

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

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**WASTE DISCHARGE REQUIREMENTS
ORDER R5-2023-0023**



ORDER INFORMATION

Order Type(s):	Waste Discharge Requirements
Status:	Adopted
Program:	Non-15 Discharges to Land
Region 5 Office:	Sacramento (Rancho Cordova)
Discharger(s):	Gico Management and Steve Gikas Trust
Facility:	California Nuggets, Inc. and Golden Gate Nuts, Inc.
Address:	23073 South Fredrick Road
County:	San Joaquin
Parcel Nos.:	228-130-21; 228-130-20
Prior Order(s):	R5-2014-0056

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 22 June 2023.

PATRICK PULUPA, Executive Officer

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GLOSSARY

ACL	Administrative Civil Liability Complaint
APN.....	Assessor's Parcel Number
bgs	below ground surface
BOD ₅	[5-day] Biochemical Oxygen Demand at 20° Celsius
BPTC.....	Best Practicable Treatment or Control
CEQA	California Environmental Quality Act, Public Resources Code section 21000 et seq
CV-SALTS.....	Central Valley Salinity Alternatives for Long-Term Sustainability
DO.....	Dissolved Oxygen
DTSC	Department of Toxic Substances Control
DWR.....	Department of Water Resources
EC	Electrical Conductivity
EIR	Environmental Impact Report
ET _o	Evapotranspiration
FDS	Fixed Dissolved Solids
FEMA	Federal Emergency Management Agency
gpd	gallons per day
LAAs.....	Land Application Areas
lbs/ac.....	Pounds per Acre
MCL.....	Maximum Contaminant Level
MG[D]	Million Gallons [per Day]
mg/L	milligrams per liter
MND	Mitigated Negative Declaration

MRP	Monitoring and Reporting Program
msl.....	Mean Sea Level
MUN	Municipal
MW	Monitoring Well
N.....	Nitrogen
NA	Not Applicable
ND	not detected or non-detect
NE	Not Established
NOA	Notice of Applicability
NOC	Notice to Comply
NPDES.....	National Pollutant Discharge Elimination System
OAL	Office of Administrative Law
O&M	Operation and Maintenance Plan
ORP	Oxidation Reduction Potential
P&O Study	Prioritization and Optimization Study of the Salt Control Program of CV-SALTS
RL.....	Reporting Limit
RWD.....	Report of Waste Discharge
RCRA	Resource Conservation and Recovery Act
SERC	State of Emergency Response Commission
SPRRs	Standard Provisions and Reporting Requirements
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

WASTE DISCHARGE REQUIREMENTS ORDER R5-2023-0023
CALIFORNIA NUGGETS, INC. AND GOLDEN GATE NUTS, INC.
SAN JOAQUIN COUNTY

v

TKN.....Total Kjeldahl Nitrogen

USEPA.....United States Environmental Protection Agency

Wat. CodeWater Code

WDRs.....Waste Discharge Requirements

WQOsWater Quality Objectives

µg/LMicrograms per Liter

µmhos/cm.....Micromhos per Centimeter

FINDINGS

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

Introduction

1. On 28 June 2022, Gico Management and Steve Gikas Trust (collectively referred to as Discharger) submitted a Report of Waste Discharge (RWD) that describes two snack food production companies: California Nuggets, Inc. and Golden Gate Nuts, Inc. (Facility). Both snack food companies are located on the same property and generate process wastewater that is discharged to land in Ripon, California. Additional information was submitted on 28 November 2022, 28 February 2023, and 22 May 2023.
2. The Facility is located at 23073 South Fredrick Road in Ripon, California (Assessor's Parcel Number [APNs] 228-130-21), as shown on Attachments A and B, which is attached hereto.
3. Gico Management owns both food production companies where wastewater from each processing area is comingled and discharged to land application areas (LAAs) and Steve Gikas Trust owns the property. The Facility owner and property owner are responsible for compliance with these Waste Discharge Requirements (WDRs).
4. This Order replaces WDRs Order No. R5-2014-0056, which was adopted by the Central Valley Water Board on 28 March 2014. The Discharger recently purchased 7.88 acres for use as additional land application areas (LAAs) and needs a wastewater flow increase to better accommodate additional food processing activities. Therefore, revised WDRs are necessary.
5. The following materials are attached and incorporated as part of this Order:
 - a. Attachment A – Site Location Map
 - b. Attachment B – Site Features Map
 - c. Attachment C – Wastewater Flow Schematic
 - d. Information Sheet
 - e. Standard Provisions and Reporting dated 1 March 1991 (SPRRs)
6. Attached is **Monitoring and Reporting Program (MRP) R5-2023-0023**, which requires monitoring and reporting for discharges regulated under these WDRs.

Facility and Discharge

7. The Discharger operates two snack food production companies on site, which began operating in 2002. California Nuggets, Inc. produces corn nuts and processes approximately 1,700 tons of corn annually. Golden Gate Nuts, Inc. processes

approximately 1,500 tons of almonds annually. The Facility generally operates 24 hours per day and is shut down for equipment maintenance once per week. The wastewater treatment system consists of screens, sumps, a Dissolved Air Flotation (DAF) system, a lined wastewater pond, and LAAs. Facility site features are shown on Attachment B.

8. An on-site water supply and drinking water well provides source water to the Facility. The water is softened using ion-exchange treatment prior to use. The ion exchange brine is separated from the wastewater stream and transported offsite for disposal. Water quality for the supply water is presented below. The following acronyms are used in the table.

EC = electrical conductivity	TKN = total Kjeldahl nitrogen
FDS = fixed dissolved solids	µg/L = micrograms per liter
mg/L = milligrams per liter	µmhos/cm = microohms per centimeter
TDS = total dissolved solids	NA = not analyzed

Table 1. Water Supply Quality

Constituent	Units	Supply Water (9/29/15)
Nitrate as Nitrogen	mg/L	2.1 (9/7/22)
TKN	mg/L	NA
Ammonia	mg/L	NA
FDS	mg/L	NA
TDS	mg/L	300
EC	µmhos/cm	444
Iron	µg/L	110
Manganese	µg/L	<10
Sulfate	mg/L	10
Chloride	mg/L	56
Sodium	mg/L	10

9. The major processes that generate wastewater include the following:
- Corn processing, which occurs year-round. Dried corn kernels are soaked in a lime solution to remove skins, steeped in a citric acid solution, and then rinsed before being fried in canola or safflower oil and seasoned. The used oil is removed from the site and reused/recycled by a third-party vendor. Corn slurry generated during processing is periodically transported off-site to be used as a

livestock feed additive or is properly disposed of off-site. Corn slurry is not discharged to the wastewater pond.

- b. Almonds are processed seasonally during harvest. The almonds are blanched in hot water to remove the skins, then cooked and/or seasoned.
 - c. Caustic and acid rinsing of the processing equipment are performed approximately every two weeks for sanitation purposes. The waste acid and base solution is hauled off-site for disposal at East Bay Municipal Utilities District.
10. Chemicals used at the Facility are summarized below. Equipment sanitation wastewater is collected in specific sumps and transported off-site for disposal.

