

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2021-0031

WASTE DISCHARGE REQUIREMENTS

FOR
R&G SCHATZ FARMS, INC.
PELTIER WINERY
SAN JOAQUIN COUNTY

FINDINGS

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

Introduction

1. On 30 March 2006, R&G Schatz Farms, Inc. (Discharger) submitted a Report of Waste Discharge (RWD) describing an existing winery, Peltier Winery (formerly Mokelumne Rim Vineyards) that generates process wastewater and residual solids discharged to land in Acampo, California. On 1 November 2019, the Discharger submitted an updated RWD describing more recent changes to the winery's wastewater treatment system. Additional information was submitted on 27 May 2020.
2. The Discharger owns and operates the Peltier Winery (Facility) that generates the waste and the land application areas (LAAs) and is responsible for compliance with these Waste Discharge Requirements (WDRs).
3. The Facility, which includes the winery, wastewater treatment system, and LAAs, is located at 22150 N. Kennefick Road, Acampo in San Joaquin County (Section 16, T3N, R6E, MDB&M) and occupies Assessor's Parcel Number (APN) 017-150-02. The Facility location and site features are shown on Attachment A and Attachment B, which are incorporated herein.
4. WDRs Order R5-2004-0035, which was adopted by the Central Valley Water Board on 19 March 2004, prescribes the requirements for the Facility's discharge. WDRs Order R5-2004-0035 allows a monthly average flow of up to 2,000 gallons per day (gpd), except during the crush season (September through November) when the limit is 5,000 gpd as a monthly average. The Discharger has made improvements to the wastewater treatment system and has requested an increase in wastewater flows; therefore, Order R5-2004-0035 will be rescinded and replaced with this Order.

Existing Facility and Discharge

5. The Facility has been in operation since 2002 and processes between 4,000 and 5,000 tons of grapes per season with peaks up to 6,000 tons. Activities at the winery include receiving, crushing, and pressing of grapes; fermentation; processing into finished

wines; and distribution. The grape harvest and crush seasons are generally between August and November.

6. Source water for processing and domestic water use is supplied by an on-site well installed in 2002. The well depth is 355 feet below ground surface (bgs). Supplemental irrigation water is supplied by an agricultural well located in the northern portion of the Facility.
7. Process wastewater is generated from processing grapes into finished wines and juices, bottling the finished product, and cleaning and sanitizing activities.
8. The Discharger uses various chemicals during wine production as additives and fining agents, and as cleaners and sanitizers. Chemicals used at the Facility and approximate quantities are listed below.

Table 1. Chemical Usage

Purpose	Chemical	2018 Annual Quantities
Wine Additives	Yeast	227 kg
	Enzymes	166 kg
	<i>Diammonium phosphate (DAP)</i> based Nutrients	589 kg
	Macro Nutrients	35 kg
	Yeast Cell Walls	144 kg
	Mannoproteins	22 kg
	Copper Sulfate Pentahydrate	1.78 kg
	Gum Arabic	7.8 kg
	Tannin	470 kg
	KMBS	951 kg
	Potassium Carbonate	20.8 kg
	Grape Concentrate	127 gal
Fining and Stabilizing Agents	Bentonite	500 kg
	Carbon (Decolorizing)	34 kg
	PVPP	58 kg
	Sodium Carboxymethyl Cellulose (CMC)	74 kg
	Gelatin	16 kg
	Lysozyme	14.7 kg
Cleaning Chemicals	Removil K (Caustic based cleaner)	1,524
	Remoxan (50% Hydrogen Peroxide)	110 gallons
	Isopropyl Alcohol 70%	25 gallons

kg = kilograms

Table Source: 2019 RWD

9. The wastewater collection and treatment system consists of drains, a collection sump, screens, an equalization tank, a BIDA® pre-treatment system, a lined aerated wastewater pond, and land application areas.
10. Winery process wastewater and all storm water from the Facility are collected in drains which feed into one main underground pipe that leads to a sump. The process water sump has a holding capacity of approximately 4,000 gallons.
11. From the process water sump, water is pumped up and over a screen that separates out solids. The screened wastewater flows via gravity to a 6,000-gallon equalization tank. A control system monitors the pH in the equalization tank and adjustments are made as necessary. Up to 12,000 gpd of wastewater is then circulated through a BIDA® pre-treatment system which was installed in December 2017 and began operating in January 2018. Influent flow rates to the wastewater treatment system are measured through a flow meter, as shown on Attachment C, which is included herein.
12. Average monthly influent flow rates are approximately 10,000 gpd, with an annual average of 1.9 million gallons (MG). Influent flows, including wastewater and storm water, from 2015 to November 2019, are summarized below.

Table 2. Influent Flow Rates (MG)

Month	2015	2016	2017	2018	2019
January	0.136	0.135	0.060	0.082	0.161
February	0.003	0.110	0.064	0.113	0.127
March	0.068	0.115	0.060	0.072	0.115
April	0.231	0.063	0.067	0.078	0.105
May	0.111	0.092	0.073	0.077	0.112
June	0.216	0.104	0.091	0.059	0.100
July	0.392	0.138	0.202	0.131	0.160
August	0.298	0.275	0.292	0.292	0.246
September	0.141	0.281	0.254	0.310	0.254
October	0.145	0.278	0.232	0.320	0.283
November	0.102	0.273	0.227	0.226	0.203
December	0.067	0.053	0.114	0.178	0.121
Annual Total	1.910	1.917	1.736	1.938	1.987

13. The BIDA® pre-treatment system utilizes both physical and passive organic filtration processes to improve wastewater quality. The pre-treatment system consists of an open top concrete basin with an estimated 3,000 square foot surface area. An automated irrigation system, regulated by pump switches, timers, and sensors, applies wastewater across the surface of the basin. From the top of the basin to the bottom, the basin is layered with earthworms (*Eisenia fetidia*) and microbial bacterial, wood shavings, cobble, and drainage basins. PVC pipes located along the walls provide passive

ventilation to the air chamber created by the drainage basins. The system is designed to treat approximately 10,000 gallons per day.

Worms, capable of eating their weight in solids each day, digest larger suspended solids and, as a result, produce castings, which are crucial in the cultivation of rich microbial activity. Worms also provide passive aeration throughout the system as their constant burrowing motion creates air channels. This symbiotic relationship enables biofilm to form throughout the system. Biofilm refers to a complex structure, or film, of colonies of bacteria and microbial flora such as yeast and fungi, that form a digestive layer on the shavings, rocks, and drainage basins. As water passes down through the system, the biofilm captures, retains, and digests wastewater constituents. Filtered water flows out from the base of the system within approximately four hours of initial system application and into an aerated treatment pond for polishing and storage.

14. Based on information supplied by the manufacturer of the BIDA® pre-treatment system, the design flow capacity of 10,000 gpd can be exceeded on a short-term basis. During periods of high rainfall, which is not likely during the processing season, the BIDA® treatment system can manage a daily flow of approximately 20% higher than the design flow for up to one time per week. Effluent quality may be reduced on that day; however, the system will perform correctly after that day and the worms and bacteria will remain healthy.
15. During periods of high rainfall or high wastewater flows, effluent flows over the BIDA® treatment system capacity of approximately 10,000 to 12,000 gallons are directed around the BIDA® system and discharged directly to the treatment pond to protect the biomass in the BIDA® system. Wastewater will continue to be treated in the pond. If the quality of wastewater in the pond exceeds discharge requirements, wastewater in the pond can be sent back through the BIDA® system for additional treatment until effluent limits are achieved, as shown on Attachment C.
16. Wastewater samples have been collected from the influent to the BIDA® pre-treatment system and effluent from the pre-treatment system to determine levels of reduction of BOD and total suspended solids (TSS) concentrations.

Table 3. BIDA® Treatment System Results (mg/L)

Sample Date	Influent	Effluent	Percent Reduction	Influent	Effluent	Percent Reduction
	BOD			TSS		
2/23/2018	610	9	99%	610	ND	100%
3/8/2018	1,400	360	74%	290	46	84%
4/6/2018	660	26	96%	1,500	26	98%
5/3/2018	2,800	40	99%	800	78	90%
6/8/2018	3,000	8	100%	1,900	76	96%
7/17/2018	25,000	160	99%	4,500	45	99%
8/28/2018	6,500	10	100%	5,700	13	100%
9/27/2018	4,700	1,600	66%	3,800	160	96%

Sample Date	Influent	Effluent	Percent Reduction	Influent	Effluent	Percent Reduction
	BOD			TSS		
10/16/2018	3,000	270	91%	180	72	60%
11/16/2018	4,000	31	99%	3,300	17	99%
12/17/2018	3,000	120	96%	4,200	180	96%
1/17/2019	4,600	130	97%	7,800	340	96%
2/13/2019	52	23	56%	390	90	77%
3/7/2019	5,000	36	99%	4,600	120	97%
5/1/2019	9,100	47	99%	8,100	340	96%
5/10/2019	5,000	5.6	100%	4,900	100	98%
6/7/2019	3,600	20	99%	5,300	310	94%

17. Effluent from the BIDA® pre-treatment system is discharged to a lined, aerated treatment pond used for storage and evaporation. The pond is equipped with a high-density polyethylene (HDPE) liner overlying hard-pan, and a sprinkler recirculation system. The pond is approximately 38 feet long, 50 feet wide, and 10 feet deep with a capacity of 0.72 MG, not including two feet of freeboard. No leak testing has been conducted on the liner.

18. Wastewater quality samples are collected from the lined treatment pond prior to discharging to the LAAs. Beginning in 2018, wastewater quality reflects inclusion of the BIDA® treatment process. Wastewater quality is summarized below.

Note: Half the Practical Quantitative Level (PQL) was used for non-detects for averaging purposes. The BIDA® pre-treatment system began operating in January 2018.

