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CENTRAL VALLEY REGION

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TENTATIVE WASTE DISCHARGE REQUIREMENTS ORDER
R5-2024-XXXX



ORDER INFORMATION

Order Type(s): Waste Discharge Requirements (WDRs)
Status: Tentative
Program: Non-15 Discharge to Land
Region 5 Office: Fresno
Discharger(s): Olam Food Ingredients
Facility: Hughson Nut Processing Facility
Address: 11173 Mercedes Ave, Livingston, CA 95334
County: Merced County
Parcel Nos.: 140-019-075
CIWQS Place ID: 882552
Prior Order(s): None

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 **XX December** 2024.

PATRICK PULUPA, Executive Officer

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OLAM FOOD INGREDIENTS
HUGHSON NUT PROCESSING FACILITY
MERCED COUNTY
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GLOSSARY

APN	assessor's parcel number
bgs	below ground surface
BOD ₅	[5-day] biochemical oxygen demand at 20 degrees Celsius
BPTC	best practical treatment or control
CEQA	California Environmental Quality Act, Public Resources Code section 21000 et seq
CIP	clean-in place
CIMIS	California Management Information Systems
CV-SALTS	Central Valley Salinity Alternatives for Long-Term Sustainability
DO	dissolved oxygen
DWR	Department of Water Resources
EC	electrical conductivity
FDS	fixed dissolved solids
FEMA	Federal Emergency Management Agency
gal	gallons
gpd	gallons per day
lb	pounds
lb/ac/day	pounds per acre per day
LAAs	land application areas
MCL	maximum contaminant level
MG[D]	million gallons [per day]
MGY	million gallons per year
mg/L	milligrams per liter
MRP	Monitoring and Reporting Program
msl	mean sea level
MUN	municipal
N	nitrogen
NA	not applicable or not available
NCP	Nitrate Control Program
ND	not detected or non-detect

TENTATIVE WDRS R5-2024-XXXX
OLAM FOOD INGREDIENTS
HUGHSON NUT PROCESSING FACILITY
MERCED COUNTY
GLOSSARY

NTU	nephelometric turbidity units
NPDES	National Pollutant Discharge Elimination System
OAL	Office of Administrative Law
P&O Study	Prioritization and Optimization Study of the Salt Control Program
RL	reporting limit
RWD	Report of Waste Discharge
SCP	Salt Control Program
SERC	State of Emergency Response Commission
sMCL	secondary maximum contaminant level
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
TKN	total Kjeldahl nitrogen
TSS	total suspended solids
USEPA	United States Environmental Protection Agency
WDRs	Waste Discharge Requirements
WQOs	Water Quality Objectives
µg/L	micrograms per liter
µmhos/cm	micromhos per centimeter

FINDINGS

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

Introduction

1. Olam Food Ingredients (OFI) owns and operates an existing nut processing facility located at 11173 Mercedes Ave, Livingston, CA in Merced County. The Hughson Nut Processing Facility (Facility), which includes the processing area, wastewater pond, and land application areas (LAAs) are located on Assessor Parcel Number (APN) 140-190-075, within Section 18, Township 6 South, Range 12 East, Mount Diablo Base and Meridian (MDB&M) as shown on **Attachment A** (Site Location Map) and **Attachment B** (Facility Location Map), which are attached hereto. Available Merced county tax records indicate the property is owned by OA Fresno Realty, LLC; however, OFI stated that OA Fresno Realty, LLC merged with Hughson Nut, Inc. on 5 October 2021. OFI acquired Hughson Nut, Inc. in 2019; therefore, OFI owns the land, as well as the Facility, and is hereafter referred to as Discharger.
2. The Facility is not currently regulated by Waste Discharge Requirements (WDRs). WDRs are needed for this Facility to ensure the discharge complies with current water quality plans and policies. According to the earliest available construction records, the Facility has existed since at least 1983. In 2002, APB Partners, the previous owners of Hughson Nut, Inc., acquired the facility, which was used for nut processing. As previously stated, OFI acquired Hughson Nut, Inc. in 2019.
3. On 5 April 2023, Brown and Caldwell, submitted a Report of Waste Discharge (RWD) on behalf of the Discharger. The April 2023 RWD was incomplete, and an amended RWD was submitted on 15 December 2023.
4. As the Facility's owner and operator, the Discharger is responsible for compliance with the Waste Discharge Requirements (WDRs) prescribed in this Order.
5. The following materials are attached and incorporated as part of this Order:
 - a. Attachment A – Site Location Map
 - b. Attachment B – Facility Location Map
 - c. Attachment C – Process Wastewater Flow Diagram
 - d. Attachment D – Requirements for Groundwater Monitoring Well Installation Workplans and Monitoring Well Installation Reports
 - 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))
[https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/std_provisions/wdr-mar1991.pdf]
6. Also attached is **Monitoring and Reporting Program (MRP) R5-2024-XXXX**, which requires monitoring and reporting for discharges regulated under these WDRs. The Discharger shall comply with the MRP, and any subsequent revisions thereto, as ordered by the Executive Officer or adopted by the Central Valley Water Board.

