CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

Fresno Office
1685 "E" Street
Fresno, CA 93706-2007

Sacramento Office (Main)
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

Redding Office
364 Knollcrest Drive #205
Redding, CA 96002

Regional Board Website (https://www.waterboards.ca.gov/centralvalley)

TENTATIVE
WASTE DISCHARGE REQUIREMENTS ORDER
R5-20XX-XXXX

ORDER INFORMATION

Order Type(s):	Waste Discharge Requirements (WDRs)
Status:	TENTATIVE
Program:	Non-15 Discharge to Land
Region 5 Office:	Sacramento (Rancho Cordova)
Discharger(s):	Bogle Vineyards Inc. and Bogle Family Limited Partnership
Facility:	Bogle Delta Winery
Address:	49792 Hamilton Road, Clarksburg
County:	Yolo County
Parcel Nos.:	APNS: 043-310-014, 043-310-015, 043-310-016, and 043-180-013
WDID:	5A57NC00034
CIWQS Place ID:	767906
Prior Order(s):	R5-2011-0033

CERTIFICATION

I, PATRICK PULUPA, Executive Officer, hereby certify that the following is a full, true, and correct copy of the order adopted by the California Regional Water Quality Control Board, Central Valley Region, on DD MONTH YEAR.

_____
PATRICK PULUPA, Executive Officer

REGIONAL BOARD INFORMATION

Sacramento Office (Main)
Rancho Cordova, CA 95670-6114
11020 Sun Center Drive #200
Telephone: (916) 464-3291

Fresno Office
1685 "E" Street
Fresno, CA 93706-2007
Telephone: (559) 445-5116

Redding Office
364 Knollcrest Drive #205
Redding, CA 96002
Telephone: (530) 224-4845

Regional Board Website
(https://www.waterboards.ca.gov/centralvalley)

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GLOSSARY

Antidegradation Policy	Statement of Policy with Respect to Maintaining High Quality Waters in California, State Water Board Resolution 68-16
APN	Assessor's Parcel Number
B	boron
Basin Plan	Water Quality Control Plan for Sacramento and San Joaquin River Basins
bgs	below ground surface
BOD_5	[5-day] biochemical oxygen demand at 20 degrees Celsius
BMPs	best management practices
BPTC	best practical treatment or control
CEQA	California Environmental Quality Act, Public Resources Code section 21000 et seq
CG	cross-gradient
Conc	concentration
CV-SALTS	Central Valley Salinity Alternatives for Long-Term Sustainability
DG	downgradient
DO	dissolved oxygen
EC	electrical conductivity
EIR	environmental impact report
FDS	fixed dissolved solids
FE	iron
FEIR	final environmental impact report
FEMA	Federal Emergency Management Agency
ft	feet
gal	gallons
gpd	gallons per day
gpy	gallons per year
GW	groundwater
LAAs	land application areas

GLOSSARY

MCL	maximum contaminant level
Mn	manganese
MPN	most probable number
MRP	Monitoring and Reporting Program
msl	mean sea level
µg/L	Micrograms per Liter
µmhos/cm	Micromhos per Centimeter
MG[D]	million gallons [per Day]
mg/L	milligrams per liter
MUN	municipal
MW	monitoring well
NTU	Nephelometric Turbidity Units
N	nitrogen
NA	not applicable or not available
NCP	Nitrate Control Program
ND	not detected or non-detect
NPDES	National Pollutant Discharge Elimination System
NW	northwest
OAL	Office of Administrative Law
lb	pounds
lb/ac/day	pounds per acre per day
P&O Study	Prioritization and Optimization Study of the Salt Control Program of CV-SALTS
PW	process wastewater
RL	reporting limit
ROWD	Report of Waste Discharge
SCP	Salt Control Program
SE	southeast
SERC	State of Emergency Response Commission

GLOSSARY

SPRRs	Standard Provisions and Reporting Requirements
SW	southwest
TDS	total dissolved solids
Title 22	California Code of Regulations, Title 22
Title 23	California Code of Regulations, Title 23
Title 27	California Code of Regulations, Title 27
TKN	total Kjeldahl nitrogen
UG	upgradient
USEPA	United States Environmental Protection Agency
UV	Ultraviolet
UVT	UV Transmittance
Wat. Code	Water Code
WDRs	Waste Discharge Requirements
WQOs	Water Quality Objectives

FINDINGS

The Central Valley Regional Water Quality Control Board (Central Valley Water Board) hereby finds as follows:

Introduction

1. Bogle Delta Winery (Facility) is an existing winery located at 49792 Hamilton Road in Clarksburg, Yolo County. The Facility, including wastewater ponds and land application areas (LAAs) are within Section 12, Township 6 N, Range 3 E, Mount Diablo Base and Meridian (MDB&M). The Facility is owned by Bogle Vineyards Inc (Bogle) and is located on property owned by Bogle Family Limited Partnership. Facility location is depicted in **Attachment A** (Site Location Map).

2. The Facility is a complete winemaking facility from receiving and crushing grapes to packaging and shipment of wine off-site. There are no winery events or hospitality. Process wastewater is generated from wine production activities and limited amounts of process wastewater trucked from nearby Bogle owned winery facilities. The Facility began operations in 2011; however, discharges of process wastewater to the LAAs began in May 2013. The treatment and land discharge of process wastewater was regulated by Waste Discharge Requirements (WDRs) R5-2011-0033 adopted by the Central Valley Water Board on 9 June 2011. Domestic wastewater is treated via an onsite wastewater treatment system that was historically permitted by Yolo County.

3. Bogle Vineyards Inc. and Bogle Family Limited Partnership (hereafter Discharger) are responsible for compliance with the WDRs prescribed in this Order.

4. The following materials are attached and incorporated as part of this Order:

   a. Attachment A – Site Location Map

   b. Attachment B – Facility and Monitoring Well Location Map

   c. Attachment C – Combined Wastewater Flow Diagram

   d. Attachment D – Domestic Wastewater Flow Diagram

   e. Information Sheet

   f. Standard Provisions & Reporting Requirements dated 1 March 1991 (1 March 1991 SPRRs) [https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/std_provisions/wdr-mar1991.pdf]

5. Also attached is **Monitoring and Reporting Program R5-20XX-XXXX** (MRP),

which requires monitoring and reporting for discharges regulated under these WDRs.

6. WDRs are needed for this Facility to ensure the discharge will comply with water quality plans and policies and reflect current treatment and disposal operations. WDRs Order R5-2011-0033 will be rescinded and replaced with this Order.

Regulatory History

7. The Facility began operations in 2011; however, discharges of process wastewater to the LAAs began in May 2013. There are two wastewater treatment systems: one for winery process wastewater and one for domestic wastewater. WDRs R5-2011-0033 regulates the discharge of up to 4.9 million gallons (mgal) per month and an annual total of up to 30.3 mgal of process wastewater to the treatment ponds and LAAs. The domestic wastewater system was historically permitted through the local agency.

8. Bogle submitted a Report of Waste Discharger (ROWD) dated 14 March 2023 requesting the following:

    a. Replace the failing domestic wastewater treatment system that was designed for 85 employees and approximately 1,275 gallons per day (gpd) with a new system to be regulated by the Central Valley Water Board. Domestic wastewater will be treated to Title 22 disinfected secondary-2.2 recycled water standards and then discharged to the existing process wastewater treatment pond system.

    b. Expand the LAAs from 122 acres to approximately 261 acres.

    c. Propose an annual fixed dissolved solids (FDS) loading limit in lieu of the FDS effluent monthly maximum concentration limit of 900 mg/L.

9. A Revised ROWD dated 26 May 2023 was submitted to address the items requested in the Central Valley Water Board's 27 April 2023 letter. A revised water balance was submitted on 20 September 2023. A Revised ROWD dated 31 July 2024 was submitted to address additional changes to the proposed disinfection system.

10. Bogle submitted a Title 22 Engineering Report dated 14 March 2023 and a revised Title 22 Engineering Report dated 26 April 2024 to State Water Resources Control Board (State Water Board), Division of Drinking Water (DDW) for review. DDW issued a conditional acceptance of the Title 22 Engineering Report on 13 September 2024 with recommendations that have been incorporated within this Order.

Existing Domestic Treatment System and Discharge

11. Domestic wastewater is generated from toilets, sinks, breakrooms, and kitchen facilities within the winery associated with employee uses. Domestic wastewater flows through a gravity collection system to two underground sumps. The collection system consists of several sumps throughout the facility that directs flow to a 3,000-gallon septic tank, which then gravity flows to a 3,000-gallon sump pump tank. From the pump tank, wastewater is pumped to a 10,500 square foot mound system which was permitted by the local agency. The mound system has failed and therefore, domestic waste was hauled to a permitted facility for disposal.

Existing Process Wastewater Treatment System and Discharge

12. Process wastewater (PW) is generated from the following areas: press area, external work areas and tank farm, barrel building, bottling and case goods building, and mechanical area. The Facility may also receive up to 0.372 mgal a year of process wastewater from the Discharger's off-site Old River Vineyard and Bogle Vineyard main facilities. The crush season is typically from August through October.

13. The existing PW System consists of a screened gravity collection system, pump tanks, a rotary screen, three aerated facultative ponds, and 122 acres of LAAs. Process wastewater undergoes solids removal and biological treatment prior to land application. Application is via spray/sprinkler irrigation. The LAAs are typically cropped with alfalfa and winter wheat. A facility map is shown in **Attachment B**. A process wastewater flow diagram is shown in **Attachment C.**

    a. Process wastewater is collected in floor drains and trenches from within the winery, receiving, crush, tank, and wash down areas. Screened baskets and strainers are installed within the floor drains and trench drains to provide initial screening.

    b. Process wastewater from the Discharger's off-site Old River Vineyard and Bogle Vineyard main facilities is received at an on-site dump station then comingled with the onsite process wastewater.

    c. All process wastewater gravity flows into designated pump stations.

    d. A rotary screen is used to filter and separate solids from the wastewater. Grape pomace (skin, pulp, seeds, and stems) and diatomaceous earth (DE) containing filterable solids from wine fermentation such as lees and minor amount of wine, are the process solid wastes that are generated from the wine making process.

e. All three ponds are aerated and lined with a single layer of 60-mil high density polyethylene liner. Two layers of liner are placed under all pond equipment. In addition to the double liner, a 10-foot square concrete pad is installed under each aerator. The pond system has a hydraulic residence time (HRT) of 142.5 days and 74.5 days during peak flow conditions (during harvest). A summary of the pond system capacity is provided in the table below. Pond capacity and freeboard is based on 2-feet of freeboard.

Table 1. Pond Summary

Pond Name	Function	Pond Capacity	Pond Depth at 2-ft Freeboard
Pond 1	Secondary Treatment	6.47 mgal	12 ft
Pond 2	Polishing	5.6 mgal	12 ft
Pond 3	Polishing and Irrigation	5.6 mgal	12 ft

14. Influent process wastewater flows (data collected from 2015 through 2022) as provided in the ROWD and the Discharger's monitoring reports are summarized in the table below.

Table 2. Process Wastewater Flows, mgal

Month	2015	2016	2017	2018	2019	2020	2021	2022
January	1.54	1.43	1.11	0.88	1.09	1.11	0.88	1.09
February	1.09	1.47	0.94	1.23	0.72	0.94	1.23	0.97
March	1.65	1.30	1.23	1.27	1.34	1.23	1.26	1.34
April	1.51	1.01	1.27	1.06	1.25	1.27	1.06	1.25
May	1.55	1.12	1.20	1.14	1.19	1.20	1.14	1.19
June	1.44	1.58	1.12	1.15	1.03	1.12	1.15	1.03
July	1.57	1.49	1.17	0.96	0.88	1.17	0.96	0.88
August	1.50	1.52	1.48	1.07	1.27	1.48	1.07	1.27
September	2.39	1.75	2.42	1.32	2.96	2.42	1.32	2.96
October	3.13	2.41	2.10	3.25	1.87	2.10	3.25	1.87
November	1.34	1.10	0.99	0.94	1.06	0.99	0.94	1.06

Month	2015	2016	2017	2018	2019	2020	2021	2022
December	1.16	0.96	0.97	1.22	1.20	0.97	1.22	1.20
Total	19.88	17.15	15.99	15.49	16.13	16.00	15.49	16.13

15. Process wastewater quality based on samples (data collected from 2014 through 2022) taken from Pond 3 is summarized in the table below. Units are in mg/L unless noted otherwise. For non-detections (ND), half the reporting limit was used to determine average concentration.

Table 3. Process Wastewater Quality

Constituents	Concentration Range	Average Concentration	No. of Data Points
BOD_5	3 - 215	34	106
TDS	870 – 3,930	1,836	106
FDS	380 – 2,850	1,315	106
Nitrate as Nitrogen	ND, <0.1 – 3.70	0.29	106
TKN	ND, <0.1 – 84.7	15	106
Boron	1,200 – 5,300	2,477	36
Iron	ND, <0.1	NA	36
Manganese	ND, <0.02	NA	36

16. Annual average FDS effluent concentrations range from 960 to 1,630 mg/L as summarized in the table below.

Table 4. Annual Average FDS Concentrations

Year	Annual Average FDS, mg/L
2014	1,348
2015	1,240
2016	1,204
2017	963
2018	1,322
2019	1,080

Year	Annual Average FDS, mg/L
2020	1,525
2021	1,632
2022	1,520

17. Total nitrogen, salt, and BOD loading to the LAAs from 2014 through 2022 provided in the ROWD and the Discharger's monitoring reports are summarized in the table below.