Table 4. Effluent Quality – Annual Averages (mg/L)

Constituent	2015	2016	2017	2018	2019
BOD	4,239	1,737	947	275	148
Nitrate as N	0.08	0.07	0.22	0.07	0.2
TKN	54	13.22	19.83	20	9.6
FDS	1,870	760	642	720	273
TDS	2,796	1,068	1,177	1,023	547
Sulfate	102	41	4.80	6.29	3.57

19. Wastewater in the pond is used to irrigate 28 acres of LAAs cropped with winegrapes and grasses. The LAAs are flood irrigated using deep furrows. The roads around the property are higher than the LAAs, which contain the wastewater and irrigation water on-site. Irrigation is managed so that tailwater is not generated. As soon as irrigation water reaches the end of a row, the water is moved to the next set of furrows. If tailwater is generated, a mobile pump would be used to pump the water back to the pond.

20. Solids generated at the Facility consist primarily of pomace and stems, which are generally hauled off-site to local dairies and lees are hauled off-site for additional processing. However, solids are occasionally applied to the LAAs and used as fertilizer and soil amendments. Worm castings generated by the BIDA® pre-treatment system are removed from the surface of the system approximately every two years and used on the LAAs as a soil amendment or sold for off-site use. Sludge and sediment from the pond are dried out after every processing season and are sent off-site to dairies.
21. Yearly loading rates to the LAAs, based on flow weighted average effluent concentrations, from 2015 to 2018, are summarized below. Note: Total nitrogen estimated based on sum of nitrate and total Kjeldahl nitrogen (TKN).

Table 5. Loading Rates (pounds per year [lb/year])

Constituent	2015	2016	2017	2018
Total Nitrogen	78.9	186	157	67.3
TDS	7,272	12,196	8,833	4,987
FDS	2,541	7,483	4,986	2,463

22. A water balance submitted as part of the 2019 RWD for a 100-year rainfall event and an average rainfall year evaluated the Facility's ability to dispose of process wastewater and storm water using the wastewater pond and 28 acres of LAAs. The evaluation included three methods of disposal: evaporation, percolation, and transpiration by the vineyards. Based on the evaluation, wastewater and storm water applied to the LAAs would be insufficient to meet crop demands. During a growing season, approximately 15.9 MG of supplemental irrigation water may be required to meet crop irrigation demands. Therefore, ponding of wastewater or wastewater runoff are not expected. Supplemental irrigation water is supplied by the on-site well shown on Attachment B.
23. All storm water at the Facility is collected in drains and comingled with the process wastewater. No storm water is discharged off-site.
24. Domestic wastewater discharges to a dedicated on-site septic system not connected to the process wastewater management system. The septic system is regulated by the San Joaquin County Environmental Health Department.

Facility Changes

25. The Discharger may expand their processing capacity from an annual crush capacity of approximately 5,000 tons of grapes to 10,000 tons with the next 10 years, depending on market conditions. The Discharger may expand the BIDA® pre-treatment system to pre-treat additional volumes of wastewater as needed to meet effluent limits. Expansion of the BIDA® system will only provide filtration for a greater percentage of wastewater flow and will not result in an increase of wastewater flows to the LAAs.

Site-Specific Conditions

26. The site topography relatively is flat. Surficial soils consist of Tokay fine sandy loam or Acampo sandy loam. Both soil types possess moderately rapid permeability (2 to 6 inches per hour) based on the Soil Survey of San Joaquin County.
27. Average annual rainfall for the Lodi area is 18.65 in/year; the 100-year return annual total rainfall is 33.76 in/year; evapotranspiration rates for the Lodi area is 52.09 in/year.
28. The Facility is within the Lower Mokelumne Hydrologic Area (No. 531.20), as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986.
29. The site is located outside the 100-year flood zone.
30. Surface water drainage in the area is to the Mokelumne River, downstream of Camanche Reservoir, located over 2.5 miles south of the Facility. The beneficial uses of the Mokelumne River from Camanche Reservoir to the Delta are agricultural supply; water contact recreation; noncontact water recreation; warm freshwater habitat, cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and/or early development; and wildlife habitat.
31. The beneficial uses of underlying groundwater are municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply.
32. The Facility is surrounded by vineyard on all sides. Single family homes are located along the northern, western, and eastern vineyards adjacent to the Facility parcel.
33. The California League of Food Processors' *Manual of Good Practice for Land Application of Food Processing/Rinse Water* proposes risk categories associated with particular BOD loading rate ranges as follows:
 - a. Risk Category 1: (less than 50 lb/ac/day; depth to groundwater greater than 5 feet) Indistinguishable from good farming operations with good distribution important.
 - b. Risk Category 2: (less than 100 lb/ac/day; depth to groundwater greater than 5 feet) Minimal risk of unreasonable groundwater degradation with good distribution more important.
 - c. Risk Category 3: (greater than 100 lb/ac/day; depth to groundwater greater than 2 feet) Requires detailed planning and good operation with good distribution very important to prevent unreasonable degradation, as well as use of oxygen transfer design equations that consider site-specific application cycles and soil properties and special monitoring.
34. Although it has not been subject to a scientific peer review process, the Manual of Good Practice provides science-based guidance for BOD loading rates that, if fully implemented, are considered a best management practice to prevent groundwater degradation due to reduced metals.

35. This Order sets an irrigation cycle average BOD loading rate for the LAA of 150 lb/acre/day/irrigation cycle based on the following:

- a. The Discharger has not had any nuisance complaints or oversaturation issues.
- b. Groundwater is considered deep in this area (depth to groundwater beneath the Facility ranges from 85 to 108 feet bgs).
- c. Excess organic loading can mobilize iron, manganese, and other compounds which can degrade groundwater. Iron concentrations in groundwater at the Facility are less than 0.3 mg/L (Secondary MCL) as shown below, indicating excessive loading has not likely occurred at the LAAs:

Table 6. Iron Concentrations in Groundwater

Well ID	Sample Date	Depth to GW (feet bgs)	Concentration (mg/L)
MW-1	12/8/2017	100.08	<0.03
MW-1	11/29/2018	101.5	<0.03
MW-1	12/6/2019	100.4	<0.03
MW-1	6/15/2020	98.8	0.07
MW-2	12/8/2017	100.9	<0.03
MW-2	11/29/2018	101.3	<0.03
MW-2	12/6/2019	99.7	<0.03
MW-2	6/15/2020	98.3	<0.03
MW-3	12/8/2017	104.0	0.07
MW-3	11/29/2018	103.3	<0.03
MW-3	12/6/2019	101.8	<0.03
MW-3	6/15/2020	100.6	<0.03

Note: The Discharger was not required to analyzed groundwater for manganese.

36. This Order requires the Discharger to ensure reasonably even application of wastewater over the available land application areas and manage drying and cycle times to prevent excessive organic and hydraulic loading. In addition, discharges to the LAAs shall not be initiated with the ground is saturated.

Groundwater Conditions

37. The existing groundwater monitoring well network consists of three groundwater monitoring wells (MW-1 to MW-3) installed in November and December 2005. Well screen intervals and depths to groundwater are shown on Table 7 below. Depth to groundwater is shown as a range between the shallowest depth to the maximum depth measured between 2006 and 2019.

Table 7. Monitoring Well Details

Monitoring Well	Depth to Groundwater (feet bgs)	Screen Interval (feet bgs)
MW-1 (background)	85.32 – 107.51	88 - 113

Monitoring Well	Depth to Groundwater (feet bgs)	Screen Interval (feet bgs)
MW-2	84.85 – 107.72	90 – 115
MW-3	87.0 – 108.31	94 - 119

38. Downgradient flow directions range between north and northeast, with occasional variation to the north northwest. The average horizontal gradient is 0.0014 feet/foot. In groundwater monitoring reports, MW-1 is identified a background (or upgradient) well.
39. Groundwater data have been collected since 2006. Data collected between 2006 and 2019 for select constituents are summarized below. Water Quality Objectives (WQO) or other numerical limits, are defined as follows: Secondary Maximum Contaminant Upper Level for TDS; Primary Maximum Contaminant Level (MCL) for nitrate; Lowest agricultural water quality goal for sodium; Secondary MCL for chloride; and agricultural water quality goal for EC.

Table 8. Groundwater Data (mg/L unless noted otherwise)

Well ID		TDS	Nitrate as N	Total N	Sodium	Chloride	EC (µmhos/cm) (field measurement)
MW-1	Avg	496	14	14	37	66	718
	Max	570	16	16	40	70	818
MW-2	Avg	679	16.2	16.4	37.8	80.5	876
	Max	911	17.4	16.8	40	82	911
MW-3	Avg	496	8.9	8.7	32.3	64.8	778
	Max	520	15.7	10.4	35	67	824
WQO/ Numerical Limit		1,000	10	10	69	250	700

40. Concentrations of nitrate as nitrogen in upgradient well MW-1 exceed the WQO of 10 mg/L. Concentrations in downgradient wells MW-2 and MW-3 also exceed 10 mg/L; however, average concentrations in all three wells are relatively equivalent.
41. All other concentrations of constituents associated with winery process wastewater, including TDS, sodium, and chloride, with the exception of EC, are less than WQOs (or other numerical limits) in all three wells.
42. Based on concentration trend analyses for TDS, nitrate as nitrogen, sodium, chloride, and EC in MW-1, concentrations of TDS are increasing, and nitrate, sodium, chloride, and EC concentrations show stable trends over time. MW-1 is considered a background well and may be influenced by upgradient activities which are out of the Discharger's control.

43. In downgradient well MW-2, concentrations of TDS, nitrate as nitrogen, chloride, and EC show increasing concentration trends using data collected between 2006 and 2019. When evaluating trends using the most recent data (end of 2017 through 2019), which is the approximate time the BIDA® treatment system was installed, concentration trends for TDS, EC, and nitrate are stable. There are insufficient data points for sodium and chloride to determine trends over this timeframe.
44. In MW-3, all concentration trends are either stable or show decreasing trends over time.

Compliance History

45. In 2005, the Discharger was issued an Administrative Civil Liability Complaint (ACL Complaint No. R5-2005-0528) for failure to submit technical reports and to make improvements to the wastewater treatment system. Since the issuance of the Complaint Order, the Discharger has made improvements to the system and paid the imposed civil liability fee.