Table 2. Chemicals

Chemical	Use	Annual Volume
Smokehouse 101K Cleaner	equipment sanitation	880 gallons
Flex SG Cleaner	equipment sanitation	440 gallons
Perasan A Sanitizer	equipment sanitation	Unknown
BioWish	equipment sanitation	17 pounds
Calcium Hydroxide	food processing	Not available
Citric Acid	food processing	Not available
Sodium Hydroxide 30%	food processing	Not available
Sulfuric Acid 66	food processing	Not available
Polyacrylamide GRAS Polymer	food processing	Not available
GP-110 Bacillus Microbes	food processing	125 pounds

11. Process rinse water, spent lime solution, blanching water, and boiler blowdown associated with each Facility are collected in floor drains (wastewater from both processes, corn and almond processing, is commingled). Wastewater is screened to remove solids and then sent to an equalization tank where pH adjustment occurs, if necessary. The wastewater is then passed through a DAF system and an oil/water separator before being directed to a lined wastewater storage pond.
12. The wastewater pond is located in the western portion of the facility and has a surface area of approximately 0.31 acres. The pond was lined in 2007 by Reed & Graham, Inc. with 24-mil reinforced polyethylene geomembrane that has a hydraulic conductivity of $<1.9 \times 10^{-8}$ cm/s. The pond is approximately 8 feet deep with a 611,000-gallon capacity (not including two feet of freeboard) and is aerated. The Discharger regularly empties the lined pond via a pumper truck to remove accumulated sludge and visually inspect the liner. Sludge is transported off-site for

disposal at an appropriately regulated facility, or considered for other uses, as appropriate.

13. Field measurements collected from the wastewater pond for 2019, 2020, and 2021 are summarized below.

Table 3. Pond Measurements

Year	Dissolved Oxygen (lowest concentration)	Freeboard (feet) (min - max)	pH (min - max)
2019	1.0 mg/L	5.9 - 11.8	3.9 - 5.7
2020	0.5 mg/L (table note 1)	3.9 - empty	4.1 - 5.1
2021	0.9 mg/L (table note 1)	1 - 9.5	3.8 / 8.2

Table Note 1: Low DO concentrations (less than 1 mg/L) are a violation of WDRs Order No. R5-2014-0056 when DO is detected in *three* consecutive weekly sample events at concentrations less than 1 mg/L. The DO concentrations reported in 2020 and 2021 were not violations of the Order because they were not reported in three consecutive sample events.

14. Effluent from the pond is filtered to remove remaining solids prior to discharging to 5.2 acres of LAAs for use as irrigation. Wastewater has not yet been applied to the newly acquired 7.88 acres of almond orchards. The original 5.2 acres are cropped with various forage grasses and Sudan grass and the newly acquired 7.88 acres are currently cropped with almond trees and will have an annual cover crop planted between the almond rows in the fall. The LAAs are irrigated using impact sprinklers. In addition, the Discharger has planted salt cedar trees around the perimeter of the forage grasses LAAs to improve water and salt uptake. Crops grown in the discharge vicinity include, but are not limited to, grapes, almonds, walnuts, cherries, tomatoes, potatoes, and hay (see the [Department of Water Resources Webpage](https://gis.water.ca.gov/app/CADWRLandUseViewer)) (<https://gis.water.ca.gov/app/CADWRLandUseViewer>).
15. An ultrasonic influent flow meter was installed to monitor influent to the wastewater pond in 2008 and an effluent meter was installed in 2009 to monitor wastewater volumes applied to the LAAs, as shown on Attachment C. Wastewater flows to the LAAs are summarized below and only include flows to the original 5.2 acres. Wastewater discharges have not yet occurred to the newly acquired 7.88 acres of LAAs. Both LAAs are bermed to prevent runoff from the LAAs.

Table 4. Effluent Flow Volumes to LAAs

	2014 WDR Limitation	Monitoring Year		
		2019	2020	2021
Average Monthly Flow to LAAs	2.0 MG	1.09	1.22	1.58

	2014 WDR Limitation	Monitoring Year		
		2019	2020	2021
Total Annual Flow to LAAs	16 MG	13	14.6	19

16. Wastewater quality samples are collected from the irrigation system pipeline prior to discharging to the LAAs. Average annual effluent concentrations are summarized below. For non-detect results, half of the analytical method detection limits were used for averaging purposes.

Table 5. Effluent Quality

Constituent	Units	2018	2019	2020	2021
BOD	mg/L	2,679	2,755	3,178	1,689
Nitrate as N	mg/L	0.39	0.12	0.13	0.15
Ammonia as N	mg/L	0.7	0.90	0.38	0.51
TKN	mg/L	35	37	38	50
TDS	mg/L	2,536	2,673	3,032	2,358
FDS	mg/L	952	982	1,023	855
Iron (Dissolved)	µg/L	410	510	640	240
Manganese (Dissolved)	µg/L	43	32	44	38
Sodium	mg/L	88	120	100	95
Chloride	mg/L	96	107	110	100

17. Yearly loading rates for nitrogen, BOD, and FDS are tabulated below. The loading rates are for the original 5.2 acres; wastewater discharges to the 7.88 acres of LAAs have not yet occurred.

Table 6. Loading Rates

Constituent	Units	2018	2019	2020	2021
Nitrogen	lb/acre/yr	683	751	897	1,570
FDS	lb/acre/yr	19,253	20,450	23,228	26,260
BOD	lb/acre/yr	53,251	51,521	72,608	51,612

18. Residual solids, solid wastes, and sludges produced at the facility from almond and corn byproducts (skins) are transported off-site for use as animal feed. Sludge accumulated on the pond floor is hauled off-site for disposal as soon as it is removed from the pond and is not stored on-site.

19. Based on the water balance included in the RWD, usable storage capacity of the lined wastewater pond is approximately 611,000 gallons (not including two feet of freeboard). The maximum required storage capacity is 609,617 gallons in March for a 100-year rainfall event. Supplemental crop irrigation will likely be needed to maintain crop health.
20. Site storm water is collected in a storm water pond, located in the western portion of the facility. The unlined pond is approximately 9 feet deep with a 0.24-acre surface area and a capacity of 0.3 MG (not including two feet of freeboard.) Storm water is not discharged off-site.
21. The Facility uses three separate septic systems for the residence, the office complex, and the processing facility, as shown on Attachment B. The septic systems are permitted and regulated by the San Joaquin County Environmental Health Department.

Changes to the Facility

22. The Discharger recently purchased 7.88 acres of almond orchards, located north of the processing facility, as shown on Attachment B, and has requested to use this land as LAAs for the application of wastewater for irrigation purposes. In addition, the Discharger is requesting an annual flow increase to better accommodate processing.

Compliance History

23. Cease and Desist Order (CDO) R5-2014-0057, adopted by the Central Valley Water Board on 28 March 2014, was issued to the Discharger for not employing treatment or control of the wastes in the discharge that could be considered “best practicable treatment or control” of the wastes and the discharge was causing groundwater beneath the facilities to exceed secondary MCLs. The Discharger was required to make upgrades to the Facility to meet and comply with the requirements in the 2014 WDRs and ensure the discharge does not result in on-going impacts to groundwater. The CDO set forth a scope and schedule of work to ensure that the discharge would not allow wastewater constituents to impact the beneficial uses of groundwater.
24. The CDO specifically required the Discharger to comply with all requirements of WDRs Order No. R5-2014-0056 and submit the following technical reports:
 - a. Crop Plan Implementation Plan
 - b. Best Practical Treatment and Control (BPTC) Work Plan
 - c. Construction Completion Report
25. In response to the CDO, the Discharger has implemented several changes and improvements to the wastewater treatment system, including:

- a. Separated out ion-exchange water for off-site disposal.
 - b. Separated out corn solids for use as cattle feed to reduce BOD loading.
 - c. The facility no longer handles recycled oil (oil is hauled off-site for disposal).
 - d. Installed sumps to collect and separate cleaning and sanitation wastewater from process wastewater to facilitate export of cleaning wastewater.
 - e. Constructed an earthen berm on the west end of the original LAA to prevent run-off of rain/irrigation water.
 - f. Installed manual valves between sump near the corn room to allow further control of wash water in this area.
 - g. Cleaned wastewater line to wastewater pond to remove residual solids present in the line.
 - h. Completed installation and testing of new water supply well.
 - i. Inspected the pond liner and patched anomalies identified as small tears/holes.
 - j. Emptied the lined wastewater storage pond to remove accumulated sludge for off-site recycling/disposal and visually inspect liner.
 - k. Installed a Dissolved Air Flotation (DAF) system and screw press system to remove suspended solids from the corn process wastewater. Skimmed solids are removed from the site generally bi-weekly.
 - l. Installed automated pH adjustment system which is regularly evaluated and adjusted.
 - m. Installed surface aerators in the lined wastewater pond.
 - n. Acquired additional acreage (approximately 7.88 acres) to increase the available LAA area.
 - o. Began adding microbes to the lined wastewater pond to assist in denitrification in 2022.
26. Based on an evaluation of the available analytical data for wastewater and groundwater quality, these changes have resulted in improvements to wastewater quality. Concentrations of constituents in groundwater are now stable (see Finding 61), indicating the continued discharge of wastewater to land will not negatively affect beneficial uses of groundwater.

Site-Specific Conditions

27. Local land use in the vicinity primarily consists of agricultural fields (i.e., orchards, vineyards) and rural residential areas.
28. According to the U.S. Department of Agriculture's Soil Conservation Service, near surface soil at the site primarily consists of loamy coarse sand. The estimated soil

permeability is greater than 6 inches per hour. The LAA has a moderate to high infiltration rate.

29. The site is located outside the 100-year flood zone.
30. The site topography is relatively flat with a gentle overall slope to the southwest. Local drainage is to the San Joaquin River, located approximately two miles southeast of the facility.
31. The average annual precipitation is 12.8 inches per year and the 100-year, 365-day precipitation event is 22.8 inches. The mean reference evapotranspiration rate is approximately 52.2 inches per year.

Groundwater Conditions

32. Based on the Discharger's groundwater monitoring reports from September 2005 through March 2022, shallow groundwater occurs at a depth ranging from approximately 12 to 26 feet below ground surface (bgs). Groundwater primarily flows to the west-southwest, with horizontal gradients ranging from 0.0003 to 0.002 feet/foot.
33. Four shallow groundwater monitoring wells (MW-1, MW-2, MW-3, and MW-4) were installed in 2005 and are shown on Attachment B. MW-1 is considered an upgradient well and it is located approximately 500 feet from the wastewater application area. MW-2 is located near the downgradient edge of the LAA, and MW-3 and MW-4 are located immediately adjacent to the downgradient side of the storm water and wastewater pond, respectively. Well construction details are shown below.

Table 7. Well Construction Details

Monitoring Well	Well Depth (feet bgs)	Screen Interval (feet bgs)
MW-1	30	15 – 30
MW-2	25	10 – 25
MW-3	30	15 – 30
MW-4	30	15 – 30

34. A summary of groundwater monitoring data for select constituents for upgradient well MW-1 is presented below. Annual average concentrations for 2018 through 2021 and data from first quarter 2022 are shown. NE indicates a water quality objective has not been established for that constituent. Potential WQOs shown in Tables 9 through 12 are for comparison purposes only.

Table 8. Upgradient Groundwater Quality (mg/L) - MW-1

	TDS	Nitrate as N	Ammonia	TKN	Na	Cl	Fe (µg/L)	Mn (µg/L)
2018	910	38	0.07	0.23	185	23.8	<0.05	<0.01
2019	1,035	42.3	<0.2	0.14	178	27	<0.05	<0.01
2020	1,060	44.5	0.085	0.21	205	31.3	<0.05	<0.01
2021	1,200	42	0.09	0.027	190	34	<0.05	<0.01
2022	1,200	42	0.11	0.37	170	38	<0.05	<0.01
Potential WQO	1,000 (sMCL)	10 (MCL)	30 (Taste and Odor Threshold)	NE	69 (Ag)	250 (sMCL)	0.30 (sMCL)	0.05 (sMCL)

35. A summary of groundwater monitoring data for select constituents for downgradient wells MW-2, MW-3, and MW-4 is presented below. Annual average concentrations for 2018 through 2021 and data from first quarter 2022 are shown. NE indicates a water quality objective has not been established for that constituent and half of the detection limit was used for averaging purposes.

Table 9. MW-2 Groundwater Quality (mg/L)

	TDS	Nitrate as N	Ammonia	TKN	Na	Cl	Fe (µg/L)	Mn (µg/L)
2018	1,225	0.6	0.7	1.8	120	107	1.2	8.4
2019	1,200	0.2	1.0	1.9	88.5	78.5	2.2	9.6
2020	1,015	1.0	0.6	1.1	91.3	107.3	1.7	6.5
2021	1,167	0.1	1.2	2.6	83.7	105.3	3.1	8.6
2022	1,100	<0.1	0.7	1.5	70	95	1.6	7.6
Potential WQO	1,000 (sMCL)	10 (MCL)	30 (Taste and Odor Threshold)	NE	69 (Ag)	250 (sMCL)	0.30 (sMCL)	0.05 (sMCL)

Table 10. MW-3 Groundwater Quality (mg/L)

	TDS	Nitrate as N	Ammonia	TKN	Na	Cl	Fe (µg/L)	Mn (µg/L)
2018	360	0.06	0.29	0.47	65.8	17	0.04	1.2
2019	415	0.06	0.32	0.47	74.5	34	0.03	1.5
2020	443	0.05	0.35	0.50	83.5	49	0.05	1.7
2021	445	0.23	0.34	0.77	83.3	62	0.03	1.4

	TDS	Nitrate as N	Ammonia	TKN	Na	Cl	Fe (µg/L)	Mn (µg/L)
2022	420	0.5	0.24	0.95	75	48	0.25	0.9
Potential WQO	1,000 (sMCL)	10 (MCL)	30 (Taste and Odor Threshold)	NE	69 (Ag)	250 (sMCL)	0.30 (sMCL)	0.05 (sMCL)

Table 11. MW-4 Groundwater Quality (mg/L)

	TDS	Nitrate	Ammonia	TKN	Na	Cl	Fe (µg/L)	Mn (µg/L)
2018	885	0.06	1.4	2.9	49.8	61	2.2	9.6
2019	835	0.05	1.4	1.7	48.5	49	1.6	8.4
2020	680	0.09	1.06	1.4	46.8	34.3	1.3	7.7
2021	728	0.11	1.24	2.5	41.5	22	0.56	5.6
2022	740	0.05	0.74	1.5	40	28	0.03	5.4
Potential WQO	1,000 (sMCL)	10 (MCL)	30 (Taste and Odor Threshold)	NE	69 (Ag)	250 (sMCL)	0.30 (sMCL)	0.05 (sMCL)

36. Average concentrations of TDS, nitrate, and sodium are higher in MW-1 (upgradient well) than average concentrations in all three downgradient wells (MW-2, MW-3, and MW-4).
37. Manganese concentrations in all three downgradient wells exceed the average concentration in MW-1 (upgradient well) and the secondary MCL of 0.05 µg/L.
38. In general, the groundwater monitoring constituent concentrations show either decreasing or stable trends since the implementation of several facility improvements after the adoption of WDRs Order No. R5-2014-0056 in 2014. As described in the RWD, with the exception of total Kjeldahl nitrogen and ammonia in well MW-2, the mean concentrations the last four quarters for those constituents have reduced between 7.8% and 59% in well MW-2, between 13% and 99% in well MW-3, and between 5.5% and 98% in MW-4, when compared to the mean concentrations in 2014.