Facility and Discharges

7. The Discharger processes whole almonds and macadamia nuts at the Facility, which is located on a 27-acre property northeast of the City of Livingston. The Facility property is owned and operated by OFI and includes a 7-acre LAA, which is planted in almonds. Operations at the Facility include sorting, sizing, pasteurization, and packaging. Nut hulling is performed prior to arriving at the site. The Facility receives 50,000 tons per year of raw almonds and macadamia nuts, and 23,000 tons of raw nuts pass through the pasteurization process each year. The remaining 17,000 tons of raw nuts are packaged or shipped to another facility for further processing. The Facility generates approximately 2.5 million gallons per year (MGY) of process wastewater.
8. Process wastewater is generated from boiler steam/condensate during the pasteurization process, equipment cleaning, and water softener discharge. The main processing season is from August through December; however, according to the Discharger, process wastewater flows are expected to be consistent throughout the year. A process flow diagram of the wastewater collection and treatment process is shown in **Attachment C**, which is attached hereto.
9. Boiler blowdown occurs twice per day, once in the morning and once in the afternoon. A five-hour sanitation washdown of processing facilities and equipment occurs every Friday. Once a month, OFI conducts an eight-hour allergen change washdown, and the water softener discharges automatically based on measured conductivity. Process wastewater is collected via floor drains that flow to a covered underground sump prior to being pumped to an unlined pond for storage. Wastewater stored in the pond is then sent to the LAA for irrigating seven acres of almonds.
10. The Discharger began monitoring process wastewater flows to the storage pond in January 2022. During 2022, the average daily flow was approximately 5,400 gallons per day (gpd), with a total annual flow of about two million gallons. Estimated peak month process wastewater flows from each source are presented in **Table 1** below.

Table 1 - Peak Month Wastewater Flows

Source	Monthly Flow (gallons)	Daily Flow (gpd)
Boiler Steam/Condensate	13,070	422
Equipment Wash water	235,260	7,587
Water Softening Discharge	13,070	422

11. According to the RWD, minimal solids are generated from the manufacturing and pasteurization process, and process wastewater is not screened prior to discharge into the storage pond. The storage pond is not currently dredged, and no solids are removed from the pond. These WDRs include Discharge Specification F.11 requiring the Discharger to monitor the solids accumulation in process wastewater pond on an annual basis and requires the Discharger to remove sludge as necessary to maintain adequate storage capacity.
12. The unlined storage pond will be used to store process wastewater for disposal by evaporation/percolation, and flood irrigation onto the LAA. Percolation from the storage pond is expected to be reduced due to long term solids accumulation on the bottom of the pond. Estimated percolation from the storage pond is approximately 0.9 inches per month. The storage pond has a total capacity of one acre-foot, however, the usable capacity considering two feet of freeboard is 193,900 gallons. Given the quality of the wastewater discussed below, this Order includes a time schedule requiring the Discharger to install/develop a groundwater monitoring well network to monitor groundwater quality beneath the pond (Provision J.5).