Basin Plan, Beneficial Uses, and Regulatory Considerations

46. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*, Fifth Edition, rev. May 2018 (Basin Plan) designates beneficial uses, established WQOs, contains implementation plans and policies for protection waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. Pursuant to Water Code section 13263, subdivision (a), WDRs are required to implement the Basin Plan.
47. The beneficial uses of surface water in the area, as stated in the Basin Plan, are agricultural supply; domestic supply; contact recreation (REC-1); non-contact recreation (REC-2); warm and cold freshwater habitat; warm water migration; warm and cold water spawning; and wildlife habitat.
48. Beneficial uses of underlying groundwater as set forth in the Basin Plan are municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
49. The Basin Plan establishes narrative WQOs for chemical constituents, tastes, and odors, and toxicity in groundwater. It also sets forth a numeric WQO for total coliform organisms.
50. The Basin Plan's numeric WQO for bacteria requires that the most probably number (MPN) of coliform organisms over any seven-day period shall be less than 2.2 per 100 mL in MUN groundwater.
51. The Basin Plan's narrative WQOs for chemical constituents, at a minimum, require MUN-designated water to meet the MCLs in the California Code of Regulations, title 22 (Title 22). The Basin Plan recognizes that the Central Valley Water Board may apply

limits more stringent than MCLs to ensure that water does not contain chemical constituents in concentrations that adversely affect beneficial uses.

52. The narrative toxicity WQO requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, animal, plant, or aquatic life associated with designated beneficial uses.
53. Quantifying a narrative WQO requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses. The Basin Plan states that when compliance with a narrative WQO is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations in order to implement the narrative WQO. This Order adopts a numeric limit of 69 mg/L for sodium, which is based on the lowest agricultural water quality goal.
54. In the absence of specific numerical water quality limits, the Basin Plan methodology is to consider any relevant published criteria. General salt tolerance guidelines, such as Water Quality for Agriculture by Ayers and Westcott and similar references indicate that yield reductions in nearly all crops are not evident when irrigation water has an EC less than 700 $\mu\text{mhos/cm}$. There is, however, an eight- to ten-fold range in salt tolerance for agriculture crops and the appropriate salinity values to protect agriculture in the Central Valley are considered on a case-by-case basis. It is possible to achieve full yield potential with water having EC up to 3,000 $\mu\text{mhos/cm}$ if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop. The list of crops in Finding 19 is not intended as a definitive inventory of crops that are or could be grown in the area affected by the discharge, but it is representative of current and historical agricultural practices in the area.

Salt and Nitrate Control Programs Reopener

55. The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting. The Basin Plan amendments were conditionally approved by the State Water Board on 16 October 2019 (Resolution 2019-0057) and the Office of Administrative Law on 15 January 2020 (OAL Matter No. 2019-1203-03).
- a. For nitrate, dischargers that are unable to comply with stringent nitrate requirements will be required to take on alternate compliance approaches that involve providing replacement drinking water to persons whose drinking water is affected by nitrates. Dischargers could comply with the new nitrate program either individually or collectively with other dischargers. For the Nitrate Control Program, the Facility falls within Groundwater Sub-Basin 5-022.01 (San Joaquin Valley – Eastern San Joaquin), a Priority 2 Basin. Notices to Comply for Priority 2 Basins will be issued within two to four years after the effective date of the Nitrate Control Program (17 January 2020).

- b. For the Salt Control Program, the Discharger was issued a Notice to Comply (CV-SALTS ID 2289) with instructions and obligations for Salt Control Program on 5 January 2021. Upon receipt of the Notice to Comply, the Discharger must submit a Notice of Intent by 15 July 2021 informing the Central Valley Water Board of their choice between Option 1 (Conservative Option for Salt Permitting) or Option 2 (Alternative Option for Salt Permitting). Dischargers that are unable to comply with stringent salinity requirements for EC of 700 $\mu\text{mhos/cm}$ to protect AGR beneficial uses or 900 $\mu\text{mhos/cm}$ to protect MUN beneficial uses will need to meet performance-based requirements and participate in a basin-wide planning effort to develop a long-term salinity strategy for the Central Valley (i.e., participate in the Priority and Optimization Study per Option 2).

As these strategies are implemented, the Central Valley Water Board may find it necessary to modify the requirements of these WDRs to ensure the goals of the Salt and Nitrate Control Programs are met.

56. This Order may be amended or modified to incorporate any newly applicable requirements.

Antidegradation Policy and Analysis

57. The State Water Board's Statement of Policy with Respect to Maintaining High Quality Waters of the State, Resolution No. 68-16 (Antidegradation Policy) prohibits degradation of groundwater unless it has been shown that:
 - a. The degradation is consistent with the maximum benefit to the people of the state.
 - b. The degradation will not unreasonably affect present and anticipated future beneficial uses.
 - c. 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, and
 - d. The discharger employs best practicable treatment or control (BPTC) to minimize degradation.
58. The Discharger has been monitoring groundwater quality at the site since 2005. Based on the data available, it is not possible to determine pre-1968 groundwater quality. Therefore, determination of compliance with the Antidegradation Policy for this Facility must be based on existing background groundwater quality.
59. Constituents of concern that have the potential to degrade groundwater include salts (primarily EC, TDS, sodium, and chloride), and nitrate as nitrogen, and total Kjeldahl nitrogen (TKN). Average concentrations for each constituent are shown in Table 9 below.

For Effluent 1 results, a flow-weighted average was calculated using data collected between 2015-2017, before the operation of the BIDA® treatment system. Effluent 2

results were calculated using data collected from January 2018 to November 2019, after the BIDA® system began operating. WQOs (or other numerical limits) are based on the following: Primary Maximum Contaminant Level (MCL) for nitrate as nitrogen; Secondary Maximum Contaminant Upper Levels for TDS and chloride; lowest agricultural water quality goal for sodium; and agricultural water quality goal for EC. WQOs have not been established (NE) for BOD and TKN.

Table 9. Antidegradation Summary

Constituent (mg/L)	Effluent 1	Effluent 2	Upgradient Groundwater (MW-1; average of data collected from 2015-2018)	Downgradient Groundwater (MW-2 and MW-3; average of data collected from 2015-2018)	WQO/ Numerical Limits
BOD	2,349	213	Not analyzed	Not analyzed	NE
TKN	23.5	14.95	Not analyzed	Not analyzed	NE
EC	NA	NA	718	827	700
TDS	1,695	790	718	529	1,000
FDS	1,104	500	Not analyzed	Not analyzed	NE
Nitrate as Nitrogen	0.12	0.13	13.6	12.7	10
Sodium	NA	NA	37	35	69
Chloride	NA	NA	66	74	250

- a. **Electrical Conductivity.** Electrical conductivity is a measure of the capacity of water to conduct electrical current and is an indicator of salinity. EC was not required to be monitored in the effluent. Concentrations in up- and downgradient groundwater exceed the WQO. Using all available groundwater data, concentration trends in MW-2 are increasing. However, the most recent groundwater data, which includes data collected after the installation of the BIDA® system, concentrations of EC have stabilized. This indicates that changes in the treatment system have likely reduced impacts to groundwater.

For the protection of groundwater, this Order requires the effluent to be monitored for EC and sets a groundwater limit for EC.

- b. **Total Dissolved Solids.** For the purposes of evaluation, TDS is representative of overall salinity. The best measure for total salinity in groundwater samples is TDS. FDS is the inorganic fraction of TDS that has the potential to percolate or leach into shallow groundwater. Therefore, the best measure for total salinity in the process wastewater is FDS. Data summarized in the table above shows that concentrations of TDS in upgradient and downgradient groundwater are relatively equivalent. Concentrations of FDS and TDS in the effluent have decreased (1,104 mg/L to 500 mg/L and 1,695 mg/L to 790 mg/L, respectively) after the BIDA® treatment system began operating. Prior to the operation of the new system, it does not appear that FDS in wastewater impacted groundwater quality beyond existing conditions.

Due to the reduction in FDS and TDS concentrations in effluent, it appears the threat to groundwater from FDS in wastewater has been further reduced. Continued groundwater monitoring for TDS will determine if the increasing concentration trends for TDS in MW-1 (background well) and MW-2 (as discussed in Findings 38 and 39) stabilize or decrease over time.

For the continued protection of groundwater, this Order requires continued groundwater monitoring, does not allow an exceedance of the WQO for TDS in groundwater, and sets an effluent limit for FDS.

- c. **Nitrate.** For nutrients such as nitrate, the potential for groundwater degradation depends on wastewater quality; crop uptake; and the ability of the vadose zone below the LAAs to support nitrification and denitrification to convert the nitrogen to gas before it reaches the water table. Most of the nitrogen in the process wastewater is present as TKN, which can readily mineralize and convert to nitrate (with some loss via ammonia volatilization) in the LAAs when under anaerobic soil conditions.

Nitrate as nitrogen concentrations in effluent have consistently been less than 2 mg/L. Upgradient background groundwater quality is poor with respect to nitrate. The average upgradient background concentration of 14 mg/L exceeds the WQO for groundwater of 10 mg/L. Concentrations in downgradient groundwater exceed 10 mg/L and are generally equivalent to upgradient concentrations. Discharges from the Facility do not appear to be degrading groundwater beyond existing conditions with respect to nitrate as nitrogen.

For the continued protection of groundwater, this Order sets a total nitrogen loading limit for the LAAs and sets a groundwater limit for nitrate.

- d. **Sodium and Chloride.** The wastewater effluent has not been monitored for sodium or chloride, but these parameters are known to be key salinity constituents in winery wastewater. Concentrations of sodium and chloride are less than WQOs in upgradient well MW-1. Concentrations of sodium and chloride in downgradient wells MW-2 and MW-3 are relatively equivalent to upgradient concentrations, indicating the discharge is not likely impacting groundwater beyond existing upgradient conditions.

For the continued protection of groundwater, this Order does not allow groundwater concentrations for sodium and chloride to exceed WQOs or other numerical limits. Monitoring of sodium and chloride in groundwater and effluent is required.

60. The Discharger provides treatment and control of the discharge that incorporates:

- a. Screening wastewater to remove solids prior to discharging to the wastewater treatment system.
- b. Pre-treatment of the wastewater to reduce BOD and TSS prior to discharging to the pond.