Table 5. Nutrient and Salt Loading, lb/ac/yr

Parameter	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Nitrogen	28	13	20	13	19	20	9	19	14
TDS	2,604	3,111	4,662	1,774	2,713	2,875	1,351	3,059	2,320
FDS	1,848	2,337	3,547	1,391	2,291	2,088	955	2,209	1,633
BOD	79	59	58	29	31	46	12	32	26

a. Based on information from *The Western Fertilizer Handbook* (California Fertilizer Association, 1995, Interstate Publishers), alfalfa and wheat will take up at least 480 pounds per acre per year (lb/ac/yr) and 175 lb/ac/yr of nitrogen, respectively, or a combined total of 655 lb/ac/yr during years when winter wheat is planted prior to starting the next alfalfa crop.

b. TDS is composed of both volatile dissolved solids (VDS) and fixed dissolved solids (FDS). The proportion of VDS to FDS in wastewater varies with the source, but 50 percent of the TDS in winery wastewater may be in the volatile form. VDS can be biologically treated by soil microorganisms in a well-managed wastewater treatment and land application system, when wastewater is not over-applied. FDS are reduced by plant uptake of nutrients, primarily nitrates, phosphorus, and potassium (and to a lesser degree calcium, magnesium, and sulfur).

c. Excessive application of winery processing wastewater to the LAAs can create objectionable odors (a possible nuisance condition), soil conditions that are harmful to crops, and degrade the underlying groundwater by overloading the shallow soil profile and causing waste constituents (organic carbon, nitrate, other salts, and metals) to percolate below the root zone. The maximum BOD loading rate that can be applied to land without creating nuisance conditions can vary significantly depending on the

operation of the land application system. *Pollution Abatement in the Fruit and Vegetable Industry*, published by the United States Environmental Protection Agency (US EPA Publication No. 625/3-77-0007) (hereafter Pollution Abatement), cites BOD loading rates for irrigation purposes in the range of 36 pounds per acre per day (lb/ac/day) to 100 lb/ac/day.

18. Winery process solids are collected for distribution to the LAAs as a soil amendment or transported off-site to a permitted facility.

    a. Large solids removed from the collection area (screening operations) are sent directly to truck trailers and hauled off-site.

    b. Solids from the winery operations include pomace, seeds, stems, and diatomaceous earth (DE). Solids generated from the grape presses go directly into truck trailers, stored at the pomace pad, then hauled for off-site disposal. Solids removal via hauling occurs multiple times per week between August and November. A sump along the pomace pad collects run-off from site. During harvest when there are solids on the pomace pad, valve controls allow leachate to be directed to the process wastewater ponds. During non-harvest, when there are no solids present, runoff is diverted from the sump to the existing irrigation canal (per approval from Reclamation District 999).

19. Solids, in the form of sludge, that accumulate in the ponds are periodically removed every 5 to 10 years, as needed. In 2019, pond sludge was removed and distributed to the LAAs using a tractor with injection system and incorporated into the soil. Application was performed during the months between June through September and when there is no wastewater applied to the LAAs.

20. Most of the winery operations are conducted under covered areas to avoid storm water wastewater mixtures. Storm water that mixes with wastewater from the outdoor tank farm and process areas, including the pretreatment and crush areas not under a roof, is discharged to the process wastewater treatment system. Uncontaminated storm water is discharged to the storm water detention basin.

21. A variety of chemicals are used in the winemaking, processing, cleaning, and sanitation processes which are identified in the table below.

Table 6. Chemical Usage Summary

Chemical	Use
Calcium hypochlorite (65 %)	Floor cleaning
Caustic soda (50 %)	Tanks, piping, and equipment cleaning
Citric acid	Tanks, piping, and equipment cleaning

Chemical	Use
Chlorinated tri sodium phosphate	Floor cleaning
Peracetic acid (5 %)	Tanks, piping, and equipment cleaning and sanitization
Potassium hydroxide	Tanks, piping, and equipment cleaning
Ammonium chloride	Tanks, piping, and equipment cleaning
Potassium Metabisulfite	Winemaking
Sodium bisulfate	Winemaking

22. The following best management practices (BMPs) have been implemented since the start of operations:

    a. Use of boilers that do not require boiler blow down or chemical additives.

    b. A non-chemical evaporative cooled refrigeration system is used to control the temperature of the wine and the winery's HVAC system, which reduces the amount of iodine and zinc discharged into the process wastewater.

    c. Wine temperature control is accomplished by pumping glycol through jacketed stainless-steel tanks. This process reduces the need to pump wine from the storage tanks through a remote wine chiller and therefore reduces the amount of line sanitation, water, and chemical usage associated with wine chillers.

    d. Replacement of chemicals with more environmentally acceptable substitutes.

    e. A water efficient high pressure/low volume barrel cleaning system is used to allow for shorter wash cycles and eliminate the need for chemicals.

    f. Process wastewater is collected in sumps and pumped through a rotary screen before entering the pond system, which removes solids and reduces ultimate organic loading to the treatment ponds.

    g. Wastewater is treated using biological processes in the form of aerated lined ponds to reduce BOD.

    h. The crush, pomace loading, dump station, and rotary screen areas are located on concrete pads, which allows drainage to designated pump stations, therefore preventing leachate generation and infiltration into the ground. Solids are containerized for off-site disposal.

i. Crops are planted in the LAAs to assimilate nutrients in the treated wastewater and are harvested and removed from the site.

j. Tailwater is collected for reapplication or sent back to the treatment system.

Changes to Domestic Treatment System and Discharge

23. The Discharger plans to treat their domestic wastewater to Title 22 disinfected secondary-2.2 requirements for non-potable by means of a membrane bioreactor (MBR) system and inline ultraviolet (UV) disinfection system. Disinfected secondary treated wastewater will be discharged to the existing process wastewater treatment pond system. The MBR and disinfection system will be sized for up to 150 employees.

24. The existing subsurface mound system will be abandoned. The existing domestic wastewater collection system, septic tank, and pump tank will remain operational.

    a. The septic tank will provide solids removal prior to treatment in the MBR system.

    b. From the septic tank, domestic wastewater flows via gravity to the pump tank.

    c. The pump tank will transfer domestic wastewater to the MBR.

25. The MBR treatment process will utilize an aerated bioreactor with return-activated sludge (RAS) as well as microfiltration to produce effluent that will remove up to approximately 97 percent and 92 percent of incoming BOD and total nitrogen concentrations, respectively. Effluent turbidity is anticipated to be <0.5 NTU (after filtration, prior to UV disinfection).

26. The UV disinfection system will be a single unit designed with a UV dose at a minimum of 40 millijoules per square centimeter (mJ/cm^2) for flows less than or equal to 40 gallons per minute (gpm). Disinfected effluent will be stored in a 16,000-gallon post disinfection holding tank. The UV unit will operate in a recirculating manner where portions of the disinfected effluent will either be discharged to the process water pond system (via the post disinfection holding tank) or returned to the post-treatment holding tank for UV treatment. A backup chlorine disinfection pump will be used if effluent in the post-disinfection holding tank does not meet Title 22 specifications.

27. After disinfection, the effluent will be commingled with the onsite winery process wastewater and Bogle's offsite process wastewater at Pump Station PS-4, then pumped to the existing PW pond system. A process flow diagram is shown on **Attachment D**.

28. Solids accumulated in the settling and pump tanks will be removed as part of the regular service and maintenance. Solids that accumulated in the MBR will be stored in a 3,000-gallon sludge storage tank and hauled offsite for disposal.

29. Anticipated domestic wastewater flows are summarized in the table below. The harvest months are from August through October.

Table 7. Anticipated Domestic Wastewater Flows

Wastewater Flow Description	Flow
Annual Domestic Wastewater - Harvest	207,000 gpy
Annual Domestic Wastewater - Non-Harvest	450,450 gpy
Total Annual Domestic Wastewater:	657,450 gpy
Peak Daily Domestic Wastewater - Harvest	2,250 gpd
Average Daily Domestic Wastewater - Non-Harvest	1,650 gpd

30. The strength of the domestic wastewater is expected to be typical of average domestic flows (Metcalf & Eddy, 2014, *Wastewater Engineering*, 5th Ed, McGraw Hill) as shown in the table below.

Table 8. Untreated Domestic Wastewater Characteristics

Parameter/Constituent	Range
BOD, mg/L	133 - 400
Total Suspended Solids, mg/L	130 - 389
Volatile Suspended Solids, mg/L	101 – 304
TDS, mg/L	374 – 1,121
FDS, mg/L	224 - 672
Total Nitrogen as N, mg/L	23 - 69
Organic, mg/L	10 -29
Free Ammonia, mg/L	14 -41
Nitrite, mg/L	0
Nitrate, mg/L	0

Changes to Process Wastewater Treatment System and Discharge

31. The existing PW treatment pond system will receive two waste types: winery process wastewater and disinfected secondary-2.2 recycled water produced from the MBR and disinfection system. Effluent (combined winery process wastewater and recycled water) from the process wastewater pond system will to be used to irrigate the LAAs. A process flow diagram is shown on **Attachment C.**

32. Anticipated process wastewater flows from winery operations are shown in the table below.

Table 9. Anticipated Process Wastewater Flows.

Wastewater Flow Description	Flow
Process Wastewater – Winemaking Process	22,275,000 gpy
Process Wastewater - Bogle's other off-site facilities	372,000 gpy
Process Wastewater - Evaporative Condenser	6,604,658 gpy
Total Annual Process Wastewater:	29,251,658 gal
Process Wastewater – Annual Average Flow	81,000 gpd
Process Wastewater – Average during Harvest	126,000 gpd
Process Wastewater – Peak Harvest	162,000 gpd
Process Wastewater – Average during Non-Harvest	65,000 gpd

33. Based on the high quality and relatively low volume of recycled water, it is not expected to impact the treatment pond beyond adding a small volume of water. Recycled water will increase influent flows to the pond by approximately 657,450 gal each year. The irrigation crop demand of the LAAs is expected to exceed the estimated annual process wastewater and recycled water volumes. Supplemental irrigation water supplied by Reclamation District 999 will continue to be applied on the LAAs as needed to meet irrigation demands.

34. The Facility and LAAs are located on four parcels (**Attachment B**). The LAAs will increase from approximately 122 to 261 acres available for waste discharges of the commingled winery process wastewater and recycled water. The Facility is acquiring a new parcel that will encompass approximately 139 acres of additional LAA. Alfalfa is the primary crop grown in the LAAs in addition to winter wheat. Crops grown within the LAAs are used as feed for animals, and the crops may feed animals that produce milk for human consumption. Crops are replanted annually and harvested and removed regularly throughout the growing season. A summary of the LAAs is shown in the table below.

Table 10. Winery and LAAs Summary

Feature	Parcel APN	Area, acres
Winery	043-310-016, 043-310-014	57.3
Existing LAA	043-310-015	122
New LAA	043-180-013	139

35. The Discharger proposes an FDS annual loading limit of 3,500 lb/ac/yr in lieu of the existing FDS effluent monthly maximum concentration limit of 900 mg/L as prescribed in the 2011 WDRs. The existing FDS effluent monthly concentration limit was based on the Discharger's expected concentrations of process wastewater, chemicals used in the winemaking process, and the net effect of water lost from evaporation from the evaporative condenser and the ponds. However, actual salinity concentrations are much higher than anticipated. The Discharger relies on the use of Reclamation District water to meet crop demands, which also helps to maintain FDS loading applied to the LAAs throughout the entire irrigation season, but process wastewater and supplemental water are not commingled prior to land discharge. Supplemental water quality from the Reclamation District may also vary, depending on when water is released into the canals for irrigation use. The Discharger's proposed FDS annual loading limit is based on calculated FDS loading rates from the application of process wastewater and supplemental Reclamation District water. As reported in the Discharger's Annual Reports from 2014 through 2022, average monthly FDS concentrations varied between 140 to 1,850 mg/L with annual FDS loading rates ranging from 960 to 3,550 lb/ac/yr.

36. Finding 15 shows that effluent FDS concentrations ranged from 380 to 2,850 mg/L. Finding 16 shows that the annual average FDS concentration is approximately 1,320 mg/L and the maximum annual average concentration is approximately 1,630 mg/L. Effluent FDS concentrations exceed 900 mg/L, however ongoing quarterly groundwater monitoring since 2010 shows no significant impacts to groundwater quality as compared to pre-discharge conditions. This Order prescribes an FDS effluent limit as a performance based flow-weighted annual average based on historical effluent data and includes a factor to allow for water conservation efforts.

37. There are no changes proposed to pond capacity. The Discharger encountered pond capacity issues in December 2022 and January 2023 due to back-to-back rain events. As a result, wastewater was discharged to the LAAs within a 24-hour rain event from 12 January 2023 through 14 January 2023, which was in violation of WDRs R5-2011-0033 Land Application Area Requirements D.15. Review of the Discharger's monitoring reports indicated that no discharges to the LAAs occurred during the months of May through September, when most of the

process wastewater is generated.