Legal Authorities

39. This Order is adopted pursuant to Water Code section 13263, subdivision (a), which provides in pertinent part as follows:

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 or receiving waters upon, or 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 reasonable required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241.

40. Compliance with section 13263, subdivision (a), including implementation of applicable water quality control plans, is discussed in the findings below.
41. 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, § 13263, subd. (g).)
42. This Order and its associated MRP are also adopted pursuant to Water 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.

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

Basin Plan Implementation

44. Pursuant to Water 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.”
45. 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, § 13241 et seq.)

46. The Facility is within the San Joaquin Delta Hydrologic Area. Local drainage is to the San Joaquin River. The beneficial uses of the San Joaquin River, as stated in the Basin Plan, are municipal and domestic supply; agricultural supply; industrial process and service supply; hydropower generation; water contact recreation; non-contact water recreation; warm and cold freshwater habitat; migration of aquatic organisms; spawning, reproduction, and /or early development; and wildlife habitat.
47. Per the Basin Plan, the beneficial uses of underlying groundwater are municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
48. The Basin Plan establishes narrative water quality objectives for chemical constituents, tastes and odors, and toxicity in groundwater. It also sets forth a numeric objective for total coliform organisms.
49. 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.
50. The Basin Plan's narrative WQOs for chemical constituents, at a minimum, require MUN-designated waters to meet the MCLs in Title 22 of the California Code of Regulations (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.
51. The narrative toxicity WQO requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, animal, plant, or aquatic life associated with designated beneficial uses.
52. Quantifying a narrative WQO requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses. The Basin Plan states that when compliance with a narrative WQO is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations in order to implement the narrative WQO.
53. 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 electrical conductivity (EC) of less than 700 $\mu\text{mhos/cm}$. 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 14 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 Reopener

54. The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting. The Basin Plan amendments were conditionally approved by the State Water Resources Control Board (State Water Board) on 16 October 2019 (Resolution 2019-0057) and by the Office of Administrative Law (OAL) on 15 January 2020 (OAL Matter No. 2019-1203-03) with Resolution R5-2020-0057, which can be found on the [Central Valley Water Board's Adopted Orders webpage](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf) (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf).
55. For the Salt Control Program, the Central Valley Water Board issued the Discharger a Notice to Comply (**CVSALTS ID: 2785**). The Discharger submitted a Notice to Intent and elected to participate in the Prioritization and Optimization Study (P&O Study) under Pathway Option 2, 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 discharges to the extent feasible; and
 - b. Sets a performance-based limit of **1,200 mg/L for FDS** (flow-weighted) for the discharge of wastewater to the LAAs.
56. For the Nitrate Control Program, the Facility falls within the Yolo Sub-basin of the Sacramento Valley Groundwater Basin 5-021.67, a Priority 2 Basin. Notices to Comply for Priority 2 Basins will be issued within two to four years after the effective date of the Nitrate Control Program, between late 2022 and late 2024.
57. As these strategies are implemented, the Central Valley Water Board may find it necessary to modify the requirements of these WDRs to ensure the goals of the Salt and Nitrate Control Programs are met. This Order may be amended or modified to incorporate any newly applicable requirements. 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). (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity)

Compliance with Antidegradation Policy

58. The *Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Water Board Resolution 68-16 (Antidegradation Policy) prohibits the Central Valley water board from authorizing degradation of “high quality water” unless it is shown that such degradation: (1) will be consistent with the maximum benefit to the people of California; (2) will not unreasonably affect beneficial uses, or otherwise result in water quality less than as prescribed in applicable policies; and (3) is minimized through the discharger’s specific BPTCs.
59. The Discharger has monitored groundwater quality at the Facility since 2005. Compliance with the Antidegradation Policy is therefore based on available groundwater data collected since 2005.
60. For the purposes of this Order, constituents in the effluent with the potential to degrade groundwater and/or affect beneficial uses include:
- FDS and TDS;
 - Nitrate as nitrogen; and
 - Iron and manganese.
61. A summary of effluent quality compared to upgradient (MW-1) and downgradient (MW-2, MW-3, and MW-4) groundwater quality is presented below. Flow weighted averages for constituents in effluent are calculated using data from 2018 through 2021. Annual averages for groundwater were calculated using data collected between 2018 and 2022. For non-detect concentrations, half of the reporting limit was used for averaging purposes.

Table 12. Data Comparison

Constituent	Units	Effluent (flow weighted average)	Upgradient Groundwater	Downgradient Groundwater	Potential WQO Reference
TDS	mg/L	2,632	1,041	774	1,000 (sMCL upper)
FDS	mg/L	945	571	494	None
Nitrate as N	mg/L	0.19	41.7	0.21	10 (MCL)
TKN	mg/L	41	0.21	1.5	None
Manganese	µg/L	39	6	5,700	50 (sMCL)
Iron	µg/L	436	30	1,088	300 (sMCL)

- a. **Salinity (FDS and TDS).** For the purposes 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. Based on effluent data collected since 2014 (adoption of WDRs Order R5-2014-0056), FDS concentrations show a decreasing trend. In 2014, FDS average annual concentration was 1,185 mg/L compared to 855 mg/L in 2021. Because wastewater is land applied, the discharge of wastewater has the potential to degrade groundwater with respect to salinity. Wastewater treatment and disposal is via a pond and LAA system and therefore relies on site conditions to control the persistence and transport of constituents into groundwater.

It should be noted that downgradient groundwater concentrations of TDS are less than upgradient concentrations. Upgradient concentrations (MW-1) show an increasing trend, and concentration trends are stable or decreasing in the downgradient wells (MW-2, MW-3, and MW-4), which indicates the changes the Discharger has made to the wastewater treatment system have improved the quality of the effluent. Due to the distance between MW-1 and the point of discharge, increasing upgradient concentrations are not likely the result of discharges to land from this Facility. Changes in upgradient concentrations are likely out of the Discharger's control as local land use in the vicinity primarily consists of agricultural fields. Discharges of wastewater with respect to FDS and TDS do not appear to be degrading groundwater beyond existing conditions at this time and will not unreasonably affect beneficial uses. This Order requires continued effluent monitoring for FDS, groundwater monitoring for TDS, and continued BPTC implementation, including participation in the CV SALTS program.

The Discharger has elected to participate in the P&O Study under Pathway Option 2 for the Salt Program. For the protection of groundwater from discharges of wastewater, this Order establishes a **Performance-Based Effluent Limit of 1,200 mg/L for FDS** as a flow-weighted average in effluent to the LAAs. The Performance Based Effluent Limit was based on historical wastewater data from collected from 2018 through 2021 and is intended to prevent increases of TDS concentrations in groundwater beyond current conditions. In addition, this Order requires the Discharger to continue its efforts to control and manage salinity in its discharge and comply with the new Salinity Control Program. Compliance with the Performance-Based Effluent Limit shall constitute compliance with the water quality control plan and shall be deemed adequately protective of beneficial uses.