Table 2 - Process Wastewater Storage Pond Summary

Parameter	Units	Storage Pond
Width	Feet	84
Length	Feet	85
Depth	Feet	6
Berm Height	Feet	3.3
Top Surface Area	Square Feet	7,175
Volumetric Capacity	Gallons	193,900

13. According to the RWD, OFI does not regularly apply process wastewater to land but can pump stored process wastewater from the storage pond to the LAA using a portable pump and hose. Supplemental irrigation from an irrigation well will be applied using a sprinkler irrigation system that will be managed to prevent runoff from the LAA. There is currently no tailwater return system. The almonds are grown without a cover crop and harvested once a year, in the summer. According

to the Western Fertilizer Handbook, Eighth Edition, the annual nitrogen uptake rate for almonds is approximately 200 lbs/acre.

14. Process water effluent grab samples were collected from the storage pond in March and April of 2020, and from the wastewater sump (pit) during normal operations in January and August of 2022. Process wastewater samples consisting of boiler blow down and sanitation wastewater were also collected in January and August of 2022. A total of 15 process wastewater samples were collected from these locations at the Facility. The average process water constituent concentrations and range of concentrations from the sampling activities are summarized in **Table 3**.

15. According to the Discharger, one sample collected from the wastewater sump pit during normal operations on 24 August 2022 resulted in elevated salinity data from the body of other available data. Because of the elevated salinity and low biochemical oxygen demand (BOD) concentration, Central Valley Water Board staff initially surmised that the 24 August 2022 sump pit sample results may be related to the water softener discharge; however, the Discharger could not confirm this and further stated that an attempt was made to sample during periods in which higher salinity concentrations were anticipated (i.e., following sanitation and boiler blowdown), but most of these samples resulted in salinity concentrations lower than typical “normal” operations samples. The wastewater sump pit results from the 24 August 2022 sample were excluded from average concentration calculations in the RWD because it was stated that the values were outliers, but they are presented separately in **Table 3** below.

Table 3 - Process Wastewater Quality

Constituent	Units	Average Concentration of all Sources (see 1 below)	Wastewater Pond Results (see 2 below)	August 2022 Results
Total Alkalinity (as CaCO ₃)	mg/L	175 (86-267)	235 (86 - 267)	94
Bicarbonate (as CaCO ₃)	mg/L	138 (29-267)	227 (190-267)	54
Carbonate (as CaCO ₃)	mg/L	105 (42-160)	9.4 (<1-45)	40
Arsenic	µg/L	8.9 (6.2-12)	--	7.2
BOD	mg/L	88.4 (11-290)	142 (23-290)	12
Chloride	mg/L	177 (8-360)	306 (250-360)	N/A
FDS	mg/L	536 (120-1,300)	814 (700-930)	4,900
TDS	mg/L	647	988	5,400

Constituent	Units	Average Concentration of all Sources (see 1 below)	Wastewater Pond Results (see 2 below)	August 2022 Results
		(220-1,400)	(780-1,100)	
TSS	mg/L	21.6 (9.2-43)	--	50
Iron (Dissolved)	mg/L	0.17 (<0.03-0.48)	0.29 (0.14-0.48)	<0.03
Manganese (Dissolved)	mg/L	0.03 (<0.01-0.06)	0.04 (0.02-0.05)	<0.01
Nitrate as N	mg/L	4.1 (<0.23-5.6)	0.2 (0.1-0.2)	3.6
TKN	mg/L	9.9 (<1-24)	15.3 (2.4-24)	3.6
Total Nitrogen	mg/L	10.5 (2.9-24)	15.4 (2.9-24)	3.6
pH	Std Units	8.8 (6.9-10.4)	7.7 (6.9-8.9)	9.1
Potassium (Dissolved)	mg/L	23.7 (3-54.8)	43 (13-55)	66
EC	µmhos/cm	994 (310-2,600)	--	10,000
Sodium (Dissolved)	mg/L	187 (34.9-490)	259 (241-271)	1,800
Sulfate	mg/L	33.3 (13-52)	37 (18-52)	N/A