38. The process wastewater treatment ponds will receive an additional waste source (disinfected secondary-2.2 recycled water); however, the Discharger is not requesting an increase in waste flows to its treatment and disposal facilities. The Discharger's water balance demonstrated that the additional waste source will not impact pond capacity and that the previously permitted waste flow of approximately 30.3 mgal is adequate. The water balance was based on typical winery flows; anticipated domestic wastewater flows; reasonable estimates of local evapotranspiration, precipitation, and pan evaporation; and availability of 260 acres of land application areas.

39. Sludge and solids collected in the ponds will be removed as needed to ensure optimal facility operation. Residual sludge, and solids waste will be disposed of at an appropriately permitted disposal site.

Site-Specific Conditions

Topography, Climate, and Land Use

40. Local land use is agriculture. This includes small wineries and larger wine production facilities, organic produce farms, and pastureland. The site is bounded to the north by farmland. Irrigation of surrounding facilities is provided by on-site wells, reuse, or local irrigation canals managed by Reclamation District 999. Irrigation ditches cross the central portion of the site and are also located near the sites northern, western, and southern boundaries.

41. Nearest surface water drainage course is the local irrigation canal which flows throughout the property. The main canal system is managed and maintained by Reclamation District 999. An existing drainage canal bisects the LAAs and is privately owned and operated by the winery.

42. The area surrounding the winery property was previously in a Flood Zone B as defined by Federal Emergency Management Agency (FEMA). The Flood Zone B designation applies to areas between the 100-year flood and 500-year flood or areas protected by levees from the base flood. On 18 June 2010, a revised FEMA flood map redesignated the region, including and surrounding the winery property, as Flood Zone A. Areas designated as Flood Zone A do not have a determined 100-year flood, base flood elevation, or flood hazard factors.

    The Discharger has taken the necessary measures to ensure the protection of the ponds from inundation and/or washout due to flooding with a 100-year return frequency. In consideration of the Facility elevation and proximity to the Sacramento River Deep Water Channel (approximately 2.3 miles west of the Facility), the pond dikes were designed at an elevation of 17 feet with the ability to be increased to 21 feet, if needed in the future.

43. Soils within the vicinity of the pond area and LAAs are primarily Sacramento Clay, characterized as poorly drained, nearly level silty clay loams and clays, in basins and typically of moderate to high shrink swell potential.

44. Based on information from the California Management Information Systems (CIMIS), the annual average precipitation is 19.2 inches. The 100-year 365-day precipitation is 36.4 inches. The annual reference evapotranspiration is 57.9 inches based on Zone 15.

Facility Source Water

45. There are two water supply wells (Water Supply #1 and #2). Supply Well #1 is located west of the Barrel Building and Supply Well #2 is located north of the Press Area. Water quality from Supply Well 1 as provided in WDRs R5-2011-0033 is shown in the table below. The well depth for Supply Well 1 is approximately 360 feet with a screened interval between 320 feet and 340 feet. Water from Supply Well 2 is blended with water from Supply Well 1 for use at the Facility.

Table 11. Supply Well Characteristics

Constituent	**Analytical Result**
pH, standard units	8.3
TDS, mg/L	290
Nitrate as NO_3, mg/L	< 0.5 (non-detect, reporting limit shown)
Iron, mg/L	0.110
Manganese, mg/L	0.037
Sodium, mg/L	98

Groundwater

46. The groundwater monitoring network includes five groundwater monitoring wells. Monitoring wells MW-1, MW-2, and MW-3 were installed in March 2010. In anticipation of the planned expansion of the LAAs discussed in these WDRs, monitoring wells MW-4 and MW-5 were installed in April 2020. Upon inclusion of the new land application area, monitoring wells MW-2 and MW-3 will be considered cross-gradient for future evaluation. Well locations are shown in **Attachment B** and well construction details are provided in the table below. Average depth to groundwater is based on available 2020 data.

Table 12. Monitoring Well Details

Parameter	MW-1	MW-2	MW-3	MW-4	MW-5
Position with respect to new and expanded LAAs	down gradient	cross-gradient	cross-gradient	upgradient	down gradient
Total Depth, ft	26	26	26	27	27
Screen Interval, ft	11 - 26	11 - 26	11 - 26	12.5 – 25.5	13.5 – 25.5
Average Depth to Groundwater, ft	7.01	7.75	7.00	6.91	9.77

47. Monitoring wells MW-1, MW-2, and MW-3 were sampled and analyzed in 2010 (four sampling events from March through June) to determine initial baseline groundwater quality prior to onsite wastewater discharges. Additional samples were taken in September and December 2010. Discharges to the LAAs began in May 2013. Based on initial pre-discharge water quality data from March 2010 through June 2010, wells MW-2 and MW-3 had relatively higher concentrations of most analytes tested than those reported in downgradient well MW-1. Initial pre-discharge groundwater data show first encountered groundwater is not high-quality water with respect to salts and metals for wells MW-1, MW-2, and MW-3.

    a. TDS concentrations ranged from 1,000 to 1,700 mg/L, which exceeds 500 mg/L, the recommended secondary MCL (sMCL).

    b. Boron concentrations ranged from 2,000 to 3,000 µg/L, which exceeds the numeric value of 700 µg/L, the agricultural water quality goal.

    c. Manganese concentrations ranged from 170 to 840 µg/L, which exceeds 50 µg/L, the sMCL.

48. Monitoring wells MW-4 and MW-5 were sampled monthly over a four-month period from April 2020 through July 2020 to provide a baseline groundwater assessment. Groundwater flow direction was towards the southeast. In general, upgradient well MW-4 had higher or similar concentrations of water quality parameters than downgradient well MW-5. Additionally, the water quality concentrations for MW-4 and MW-5 were similar to historic concentrations in the existing monitoring well network (MW-1, MW-2, and MW-3), with the expection of salts (specific conductivity, TDS, chloride, and sodium) which were noticeably lower in MW-5 than in the other wells.

49. Groundwater quality data for monitoring wells MW-1, MW-2, and MW-3 provided in the ROWD and in the Discharger's monitoring reports are summarized in the table below. Average concentrations were based on available data from 2010

through 2022. Groundwater flow direction varied to the east and to the southeast. Average concentrations for monitoring wells MW-4 and MW-5 were based on four sampling events during the months of April, May, June, and July of 2020. No other samples have been obtained from MW-4 and MW-5 to date. The position of the monitoring wells noted below are with respect to inclusion of the expanded LAAs. WQO denotes water quality objectives. DG denotes downgradient. UG denotes upgradient. CG denotes cross-gradient. For non-detects, half the reporting limit was used to calculate the average.

Table 13. Average Groundwater Quality

Constituents	Potential WQO	MW-1 (DG)	MW-2 (CG)	MW-3 (CG)	MW-4 (UG)	MW-5 (DG)
EC, µmhos/cm	700 (Ag) See Note 1 below	2,069	1,954	1,876	1,700	946
TDS, mg/L	500 (sMCL)	1,185	1,183	1,078	993	548
Nitrate as N, mg/L	10 (MCL)	0.2	7.8	0.3	0.7	0.6
TKN, mg/L	none	0.2	0.3	0.2	0.5	0.3
Chloride, mg/L	250 (sMCL)	255	257	252	255	55
Sodium, mg/L	69 (Ag)	293	181	231	148	100
Boron, µg/L	700 (Ag)	2,671	2,023	2,416	1,675	950
Iron, µg/L	300 (sMCL)	133	347	76	4,225	2,055
Manganese, µg/L	50 (sMCL)	515	354	429	288	87

Table Note:

1. Numeric value of 700 µmhos/cm is considered to be a conservative value that is protective of the agricultural beneficial use during Phase 1 of the Salt Control Program.

50. Groundwater data shows the following:

    a. Salinity concentrations (EC and TDS) prior to discharge activities exceeded their respective potential WQOs. Based on available data from 2010 through 2022, salinity concentrations in first encountered groundwater remain elevated, but do not appear to be increasing, except for TDS concentrations for well MW-2. Based on groundwater data obtained in 2022, TDS concentrations for cross-gradient monitoring well MW-2 show increasing trends. However, EC concentrations for MW-2 remain stable. TDS concentrations for MW-3, which is also cross-gradient

of the LAAs, remain stable.

Based on four monthly sampling events from April through July 2020, EC concentrations exceed 700 µmhos/cm for wells MW-4 and MW-5. TDS concentrations ranged from 940 to 1,100 mg/L for upgradient well MW-4 and from 530 to 580 mg/L for downgradient well MW-5, which exceeds the sMCL recommended level of 500 mg/L.

b. Nitrate as N concentrations in first encountered groundwater prior to discharge activities were below 10 mg/L, the primary MCL. Based on available data from 2010 through 2022, nitrate as N concentrations continue to be below 10 mg/L and concentration trends appear to be stable for MW-2 and decreasing for MW-1 and MW-3.

   Based on four monthly sampling events from April through July 2020, nitrate as N concentrations for wells MW-4 and MW-5 did not exceed 10 mg/L and ranged from non-detect to 0.9 mg/L.

c. Boron concentrations in first encountered groundwater prior to discharge activities exceeded 700 µg/L, the agricultural water quality goal. Based on available data from 2010 through 2022, boron concentrations show an increasing trend for MW-1, appear stable for MW-2, and show a decreasing trend for MW-3.

   Based on four monthly sampling events from April through July 2020, boron concentrations exceeded 700 ug/L for wells MW-4 and MW-5.

d. Iron concentrations in first encountered groundwater prior to discharge activities were non-detect. Based on available data from 2010 through 2022, iron concentrations appear stable for wells MW-1, MW-2, and MW-3.

   Based on four monthly sampling events from April through July 2020, iron concentrations for wells MW-4 and MW-5 exceeded the sMCL of 300 µg/L. Concentrations were noticeably higher than those observed in the existing monitoring well network.

e. Manganese concentrations prior to discharge activities exceeded 50 µg/L, the sMCL. Based on available data from 2010 through 2022, manganese concentration trends show an increasing trend for MW-1, stable for MW-2, and show a decreasing trend for MW-3.

   Based on four monthly sampling events from April through July 2020, manganese concentrations for MW-4 and MW-5 exceeded 50 µg/L the sMCL, except during the April sampling event for MW-5.

f. Water quality in MW-4 is similar to that of MW-2, with the exception of iron. MW-4 is upgradient of the expanded LAAs and MW-2 is now cross-gradient of the expanded LAAs.

51. In accordance with Provision G.1.f of WDRs R5-2011-0033, the Discharger submitted a *Background Groundwater Quality Report* dated 14 March 2014 to characterize and determine background groundwater quality. Based on the data and spatial variability of the water quality observed between each monitoring well, a statistical analysis using an intra-well comparison was performed to determine baseline groundwater quality for each well for select parameters as shown in the table below. Baseline groundwater quality was based on 15 monitoring events conducted between March 2010 and September 2013. During this monitoring period, groundwater flowed towards the east or southeast, on 14 of the 15 events and towards the west only once (September 2010). Average groundwater concentrations from Table 13 are shown for comparison. GW denotes groundwater. Conc denotes concentration. NA denotes not analyzed.

Table 14. Baseline Groundwater Quality for Wells MW-1, MW-2, and MW-3

Concentrations	EC, µmhos/cm	TDS, mg/L	Nitrate as N, mg/L	B, µg/L	Fe, µg/L	Mn, µg/L
MW-1 Average GW Conc	2,069	1,185	0.2	2,671	133	515
MW-1 Baseline Quality	2,086	1,237	10	2,499	NA	505
MW-2 Average GW Conc	1,954	1,183	7.8	2,023	347	354
MW-2 Baseline Quality	2,041	1,265	15	2,233	NA	375
MW-3 Average GW Conc	1,876	1,078	0.3	2,416	76	429
MW-3 Baseline Quality	2,531	1,523	10	2,719	NA	725

Legal Authorities

52. This Order is adopted pursuant to Wat. Code section 13263, subdivision (a), which provides as follows:

53. The regional board, after any necessary hearing, shall prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change

in an existing discharge…, with relation to the conditions existing in the disposal area … into which, the discharge is made or proposed. The requirements shall implement any relevant water quality control plans that have been adopted and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of [Wat. Code] Section 13241.

54. The ability to discharge waste is a privilege, not a right, and adoption of this Order shall not be construed as creating a vested right to continue discharging waste. (Wat. Code, section 13263, subd. (g).)

55. This Order and its associated Monitoring and Reporting Program (MRP) are also adopted pursuant to Wat. Code section 13267, subdivision (b)(1), which 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 … shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports.*

56. The reports required under this Order, as well as under the separately issued MRP, are necessary to verify and ensure compliance with WDRs. The burden associated with such reports is reasonable relative to the need for their submission.

Basin Plan Implementation

57. Pursuant to Wat. Code section 13263, subdivision (a), WDRs must "implement any relevant water quality control plans and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241."