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

Based on nitrate concentrations in source water, effluent, and groundwater, it does not appear that nitrate is degrading groundwater. Concentrations in effluent and downgradient groundwater are less than 1 mg/L, while upgradient groundwater concentrations have been detected up to 48 mg/L, which exceeds the primary MCL of 10 mg/L. The higher upgradient concentration indicates nitrate as nitrogen exceedances are not likely the result of discharges to land from this Facility and are

likely out of the Dischargers control. The continued discharge of wastewater to land from this Facility's existing operations with respect to nitrate as nitrogen will not unreasonably affect beneficial uses of groundwater.

TKN concentrations in effluent are relatively high when compared to nitrate concentrations. Effluent concentrations over time since 2014 show a decreasing trend for TKN, and in all four monitoring wells, TKN trends are either stable or decreasing. This Order requires continued monitoring for nitrate and TKN in effluent and groundwater and continued BPTC implementation.

- c. Iron and Manganese.** 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 the soil, including iron and manganese.

Historically, the Discharger has exceeded the BOD loading rate permitted in WDRs Order No. R5-2014-0056. Iron and manganese concentrations in effluent and downgradient groundwater are higher than upgradient groundwater, indicating a possible anoxic environment. The Discharger has made several changes and upgrades to the wastewater treatment system to mitigate excessive BOD and hydraulic loading, as described in Finding 25. Since 2014, concentrations of iron and manganese in groundwater show decreasing or stable trends. The continued discharge of wastewater to land from this Facility with respect to iron and manganese (when in compliance with the BOD loading limit) will not unreasonably affect beneficial uses of groundwater. This Order requires continued monitoring of BOD in the wastewater, sets a BOD loading limit, requires continued monitoring of iron and manganese in effluent and groundwater, and continued BPTC implementation. Effluent and groundwater samples for metal analysis shall be filtered prior to analysis.

62. This Order establishes effluent limits for the facility that will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds water quality objectives set forth in the Basin Plan
63. The Discharger provides treatment and control of the discharge that incorporates:
- a. Separation of ion-exchange water for off-site disposal.
 - b. Separation of corn solids for use as cattle feed to reduce BOD loading.
 - c. Installed a DAF system and screw press system in 2017 to remove suspended solids from the corn process wastewater. The DAF system replaced the previously used settling tanks to separate out solids from the wastewater.
 - d. Installed sumps to collect and separate sanitation wastewater from process wastewater for off-site disposal.
 - e. Installed manual valves between sumps near the corn room to allow further control of sanitation wastewater.

- f. Continued transport of solids off-site for disposal and/or reuse at various licensed facilities to reduce the nutrient load on the LAA.
 - g. Installed automated pH adjustment system.
 - h. Installed surface aerators in the lined wastewater pond in 2021.
 - i. Began adding microbes to the lined wastewater pond to assist in denitrification in 2022.
 - j. Added 7.88 acres of LAAs (almond orchard).
 - k. Continued use of a sprinkler system to help ensure even application of wastewater over the LAAs.
 - l. Enrolled in the P&O Study for the Salt Control Program under CV SALTS.
64. The Discharge's implementation of the above-listed measures, which constitute BPTCS, will minimize the extent of further water quality degradation resulting from the Facility's continued discharge.
65. The economic prosperity of Central Valley communities and associated industry is of maximum benefit to the people of the State and provides justification for allowing the limited groundwater degradation that may occur pursuant to this Order. 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. The Facility employs approximately 50 employees.
66. Based on the foregoing, the adoption of this Order is consistent with the State Water Board's Antidegradation Policy.

California Environmental Quality Act

67. This project is exempt from the California Environmental Quality Act (CEQA) per California Code of Regulations title 14, sections.

Section 15304 (Minor Alterations to Land) applies to minor private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees, except for forestry and agricultural purposes. This exemption includes, but is not limited to, grading on land with a slope of less than 10 percent and new gardening or landscaping. This project entails only minor alterations to existing conditions by authorizing irrigation of existing orchards with the Facility's process wastewater.

Other Regulatory Considerations

68. 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 Water 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.

69. 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 disadvantaged communities in San Joaquin County: 1) active participation in the P&O Study and compliance with the Salt Control Program, 2) compliance with a performance-based salinity limitation, and 3) preparation and implementation of Salinity Evaluation and Minimization Plans to establish goals for potentially reducing salinity concentrations in the Facility's discharge.
70. Pursuant to Water Code section 106.3, subdivision (a), it is "the established policy of the state 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.
71. This Order, which prescribes WDRs for discharges of domestic sewage, commercial waste, or treated effluent from a privately owned treatment plant, 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. (a) - (b).)
72. Based on the threat and complexity of the discharge, the facility is determined to be classified as 2B as defined below:
 - a. 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. 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.
73. This Order, which prescribes WDRs for discharges 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, § 20090, subds. (a)-(b).)
74. 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. All storm water at the facility is collected and discharged to the storm water pond. Storm water is not discharged offsite or discharged to waters of the U.S. Coverage under the NPDES General Permit CAS000001 is not required at this time.
75. 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 94-81 (December 1981). These standards, and any more stringent standards adopted by the state or county pursuant to Water Code section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.
76. 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

77. This Order is strictly limited in scope to those waste discharges, activities, and processes described and expressly authorized herein.
78. Pursuant to Water 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 (RWD) per Water Code section 13260.
79. Failure to file a new RWD before initiating material changes to the character, volume or timing of discharges authorized herein, shall constitute an independent violation of these WDRs.

80. 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.

Procedural Matters

81. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.
82. 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. (Water Code, §13167.5.)
83. At a public meeting, the Central Valley Water Board heard and considered all comments pertaining to the discharges regulated under this Order.
84. The Central Valley Water Board will review and revise the WDRs in this Order as necessary.
85. CDO R5-2014-0057 required the Discharger to make facility improvements to comply with all requirements of WDRs Order No. R5-2014-0056; the Discharger has adequately addressed these requirements. This Order rescinds and replaces WDRs Order No. R5-2014-0056 and thus, adoption of this Order will moot the CDO. Therefore, this Order also rescinds the CDO.

REQUIREMENTS

IT IS HEREBY ORDERED that Waste Discharge Requirements Order No. R5-2014-0056 and Cease and Desist Order No. R5-2014-0057 are rescinded (except for enforcement purposes) and, pursuant to Water Code sections 13263 and 13267, that the Discharger and their agents, employees, tenants, and successors shall comply with the following:

A. Standard Provisions

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

B. Discharge Prohibitions

1. Discharge of wastes 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 Limitations of this Order.
3. Wastewater treatment, storage, and disposal shall not cause pollution, or a nuisance as defined by Water Code section 13050.
4. Discharge of waste classified as 'hazardous', as defined in the California Code of Regulations, title 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. Objectionable odors shall not be perceivable beyond the limits of the property where the waste is generated, treated, and/or discharged at an intensity that creates or threatens to create nuisance conditions for an entire community or any considerable number of persons.
7. Treatment system bypass of untreated or partially treated waste is prohibited, except as allowed by Section E.2 of the Standard Provisions and Reporting Requirements for Waste Discharge Requirements, 1 March 1991 edition (Standard Provisions or SPRRs).
8. Discharge of waste at a location or in a manner different from that described in the Findings is prohibited.
9. Discharge of toxic substances into any wastewater treatment system or land application area such that biological treatment mechanisms are disrupted is prohibited.
10. Application of residual solids to the LAAs is prohibited.
11. Discharge of domestic wastewater to the process wastewater treatment system, including LAAs, is prohibited.
12. Discharge of process wastewater to the domestic wastewater treatment system (septic system) is prohibited.