1. The average concentration consists of a total of 14 grab samples collected between March 2020 to August 2022. The number in the parenthesis is the range of concentration of the samples collected.
 2. Five samples were collected from the process wastewater storage pond in March and April 2020.
-
16. According to the data's concentration range, the discharge may be high in biochemical oxygen demand (BOD), salts, and total nitrogen. In addition, average metals concentrations, such as arsenic, iron, and manganese, are near or just below the respective maximum contaminant level or secondary maximum contaminant level(s).
 17. The water balances submitted with the RWD demonstrated that the proposed annual flow limit of 2.5 MGY is less than the total crop demand for the LAA and that approximately 25.5 MGY of supplemental irrigation is needed. Both the normal and 100-year annual return water balance(s) included a ten percent leaching requirement, an irrigation efficiency of 80 percent, and assume no stormwater collected onsite is discharged to the storage pond or LAA.
 18. The normal-year and 100-year water balances show no surplus discharge to the

LAA beyond the irrigation capacity of the almond orchard will occur. During both normal-year and 100-year precipitation levels, supplemental irrigation water, ranging from 50,000 gallons to 25.5 million gallons, will be needed for crop production throughout the year.

19. At the average daily process water flow rate of 7,000 gpd, the capacity of the process wastewater storage pond provides approximately 27 days of storage without accounting for losses through percolation. The maximum average daily flow reported is 8,000 gpd. Using the *Irrigation Management for Almond Trees Under Drought Conditions* by Terry L. Prichard of University of California Davis, the RWD conservatively estimated a peak bi-weekly application of four inches of water use during the warm summer months. An application of four inches will require approximately 0.09 acres per day, much less than the seven acres available on the LAA. The storage capacity will allow additional flexibility for wintertime applications, and if necessary, plant production can be shut down until rain events cease.
20. The potential nitrogen, salt, and BOD loadings from OFI's discharge to the LAA are presented in the RWD. The Discharger assumes denitrification losses of 50 and 20 percent for flood irrigation of process wastewater and sprinkler irrigation of supplemental irrigation water, respectively. As shown in **Table 4**, the nitrogen balance indicates a net negative balance after crop uptake (i.e., the discharge alone will not provide enough nitrogen for the crop needs and additional fertilizer applications are needed).

Table 4 - Estimated Annual Nitrogen Loading Rate (LAA)

Crop	Effluent and Supplemental Irrigation Loading (lbs/ac/yr)	Crop Uptake (lbs/ac)	Balance (lbs/ac/yr)
Almonds	85	130	-45

21. Utilizing the process wastewater pond concentration data, around 80 percent of the TDS is inorganic, which is represented as FDS. The organic portion of TDS may rapidly break down in the soil profile as compared to the FDS portion of TDS.
22. The RWD also provides estimated annual TDS and FDS loadings from process and supplemental water and flow-weighted average concentrations for current operations. The flow-weighted average concentration for TDS and FDS were estimated to be 279 mg/L, and 207 mg/L, respectively. The combined discharge will add approximately 6,900 pounds of salt per year (calculated using FDS) as summarized in **Table 5**.

Table 5 - Estimated Annual Salt Loading Rate (LAA)

Source	Total Annual Flow (MG/yr)	Flow Weighted Average Concentration (mg/L)		Average Concentration (mg/L)		Annual Loading (lbs/ac/yr)	
		TDS	FDS	TDS	FDS	TDS	FDS
Process Wastewater	2.5	279	207	988	814	2,943	2,425
Supplemental Irrigation Water	25.5	279	207	210	147	6,378	4,465

23. BOD loading calculations are presented in the RWD for the LAA and indicate that the instantaneous BOD loading is estimated to be 0.9 lbs/ac/day. Due to the low instantaneous BOD loading rate, irrigation cycle average BOD loading is expected to be low as well. Also, supplemental irrigation water is expected to have a negligible BOD concentration compared to process wastewater and is anticipated to reduce the BOD loading to the LAA when supplemental irrigation water is applied to the orchard.