Beneficial Uses of Water

58. This Order implements the Central Valley Water Board's Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan), which designates beneficial uses for surface water and groundwater and establishes water quality objectives (WQOs) necessary to preserve such beneficial uses. (See Wat. Code, section 13241 et seq.).

59. The Facility is within the Yolo Bypass Hydrologic Area (No. 510.00), as depicted on interagency hydrologic maps prepared by the Department of water Resources in August 1986. The beneficial uses of the Yolo Bypass are agricultural supply; water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); migration of aquatic organisms (MIGR); spawning, reproduction, and/or early development (SPWN); and wildlife habitat (WILD).

60. The beneficial uses of underlying groundwater are municipal and domestic water supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PRO).

Water Quality Objectives

61. The Basin Plan establishes narrative WQOs for chemical constituents, taste and odors, and toxicity in groundwater. It also sets forth a numeric objective for total coliform organisms.

62. The Basin Plan's numeric WQO for bacteria requires that the most probable number (MPN) of coliform organisms over any seven-day period shall be less than 2.2 per 100 mL in MUN groundwater.

63. The Basin Plan's narrative WQOs for chemical constituents require MUN designated water to at least meet the MCLs specified in 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 waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

64. 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 objective is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations to implement the narrative objective.

65. 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 of Agriculture by Ayers and Westcot and similar references indicate that yield reductions in nearly all crops are not evident when irrigation water has an EC of less than 700 µmhos/cm. There is, however, an eight-to ten-fold range in salt tolerance for agricultural 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 groundwater EC up to 3,000 µmhos/cm, if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop. The list of crops in Finding 13 is not intended as a definitive inventory of crops that are or could be grown in the area affected by the discharge.

Salt and Nitrate Control Programs

66. On 31 May 2018, the Central Valley Water Board adopted Basin Plan amendments incorporating the Salt Control Program and Nitrate Control Program (Resolution R5-2018-0034). The Basin Plan amendments became effective on 17 January 2020. On 10 December 2020, the Central Valley Water Board adopted revision to the Basin Plan amendments with Resolution R5-2020-0057 (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf.). Those revisions became effective on 10 November 2021.

67. For the Salt Control Program (SCP), the Discharger was issued a Notice to Comply (**CV-SALTS ID 2886**). The Discharger submitted a Notice of Intent and elected to participate in the Prioritization and Optimization Study (P&O Study) under the Alternative Salinity Permitting Approach. In the interim, to maintain existing salt discharges and minimize salinity impacts, this Order does the following:

    a. Requires the Discharger to continue efforts to control salinity in its discharge to the extent reasonable, feasible, and practicable; and

    b. Sets a Performance-Based Salinity Limit of **1,960 mg/L for FDS** as a flow-weighted annual average on the discharge of treated wastewater from the ponds to the land application areas. Based on available data, the Facility's discharge has historically been consistent as shown in Finding 16 and review of the groundwater monitoring data show the discharge has not significantly impacted groundwater quality. This limit is intended to ensure that the Facility's discharge with respect to salinity does not increase over time.

68. The discharges regulated by this Order are not currently subject to the Nitrate Control Program (NCP). The Facility and LAAs are within Sub-basin 5-21.66 (Solano), a non-prioritized basin, so the Central Valley Water Board has not yet issued a Notice to Comply with the Nitrate Control Program for this Facility. Furthermore, because this Order does not authorize a new or expanded discharge, NCP provisions that apply to new and expanding discharges of nitrate are not applicable in this instance. Accordingly, this Order requires the Discharger to meet groundwater limitations for nitrate based on the MCLs listed in Title 22. This Order may be modified in the future to implement provisions of the NCP if and when the Executive Officer of the Central Valley Water Board determines that coverage thereunder is necessary and appropriate.

69. As these strategies are implemented, the Central Valley Water Board may find it necessary to modify the requirements of these WDRs. As such, this Order may be amended or modified to incorporate any newly applicable requirements to ensure that the goals of the Salt and Nitrate Control Programs are met. More

information regarding this regulatory planning process can be found on the Central Valley Water Board's CV-SALTS website. (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity)

Special Consideration for High Strength Waste

70. For the purpose of this Order, "high strength waste" is defined as wastewater that contains concentrations of readily degradable organic matter that exceed typical concentrations for domestic sewage. Such wastes contain greater than 500 mg/L BOD. Typical high strength wastewaters include septage, some food processing wastes (e.g., slaughterhouse wastes), winery wastes, and rendering plant wastes.

71. Excessive application of high organic strength wastewater to land can create objectionable odors, soil conditions that are harmful to crops, and degradation of underlying groundwater with nitrogen species and metals, as discussed below. Such groundwater degradation can be prevented or minimized through implementation of best management practices, which include planting crops to take up nutrients, and maximizing oxidation of BOD to prevent nuisance conditions.

72. Regarding BOD, excessive application can deplete oxygen in the vadose zone and lead to anoxic conditions. At the ground surface, this can result in nuisance odors and fly breeding. When insufficient oxygen is present below the ground surface, anaerobic decay of the organic matter can create reducing conditions that convert metals that are naturally present in the soil as relatively insoluble (oxidized) forms to more soluble reduced forms. This condition can be exacerbated by acidic soil and/or acidic wastewater. If the reducing conditions do not reverse as the percolate travels down through the vadose zone, these dissolved metals (primarily iron, manganese, and arsenic) can degrade shallow groundwater quality. Many aquifers contain enough dissolved oxygen to reverse the process, but excessive BOD loading over extended periods may cause beneficial use impacts associated with these metals.

73. Typically, irrigation with high strength wastewater results in high loading on the day of application. It is reasonable to expect some oxidation of BOD at the ground surface, within the evapotranspiration zone, and below the root zone within the vadose (unsaturated) zone. The maximum BOD loading rate that can be applied to land without creating nuisance conditions or leaching of metals can vary significantly depending on soil conditions and operation of the land application system.

74. *Pollution Abatement in the Fruit and Vegetable Industry*, published by the US EPA, cites BOD loading rates in the range of 36 to 600 lb/acre-day to prevent nuisance, but indicates the loading rates can be even higher under certain conditions. The studies that supported this report did not evaluate actual or

potential groundwater degradation associated with those rates. There are few studies that have attempted to determine maximum BOD loading rates for protection of groundwater quality. Those that have been done are not readily adapted to the varying soil, groundwater, and climate conditions that are prevalent throughout the region.

75. The *California League of Food Processors' Manual of Good Practice for Land Application of Food Processing/Rinse Water* (Manual of Good Practice), prepared for the California League of Food Processors 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.

    The Manual of Good Practice recommends allowing a 50 percent increase in the BOD loading rates in cases where sprinkler irrigation is used but recommends that additional safety factors be used for sites with heavy and/or compacted soils.

76. 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. Annual BOD loading rates from 2014 through 2022 to the LAAs were between 12 and 79 lb/ac/yr, as discussed in Finding 17. These WDRs establish a BOD cycle average loading rate of 60 lb/ac/day, which was prescribed in WDRs R5-2011-0033, to prevent odor conditions from occurring and to prevent groundwater degradation due to reduced metals.

Compliance with Antidegradation Policy

77. State Water Resources Control Board (State Water Board) Resolution 68-16, *Policy with Respect to Maintaining High Quality Waters of the State* prohibits degradation of high-quality groundwater unless it is shown that such degradation:

    a. Will be consistent with the maximum benefit to the people of the state;

b. Will not unreasonably affect present and anticipated future beneficial uses; and

c. Will not result in water quality less than that is prescribed in state and regional policies, including violation of one or more water quality objectives.

78. Resolution 68-16 further requires that any discharge to existing high quality waters be required to meet waste discharge requirements that will result in the best practicable treatment or control (BPTC) of the discharge necessary to assure that pollution and/or nuisance will not occur and that the highest quality consistent with the maximum benefit to the people of the state will be maintained.

79. Given the unavailability of pre-1968 water quality information, compliance with the Antidegradation Policy will be determined on available historic onsite groundwater monitoring data. Monitoring of the shallow groundwater began in March 2010 (before process wastewater was discharged to the LAAs), with three groundwater monitoring wells MW-1, MW-2, and MW-3. Two additional groundwater monitoring wells, MW-4 and MW-5 were added in 2020.

80. The Antidegradation Policy applies when an activity discharges to high quality waters and will result in some degradation of such high-quality waters. "High quality waters" are defined as those waters where water quality is more than sufficient to support beneficial uses designated in the Basin Plan. Whether a water is high-quality water is established on a constituent-by-constituent basis, which means that an aquifer can be considered a high-quality water with respect to one constituent, but not for others (SWRCB Order No. WQ 91-10). If the activity will not result in the degradation of high-quality waters, the Antidegradation Policy does not apply, and the discharger need only demonstrate that it will use "best efforts" to control the discharge of waste

81. For the purposes of this Order, constituents/parameters associated with this Facility include salts (represented by EC, TDS, and FDS), nitrate, boron, iron, and manganese. Average concentrations are shown in the table below. Units are in mg/L unless otherwise shown. NA denotes not available. ND denotes non-detect, reporting limit is shown. DG denotes downgradient. CG denotes cross-gradient. UG denotes upgradient.

Table 15. Constituents with Potential for Degradation

Sample Source	EC, µmhos/cm	TDS	FDS	Nitrate as N	B, µg/L	Fe, µg/L	Mn, µg/L
Source Water	NA	290	NA	ND, <0.5	NA	110	37

Sample Source	EC, µmhos/cm	TDS	FDS	Nitrate as N	B, µg/L	Fe, µg/L	Mn, µg/L
Domestic Wastewater	NA	250 - 500	NA	0	NA	NA	NA
Winery Wastewater	NA	1,836	1,320	0.29	2,477	ND, <0.1	ND, <0.02
MW-1 (DG)	2,069	1,185	NA	0.2	2,671	133	515
MW-2 (CG)	1,954	1,183	NA	7.8	2,023	347	354
MW-3 (CG)	1,876	1,078	NA	0.3	2,416	76	429
MW-4 (UG)	1,700	993	NA	0.7	1,675	4,225	288
MW-5 (DG)	946	548	NA	0.6	950	2,055	87
Potential WQO (reference)	700 (Ag) See Note 1 below	500 (sMCL)	NA	10 (MCL)	700 (Ag)	300 (sMCL)	50 (sMCL)

Table Note:

1. Numeric value of 700 µmhos/cm is considered to be a conservative value that is protective of the agricultural beneficial use during Phase 1 of the Salt Control Program.

82. **Salinity (EC and TDS)**. For the purpose of evaluation, TDS is representative of overall salinity. The best measure for total salinity in groundwater is TDS. FDS is the non-volatile 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.

Domestic wastewater will be treated to disinfected secondary-2.2 recycled water standards and commingled with winery wastewater. Salinity impacts from domestic wastewater are considered minimal based on volume and quality. For the purpose of evaluation, winery wastewater is analyzed. Based on available data collected in 2014 through 2022, TDS concentrations in winery wastewater are relatively stable but exceed 500 mg/L, the recommended sMCL for TDS. In comparison to source water quality, discharges of the commingled wastewater have the potential to degrade groundwater with respect to salinity.

Concentrations of TDS within first encountered groundwater is not identified as high-quality water, and pre-discharge groundwater concentrations exceed 500 mg/L, the recommended sMCL. Additional treatment is provided in the lined pond system via aerators and through land application areas. Site conditions

(climate and soils) are relied upon to control the persistence and transport of constituents into the aquifer. High quality water is used as a source for supplemental irrigation, which is needed to meet the crop demands planted in the LAAs and helps to maintain FDS loading applied to the LAAs throughout the irrigation season.

The Discharger has elected to participate in the P&O Study; therefore, this Order includes an FDS effluent limitation as a performance-based limit based on historical effluent data and consideration of water conservation efforts. Review of the available groundwater data collected in 2010 through 2022 suggest that the discharge has not significantly impacted groundwater quality with respect to salinity and concentrations appear to be stable, except for cross-gradient monitoring well MW-2. Based on groundwater data collected in 2022, TDS concentrations for MW-2 show increasing trends, however TDS concentrations for MW-3 which is also cross-gradient of the LAAs appear decreasing. The purpose of this limit is to ensure the Discharger is implementing appropriate performance-based measures at the facility and is intended to prevent increases of TDS concentrations in groundwater beyond current conditions. Compliance with the performance-based effluent limit shall constitute compliance with the water quality control plan and ensures that the Discharger is maintaining current discharge concentrations and loading levels of salt. In addition, the Discharger is required to evaluate groundwater TDS concentrations to determine if degradation that may impact beneficial uses of groundwater has been mitigated or what actions will be necessary to minimize groundwater degradation.

83. **Nitrate as Nitrogen (N).** For nutrients such as nitrate, the potential for groundwater degradation depends on wastewater quality and the ability of the vadose zone below the land application areas to support nitrification and denitrification to convert the nitrogen to nitrate or nitrogen gas (ammonia) before it reaches the water table.