- c. A lined and aerated wastewater pond.
- d. Controlling and evenly applying wastewater to the LAAs.
- e. On-going employee training on proper cleanup and handling procedures in the event of a spill, and
- f. Compliance with the Salt and Nitrate Control Programs.

61. Degradation of groundwater by some of the typical waste constituents associated with discharges from a food processing Facility, after effective source control, treatment, and control measures are implemented, is consistent with the maximum benefit to the people of the state. The Discharger's operation provides approximately 37 full time and part time employees and 6 seasonal jobs. In addition, the Discharger provides a needed service for local growers, trucking services, and equipment manufacturers as well as a tax base for local and county governments. The economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State and provides sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this Order.

62. The Discharger's implementation of these practices has resulted in improved wastewater quality and a reduction in potential degradation of groundwater. The provisions of this Order require the Discharger to implement treatment and control measures listed in Finding 60. These treatment and control practices are reflective of BPTCs of the discharge.

Other Regulatory Considerations

63. In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This order promotes that policy by requiring discharges to meet Title 22 MCLs designed to protect human health and ensure that water is safe for domestic use.

64. This Order implements the Central Valley Water Board's Basin Plan, which designates beneficial uses for surface water and groundwater and establishes WQOs necessary to preserve such beneficial uses. (Wat. Code, § 13241 et seq.)

65. Based on the threat and complexity of the discharge, the Facility is determined to be classified as 3C as defined below:

- a. Category 3 threat to water quality: "Those discharges of waste that could degrade water quality without violating water quality objective or could cause a minor impairment of designed beneficial uses as compare with Category 1 and Category 2."
- b. Category C complexity, defined as: "Any discharger for which waste discharge requirements have been prescribed pursuant to Section 13263 of the Water Code

not included in Category A or Category B as described above. Included are dischargers having no waste treatment systems or that must comply with best management practices, dischargers having passive treatment and disposal systems, or dischargers having waste storage systems with land disposal.”

66. As authorized under this Order, discharges of wastewater and decomposable food processing residual solids to land are exempt from the prescriptive requirements of California Code of Regulation, title 27 (Title 27). (Title 27, § 20090, subds. (b)-(d).)
67. Statistical data analyzes methods set forth in the USEPA’s Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (Unified Guidance) are appropriate for determining whether the discharge complies with Groundwater Limitation of this Order.
68. Storm water at the Facility is collected, commingled with process wastewater, and discharged to the LAAs. Because storm water is not discharged offsite or discharged to waters of the U.S., coverage under the NPDES General Permit CAS000001 is not required at this time.
69. Water Code section 13267, subdivision (b)(1) provides as follows:
- [T]he 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... shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports 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.
70. The technical reports required by this Order and the attached **Monitoring and Reporting Program R5-2021-0031** are necessary to ensure compliance with these waste discharge requirements. The Discharger owns and operates the Facility that discharges the waste subject to this Order.
71. The California Department of Water Resources (DWR) sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), 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 used to monitor the impacts of wastewater storage or disposal governed by this Order.
72. The action to adopt WDRs for this existing Facility is exempt from the provisions of the California Environmental Quality (CEQA), in accordance with the California Code of Regulations, title 14, section 15301. This Order does not authorize any expansions,

negligible or otherwise, in existing operations at the Facility. Although discharges authorized herein may vary from those previously authorized under WDRs Order R5-2004-0035, such changes are already being lawfully implemented by the Discharger in accordance with Water Code section 13264, subdivision (a).

73. Pursuant to Water Code section 13263, subdivision (g), the ability to discharge waste is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

PROCEDURAL MATTERS

74. 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 following conditions of discharge.

75. The Discharger and interested agencies and persons have been notified of the Central Valley Water Board's intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity to submit written comments and an opportunity for a public hearing.

76. All comments pertaining to the discharge regulated under this Order were heard and considered in a public hearing.

REQUIREMENTS

IT IS HEREBY ORDERED that Order R5-2004-0035 is rescinded and pursuant to Water Code sections 13263 and 13267, R&G Schatz Farms, Inc., its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted hereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.
2. Discharge of waste classified as 'hazardous', as defined in the California Code of Regulations, title 22, section 66261.1 et seq., is prohibited.
3. 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. Treatment system bypass of untreated or partially treated waste is prohibited, except as allowed by Standard Provision E.2 of the Standard Provisions and Reporting Requirements for Waste Discharge Requirements and as described in Finding 15.
5. Discharge of waste at a location or in a manner different from that described in the Findings is prohibited.

6. Discharge of toxic substances into any wastewater treatment system or land application area such that biological treatment mechanisms are disrupted is prohibited.
7. Discharge of domestic wastewater to the process wastewater treatment system is prohibited.
8. Discharge of process wastewater to the domestic wastewater treatment system (septic system) is prohibited.
9. Discharge of domestic wastewater to the process wastewater ponds, land application area or any surface waters is prohibited.

B. Flow limitations

1. Flows to the wastewater treatment pond, measured at the location shown on Attachment C, shall not exceed the following limits:

Table 10. Flow Limits

Flow Measurement	Flow Limits
Monthly Average Daily Flow	40,000 gpd As determined by the total flow during the calendar month divided by the number of days in that month
Total Annual Flow	6 MG As determined by the total flow for the calendar year

C. Effluent Limitations

1. The wastewater applied to the LAA shall not exceed the following effluent limit:

Table 11. Effluent Limits

Constituent	Annual Average Concentration (mg/L)
FDS	900 mg/L Flow-weighted average based on the total flow

D. Mass Loading Limitations

1. The wastewater applied to the LAAs shall not exceed the following mass loading limits:

Table 12. Loading Limits

Constituent	Units	Irrigation Cycle Average	Annual Maximum
BOD Mass Loading	lb/ac/day	150	--

Constituent	Units	Irrigation Cycle Average	Annual Maximum
Total Nitrogen Mass Loading	lb/ac/year	--	Crop Demand

Compliance with the above requirements shall be determined as specified in the Monitoring and Reporting Program.

E. Discharge Specifications

1. No waste constituent shall be released, discharged, or placed where it will cause a violation of the Groundwater Limitation of this Order.
2. Wastewater treatment, storage, and disposal shall not cause pollution, or a nuisance as defined by Water Code section 13050.
3. The discharge shall remain within the permitted waste treatment/containment structure and land application areas at all times.
4. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.
5. All conveyance, treatment, storage, and disposal systems for wastewater shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
6. Objectionable odors shall not be perceivable beyond the limits of the property where the waste is generated, treated, and/or discharged at an intensity that creates or threatens to create nuisance conditions.
7. As a means of discerning compliance with Discharge Specification 6, the dissolved oxygen (DO) content in the upper one foot of the wastewater pond shall not be less than 1.0 mg/L for three consecutive sampling events. If DO concentrations are less than 1.0 mg/L for three consecutive sampling events and objectionable odors are perceivable beyond the property limits, the Discharger shall report the findings to the Regional Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results and odors within 30 days.
8. The Discharger shall design, construct, operate, and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. The operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at a design capacity and enable determination of available operational freeboard.

9. Wastewater treatment, storage, and disposal ponds or structures shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring continuous compliance with all requirements of this Order. 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.
10. On or about 1 October of each year, available capacity shall at least equal the volume necessary to comply with Discharger Specifications E.8 and E.9.
11. All ponds and open containment structures shall be managed to prevent breeding of mosquitos. Specifically:
 - a. An erosion control program shall be implemented to ensure 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, or herbicides.
 - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
 - d. The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.
12. Newly constructed or rehabilitated berms or levees (excluding internal berms that separate ponds or control the flow of water within a pond) shall be designed and constructed under the supervision of a California Registered Civil Engineer.
13. The Discharger shall monitor sludge accumulation in the wastewater treatment/storage ponds at least every five years beginning in **2026** and shall periodically remove sludge as necessary to maintain adequate storage capacity.
14. Storage of residual solids, including organic food processing byproducts such as culls, pulp, stems, leaves, and seeds, on areas not equipped with means to prevent storm water infiltration, or a paved leachate collection system is prohibited.

F. Groundwater Limitations

Release of waste constituents from any portion of the Facility shall not cause groundwater to:

1. Contain any of the specified constituents in a concentration statistically greater than the maximum allowable concentration tabulated below. The wells to which these requirements apply are specified in the Monitoring and Reporting Program.

Table 13. Groundwater Limits

Constituent	Maximum Allowable Concentration
EC	Current Groundwater Quality or 700 µmhos/cm (agricultural water quality goal), whichever is greater
TDS	Current Groundwater Quality or 1,000 mg/L (Secondary Maximum Contaminant Upper Level), whichever is greater
Nitrate as N	Current Groundwater Quality or 10 mg/L (Primary MCL), whichever is greater
Sodium	Current Groundwater Quality or 69 mg/L (Lowest agricultural water quality goal), whichever is greater
Chloride	Current Groundwater Quality or 250 mg/L (Secondary Maximum Contaminant Upper Level), whichever is greater

Note: Current groundwater quality will be defined using appropriate statistical methods described in an approved Groundwater Limitation Compliance Assessment Plan (Provision I.1.a).

2. For all compliance monitoring wells, except as specified in F.1 above, contain constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22.
3. For all compliance monitoring wells, except as specified in F.1 above, contain taste and odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.
4. Compliance with these limitations shall be determined annually as specified in the Monitoring and Reporting Program using approved statistical methods.

G. Land Application Area Specifications

1. Crops or other vegetation which may include, but not limited to, winegrapes, grasses, trees, and/or ornamental landscaping, shall be grown in the LAAs.
2. Wastewater shall be distributed uniformly on adequate acreage within the LAAs to preclude the creation of nuisance conditions or unreasonable degradation of groundwater.
3. The Discharger shall maximize the use of the available LAAs to minimize waste constituent loading.
4. Hydraulic loading of wastewater and irrigation water shall be at reasonable agronomic rates.