C. Flow Limitations

1. Effluent flows from the wastewater pond to the LAAs shall not exceed the limits in Table 9 below. Flow volumes will include all water discharged from the pond. If supplemental irrigation water is needed for crop maintenance and is applied directly to the LAAs, that volume of water shall not be included in

the flow volume. Supplemental irrigation water volumes shall only be included if the water is added to the wastewater pond prior to discharging to the LAAs.

Table 13. Flow Limits

Flow Measurement	Flow Limit
Maximum Monthly Flow (As determined by the total flow for the calendar year)	2.0 MG
Total Annual Flow (As determined by the total flow for the calendar year)	24 MG

D. Performance Based Limitations

1. A flow-weighted annual concentration of FDS in effluent to the LAAs shall not exceed **1,200 mg/L**. The FDS limit is a performance-based limitation since the Discharger has selected to participate in the P&O Study in the Salt Control Program. The purpose of this limit is to ensure the Discharger is implementing appropriate performance-based measures and maintaining existing discharge concentrations.

E. Discharge Specifications

1. The discharge shall remain within the permitted waste treatment/ containment structures and land application areas at all times, including the LAAs and on-site landscape irrigation areas. Wastewater may be used for dust control or facility washing in areas that can collect the wastewater and discharge it back to the wastewater pond.
2. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.
3. 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.
4. As a means of monitoring odors, the dissolved oxygen (DO) content in the upper one foot of the wastewater pond shall not be less than 1.0 mg/L for three consecutive sample events. If DO concentrations are less than 1.0 mg/L for three consecutive sampling events and objectionable odors are perceivable beyond the property limits, the Discharger shall report the findings to the Central Valley Water Board in writing within 10 days and shall include a specific plan to resolve the odors within 30 days.

5. The Discharger shall design, construct, operate, and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. The operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard.
6. 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.
7. On or about **1 October** of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specifications E.8 and E.9.
8. 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.
9. 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.
10. The Discharger shall monitor sludge accumulation in the wastewater treatment/storage ponds at least every five years beginning in **2023**, and shall periodically remove sludge as necessary to maintain adequate storage capacity.

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

F. Groundwater Limitations

Release of waste constituents from any portion of the Facility and LAAs shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or in excess of natural upgradient quality, whichever is greater:

1. Constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations, excluding salinity since the Discharger has chosen the Alternative Option for the Salt Control Program and is in good standing with the P&O Study.
2. Contain taste or odor-producing constituents, toxic substances, or any other constituent in concentrations that cause nuisance or adversely affect beneficial uses.

G. Land Application Area Specifications

1. The Discharger shall ensure that all water is applied and distributed with reasonable uniformity across each LAA field, consistent with good agricultural irrigation practices.
2. BOD loading rates to the LAAs will not exceed **100 lb/ac/day/irrigation cycle**.
3. Crops or other vegetation (which may include, but is not limited to pasture grasses, native grasses, orchard trees, and/or ornamental landscaping) shall be grown in the LAAs or any areas where on-site irrigation using wastewater may occur.
4. Land application of wastewater shall be managed to minimize erosion.
5. The LAAs and on-site irrigation areas shall be managed to prevent breeding of mosquitoes or other vectors.
6. LAAs shall be designed, maintained, and operated to comply with the following setback requirements:

Table 14. Setbacks

Setback Definition	Minimum Irrigation Setback (feet)
Edge of LAA to property boundary	25

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

Note: This Facility is an existing facility that may not comply with the setback provided herein. Expansion of a noncomplying wastewater system shall trigger further evaluation of the setbacks.

7. 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 Dischargers shall temporarily stop discharging immediately in the area of concern and implement corrective actions to ensure compliance with this Order.
8. Sprinkler heads shall be designed, operated, and maintained to create a minimum amount of mist.
9. Discharge to the LAAs or on-site landscaped areas shall not be initiated when the ground is saturated.
10. Any irrigation runoff (tailwater) shall be confined to the LAAs or returned to the treatment system and shall not enter any surface water drainage course or storm water drainage system.

H. Solids Disposal Specifications

For the purpose of this Order, solid waste refers to solid inorganic matter removed by screens and soil sediments from washing of unprocessed fruit or vegetables. Except for waste solids originating from meat processing, residual solids means organic food processing byproducts such as culls, pulp, stems, leaves, and seeds that will not be subject to treatment prior to disposal or land application.

1. Residual solids shall be removed from screens, sumps, and ponds as needed to ensure optimal operation, prevent nuisance conditions, and maintain adequate storage capacity.
2. Any handling and storage of sludge, solid waste, and residual solids shall be controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate the groundwater limitations of this Order.
3. If removed from the site, sludge, solid waste, and residual solids shall be disposed of in a manner approved by the Executive Officer and consistent

with Title 27, division 2. Removal for reuse as animal feed, or land disposal at facilities (i.e., landfills, composting facilities, soil amendment sites operated in accordance with valid waste discharge requirements issued by a Regional Water Board) will satisfy this specification.

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

I. Provisions

1. The following reports shall be submitted pursuant to Water Code section 13267:
 - a. **By 1 February 2024**, the Discharger shall submit a technical evaluation of the existing groundwater monitoring network and whether additional groundwater monitoring wells are or are not necessary to track the potential impacts from discharges to the newly acquired LAAs (7.88 acres). If the evaluation does not recommend additional well(s), the document must provide a technical rationale demonstrating that the existing monitoring well can adequately represent changes groundwater conditions beneath the newly acquired LAAs.
 - b. At least **180 days** prior to any sludge removal and disposal, the Discharger shall submit a Sludge Cleanout Plan. The plan shall describe action to be taken for sludge removal, drying, and disposal. The plan shall specifically describe the measures to be used to control runoff or percolate from the sludge as it is drying, and a schedule that shows when solids are removed from the site prior to the onset of the rainy season (**1 October**).
2. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans 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.
3. The Dischargers 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.

4. The Discharger shall comply with Monitoring and Reporting Program **R5-2023-0023**, which is part of this Order, and any revisions thereto as ordered by the Executive Officer. The submittal dates of Discharger self-monitoring reports shall be no later than the submittal date specified in the MRP.
5. The Discharger shall comply with the Standard Provisions, which are attached hereto and made part of this Order by reference.
6. 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.
7. 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 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.
8. The Discharger shall use the best practicable control technique(s) including proper operation and maintenance, to comply with this Order.
9. As described in the 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.
10. 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.
11. 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.
12. 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.
 13. 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.
 14. In order to rescind 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's Compliance and Enforcement Unit to discuss appropriate wastewater treatment system closure requirements.
 15. A copy of this Order including the MRP, Information Sheet, Attachments, and Standard Provisions, shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
 16. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