Nitrate impacts from domestic wastewater are considered minimal based on volume and quality. For the purpose of evaluation, winery wastewater is analyzed. Based on available winery wastewater data collected from 2014 through 2022, total nitrogen is primarily TKN, which consists of organic nitrogen and ammonia nitrogen. TKN has the potential to mineralize and convert to nitrate (with some loss via ammonia volatilization). Historically, nitrate as N concentrations in the winery wastewater have not exceeded 10 mg/L, the primary MCL for nitrate. Nitrate concentrations in first encountered groundwater also do not exceed 10 mg/L and concentrations appear stable for wells MW-1, MW-2, and MW-3. Based on this information, the discharge has not impacted groundwater with respect to nitrate.

For the protection of groundwater quality, this Order requires continued groundwater monitoring for nitrate, requires nitrogen monitoring in the commingled treated recycled water and winery process water, and requires the

Discharger to evaluate groundwater nitrate concentrations to determine any impacts to the beneficial uses of groundwater.

84. **Iron (Fe) and Manganese (Mn).** Typical winery wastewater is not expected to contain significant iron or manganese concentrations. Available data collected from 2014 through 2022 show that both constituents are non-detect in the winery wastewater. Iron concentrations prior to waste discharges to the LAAs were non-detect for wells MW-2 and MW-3; however more recent data show sporadic detections above 300 µg/L, the sMCL. Iron concentrations prior to waste discharges were above the sMCL for well MW-1. Iron concentrations in groundwater appear to be stable for wells MW-1, MW-2, and MW-3. Manganese concentrations prior to waste discharges exceeded 50 µg/L, the sMCL for wells MW-1, MW-2, and MW-3. Manganese concentration trends for MW-1 appear to be increasing, stable for MW-2, and decreasing for MW-3.

Iron and manganese can be present in groundwater as a result of excessive BOD loading rates, which can deplete oxygen resulting in anoxic conditions. An anoxic environment can solubilize naturally occurring metals in soil, such as iron and manganese.

The Facility uses multiple screening equipment for solids recovery and aerated ponds to minimize organic loading into the ponds. Based on available data from 2014 through 2022, BOD concentrations in winery wastewater (samples obtained from Pond 3) ranged from 3 to 215 mg/L and an average of 35 mg/L. The Discharger's monitoring reports show that BOD loading at the LAAs is below 60 lb/ac/yr, the BOD loading limit prescribed in WDRs R5-2011-0033.

This Order requires continued monitoring of BOD in the wastewater, prescribes a BOD loading limit, and requires continued monitoring of iron and manganese in groundwater. The Discharger is required to evaluate iron and manganese groundwater concentrations to determine if degradation that may impact beneficial uses has been mitigated or what actions will be necessary to minimize groundwater degradation.

85. **Boron (B).** Based on available data from 2014 through 2022, boron concentrations in the winery wastewater range from 1,200 to 5,300 mg/L and 2,477 mg/L as an average. Boron concentrations in first encountered groundwater prior to wastewater discharges to the LAAs exceeded 700 µg/L, the agricultural water quality goal, and remain elevated. This Order requires continued monitoring of boron in both the wastewater and groundwater and requires monitoring of boron in the source water.

86. The Discharger implements, or will implement, as required by this Order the following best practicable treatment and control (BPTCs)/best efforts:

    a. Best management practices as described in Finding 22.

b. The wastewater treatment ponds are lined with a 60-mil high density polyethylene.

c. The LAAs will increase from 122 acres to approximately 261 acres. Crops will be planted in the expanded LAAs, which will take up some of the waste constituents found in the wastewater. This Order limits land application of nitrogen to agronomic rates. The additional acreage will help to reduce BOD loading. Good quality water provided by Reclamation District 999 will be used as a source of supplemental irrigation source when needed.

d. Domestic wastewater will be treated to meet Title 22 disinfected secondary-2.2 recycled water standards prior to discharges to land.

87. The Discharger's implementation of the above-listed BPTCs, and the dilution provided by higher quality supplemental irrigation water from Reclamation District 999, will minimize the extent of water quality degradation resulting from the Facility's continued operation.

88. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the state and, therefore, sufficient reason exists to accommodate growth and limited groundwater degradation around the Facility, provided that the terms of the Basin Plan are met. Degradation of groundwater by some typical waste constituents released with discharge from the Facility after effective source reduction, treatment and control, and considering the best efforts of the Discharger and magnitude of degradation, is of maximum benefit to the people of the state.

89. The Facility contributes to the economic prosperity of the region by providing a service and employment for the local community; by providing incomes for numerous aligned businesses; and by providing a tax base for local and county governments. The Facility employs between 85 and 150 employees. Accordingly, to the extent that any degradation occurs as the result of the Facility's operation, such degradation is consistent with the maximum interest of the people of the State of California.

90. Based on the foregoing, the adoption of this Order is consistent with the State Water Board's Antidegradation Policy.

California Environmental Quality Act

91. The issuance of this Order, which prescribes requirements for and monitoring of waste discharges at an existing facility, with negligible or no expansion of its existing use, is exempt from the procedural requirements of the California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq., pursuant to California Code of Regulations, title 14, sections 15301 and 15304. The discharges authorized under this Order are substantially within

parameters established under prior WDRs, particularly with respect to character and volume of discharges. To the extent that the construction of any new basins, ponds, surface impoundments, and/or use of existing irrigated lands as new LAAs are authorized under this Order, such features involve minor alterations to land.

Other Regulatory Considerations

Wat. Code Section 13149.2

92. These WDRs regulate a facility that may impact a disadvantaged community and/or tribal community and includes an alternative compliance path that allows the Discharger time to come into compliance with a water quality objective (i.e., salinity). The Discharger has selected the Alternative Salinity Permitting Approach for the Salt Control Program, which provides an alternative approach for compliance with salinity limits through implementation of specific requirements (i.e., support facilitation and completion of the Salinity P&O Study). The Central Valley Water Board has satisfied the outreach requirements set forth in Water Code section 189.7 by conducting outreach in affected disadvantaged and tribal communities. Pursuant to Wat. Code section 13149.2, the Central Valley Water Board reviewed readily available information and information raised to the Board by interested persons concerning anticipated water quality impacts in disadvantaged or tribal communities resulting from adoption of these WDRs. The Board also considered environmental justice concerns within the Board's authority and raised by interested persons with regard to those impacts.

93. The Central Valley Water Board anticipates that the issuance of these WDRs will result in water quality impacts within the scope of the Board's authority. Specifically, these WDRs authorize the continued discharge of wastewater with salinity concentrations above applicable water quality objectives. The Central Valley Water Board has identified the following measures available and within the scope of its authority to address the impacts of the Facility to the nearby disadvantage communities in Yolo County: 1) active participation in the P&O Study and compliance with the Salt Control Program, 2) compliance with the Nitrate Control Program, 3) compliance with a performance-based salinity limitation, 4) properly lining the wastewater effluent treatment ponds, 5) application of wastewater to crops at agronomic rates with irrigation of good quality supplemental water as needed, 6) preparation and implementation of Salinity Evaluation and Minimization Plan to establish goals for potentially reducing salinity concentrations in the Facility's discharge, and 7) implementation of the BPTC described in Finding 86.

Human Right to Water

94. Pursuant to Wat. Code, section 106.3, subdivision (a), 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." Although this Order is not subject to Water Code section 106.3, as it does not revise, adopt or establish a policy, regulation or grant criterion, (see § 106.3, subd. (b)), it nevertheless promotes the policy by requiring discharges to meet maximum contaminant levels (MCLs) for drinking water, which are designed to protect human health and ensure that water is safe for domestic use. For salinity, this Order requires compliance with the SCP. Although the Basin Plans' Exceptions Policy for Salinity allows participants in this Program to obtain limited-term exceptions from MCLs for salinity, this Program is consistent with the Human Right to Water Policy because their over-arching management goals and priorities include short-term provision of safe drinking water to impacted users and long-term restoration of impacted groundwater basins and sub-basins where reasonable, feasible, and practicable

Threat-Complexity Rating

95. For the purposes of the California Code of Regulations (CCR), title 23 (Title 23), section 2200, the Facility has a threat and complexity rating of **2-B** as defined below:

a. Threat Category "2" – Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance.

b. Complexity Category "B" - Any discharger not included in Category A that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal), or any Class 2 or Class 3 waste management units.

Title 27 Exemption

96. This Order, which prescribes WDRs for discharges of industrial process water from winery operations and treated domestic wastewater, wastewater, is exempt from the prescriptive requirements of California Code of Regulations, title 27 (Title 27), section 20005 et seq. (See Cal. Code Regs., tit. 27, section 20090, subd. (b).).

Storm Water

97. The State Water Board adopted Order 2014-0057-DWQ (NPDES General Permit CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities and requiring submittal of a Notice of Intent by all affected industrial dischargers. The Facility is enrolled and has coverage under General Order 2014-0057-DWQ, which has been active since July 2011.

Groundwater Well Standards

98. The California Department of Water Resources 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 74-81 (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.

Statistical Data Analysis

99. Statistical data analysis methods outlined in the US EPA's Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (Unified Guidance) are appropriate for determining compliance with the Groundwater Limitations of this Order. Depending on the circumstances, other methods may also be appropriate.

Scope of Order

100. This Order is strictly limited in scope to those waste discharges, activities, and processes described and expressly authorized herein.

101. Pursuant to Wat. Code section 13264, subdivision (a), the Discharger is prohibited from initiating the discharge of new wastes (i.e., other than those described herein), or making material changes to the character, volume and timing of waste discharges authorized herein, without filing a new Report of Waste Discharge (ROWD) per Wat. Code section 13260.

102. Failure to file a new ROWD before initiating material changes to the character, volume or timing of discharges authorized herein, shall constitute an independent violation of these WDRs.

103. This Order is also strictly limited in applicability to those individuals and/or entities specifically designated herein as "Discharger," subject only to the discretion to designate or substitute new parties in accordance with this Order.

Reporting Requirements

104. This Order is also issued in part pursuant to Wat. Code section 13267, subdivision (b)(1), which provides that:

> *[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 regional board requires. The burden, including costs, of these reports shall bear a*

reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

105. The technical reports required under this Order, as well as those required under the separately issued MRP, are necessary to ensure compliance with prescribed WDRs. Additionally, the burdens associated with such reports are reasonable relative to the need for their submission.

106. Failure to comply with the reporting requirements under this Order and the MRP may result in enforcement action pursuant to Wat. Code section 13268.

Procedural Matters

107. All of the above and the supplemental information and details in the attached Information Sheet (incorporated herein), were considered in establishing the following conditions of discharge.

108. The Discharger, interested agencies, and interested persons were notified of the Central Valley Water Board's intent to prescribe the WDRs in this Order, and provided an opportunity to submit their written views and recommendations at a public hearing. (Wat. Code, section 13167.5)

109. At a public meeting, the Central Valley Water Board heard and considered all comments pertaining to the discharges regulated under this Order.

110. The Central Valley Water Board will review and revise the WDRs in this Order as necessary.

REQUIREMENTS

IT IS HEREBY ORDERED, that Waste Discharge Requirements Order R5-2011-0033 is rescinded (except for enforcement purposes) and pursuant to Water Code sections 13263 and 13267, Bogle Vineyards Inc and Bogle Family Limited Partnership, its agents, successors, and employees shall comply with the following:

A. Standard Provisions

1. Except as expressly provided herein, the Dischargers shall comply with the Standard Provisions and Reporting Requirements dated 1 March 1991 (1 March 1991 SPRRs), which are incorporated herein.

B. Discharge Prohibitions

1. Discharge of waste to surface waters or surface water drainage courses is prohibited.

2. No waste constituent shall be released, discharged, or placed where it will cause a violation of the Groundwater Limitation of this Order.

3. Waste constituents shall not be discharged or otherwise released from the Facility (including during treatment and storage activities) in a manner that results in conditions of “nuisance” or “pollution,” as defined per Wat. Code section 13050.

4. Discharge of waste classified as “hazardous” (per Cal. Code Regs., tit. 22, section 66261.1 et seq.), is prohibited.

5. Discharge of waste classified as “designated”, as defined in Water Code section 13173, in a manner that causes violation of Groundwater Limitations, is prohibited.

6. Treatment system bypass of untreated or partially treated waste is prohibited, except as allowed by Standard Provision E.2 of the 1 March 1991 SPRRs.

7. Discharge of waste at a location or in a manner different from that described in the Findings is prohibited.

8. Discharge of toxic substances into any wastewater treatment system or land application area such that biological treatment mechanisms are disrupted is prohibited.

9. Discharge of domestic wastewater to the process water treatment ponds and land application areas is prohibited unless treated to disinfected secondary-2.2 recycled water in accordance with CCR, title 22 section 60301.

10. Storage of process residual solids on areas not equipped with a means to prevent storm water infiltration, or a paved leachate collection system is prohibited.

C. Flow Limitation

1. Waste discharges (combined winery process waste and recycled water) to the ponds shall not exceed a maximum daily flow of **4.9 mgd** and an **annual total of 30.3 mgy** for the calendar year (1 January through 31 December).

2. Disinfected secondary-2.2 recycled water discharged to the ponds shall not exceed an annual total of **0.66 mgy** for the calendar year (1 January through 31 December).

D. Performance Based Salinity Limit

1. The flow-weighted annual average FDS limitation in effluent is a performance-based limitation (as discussed in Finding 67). The purpose of this limit is to ensure the Discharger is implementing appropriate performance-based measures and maintaining existing discharge concentrations.