5. Discharge to the LAAs shall not be initiated when the ground is saturated.
6. Land application of wastewater shall be managed to minimize erosion.
7. The LAAs shall be managed to prevent breeding of mosquitos or other vectors.
8. LAAs shall be designated, maintained, and operated to comply with the following setback requirements:

Table 14. Setbacks

Setback Definition	Minimum Irrigation Setback (feet)
Edge of LAA to property boundary	25
Edge of LAA to manmade or natural surface water drainage	25
Edge of LAA to domestic water supply well	100

9. LAAs shall be inspected periodically to determine compliance with the requirements of this Order. If an inspection reveals noncompliance or threat of noncompliance with this Order, the Discharger shall temporarily stop discharging immediately in the area of concern, such as the specific field where the issue has occurred and implement correction actions to ensure compliance with this Order.
10. Any irrigation runoff (tailwater) shall be confined to the LAAs and shall not enter any surface water drainage course or storm water drainage system.

H. Solids Disposal Specifications

For the purposes of this Order, sludge means the solid, semisolid, and liquid organic matter removed from wastewater treatment, settling, and storage vessels or ponds; “solid waste” refers to solid inorganic matter removed by screens and soil sediments from washing of unprocessed fruit or vegetables; and “residual solids” mean organic food processing byproducts such as culls, pulp, stems, leaves, and seeds that will not be subject to treatment prior to disposal or land application (solids originating from meat processing are excluded from this definition).

1. Sludge and solid waste shall be removed from screens, sumps, and ponds, as needed to ensure optimal operation and adequate storage capacity.
2. Any handling and storage of sludge, solid waste, and residual solids shall be controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into solids in a mass or concentration that will violate the groundwater limitations of this Order.
3. If removed from the site, sludge, solid waste, and residual solids shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27, division 2. Removal for reuse as animal feed, or land disposal at facilities (i.e., landfills, composting

facilities, soil amendment sites operated in accordance with valid waste discharge requirements issued by the Regional Water Board) will satisfy this specification.

4. Any proposed change in solids or disposal practices shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

I. Provisions

1. The following reports shall be submitted pursuant to Water Code section 13267, and shall be prepared as described in Provision I.5:
 - a. **By 1 December 2021**, the Discharger shall submit a *Groundwater Limitations Compliance Assessment Plan*. The Plan shall propose and justify the statistical methods used to determine “current groundwater quality” (as defined in Groundwater Limitations F.1) for each of the compliance wells listed in the Monitoring and Reporting Program (MRP) using intrawell evaluations. Compliance shall be determined using appropriate statistical methods that have been selected based on site-specific information and the U.S. EPA Unified Guidance document cited in Finding 67 of this Order. The report shall also contain a Sample and Analysis Plan that describes sampling procedures and sample analyses methods to be used that will meet EPA standards.
 - b. **By 1 December 2021**, the Discharger shall submit an *Operations and Maintenance Plan* (O&M) for the wastewater treatment system. A copy of the O&M Plan shall be kept at the Facility for reference by operating personnel. The O&M Plan shall provide the following:
 - i. A description of the wastewater treatment equipment and maintenance procedures, including pond maintenance, leak detection, and cleanout procedures.
 - ii. Emergency spill response procedures.
 - iii. A description of sludge and solids handling procedures.
2. If groundwater monitoring results show that the discharge of waste is causing groundwater to contain any monitored waste constituents in concentrations statistically greater than the Groundwater Limitations of this Order based on intrawell evaluations, within 120 days of the request of the Executive Officer, the Discharger shall submit a BPTC Evaluation Workplan that sets forth the scope and time schedule for a systematic and comprehensive technical evaluation of each component of the Facility’s waste treatment and disposal system to determine best practicable treatment and control for each waste constituent that exceeds a Groundwater Limitation. The schedule to complete the evaluation shall be as short as practicable and shall not exceed one year. Alternatively, if it can be shown that the increase is the result of activities outside the Discharger’s control, a technical report shall be submitted that justifies and supports that determination.

3. In accordance with Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgements shall be performed by or under the direction of a registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for investigations and studies, 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 bear the professional's signature and stamp.
4. The Discharger shall submit the technical reports and work plans required by this Order for consideration by the Executive Officer and incorporate comments the Executive Officer may have in a timely manner, as appropriate. Unless expressly stated otherwise in this Order, the Discharger shall proceed with all work required by the foregoing provisions by the due dates specified.
5. The Discharger shall comply with the separately adopted **MRP** (incorporated herein), as well as any subsequent revisions thereto. The submittal dates of Discharger self-monitoring reports shall be no later than the submittal date specified in the MRP.
6. The Discharger shall comply with the Standard Provisions, incorporated herein.
7. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports. On or before each report due date, the Discharger shall submit the specified document to the Central Valley Water Board or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharger shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board in writing 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 shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with 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 when the operation is necessary to achieve compliance with the conditions of this Order.
9. The Discharger shall use the best practicable control technique(s) including proper operation and maintenance, to comply with this Order.

10. Per the Standard Provisions, 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.
11. In the event that the Discharger reports toxic chemical release data to the State Emergency Response Commission (SERC) pursuant to section 313 of the Emergency Planning and Community Right to Know Action (42 U.S.C. § 11023), the Discharger shall also report the same information to the Central Valley Water Board within 15 days of the report to the SERC.
12. At least **90 days** prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.
13. In the event of any change in control or ownership of the Facility, 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 the Central Valley Water Board.
14. To assume operation as Discharger under this Order, the succeeding owner or operation 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 the corporation if a corporation, the name and address and telephone phone 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 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.
15. A copy of this Order including the MRP, Information Sheet, Attachments, and Standard Provisions, shall be kept at the discharge Facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
16. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

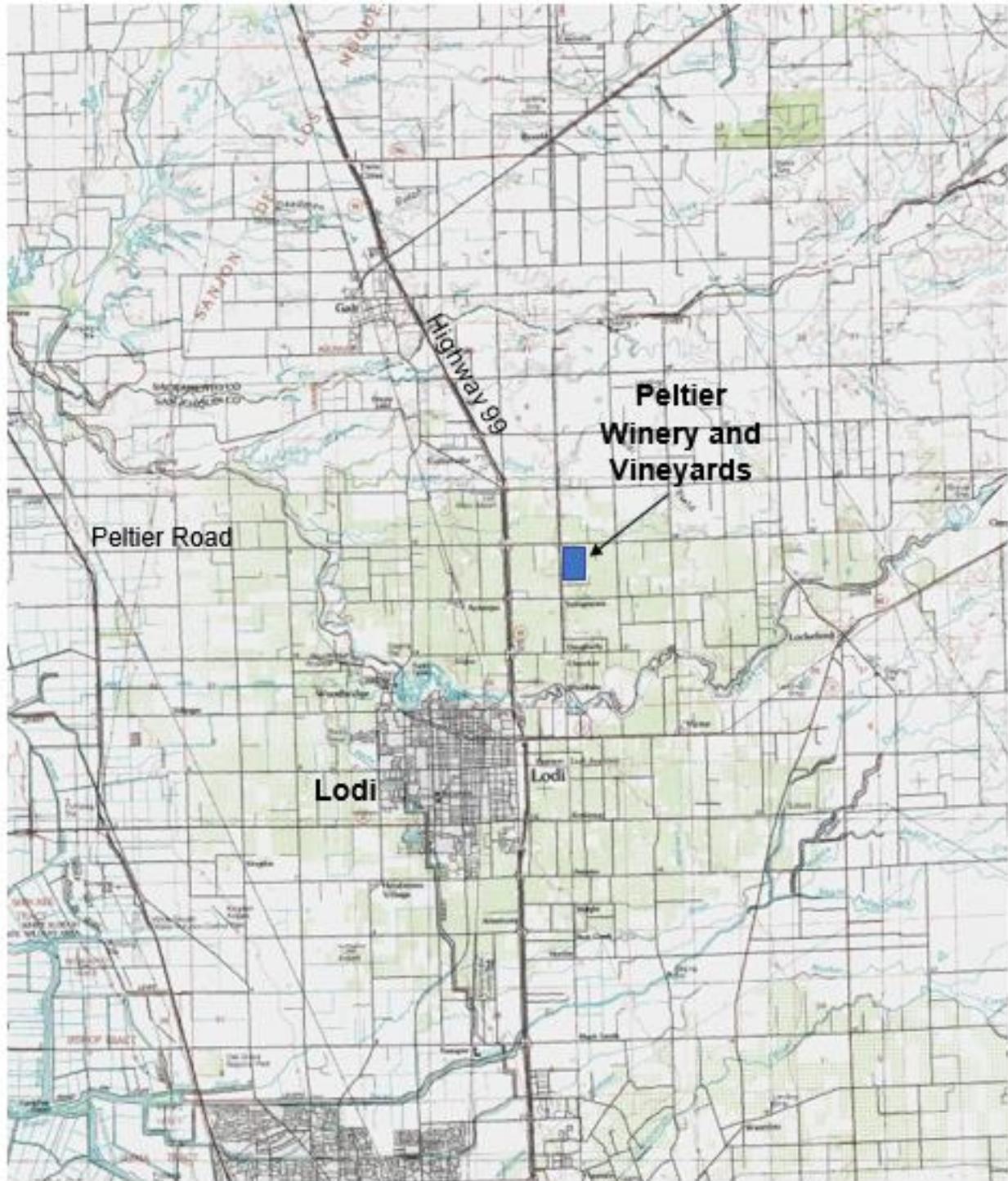
If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order 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 the right to take any enforcement actions authorized by law.

Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. The State Water Board must receive the petition by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions are available via the [Water Board's Webpage for Public Notices](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) (http://www.waterboards.ca.gov/public_notices/petitions/water_quality).