ENFORCEMENT

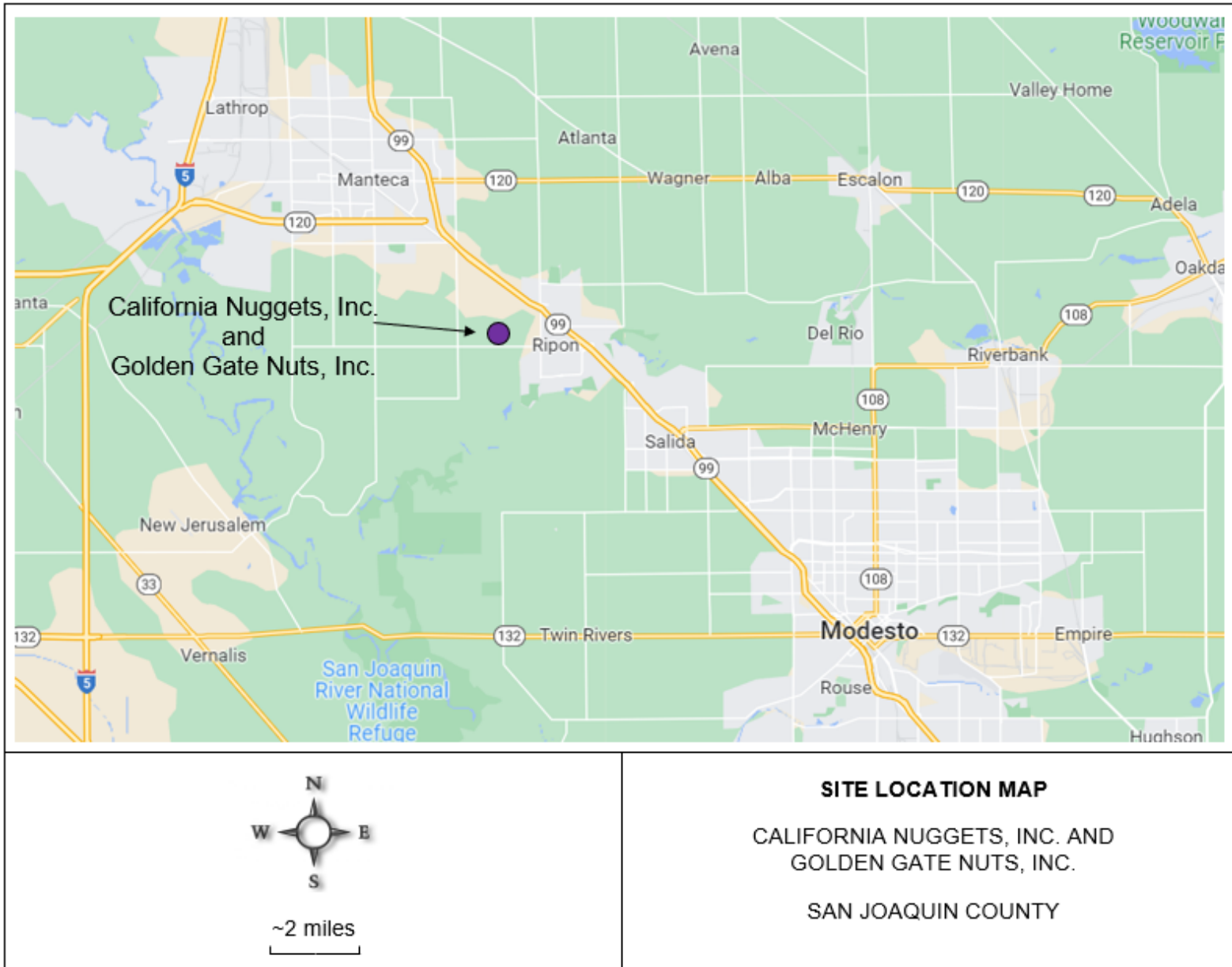
If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. 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 Water 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 action of the Central Valley Water Board may petition the State Water Board for administrative review in accordance with Water Code section 13320, and California Code of Regulations, title 23, section 2050 et seq. To be timely, the State Water Board must receive the petition by 5pm on the 30th day after the date of this Order, except that if the 30th day falls on a Saturday, Sunday or State Holiday, the petition must be received by the State Water Board by 5pm on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet on the [Water Boards Public Notice web page](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) (http://www.waterboards.ca.gov/public_notices/petitions/water_quality).

ORDER NO. R5-2023-0023

ATTACHMENT A



ORDER NO. R5-2023-0023

ATTACHMENT B



Legend

⊕ Groundwater monitoring well

▢ Septic systems

Note: All site features are approximately located.



~ 300 feet



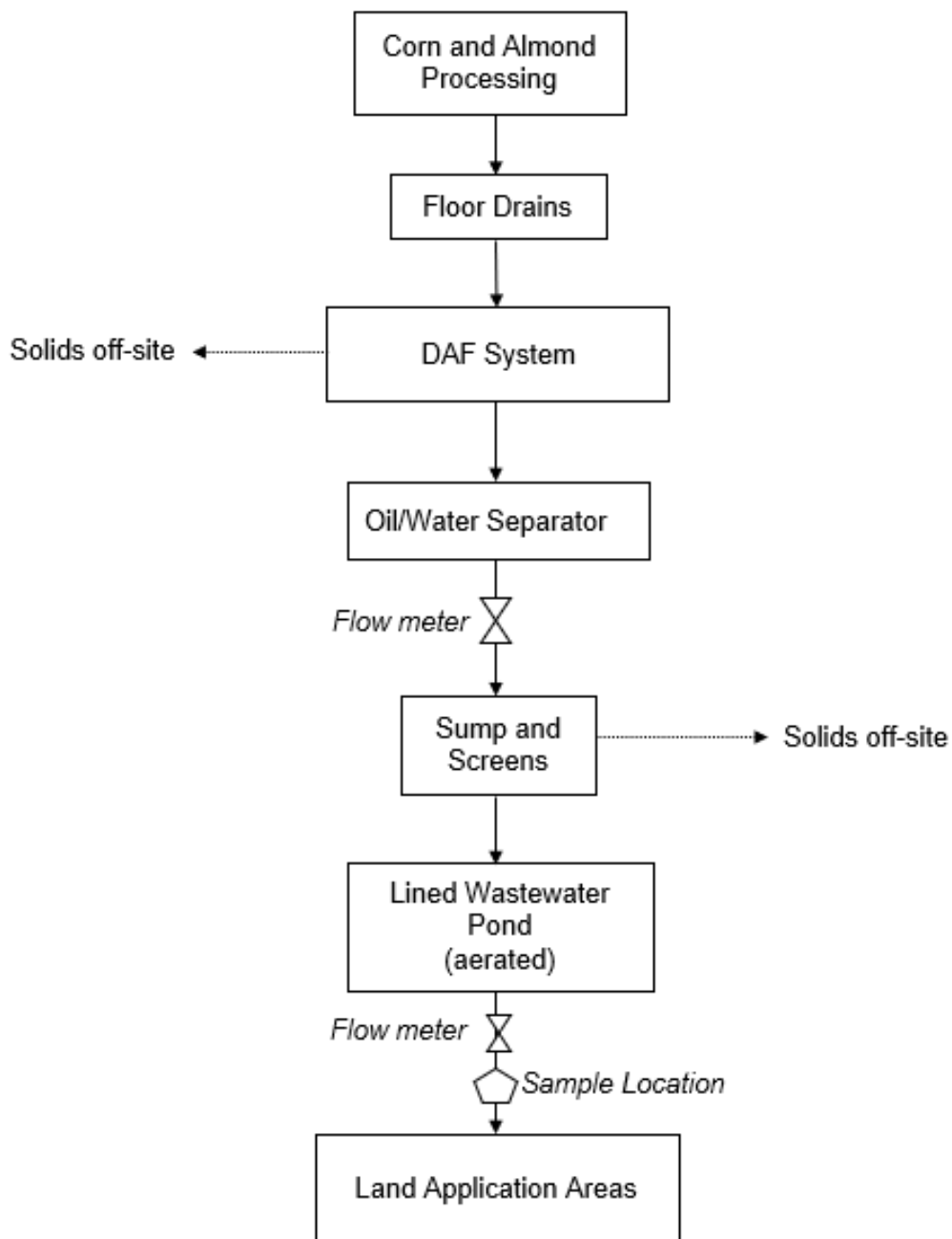
SITE FEATURES MAP

CALIFORNIA NUGGETS, INC. AND
GOLDEN GATE NUTS, INC.