24. According to the RWD, all sanitary wastes produced by workers at the facility are treated separately by five onsite septic tank and leach field systems and remain separate from the process wastewater. The Facility's septic system is not permitted by the Central Valley Water Board, and Merced County (County) records indicate that a permit was issued for the Facility in the 1980s. While the County does not have more recent records for the septic system, it is likely that the system may be covered under the County's Local Agency Management Program (LAMP) as an existing onsite wastewater treatment system (Tier 0), in accordance with the State Water Board's [Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems](https://www.waterboards.ca.gov/water_issues/programs/owts/docs/owts_policy.pdf) (https://www.waterboards.ca.gov/water_issues/programs/owts/docs/owts_policy.pdf).

Site-Specific Conditions

Topography, Climate, and Land Use

25. The Facility and LAA are in the northern portion of the San Joaquin Valley. Local land use is agriculture. The site is surrounded by farmland. Topography in the area is generally level with an approximate elevation of 154 feet above mean sea level.

26. The Facility is located within Zone X as currently defined by Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, which indicates an area that is outside the 0.2 percent annual chance floodplain.

27. Soils within the vicinity are classified by the Natural Resource Conservation Service (NRCS) as predominantly Delhi sand, with a slope of 0 to 3 percent, and some Atwater loamy sand, with a slope of 0 to 3 percent. Delhi soils are very deep and somewhat excessively drained soils that formed in wind modified material weathered from granitic rock. Delhi soils have negligible slow runoff and rapid permeability, and the saturated hydraulic conductivity of the most limiting layer is 5.95 to 19.98 inches/hour.
28. A soil boring log was developed during drilling activities in October 2022 for on-site groundwater characterization. Soil encountered to 80 feet (ft) below ground surface (bgs) is mainly sand and silt.
29. The climate in the Central Valley is characterized by hot dry summers and mild winters. The rainy season generally extends from November through April. Occasional rains occur during the spring and fall months, but summer months are dry. Based on publications from the Department of Water Resources and the Western Regional Climate Center, annual rainfall for the Turlock area averages about 11.7 inches, with a 100-year return period wet year rainfall of about 26.6 inches. From the California Irrigation Management System (CIMIS), the mean referenced evapotranspiration rate (ET_o) for the nearby Denair station is about 55.1 inches per year.
30. Stormwater at the Facility is collected and discharged to a stormwater pond onsite, while the remaining portion is discharged to the Ward Canal. OFI is coordinating with Merced Irrigation District on their future plans to discharge all stormwater from the Facility into the canal.

Facility Source Water

31. Supply water for processing activities is pumped from one production well located onsite, shown in **Attachment B**. According to the Discharger, construction details of the production well are unavailable. Water quality of the production well was collected from the Environmental Protection Agency’s Safe Drinking Water Information System over a period ranging from 2004 to 2022 and averaged for each constituent. Samples were not collected from an onsite irrigation well, as the quality is expected to be similar to the production well. A summary of the production well water quality is shown in **Table 6**.

Table 6 - Source Water Quality

Constituent	Units	Average Concentration	Concentration Range
Alkalinity (as CaCO ₃)	mg/L	78	75 - 81
Bicarbonate (as CaCO ₃)	mg/L	78	75 - 81
Carbonate (as CaCO ₃)	mg/L	<1	<1
Arsenic	µg/L	6.5	6.1 – 6.9
Chloride	mg/L	8.3	8.3

Constituent	Units	Average Concentration	Concentration Range
TDS	mg/L	210	210
Iron (Dissolved)	mg/L	<0.02	<0.02
Manganese (Dissolved)	mg/L	<0.01	<0.01
Nitrate as N	mg/L	2.8	2.6 – 3.2
pH	Std Units	7.8	7.6 – 7.9
EC	µmhos/cm	223	220 – 230
Sodium (Dissolved)	mg/L	34	33 - 35
Sulfate	mg/L	10	10