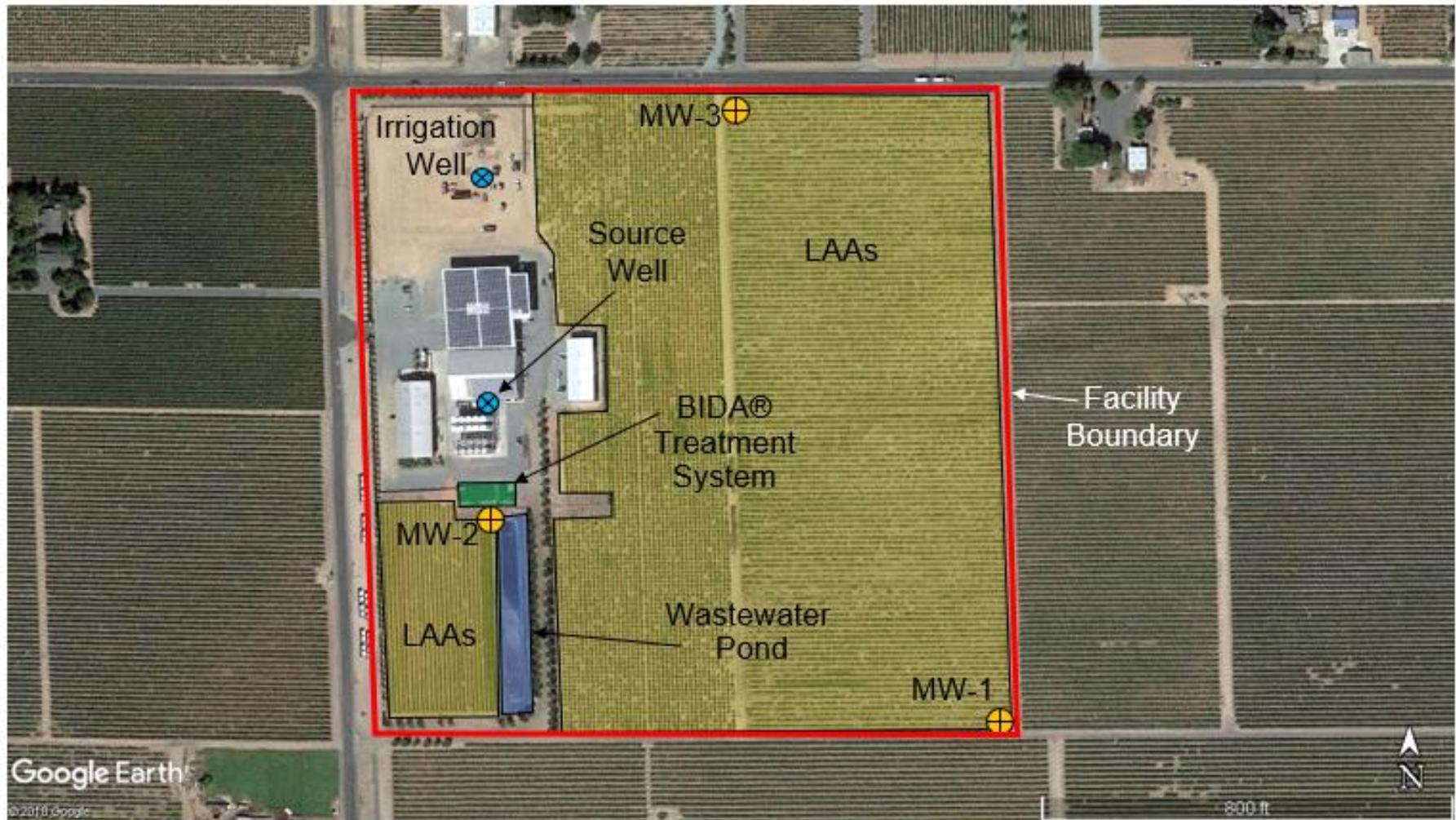
I, PATRICK PULUPA, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board on 22 April 2021.

PATRICK PULUPA, Executive Officer



~ 2 miles

SITE LOCATION MAP
R&G SCHATZ FARMS, INC.
PELTIER WINERY AND VINEYARDS
SAN JOAQUIN COUNTY



LEGEND

-  Wastewater Pond
-  BIDA® Treatment System
-  Groundwater Monitoring Well
-  Source and irrigation wells



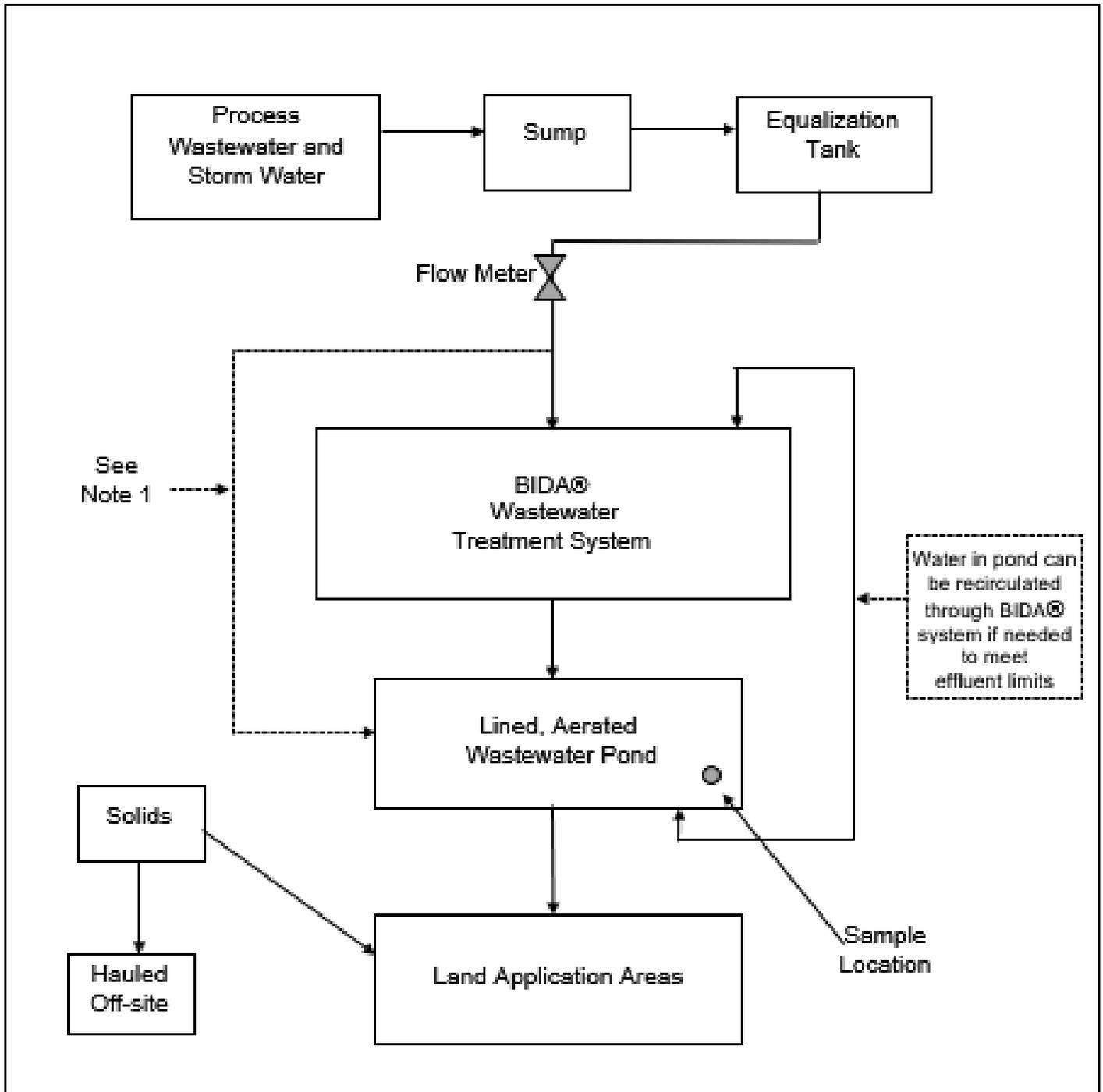
~ 400 feet

Figure Reference:
Google Earth, 2018

SITE FEATURES MAP

R&G SCHATZ FARMS, INC.
PELTIER WINERY

SAN JOAQUIN COUNTY



Note 1: Wastewater can be directed to Treatment Pond during period of high flows, such as during storm events, to protect biomass in BIDA® system.

Figure is not to scale.

WASTEWATER FLOW SCHEMATIC

R&G SHALTZ FARMS, INC.
 PELTIER WINERY
 SAN JOAQUIN COUNTY

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

STANDARD PROVISIONS AND REPORTING REQUIREMENTS
FOR
WASTE DISCHARGE REQUIREMENTS

1 March 1991

A. General Provisions:

1. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, or protect the Discharger from liabilities under federal, state, or local laws. This Order does not convey any property rights or exclusive privileges.
2. The provisions of this Order are severable. If any provision of this Order is held invalid, the remainder of this Order shall not be affected.
3. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - a. Violation of any term or condition contained in this Order;
 - b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;
 - c. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge;
 - d. A material change in the character, location, or volume of discharge.
4. Before making a material change in the character, location, or volume of discharge, the discharger shall file a new Report of Waste Discharge with the Regional Board. A material change includes, but is not limited to, the following:
 - a. An increase in area or depth to be used for solid waste disposal beyond that specified in waste discharge requirements.
 - b. A significant change in disposal method, location or volume, e.g., change from land disposal to land treatment.
 - c. The addition of a major industrial, municipal or domestic waste discharge facility.
 - d. The addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.

Waste Discharge to Land

5. Except for material determined to be confidential in accordance with California law and regulations, all reports prepared in accordance with terms of this Order shall be available for public inspection at the offices of the Board. Data on waste discharges, water quality, geology, and hydrogeology shall not be considered confidential.
6. The discharger shall take all reasonable steps to minimize any adverse impact to the waters of the state resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance.
7. The discharger shall maintain in good working order and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.
8. The discharger shall permit representatives of the Regional Board (hereafter Board) and the State Water Resources Control Board, upon presentations of credentials, to:
 - a. Enter premises where wastes are treated, stored, or disposed of and facilities in which any records are kept,
 - b. Copy any records required to be kept under terms and conditions of this Order,
 - c. Inspect at reasonable hours, monitoring equipment required by this Order, and
 - d. Sample, photograph and video tape any discharge, waste, waste management unit, or monitoring device.
9. For any electrically operated equipment at the site, the failure of which would cause loss of control or containment of waste materials, or violation of this Order, the discharger shall employ safeguards to prevent loss of control over wastes. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.
10. The fact that it would have been necessary to halt or reduce the permitted activity in Order to maintain compliance with this Order shall not be a defense for the discharger's violations of the Order.
11. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the California Water Code, Section 13050.
12. The discharge shall remain within the designated disposal area at all times.