Constituent	Limit	Basis of Compliance Determination
FDS	1,960 mg/L	Pond 3

E. Mass Loading Limitations

1. The total nitrogen loading from the discharge to the LAAs, as determined by the methods described in the attached MRP, shall not **exceed crop demand**.

2. The maximum BOD loading to the LAAs, as calculated as a cycle average as determined by the methods described in the attached MRP, shall not exceed **60 lb/ac/day/irrigation cycle**.

F. Discharge Specifications

1. Domestic wastewater shall be treated to disinfected secondary-2.2 recycled water in accordance with CCR, title 22 section 60301, prior to discharge to the ponds and land application areas.

2. All wastewater discharges shall remain within the lined treatment and storage pond(s), LAAs, and any authorized waste treatment and/or containment structures as described in the Findings. The engineered lined surface shall meet a hydraulic conductivity standard of at least 1×10^{-6} centimeter per second.

3. All systems and equipment shall be operated to optimize discharge quality.

4. All conveyance, treatment, storage, and disposal systems shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

5. Objectionable odors shall not be perceivable beyond the limits of the Facility property where the waste is generated, treated, and/or discharged at an intensity that creates or threatens to create nuisance conditions that affects an entire community or neighborhood, or any considerable number of persons.

6. As a means of ensuring compliance with Discharge Specification E.4, the dissolved oxygen (DO) content in the upper one foot of any wastewater treatment or storage pond shall not be less than 1.0 mg/L for three consecutive sampling events. Notwithstanding the DO monitoring frequency specified in the monitoring and reporting program, if the DO in the pond(s) is below 1.0 mg/L for any single sampling event and objectionable odors are perceivable beyond the property limits, the Discharger shall report the findings to the Central Valley Water Board in accordance with Section B.1 of the 1 March 1991 SPRRs. The written notification shall include a specific plan to resolve the low DO results within 30 days of the first date of violation.

7. 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. Unless a California-registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard 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 design capacity and enable determination of available operational freeboard.

8. 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.

9. On or about **1 October** of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specifications E.6 and E.7.

10. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. 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.

11. 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.

12. The Discharger shall monitor process residual solids accumulation in the pond(s) annually and shall periodically remove residual solids as necessary to maintain adequate storage capacity. Any sludge removed from ponds shall be hauled off-site for disposal.

13. The Discharger shall regularly inspect the liner condition of the lined treatment pond(s). The Discharger shall maintain and repair the liner as necessary to ensure the integrity of the pond liner is maintained and leakage from the liner is minimized.

14. Lined ponds shall be tested for leaks at least once every **5 years** using a performance test (e.g., seepage/leak test, water balance, liner leak detection testing, or geologic evaluation) to demonstrate that the existing pond is operating with minimal leaking and meets the hydraulic conductivity standard. In lieu of conducting a pond performance test, the performance test requirements may be satisfied using groundwater monitoring data from an onsite, active groundwater monitoring well network designed for the pond to demonstrate that the pond has not caused significant groundwater degradation.

15. The Discharger shall adhere to the following setbacks (minimum horizontal distances) unless a different setback is approved by the Water Board.

a. Waste nor recycled water shall not be discharged within 50 feet of any water supply well.

b. No impoundment of disinfected secondary recycled water shall occur within 100 feet of any domestic water supply well.

c. Waste nor recycled water shall be discharged within 50 feet of surface waters or surface water drainage courses.

d. Waste shall not be discharged within a 5-foot setback from the property line provided the irrigation system is managed to prevent discharge offsite.

G. Land Application Area Specifications

For the purposes of this Order, “land application area” or “LAAs” refers to the discharge areas described in the Findings and shown in **Attachment B**.

1. Crops shall be grown on the LAAs. Crops shall be selected based on nutrient uptake, consumptive use of water, and irrigation requirements to maximize uptake of nutrients.

2. Wastewater shall not be applied to an LAA within 24 hours of forecasted precipitation with a greater than 50-percent probability of occurring, during precipitation events, or when the LAA surface soil is saturated.

3. The perimeter of the LAAs shall be graded to prevent ponding along public roads or other public areas and prevent runoff or overspray onto adjacent properties not owned or controlled by the Dischargers.

4. Application of waste constituents to the LAAs shall be at reasonable agronomic rates to preclude creation of a nuisance or unreasonable degradation of groundwater, considering crop, soil, climate and irrigation management system. The annual nutritive loading of the LAAs, including nutritive value of organic and chemical fertilizers, and the wastewater, shall not exceed the annual crop demand.

5. Hydraulic loading of wastewater and irrigation water shall be at reasonable agronomic rates designed to minimize the percolation of wastewater and irrigation water below the root zone (i.e., deep percolation).

6. The resulting effect of the discharge on soil pH shall not exceed the buffering capacity of the soil profile.

7. Land application of wastewater shall be managed to minimize erosion.

8. Any irrigation runoff shall be confined to the LAA and shall not enter any surface water drainage course or storm water drainage system.

9. The LAAs shall be managed to prevent breeding of mosquitos. More specifically:

    a. All applied irrigation water must infiltrate completely within 48 hours;

    b. Ditches not serving as wildlife habitat shall be maintained free of emergent marginal, and floating vegetation; and

    c. Low-pressure and unpressurized pipeline and ditches accessible to mosquitos shall not be used to store process wastewater.

10. 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 land application use immediately and implement corrective actions to ensure compliance with this Order.

H. Recycled Water General Requirements

1. Recycled water is defined in Wat Code section 13050 and title 22, section 60301.220.

2. The Discharger's recycled water program must comply with all applicable requirements set forth in CCR, title 22 for the production, distribution, and use of recycled water.

3. Cross connection control must comply with the State Water Board's Cross Connection Control Policy Handbook.

4. All recycled water produced at the Facility must be filtered using the membrane bioreactor as described in the Discharger's Engineering Report.

5. No changes, additions, or modifications can be made to the disinfection process unless approval is obtained from DDW.

6. Recycled water discharged to the ponds and land application areas shall be at least disinfected secondary-2.2 recycled water as defined in title 22, section 60301

7. In accordance with CCR, title 22 section 60301, disinfected secondary-2.2 recycled water shall meet the following:

    a. Sampling for total coliform bacteria shall be sampled daily on the days that disinfected secondary water is discharged to the pond system The median concentration of total coliform bacteria measured in the disinfected effluent must not exceed the following:

i. MPN of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days which analyses have been completed; and

ii. MPN of 23 per 100 milliliters in more than one sample in any 30-day period.

No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters. Report daily values, rolling seven-day median values, and maximum monthly values.

8. The Discharger must provide qualified personnel to operate the domestic wastewater treatment system effectively to always achieve the required level of treatment. Qualified personnel must be those meeting requirements pursuant to Division 7, chapter 9 (commencing with section 13625) of the California Water Code.

9. Per CCR, title 22, articles 8 and 10 of the Water Recycling Criteria, the Discharger must always maintain the reliability features and contingency measures for the domestic wastewater treatment system processes and ensure non-compliant recycled water is not being delivered for recycled water use.

10. The Discharger must not bypass untreated or partially treated wastewater from the domestic wastewater treatment system, or any intermediate unit processes, to the point of use. Excess flows and/or noncompliant process flows must be returned to the equalization tank for full treatment or hauled offsite.

11. No changes, additions, or modifications shall be made to the Facility unless approval is obtained from DDW and the Central Valley Water Board.

I. Recycled Water Land Application Area Specifications

Application and use of disinfected secondary-2.2 recycled water must be in accordance with the CCR, title 22, Recycled Water Criteria. The Discharger must ensure the recycled water uses and practices adhere to the following:

1. An engineering report must be submitted to DDW and the Central Valley Water Board for review and approval of any future use of recycled water or expansion of existing irrigation areas beyond those described in the approved Title 22 Engineering Report(s).

2. Plans for future uses of recycled water or expanded irrigation areas, when available must be submitted to DDW and the Central Valley Water Board for review and approval.

3. Application of recycled water must be confined to the ponds and LAAs described in the Findings of this Order.

4. In accordance with CCR, title 22, section 60310(e), the use of recycled water must comply with the following:

    a. Any recycled water irrigation runoff must be confined to the LAAs areas unless the runoff does not pose a public health threat and is authorized by the regulatory agency.

    b. Spray, mist, or runoff shall not enter dwelling, designated outdoor eating areas, or food handling facilities.

5. Public contact with wastewater/recycled water must be precluded through use of fences, signs, and/or other appropriate means. LAAs where recycled water is used must be posted with signs that are visible, in a size no less than 4 inches by 8 inches and include the following wording, “Recycled Water – Do Not Drink.” (CCR, title 22, section 60310(g).) Signs must be placed in conspicuous places including at each entrance to the recycled water irrigated area. Alternative signage and wording, or an educational program, provided the Discharger demonstrates to DDW that the alternative approach will assure an equivalent degree of public notification may be acceptable upon DDW approval.

6. In accordance with CCR, Title 22, Section 60310(h), no physical connection can be made or allowed to exist between the recycled water system and any separate system conveying potable water. Supplementing of recycled water with potable water must always be through an approved air gap separation.

7. The installation of recycled water pipeline(s) at the use site area(s) must be in accordance with the separation criteria pursuant to the California Waterworks Standards Chapter 16, Article 3, Section 64572.

8. Pipeline(s), control valves and other appurtenances located at the recycled water use areas must have identification markings and color coding. Purple color coding must be used, such as purple identification tape, or a purple polyethylene vinyl wrap color Pantone 522C to tag the RW pipelines and appurtenances.

9. In accordance with CCR, Title 22, Section 60310(i), the recycled water system in irrigated areas must not include hose bibs. Only quick couplers that differ from those used on potable water system can be used.

10. The installation of recycled water pipeline(s) at use area(s) must be in accordance with the separation criteria pursuant to Section 64572, Article 3, Chapter 16, California Waterworks Standards.

11. Pipeline(s), control valves and other appurtenances located at the recycled water use areas must have identification markings and color coding. Purple color coding must be used, such as purple identification tape, or a purple polyethylene vinyl wrap color Pantone 522C to tag the recycled water pipelines and appurtenances.

12. Irrigation of the LAAs with recycled water shall occur only when appropriately trained personnel are on duty.

13. LAAs that are irrigated with recycled water shall be designed, maintained, and operated to comply with the following setback requirements:

Setback Definition	Minimum Irrigation Setback (feet)
Edge of LAA to domestic water supply well	100
Edge of LAA to residence	100

J. Groundwater Limitations

Discharge of waste from any portion of the Facility shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or in excess of baseline groundwater quality, whichever is greater:

1. Contain constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations, excluding salinity.

   The Discharger has chosen to participate in the Alternative Salinity Permitting Approach for the Salt Control Program. The Basin Plans' Exceptions Policy for Salinity allows participants in these Programs to obtain limited-term exceptions from MCLs for priorities including short-term provision of safe drinking water to impacted users and long-term restoration of impacted groundwater basins and sub-basins where reasonable, feasible, and practicable.

2. Contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

K. Winery Process Solids Disposal Specification

1. For the purpose of this Order, process solids refer to grit and screenings and organic matter removed during the screening of winery wastewater from crushing or processing activities.

2. Process solids shall be removed from screens, vaults, sumps, and tanks as needed to ensure optimal operation, prevent nuisance conditions, and maintain adequate storage capacity.

3. Stored process solids shall be protected from precipitation as needed (e.g., containerized, covered with tarps, stored under roofed areas) or stored in areas protected from stormwater runon or runoff (e.g., bermed or graded to direct stormwater away from stockpiles) to minimize leachate formation.

4. Process solids shall be stored and managed such that free draining liquid is contained (e.g., placed on a compacted, bermed outdoor pad, controlled with a leachate collection and return system), directed to a containment structure (e.g., process water pond), or otherwise similarly controlled and contained to prevent leachate runoff and minimize infiltration.

5. Process solids shall be managed to prevent nuisance conditions (e.g., stored in covered containers, dried and moved offsite as soon as practicable, or promptly land applied).

6. Any handling and storage of process solids shall be temporary and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate the groundwater limitations of this Order.

7. If removed from the site, process solids shall be disposed of in a manner consistent with Title 27, division 2. Removal for reuse as animal feed, biofuel feedstock, or land disposal at facilities (i.e., landfills, composting facilities, soil amendment sites operated in accordance with valid waste discharge requirements issued by a Regional Water Board) will satisfy this specification.

8. Any proposed change in process solids use or disposal practice shall be reported in writing to the Executive Officer **at least 90 days** in advance of the change.

L. Pond Sludge/Biosolids Disposal Specification

1. For the purpose of this Order, pond sludge means the solid, semisolid, and liquid residues removed from the treatment ponds. Residual sludge means sludge that will not be subject to further treatment at the

wastewater system. Biosolids refers to sludge that has undergone sufficient treatment and testing to qualify for reuse pursuant to the USEPA Part 503 Biosolids Rule. (40 C.F.R. § 503.).

