, crop rotation schedules, and appropriate protocol for the application of any supplemental fertilizer. The report shall include the application concentration values of the blended wastewater and the supplemental irrigation water prior to irrigation. The location of any available LAA shall be included and presented in a map indicating the boundaries of the LAA including fences, tailwater ditches, nearby surface water drainage ditches, and public property boundaries (e.g. roads). The report shall specify crop selection; provide crop nutrient uptake information, and a revised water balance to reflect the evapotranspiration and crop coefficients for any new crop activities.
 - b. By **23 July 2010**, the Discharger shall submit a *Salinity Source Reduction Workplan*. The workplan shall evaluate all current aspects of winery waste and shall investigate methods to reduce the salinity of the waste which enters the treatment ponds and or land application areas. The workplan shall include implementing achievable management practices, reducing salinity overloading to crops, preventing groundwater degradation, and an implementation time schedule to achieve such tasks.

- c. By **30 July 2010**, the Discharger shall submit a *Treatment Pond Design Report*. The report shall at a minimum include the installation procedures for the construction of the treatment ponds and a quality control and quality assurance (QA/QC) program to verify construction in accordance with the design specifications. The report shall be approved by the Executive Officer prior to the construction of the treatment ponds.
- d. By **1 September 2010**, the Discharger shall apply for coverage and submit a Notice of Intent for Order No. 97-03-DWQ, Discharges of Storm Water Associated with Industrial Activities.
- e. **Within 60 days of completion of the proposed wastewater treatment system but no later than 1 November 2010**, the Discharger shall submit and implement an *Operation and Management Plan (O&M Plan)* that addresses operation of the wastewater treatment and disposal facility. At a minimum, the *O&M Plan* will describe (a) the daily operation and maintenance of the treatment system, (b) the practices used to treat the wastewater within limits specified in this Order, (c) the locations of the LAA, and procedures to prevent excessive BOD, nitrogen, or dissolved solids loading of LAA, (d) the locations of influent and effluent sampling points, (e) quality control sampling procedures necessary to obtain representative samples, (f) practices used to maintain the LAA, (g) the locations of solid waste disposal areas, methods of disposal, and the daily practices associated with the disposal of solid waste, (h) means to secure the LAA and control wastewater or stormwater from discharging off-site (i.e., installation of fencing or notification signs, installation of berms to prevent runoff, configuration of checks to control application rates), (i) planning for potential response to natural disasters, (j) institutional controls such as Best Management Practices (BMPs), (k) Standard Operating Procedures (SOPs), (l) specific procedures to ensure that contaminated stormwater is discharged to the winery wastewater treatment system and uncontaminated stormwater is surface drained on-site, (m) employee orientation and training. A copy of the O&M Plan shall be kept at the facility for reference by operating personnel and they shall be familiar with its contents.
- f. **Within 60 days of completion of the proposed wastewater treatment system but no later than 15 November 2010**, the Discharger shall submit a *Facility Expansion Report* that describes completion of the expansion described in Finding Nos. 12, 18.a, and 33. Each process component shall be described. In particular, the Discharger shall show that the wastewater treatment system was designed to comply with the effluent limitations as set forth in this Order.
- g. By **1 July 2011**, the Discharger shall submit a *Solids Management Plan* for review and approval by the Executive Officer. The plan must include the following:
 - i. Comply with the requirements of this Order.
 - ii. Describe protocols for the application of solids or pomace.
 - iii. Provide a map that indicates the boundaries of the solids disposal area, including fences, tailwater ditches, nearby surface water drainage ditches, public property boundaries, and show compliance with Discharge Prohibition A.1.

- iv. Provide evidence of solids disposal area ownership, such as a copy of the grant deed. The report needs to show whether Wildhurst Vineyards or other subsidiary company owns the land.
 - v. Within **30 days** of approval by the Executive Officer of the Central Valley Water Board, the Discharger shall implement the methodologies as specified in the *Solids Management Plan*.
2. In accordance with California Business and Professions Code Sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology, shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain a statement of qualifications of the responsible licensed professional(s) as well as the professional's signature and/or stamp of the seal.
3. The Discharger shall comply with the Monitoring and Reporting Program No. R5-2010-____, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.
4. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and by reference a part of this Order. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."
5. In the event of any change in control or ownership of the facility or wastewater disposal areas, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office. To assume operation as Discharger 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 name and 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. Transfer shall be approved or disapproved by the Executive Officer.
6. The Discharger shall submit to the Central Valley Water Board on or before each compliance report due date the specified document, or if appropriate, a written report detailing compliance or noncompliance with the specified schedule date and task. If noncompliance is reported, then the Discharger shall state the reasons for noncompliance and shall provide a schedule to come into compliance.
7. The Discharger shall report to the Central Valley Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days

of reporting the data to the Commission pursuant to Section 313 of the "Emergency Planning and Community Right to Know Act of 1986."

8. 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.
9. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. 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.
10. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
11. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

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