B. General Reporting Requirements:

1. In the event the discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the discharger shall notify the Board by telephone at **(916) 464-3291**
[Note: Current phone numbers for all three Regional Board offices may be found on the Central Valley Waterboards' website (http://www.waterboards.ca.gov/centralvalley/about_us/contact_us/)]
as soon as it or its agents.

Waste Discharge to Land

have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing within **two weeks**. The written notification shall state the nature, time and cause of noncompliance, and shall include a timetable for corrective actions.

2. The discharger shall have a plan for preventing and controlling accidental discharges, and for minimizing the effect of such events.

This plan shall:

- a. Identify the possible sources of accidental loss or leakage of wastes from each waste management, treatment, or disposal facility.
- b. Evaluate the effectiveness of present waste management/treatment units and operational procedures, and identify needed changes of contingency plans.
- c. Predict the effectiveness of the proposed changes in waste management/treatment facilities and procedures and provide an implementation schedule containing interim and final dates when changes will be implemented.

The Board, after review of the plan, may establish conditions that it deems necessary to control leakages and minimize their effects.

3. All reports shall be signed by persons identified below:
 - a. For a corporation: by a principal executive officer of at least the level of senior vice-president.
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor.
 - c. For a municipality, state, federal or other public agency: by either a principal executive officer or ranking elected or appointed official.
 - d. A duly authorized representative of a person designated in 3a, 3b or 3c of this requirement if;
 - (1) the authorization is made in writing by a person described in 3a, 3b or 3c of this provision;
 - (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a waste management unit, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - (3) the written authorization is submitted to the Board

Any person signing a document under this Section shall make the following certification:

“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of the those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”

4. Technical and monitoring reports specified in this Order are requested pursuant to Section 13267 of the Water Code. Failing to furnish the reports by the specified deadlines and falsifying information in the reports, are misdemeanors that may result in assessment of civil liabilities against the discharger.
5. The discharger shall mail a copy of each monitoring report and any other reports required by this Order to:

California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Note: Current addresses for all three Regional Board offices may be found on the Central Valley Waterboard website (http://www.waterboards.ca.gov/centralvalley/about_us/contact_us) or the current address if the office relocates.

C. Provisions for Monitoring:

1. All analyses shall be made in accordance with the latest edition of: (1) *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA 600 Series) and (2) *Test Methods for Evaluating Solid Waste* (SW 846-latest edition). The test method may be modified subject to application and approval of alternate test procedures under the Code of Federal Regulations (40 CFR 136).
2. Chemical, bacteriological, and bioassay analysis shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Board staff. The Quality Assurance-Quality Control Program must conform to EPA guidelines or to procedures approved by the Board.

Unless otherwise specified, all metals shall be reported as Total Metals.

3. The discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to

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complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Record of monitoring information shall include:

- a. the date, exact place, and time of sampling or measurements,
 - b. the individual(s) who performed the sampling of the measurements,
 - c. the date(s) analyses were performed,
 - d. the individual(s) who performed the analyses,
 - e. the laboratory which performed the analysis,
 - f. the analytical techniques or methods used, and
 - g. the results of such analyses.
4. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated at least yearly to ensure their continued accuracy.
 5. The discharger shall maintain a written sampling program sufficient to assure compliance with the terms of this Order. Anyone performing sampling on behalf of the discharger shall be familiar with the sampling plan.
 6. The discharger shall construct all monitoring wells to meet or exceed the standards stated in the State Department of Water Resources *Bulletin 74-81* and subsequent revisions, and shall comply with the reporting provisions for wells required by Water Code Sections 13750 through 13755.22

D. Standard Conditions for Facilities Subject to California Code of Regulations, Title 23, Division 3, Chapter 15 (Chapter 15)

1. All classified waste management units shall be designed under the direct supervision of a California registered civil engineer or a California certified engineering geologist. Designs shall include a Construction Quality Assurance Plan, the purpose of which is to:
 - a. demonstrate that the waste management unit has been constructed according to the specifications and plans as approved by the Board.
 - b. provide quality control on the materials and construction practices used to construct the waste management unit and prevent the use of inferior products and/or materials which do not meet the approved design plans or specifications.
2. Prior to the discharge of waste to any classified waste management unit, a California registered civil engineer or a California certified engineering geologist must certify that the waste management unit meets the construction or prescriptive standards and performance goals in Chapter 15, unless an engineered alternative has been approved by the Board. In the case of an engineered alternative, the registered civil engineer or a certified engineering geologist must

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certify that the waste management unit has been constructed in accordance with Board-approved plans and specifications.

3. Materials used to construct liners shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the waste management units.
4. Closure of each waste management unit shall be performed under the direct supervision of a California registered civil engineer or a California certified engineering geologist.

E. Conditions Applicable to Discharge Facilities Exempted from Chapter 15 Under Section 2511

1. If the discharger's wastewater treatment plant is publicly owned or regulated by the Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to California Code of Regulations, Title 23, Division 4, Chapter 14.
2. By-pass (the intentional diversion of waste streams from any portion of a treatment facility, except diversions designed to meet variable effluent limits) is prohibited. The Board may take enforcement action against the discharger for by-pass unless:
 - a. (1) By-pass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a by-pass. Severe property damage does not mean economic loss caused by delays in production); and
 - (2) There were no feasible alternatives to by-pass, such as the use of auxiliary treatment facilities or retention of untreated waste. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a by-pass that would otherwise occur during normal periods of equipment downtime or preventive maintenance; or
 - b. (1) by-pass is required for essential maintenance to assure efficient operation; and
 - (2) neither effluent nor receiving water limitations are exceeded; and
 - (3) the discharger notifies the Board ten days in advance.

The permittee shall submit notice of an unanticipated by-pass as required in paragraph B.1. above.

3. A discharger that wishes to establish the affirmative defense of an upset (see definition in E.6 below) in an action brought for noncompliance shall demonstrate, through properly signed, contemporaneous operating logs, or other evidence, that:

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- a. an upset occurred and the cause(s) can be identified;
- b. the permitted facility was being properly operated at the time of the upset;
- c. the discharger submitted notice of the upset as required in paragraph B.1. above; and
- d. the discharger complied with any remedial measures required by waste discharge requirements.

In any enforcement proceeding, the discharger seeking to establish the occurrence of an upset has the burden of proof.

4. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Board by **31 January**.
5. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to disposal. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
6. Definitions
 - a. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper action.
 - b. The monthly average discharge is the total discharge by volume during a calendar month divided by the number of days in the month that the facility was discharging. This number is to be reported in gallons per day or million gallons per day.

Where less than daily sampling is required by this Order, the monthly average shall be determined by the summation of all the measured discharges by the number of days during the month when the measurements were made.

- c. The monthly average concentration is the arithmetic mean of measurements made during the month.
- d. The "daily maximum" **discharge** is the total discharge by volume during any day.

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- e. The “daily maximum” **concentration** is the highest measurement made on any single discrete sample or composite sample.
- f. A “grab” sample is any sample collected in less than 15 minutes.
- g. Unless otherwise specified, a composite sample is a combination of individual samples collected over the specified sampling period;
 - (1) at equal time intervals, with a maximum interval of one hour
 - (2) at varying time intervals (average interval one hour or less) so that each sample represents an equal portion of the cumulative flow.

The duration of the sampling period shall be specified in the Monitoring and Reporting Program. The method of compositing shall be reported with the results.

7. Annual Pretreatment Report Requirements:

Applies to dischargers required to have a Pretreatment Program as stated in waste discharge requirements.)

The annual report shall be submitted **by 28 February** and include, but not be limited to, the following items:

- a. A summary of analytical results from representative, flow-proportioned, 24-hour composite sampling of the influent and effluent for those pollutants EPA has identified under Section 307(a) of the Clean Water Act which are known or suspected to be discharged by industrial users.

The discharger is not required to sample and analyze for asbestos until EPA promulgates an applicable analytical technique under 40 CFR (Code of Federal Regulations) Part 136. Sludge shall be sampled during the same 24-hour period and analyzed for the same pollutants as the influent and effluent sampling analysis. The sludge analyzed shall be a composite sample of a minimum of 12 discrete samples taken at equal time intervals over the 24-hour period. Wastewater and sludge sampling and analysis shall be performed at least annually. The discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants which may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto.

- b. A discussion of Upset, Interference, or Pass Through incidents, if any, at the treatment plant which the discharger knows or suspects were caused by industrial users of the system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the industrial user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any

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additional limitations, or changes to existing requirements, may be necessary to prevent Pass Through, Interference, or noncompliance with sludge disposal requirements.

- c. The cumulative number of industrial users that the discharger has notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.
- d. An updated list of the discharger's industrial users including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The discharger shall provide a brief explanation for each deletion. The list shall identify the industrial users subject to federal categorical standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent than the federal categorical standards. The discharger shall also list the noncategorical industrial users that are subject only to local discharge limitations. The discharger shall characterize the compliance status through the year of record of each industrial user by employing the following descriptions:
 - (1) Complied with baseline monitoring report requirements (where applicable);
 - (2) Consistently achieved compliance;
 - (3) Inconsistently achieved compliance;
 - (4) Significantly violated applicable pretreatment requirements as defined by 40 CFR 403.8(f)(2)(vii);
 - (5) Complied with schedule to achieve compliance (include the date final compliance is required);
 - (6) Did not achieve compliance and not on a compliance schedule;
 - (7) Compliance status unknown.

A report describing the compliance status of any industrial user characterized by the descriptions in items (d)(3) through (d)(7) above shall be **submitted quarterly from the annual report date** to EPA and the Board. The report shall identify the specific compliance status of each such industrial user. This quarterly reporting requirement shall commence upon issuance of this Order.

- e. A summary of the inspection and sampling activities conducted by the discharger during the past year to gather information and data regarding the industrial users. The summary shall include but not be limited to, a tabulation of categories of dischargers that were inspected and sampled; how many and how often; and incidents of noncompliance detected.