2. The application of biosolids to the LAAs is prohibited,

3. Sludge shall be removed from the wastewater ponds as needed to ensure optimal plant operation.

4. Treatment and storage of pond sludge shall be confined to the wastewater system property and shall be conducted in a manner that precludes infiltration of waste constituents into soil in a mass or at concentrations that will violate the groundwater limitations of this Order.

5. Any storage of residual sludge at the wastewater system shall be temporary, and the waste shall be controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or at concentrations that will violate the groundwater limitations of this Order.

6. Residual sludge shall be disposed of in a manner approved by the Regional Water Board's Executive Officer and consistent with the Consolidated Requirements for Treatment, Storage, Processing, or Disposal of Solid Waste. (CCR, title 27 div. 2.) Removal for further treatment, disposal, or reuse at disposal sites operated in accordance with valid WDRs issued by the State Water Board or Regional Water Board will satisfy this specification.

7. Any proposed change in pond solids use or disposal practice shall be reported in writing to the Executive Officer **at least 90 days** in advance of the change.

M. Provisions

1. **Within 4 months** after effective date of this Order, the Discharger shall submit a *Wastewater Treatment System Operations Plan* to DDW and the Central Valley Water Board prior to start-up and subsequently upon any changes or modification to the treatment facilities and/or operations.

2. **Within 6 months** after effective date of this Order, the Discharger shall develop a Preventative Maintenance Program (CCR, title 22, section 60327) for the Wastewater Treatment System to ensure all equipment is kept in a reliable operating condition.

3. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered

professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans 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 issued **Monitoring and Reporting Program (MRP) R5-20XX-XXXX**, and any revisions thereto as ordered by the Executive Officer. The submittal dates of Discharger monitoring reports shall be no later than the submittal date specified in the MRP.

6. The Discharge shall comply with the 1 March 1991 SPRRs.

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 cost-effective control technique(s), including proper operation and maintenance, to comply with this Order.

10. As described in the 1 March 1991 SPRRs, 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 Act (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 operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the 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. In order to secure rescission of WDRs that are no longer necessary because the discharge to land permitted under this Order has ceased, the Discharger must contact the Central Valley Water Board to coordinate appropriate wastewater treatment, storage, and conveyance closure requirements.

16. A copy of this Order including the MRP, Information Sheet, Attachments, and 1 March 1991 SPRRs, shall be kept at the Facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.

17. The Discharger shall comply with the Basin Plan amendments adopted in Resolution R5-2018-0034 and revised per Resolution R5-2020-0057 incorporating new programs (Salt and Nitrate Control Program) for addressing ongoing salt and nitrate accumulation in the Central Valley developed as part of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative.

18. 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 Central Valley Water Board by 31 January.

19. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

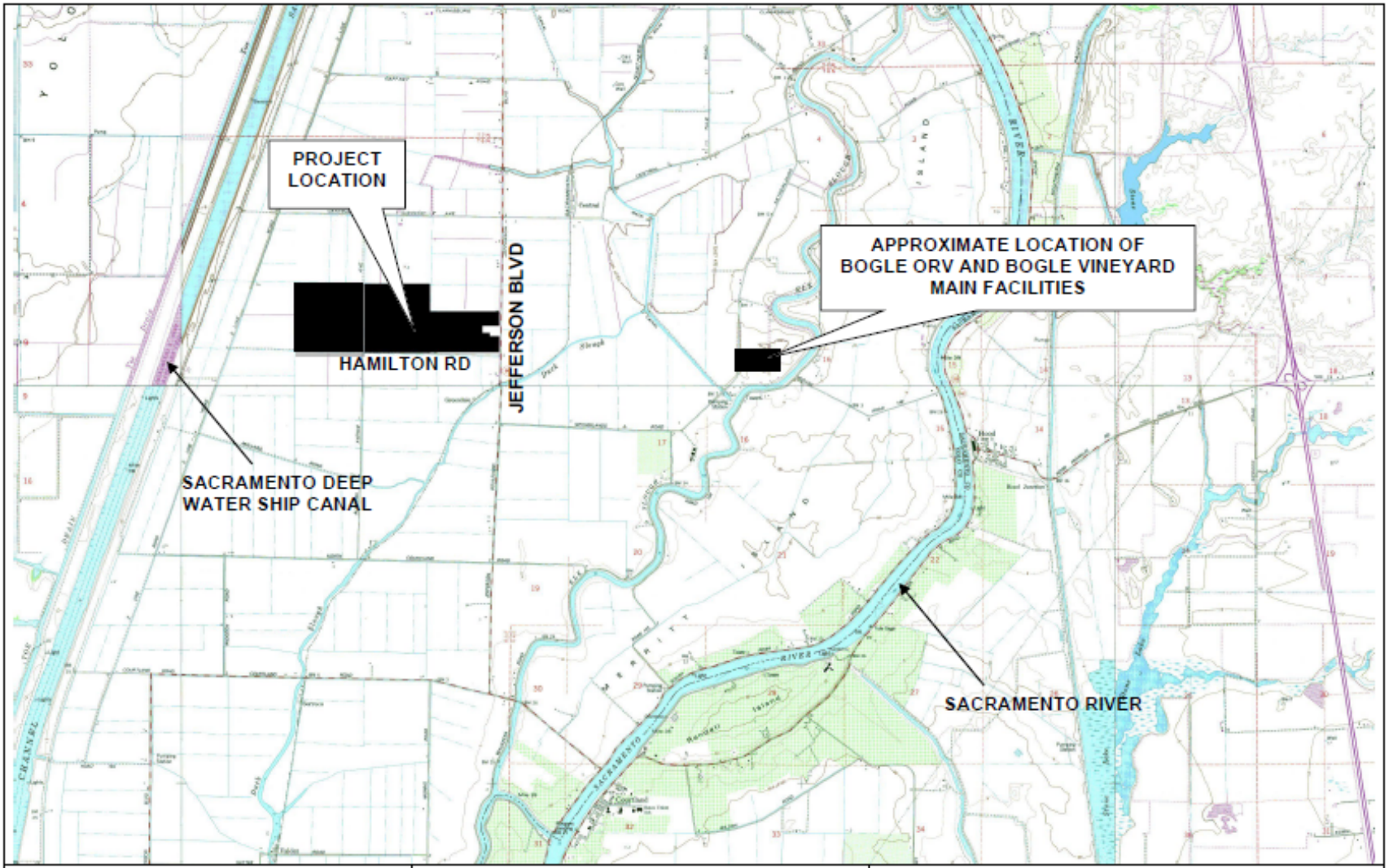
ENFORCEMENT

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 Wat. Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

ADMINISTRATIVE REVIEW

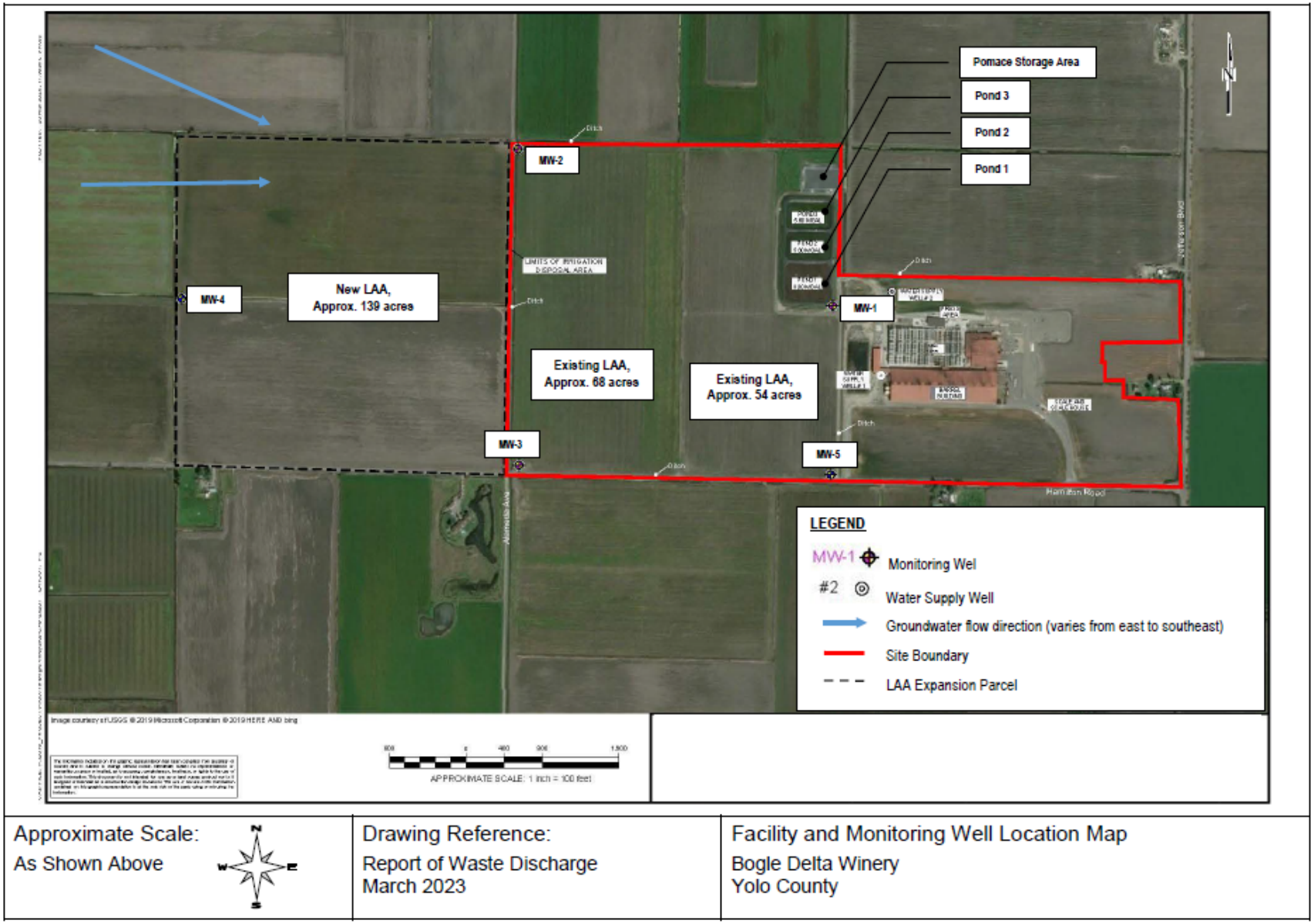
Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Wat. Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. To be timely, the petition must be received by the State Water Board by 5:00 pm on the 30th day after the date of this Order; if the 30th day falls on a Saturday, Sunday or state holiday, the petition must be received by the State Water Board by 5:00 pm on the next business day. The law and regulations applicable to filing petitions are available on the State Water Board website (http://www.waterboards.ca.gov/public_notices/petitions/water_quality). Copies will also be provided upon request.

ATTACHMENT A – SITE LOCATION MAP



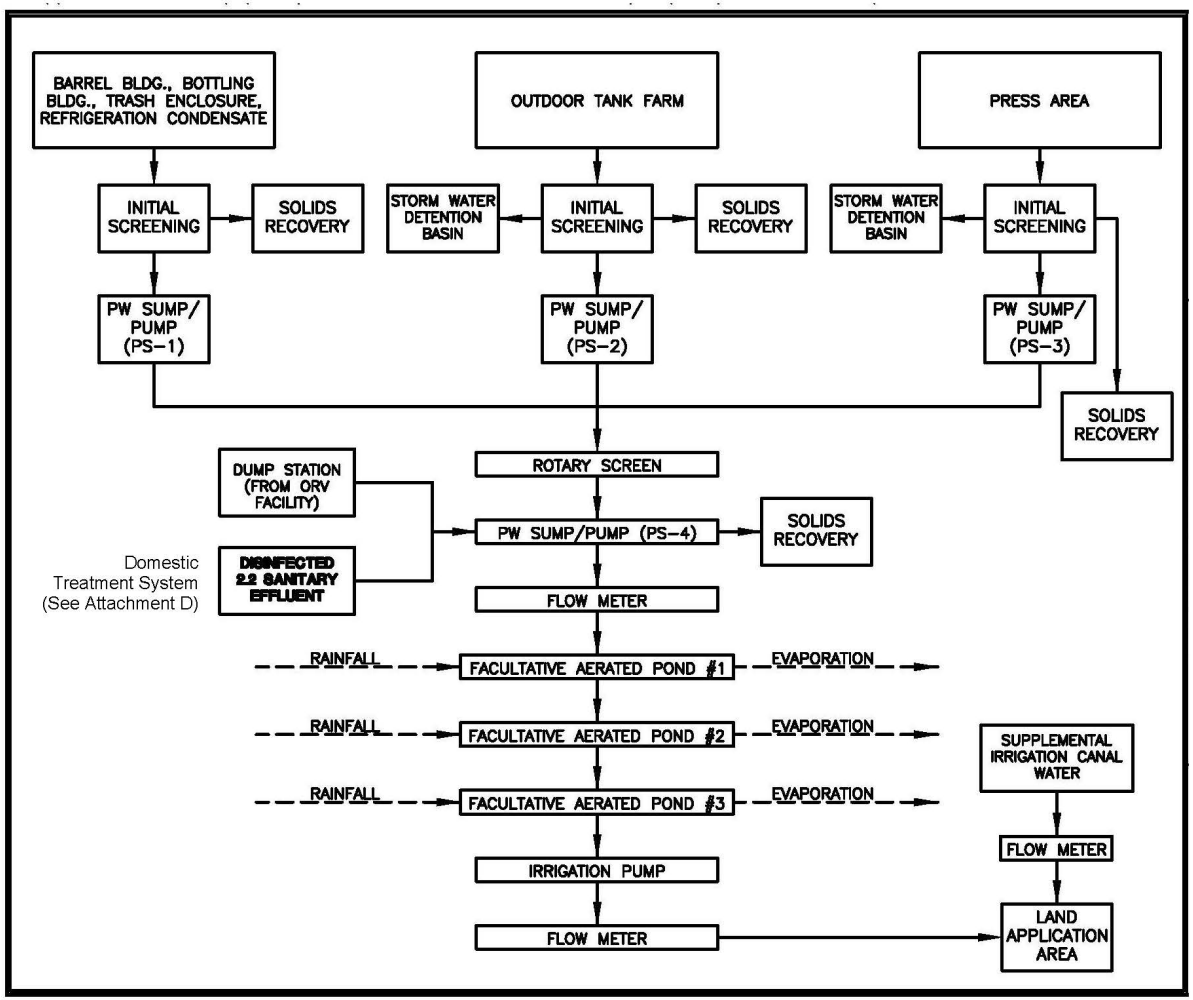
Approximate Scale	Drawing Reference:	Site Location Map
1 inch = 5000 feet	U.S.G.S., Clarksburg Quadrangle TOPOGRAPHIC MAP, 7.5 MINUTE QUAD	Bogle Delta Winery Yolo County