SAN JOAQUIN COUNTY

ORDER NO. R5-2023-0023

ATTACHMENT C



WASTEWATER FLOW SCHEMATIC

CALIFORNIA NUGGETS, INC., AND
GOLDEN GATE NUTS, INC.

SAN JOAQUIN COUNTY

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

WASTE DISCHARGE REQUIREMENTS ORDER R5-2023-0023
FOR
CALIFORNIA NUGGETS, INC. AND GOLDEN GATE NUTS, INC.
SAN JOAQUIN COUNTY

INFORMATION SHEET

Background

Gico Management and Steve Gikas Trust (collectively referred to as Discharger) owns and operates two snack food processing facilities located at 23073 South Fredrick Road, Ripon, in San Joaquin County. Both companies, the California Nuggets, Inc. and the Golden Gate Nuts, Inc. (Facility), began operating in 2002. The Discharger processes approximately 1,700 tons of corn for corn nuts and 1,500 tons of almonds per year.

The Discharger recently purchased 7.88 acres to be used as additional LAAs and has requested a flow increase; therefore, revised WDRs are necessary.

Wastewater Generation and Disposal

Wastewater is generated from food processing activities, including processing corn year-round and processing almonds seasonally during harvest. Wastewater, which includes nut processing rinse water, spent lime solution, blanching water, and boiler blowdown, is screened and passed through a DAF system, and an oil/water separator prior to discharging to a lined wastewater pond.

The pond is aerated and lined with reinforced polyethylene and has a capacity of approximately 0.61 million gallons (not including two feet of freeboard). Wastewater from the pond is used to irrigate approximately 13 acres of land application areas. Approximately 5.2 acres are cropped with various forage crops and other grasses and then newly acquired LAAs (7.88 acres) are cropped with almond trees with inter-row crop cover. The LAAs are sprinkler irrigated.

All solids are hauled off-site for disposal or use as animal feed, and all wastewater generated from cleaning activities is hauled off-site for disposal.

Effluent quality prior to discharging to the LAAs for March through May 2022 for select constituents is summarized below.

Constituent	Units	2022
BOD	mg/L	1,280
Nitrate as N	mg/L	<0.20

Constituent	Units	2022
TKN	mg/L	57
FDS	mg/L	850
Iron	µg/L	270
Manganese	µg/L	46
Sodium	mg/L	119
Chloride	mg/L	90

Compliance History

CDO R5-2014-0057 was issued to the Discharger for violations of WDRs Order R5-2014-0056. Based on an evaluation of groundwater and effluent data collected after the Discharger began implementing changes, effluent and groundwater quality have improved.

The Discharger recently purchased 7.88 acres for use as LAAs. A water balance with an agronomic assessment was included in the RWD. The evaluation included all available LAA acreage, crop types, an annual flow limit of 22 MG, and the 100-year rain event estimates. The water balance showed sufficient capacity for the wastewater pond and LAAs, and supplemental irrigation water will be necessary to maintain crop health.

The Discharger has met the requirements of the CDO.

Groundwater Considerations

There are four shallow groundwater monitoring wells on-site. Depths to groundwater range from 12 to 26 feet bgs with a west to southwest horizontal gradient.

TDS, sodium, iron, and manganese have been detected at concentrations greater than the potential WQOs. However, nitrate and sodium concentrations in the upgradient well are higher than concentrations in the downgradient wells. TDS, manganese, and iron concentrations in downgradient groundwater wells show either stable or decreasing concentration trends. This may be the result of the Discharger implementing numerous BPTCs since the adoption of WDRs Order No. R5-2014-0056 in 2014. A list of changes the Discharger has made to improve wastewater management as an effort to reduce impacts to groundwater is included in Finding 25.

Antidegradation

Typical constituents in food processing wastewater generally include, at a minimum, salts (primarily TDS, sodium, and chloride) and nitrate as nitrogen. Effluent quality and groundwater quality are summarized below.

Constituent	Units	Effluent (flow weighted average)	Upgradient Groundwater	Downgradient Groundwater	Potential WQO Reference
TDS	mg/L	2,632	1,041	774	1,000 (sMCL upper)
FDS	mg/L	945	571	494	None
Nitrate as N	mg/L	0.19	41.7	0.21	10 (MCL)
TKN	mg/L	41	0.21	1.5	None
Manganese	µg/L	39	6	5,700	50 (sMCL)
Iron	µg/L	436	30	1,088	300 (sMCL)

The discharge of wastewater to the LAAs does not appear to be degrading groundwater beyond existing conditions. The Discharger has made improvements to the Facility that has improved the wastewater treatment system and wastewater quality since the adoption of WDRs Order No. R5-2014-0056.

Discharge Prohibitions, Effluent Limitations, Discharge Specifications, and Provisions

The Order sets the flowing flow limits:

Flow Measurement	Flow Limit
Maximum Monthly Flow (As determined by the total flow for the calendar month)	2.0 MG
Total Annual Flow (As determined by the total flow for the calendar month)	24 MG

Because the Discharger has enrolled in the P&O study, this Order sets a **performance-based flow-weighted limit of 1,200 mg/L** for FDS in order to maintain the existing discharge concentration. In addition, the BOD loading limit is 100 lb/ac/day/irrigation cycle for the LAAs.

Monitoring Requirements

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

Salt and Nitrate Control Programs Regulatory Considerations

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

Pursuant to the Basin Plan amendments, dischargers will receive a Notice to Comply with instructions and obligations for the Salt Control Program within one year of the effective date of the amendments (17 January 2020). Upon receipt of the Notice to Comply, the Discharger will have no more than six months to inform the Central Valley Water Board of their choice between Option 1 (Conservative Option for Salt Permitting) or Option 2 (Alternative Option for Salt Permitting). The level of participation required of dischargers whose discharges do not meet stringent salinity requirements will vary based on factors such as the amount of salinity in the discharge, local conditions, and type of discharge. The Discharger (Salt ID: 2785) has chosen to pursue Option 2 (Alternative Salinity Permitting Approach).

For the Nitrate Control Program, the Facility falls within Groundwater Sub-Basin 5-22.07 (San Joaquin Valley Delta Mendota Basin), a priority 2 Basin. Notices to Comply for Priority 2 Basins will be issued within two to four years after the effective date of the Nitrate Control Program. The CV-SALTS initiative will result in regulatory changes that will be implemented through conditional prohibitions and modifications to many WDRs regionwide, including the WDRs that regulate discharges from the Facility. [More information regarding the CV-SALTS regulatory planning process](https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/) can be found at the following link: (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/)

Reopener

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

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

The Central Valley Water Board's rescission of prior waste discharge requirements and/or monitoring and reporting orders does not extinguish any violations that may have

occurred during the time those waste discharge requirements or orders were in effect. The Central Valley Water Board reserves the right to take enforcement actions to address violations of prior prohibitions, limitations, specifications, requirements, or provisions of rescinded waste discharge requirements or orders as allowed by law.