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- f. A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of the industrial users affected by the following actions:
- (1) Warning letters or notices of violation regarding the industrial user's apparent noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the federal categorical standards or local discharge limitations;
 - (2) Administrative Orders regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;
 - (3) Civil actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations;
 - (4) Criminal actions regarding the industrial user's noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.
 - (5) Assessment of monetary penalties. For each industrial user identify the amount of the penalties;
 - (6) Restriction of flow to the treatment plant; or
 - (7) Disconnection from discharge to the treatment plant.
- g. A description of any significant changes in operating the pretreatment program which differ from the discharger's approved Pretreatment Program, including, but not limited to, changes concerning: the program's administrative structure; local industrial discharge limitations; monitoring program or monitoring frequencies; legal authority of enforcement policy; funding mechanisms; resource requirements; and staffing levels.
- h. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases.
- i. A summary of public participation activities to involve and inform the public.
- j. A description of any changes in sludge disposal methods and a discussion of any concerns not described elsewhere in the report.

Duplicate signed copies of these reports shall be submitted to the Board and:

Regional Administrator
U.S. Environmental Protection Agency W-5
75 Hawthorne Street
San Francisco, CA 94105

and

State Water Resource Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95812

Revised January 2004 to update addresses and phone numbers

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

INFORMATION SHEET
ORDER R5-2021-0031
R&G SCHATZ FARMS, INC.
PELTIER WINERY
SAN JOAQUIN COUNTY

Background

R&G Schatz Farms, Inc. (Discharger) owns and operates the Peltier Winery (formerly Mokelumne Rim Vineyards), located in Acampo in San Joaquin County. The Facility has been in operation since 2002 and processes between 4,000 and 5,000 tons of grapes per season with peaks up to 6,000 tons. Activities at the winery include receiving, crushing, and pressing of grapes; fermentation; processing into finished wines; and distribution. The grape harvest and crush season is generally between August and November.

The Facility has been regulated by Waste Discharge Requirements Order R5-2004-0035, adopted by the Central Valley Water Board on 19 March 2004. The Discharger has made changes to the wastewater treatment system and has requested a flow increase; therefore, Order R5-2004-0035 will be rescinded and replaced with this Order.

Wastewater Generation and Disposal

Process wastewater is generated from processing grapes into finished wines and juices, bottling the finished product, and cleaning and sanitizing activities.

Winery process wastewater and all storm water from the Facility are collected in drains which feed into one main underground pipe that leads to a sump. Wastewater is then pumped over screens to separate solids. Screened wastewater is then discharged to a 6,000-gallon equalization tank that controls pH levels. Flow rates are measured prior to wastewater entering the BIDA® pre-treatment system. Annual flow rates are approximately 2 million gallons per year.

The BIDA® pre-treatment system began operating in January 2018. It consists of both physical and passive organic filtration processes to improve wastewater quality. The BIDA® system consists of a treatment basin. From the top of the basin to the bottom, the basin is layered with earthworms (*Eisenia fetidia*) and microbial bacterial, wood shavings, cobble, and drainage basins. The system is designed for 10,000 gallons per day. Worms, capable of eating their weight in solids each day, digest larger suspended solids and, as a result, produce castings, which are crucial in the cultivation of rich microbial activity. Worms also provide passive aeration throughout the system as their constant burrowing motion creates air channels. This symbiotic relationship enables biofilm to form throughout the system. Biofilm refers to a complex structure, or film, of colonies of bacteria and microbial flora such as yeast and fungi, that form a digestive layer on the shavings, rocks, and drainage basins. As water passes down through the system, the biofilm capture, retains, and digests wastewater constituents. Filtered water

flows out within approximately four hours of initial system application and into the aeration pond for polishing and storage.

When wastewater and/or storm water flows are greater than the design capacity of the BIDA® system (approximately 10,000 gpd), flows over 10,000 gpd are directed around the BIDA® system and discharged to the treatment pond. If constituents in wastewater samples from the pond exceed effluent limitations, water in the pond can be sent back through the BIDA® system for additional treatment once the flows have decreased. Wastewater is not discharged to the land application areas (LAAs) until the effluent limitations have been achieved.

The treatment pond is lined and aerated and has a storage capacity of approximately 0.72 MG, not including 2 feet of freeboard. Wastewater in the pond is used to irrigate 28 acres of LAAs cropped with winegrapes and grasses. The LAAs are flood irrigated using deep furrows to contain the wastewater and irrigation water.

Solids generated at the Facility consist primarily of pomace, stems, and lees, which are generally hauled off-site to local dairies or occasionally used on the LAAs as a soil amendment. Worm castings generated by the BIDA® pre-treatment system, are removed from the surface of the system approximately every two years and used on the LAAs as a soil amendment or sold for off-site use.

Groundwater Considerations

Concentrations of constituents associated with winery wastewater, including TDS, nitrate, sodium, and chloride, are reported at concentrations less than concentrations protective of beneficial use, with the exception of nitrate and electrical conductivity. Nitrate concentrations in the single upgradient groundwater monitoring well exceed the water quality objective of 10 mg/L (Primary Maximum Contaminant Level). EC concentrations exceed the WQO of 700 μ mhos/cm in all three wells. In downgradient well MW-2, concentration trends using data from 2006 to 2019 show increasing concentrations of TDS, nitrate as nitrogen, chloride, and EC. However, when using data collected from the approximate time the BIDA® system was stalled to 2019, concentration trends have all stabilized and are no longer showing increasing trends.

While the discharge has likely impacted groundwater, changes to the treatment system, including lining the pond and the BIDA system, have likely reduced impacts to groundwater. Constituent concentrations in effluent have been reduced and concentration trends in downgradient groundwater have stabilized. However, for the continued protection of groundwater, groundwater monitoring is required, and groundwater limitations have been established in the Order.

Antidegradation

The Antidegradation analysis included an evaluation of effluent concentrations prior to the installation of the BIDA® system and concentrations of constituents in effluent after the system began operating. BIDA® treated effluent show significant decreases in BOD

and TSS concentrations. The installation of the new treatment system and improved wastewater treatment procedures have resulted in improved wastewater quality and reduced potential impacts to groundwater.

While concentrations for select constituents show increasing concentration trends in groundwater, using the most recent data, concentration trends have stabilized. Continued monitoring of groundwater is required to determine if improvements in wastewater treatment system result in continued improvement in groundwater quality.

Discharge Prohibitions, Effluent Limitations, Discharge Specifications, and Provisions

The Order limits the monthly average daily flow at 40,000 gallons a day and 6 MG per year. This Order sets an FDS annual flow weighted effluent limit of 900 µg/L and a BOD loading limit of 150 lb/ac/day. In addition, this Order requires wastewater and supplemental irrigation water to be applied to the LAAs evenly and at agronomic rates. Groundwater Limitations are set for the two compliance groundwater monitoring wells as follows:

Constituent	Groundwater Limitation	Compliance Wells
EC	Current Groundwater Quality	MW-2, MW-3
TDS	1,000 mg/L (Secondary Maximum Contaminant Upper Level)	MW-2, MW-3
Nitrate as Nitrogen	Current Groundwater Quality	MW-2, MW-3
Chloride	250 mg/L (Secondary Maximum Contaminant Upper Level)	MW-2, MW-3
Sodium	69 mg/L (Lowest agricultural water quality goal)	MW-2, MW-3

The Provision in Order R5-2021-0031 require the Discharger to submit the following reports: a *Groundwater Limitations Compliance Assessment Plan* and an *Operations and Maintenance Plan*.

Monitoring Requirements

Section 13267 of the California Water Code authorizes the Central Valley Water Board to require monitoring and technical reports as necessary to investigate the impact of waste discharges on waters of the State. Water Code Section 13268 authorizes assessment of civil administrative liability where appropriate. The Order includes effluent, LAA, solids, groundwater, and water supply monitoring requirements. This monitoring is necessary to characterize the discharge and evaluate compliance with the requirements and specifications in the Order.

Salt and Nitrate Control Programs Regulatory Considerations

As part of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative, the Central Valley Water Board adopted Basin Plan amendments (Resolution R5-2018-0034) incorporating new programs for addressing ongoing salt and nitrate accumulation in the waters and soils of the Central Valley at its 31 May 2018 Board Meeting. On 16 October 2019, the State Water Resources Control Board adopted Resolution No. 2019-0057 conditionally approving the Central Valley Water Board Basin Plan amendments and directing the Central Valley Water Board to make targeted revisions to the Basin Plan amendments within one year from the approval of the Basin Plan amendments by the Office of Administrative Law. The Office of Administrative Law (OAL) approved the Basin Plan amendments on 15 January 2020. (OAL Matter No. 2019-1203-03).

Pursuant to the Basin Plan amendments, dischargers will receive a Notice to Comply with instructions and obligations for the Salt Control Program within one year of the effective date of the amendments (17 January 2020). Upon receipt of the Notice to Comply, the Discharger will have no more than six months to inform the Central Valley Water Board of their choice between Option 1 (Conservative Option for Salt Permitting) or Option 2 (Alternative Option for Salt Permitting). The level of participation required of dischargers whose discharges do not meet stringent salinity requirements will vary based on factors such as the amount of salinity in the discharge, local conditions, and type of discharge. For the Nitrate Control Program, the Facility falls within Groundwater Sub-Basin 5-022.01 (San Joaquin Valley – Eastern San Joaquin), a Priority 2 Basin. Notices to Comply for Priority 2 Basins will be issued within two to four years after the effective date of the Nitrate Control Program. The CV-SALTS initiative will result in regulatory changes that will be implemented through conditional prohibitions and modifications to many WDRs regionwide, including the WDRs that regulate discharges from the Facility. [More information regarding the CV-SALTS regulatory planning process](https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/) can be found at the following link:
https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/

Reopener

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

Legal Effect of Rescission of Prior WDRs or Orders on Existing Violations

The Central Valley Water Board's rescission of prior waste discharge requirements and/or monitoring and reporting orders does not extinguish any violations that may have occurred during the time those waste discharge requirements or orders were in effect. The Central Valley Water Board reserves the right to take enforcement actions to

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R&G SCHATZ FARMS, INC
PELTIER WINERY
SAN JOAQUIN COUNTY

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address violations of prior prohibitions, limitations, specifications, requirements, or provisions of rescinded waste discharge requirements or orders as allowed by law.