ATTACHMENT B – FACILITY AND MONITORING WELL LOCATION MAP



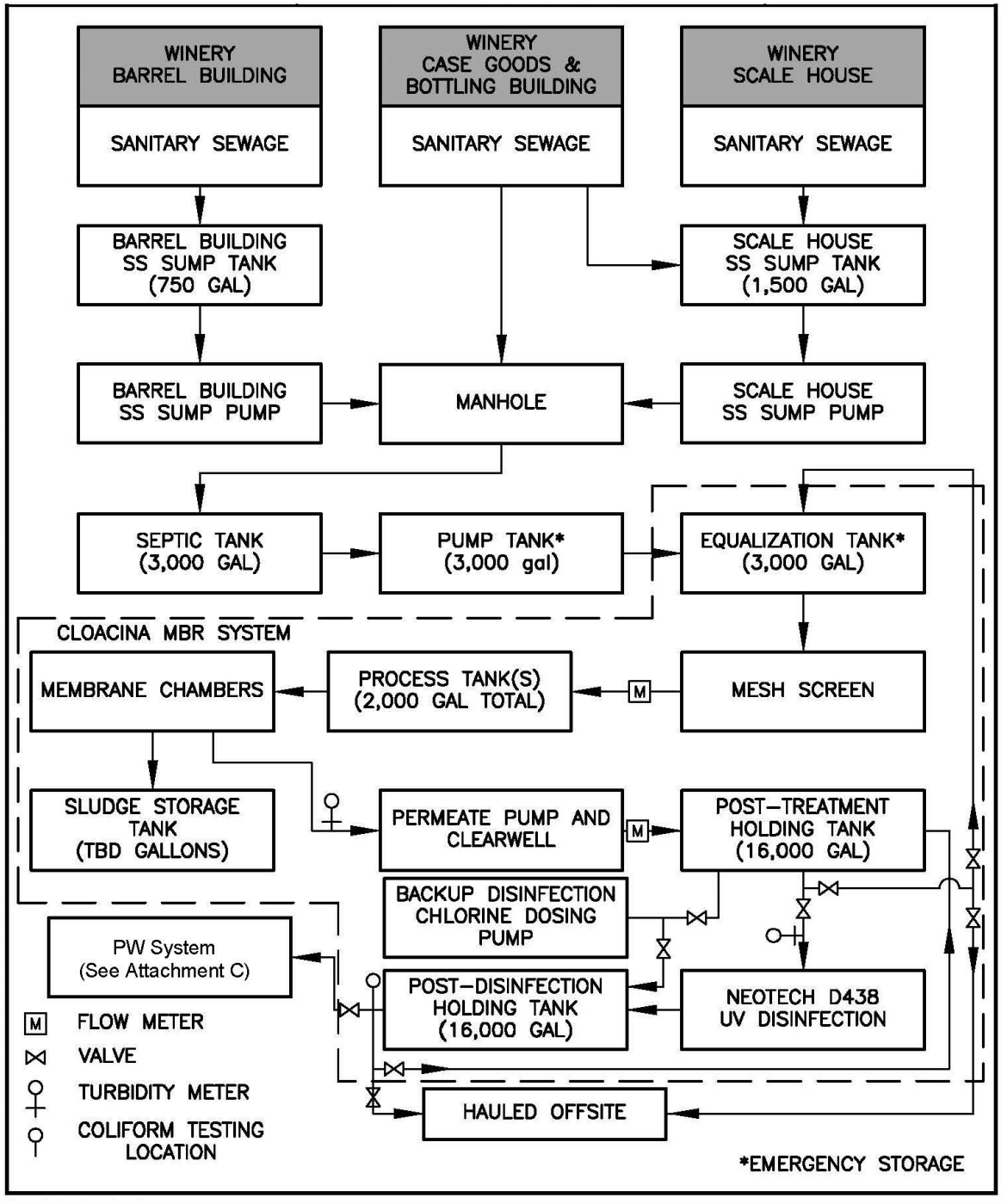
Approximate Scale:	Drawing Reference:	Facility and Monitoring Well Location Map
As Shown Above	Report of Waste Discharge March 2023	Bogle Delta Winery Yolo County

ATTACHMENT C– COMBINED WASTEWATER FLOW DIAGRAM



Approximate Scale:	Drawing Reference:	Combined Wastewater Flow Diagram
No Scale	Report of Waste Discharge Rev1 May 2023	Bogle Delta Winery Yolo County

ATTACHMENT D – DOMESTIC WASTEWATER FLOW DIAGRAM



Approximate Scale:	Source:	Domestic Wastewater Flow Diagram
No Scale	Report of Waste Discharge, May 2023	Bogle Delta Winery Yolo County

INFORMATION SHEET

Background

The Facility is a complete winemaking facility from receiving and crushing grapes to packaging and shipment of wine off-site. Process wastewater is generated from wine production activities and limited amounts of process wastewater trucked from nearby Bogle owned winery facilities (approximately 0.192 mgal from the Old River Vineyard Facility and approximately 0.180 mgal from the Vineyard Main Facility on an annual basis).

The treatment and land discharge of process wastewater has been regulated by WDRs Order R5-2011-0033 adopted by the Central Valley Water Board on 9 June 2011. The process wastewater (PW) treatment system consists of a series of three aerated facultative ponds lined with a 60-mil HPDE liner and 122 acres of LAAs cropped with alfalfa and winter wheat.

The existing domestic wastewater treatment system consists of a septic tank and mound system that has historically been regulated by Yolo County. The system has failed and is no longer operational.

Domestic and Process Wastewater Treatment and Disposal

The failing domestic treatment system will be replaced with a membrane bioreactor (MBR) system. Effluent from the MBR system is expected to contain less than 10 mg/L BOD and TSS, and less than 5 mg/L of total nitrogen. Disinfection will be performed by an inline ultraviolet (UV) system. Domestic wastewater will be treated to disinfected secondary-2.2 recycled water standards and comingled with winery process wastewater prior to discharge to the treatment pond system and then to the LAAs.

The LAAs will increase from approximately 122 to 261 acres for waste discharges of the commingled winery process wastewater and recycled water. The LAAs are cropped with alfalfa and winter wheat. Supplemental irrigation water from Reclamation District 999 is used to help meet the crop water demands.

Groundwater Considerations

There are five shallow groundwater monitoring wells on-site. Groundwater monitoring wells MW-1, MW-2, and MW-3 were installed in March 2010 and sampled for analysis to determine pre-discharge groundwater quality. In anticipation of expanding the LAAs, groundwater monitoring wells MW-4 and MW-5 were installed in April 2020. Monitoring wells MW-4 and MW-5 were only sampled in 2020 to determine baseline groundwater conditions. Groundwater flow direction is typically to the east and southeast. Based on 2020 data from all five wells, depth to first encountered groundwater ranged from 6.9 to 9.8 feet bgs. Groundwater conditions are discussed in Findings 46 through 51.

Pre-discharge groundwater data shown as a range for monitoring wells MW-1, MW-2, MW-3, MW-4, and MW-5 are shown in the table below. ND denotes non-detect and the reporting limit is shown. Pre-discharge groundwater data for wells MW-1, MW-2, and MW-3 are based on six sampling events during the months of March, April, May, June, September, and December of 2010. Pre-discharge groundwater data for wells MW-4 and MW-5 are based on four sampling events during the months of April, May, June, and July of 2020. Available data show first encounter groundwater is not considered high-quality water with respect to salinity and metals. Based on initial pre-discharge water quality data from March 2010 through June 2010, MW-2 and MW-3, had relatively higher concentrations of most analytes tested than those reported in downgradient well MW-1. In general, MW-4 (upgradient) had higher or similar concentrations of water quality parameters than MW-5 (downgradient).

Table 16. Pre-Discharge Groundwater Quality

Constituents	MW-1	MW-2	MW-3	MW-4	MW-5
EC, µmhos/cm	1,500 – 2,000	1,500 – 2,100	1,600 – 2,700	1,599 - 1,746	931 - 960
TDS, mg/L	980 – 1,300	1,000 – 1,300	1,000 – 1,700	940 - 1,100	530 - 580
Nitrate as N, mg/L	ND <0.5	8.3 - 29	ND <0.5 – 2.4	0.40 - 0.98	0.40 – 0.67
Boron, µg/L	2,100 – 2,400	2,000 – 2,300	2,500 – 3,000	1,500 - 1,800	800 – 1,000
Iron, µg/L	ND <100	ND <100	ND <100	1,600 - 7,700	480 – 6,400
Manganese, µg/L	240 - 690	170 - 440	ND <20 - 840	250 -360	50 - 110

Antidegradation

Antidegradation analysis and conclusions are discussed in Findings 77 through 90.

Based on volume and quality of the treated domestic wastewater, discharges are not anticipated to impact groundwater quality, especially in light of the added land application areas. Domestic wastewater will be treated to disinfected secondary-2.2 recycled water standards. Anticipated volume of recycled water is less than 3 percent of the permitted wastewater flow allowed.

The Discharger has elected to participate in the Salt Control Program and has enrolled in the P&O Study. Therefore, this Order sets a Performance-Based Salinity Limit for FDS of 1,960 mg/L (flow-weighted annual average).

This Order sets a BOD as a loading limit of 60 lb/ac/day/irrigation cycle, which was prescribed in the previous WDRs Order R5-2011-0033. If manganese or iron concentrations show increasing concentration trends, the BOD effluent limit may be re-evaluated at that time.

Discharge Prohibitions, Effluent Limitations, Discharge Specification, and Provisions

Based on the water balance, the Order sets the following flow limits:

1. Waste discharges (combined winery process waste and recycled water) to the ponds shall not exceed 4.9 mgd. In addition, the discharge shall not exceed an annual total of 30.3 mgy for the calendar year (1 January through 31 December).

2. Disinfected secondary 2.2 recycled water discharged to the ponds shall not exceed an annual total of 0.66 mgy.

This Order sets a performance-based flow-weighted annual average of 1,960 mg/L for FDS. This limit was based on historical effluent data with a 20 percent safety factor to allow flexibility for water conservation efforts and review of the groundwater data which suggests that effluent has not significantly impacted groundwater quality with respect to salinity. By choosing to participate in the Prioritization and Optimization (P&O) Study, the Discharger may continue implementing reasonable, feasible, and practicable efforts to control salinity through performance-based measures.

In addition, the WDRs prescribes a total nitrogen not to exceed crop demand and a BOD loading limit of 60 lb/ac/day/irrigation cycle.

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 treated domestic wastewater, commingled wastewater, pond, LAAs, solids and groundwater monitoring requirements. This monitoring is necessary to characterize the discharge and evaluate any impacts to groundwater and 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).

For the Salt Control Program, the Discharger (**CV-SALTS ID 2886**) has chosen to pursue Option 2 (Alternative Salinity Permitting Approach) and participation in the Prioritization and Optimization (P&O) Study.

For the Nitrate Control Program, the Facility and LAAs are within Sub-basin 5-21.66 (Solano), a non-prioritized basin, so the Central Valley Water Board has not yet issued a Notice to Comply with the Nitrate Control Program for this Facility. Furthermore, because this Order does not authorize a new or expanded discharge, NCP provisions that apply to new and expanding discharges of nitrate are not applicable in this instance. Accordingly, this Order requires the Discharger to meet groundwater limitations for nitrate based on the MCLs listed in Title 22. This Order may be modified in the future to implement provisions of the NCP if and when the Executive Officer of the Central Valley Water Board determines that coverage thereunder is necessary and appropriate.

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