Groundwater Conditions

32. Currently, there are no active groundwater monitoring wells at the Facility or the LAA. However, Hughson proposes to install a groundwater monitoring well network consisting of three monitoring wells. Monitoring wells are to be installed in the vicinity of the Facility and the LAA. According to the Department of Water Resources (DWR) Sustainable Groundwater Management Act (SGMA) Data Viewer, depth to groundwater from Spring 2023 to Fall 2023 was between 90 to 110 ft bgs. Groundwater generally flows from the southwest to the northeast, towards the Merced River. Groundwater quality underlying the Facility is expected to be of similar quality to the water quality data provided in Table 4.
33. Regional groundwater quality data can be found on the State Water Resources Control Board’s (State Water Board) [Groundwater Ambient Monitoring Program \(GAMA\) database](https://www.waterboards.ca.gov/gama/) (<https://www.waterboards.ca.gov/gama/>). A search of the GAMA database identified several wells in the vicinity of the Facility and LAA. Based on the available data, groundwater quality in the vicinity of the Facility is of relatively good quality with respect to salinity and potassium. Available nearby data for select constituents are provided in **Table 7** below.

Table 7 - Regional Groundwater Quality

Constituents	WQO (See Note 1)	Well 1 USGS37255 9120405601	Well 2 USGS37245 4120405701	Well 3 CA2400307 001001	Well 4 CA2410004 008008
Well Depth, ft bgs	---	60	211	---	242
Sample Date	---	1965	1987	2014	2022
pH, std units	6 – 8 (USEPA sMCL)	8.4	7.5	---	---
EC, µmhos/cm	900 (sMCL)	423	439	188	570

Constituents	WQO (See Note 1)	Well 1 USGS37255 9120405601	Well 2 USGS37245 4120405701	Well 3 CA2400307 001001	Well 4 CA2410004 008008
Nitrate as N, mg/L	10 (primary MCL)	---	12	1.2	8.5
Sodium, mg/L	69 (Ag)	30	---	11	49
Potassium, mg/L	---	---	4.7	7.5	---
Sulfate, mg/L	250 (sMCL)	---	33	3.9	49
Chloride, mg/L	250 (sMCL)	33	6.5	2.8	66
Manganese, µg/L	50 (sMCL)	---	1	<20	<20
Iron, µg/L	300 (sMCL)	---	4	<100	<100

34. OFI contracted with Confluence Technical Services, Inc. (Confluence) in October 2022 to conduct three shallow boring investigations to first encountered groundwater and collect site-specific groundwater quality data using a direct push rig. However, at the first investigation location east of the storage pond, Confluence advanced to a depth of more than 80 ft bgs without encountering groundwater, which was the extent of the direct push rig's capability.
35. OFI provided a summary of groundwater conditions at the Foster Poultry Farms Livingston Chicken Processing Complex Wastewater Treatment Plant (regulated by WDRs Order R5-2009-0086), which is located approximately two miles from the site. Groundwater data collected between 1959 and 2001 from the DWR wells in proximity to the Foster Poultry site indicates ambient first-encountered groundwater quality is good to excellent with an EC less than 500 µmhos/cm.
36. Based on available groundwater data:
 - a. Groundwater quality is good quality with regards to salinity, with EC levels below 500 µmhos/cm.
 - b. Nitrate (as nitrogen) concentration is generally below the primary MCL of 10 mg/L, with the exception of USGS372454120405701, which is located within two miles of the Facility and LAA.
 - c. Manganese concentration does not exceed 0.05 mg/L, the sMCL.
 - d. Iron concentration does not exceed the MCL of 0.3 mg/L, the sMCL.

Legal Authorities

37. This Order is adopted pursuant to Water Code section 13263, subdivision (a),

which provides 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 ... 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 [Water Code] Section 13241.

38. 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. (Water Code, section 13263, subd. (g).)
39. This Order and its associated Monitoring and Reporting Program (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.

40. 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

41. 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.”

Beneficial Uses of Water

42. 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 Water Code, section 13241 et seq.).

43. The Facility is within the Merced Hydrologic Area (No. 535.80), as depicted on interagency hydrologic maps prepared by the DWR in 1986. As indicated in the Basin Plan, the beneficial uses of the Merced River, as a tributary of the San Joaquin River, are municipal and domestic supply (MUN); agricultural supply (AGR), including stock watering; industrial service supply (IND); industrial process supply (PRO); hydropower generation (POW); water contact recreation (REC-1), including canoeing and rafting; non-contact water recreation (REC-2); warm freshwater habitat (WARM), cold freshwater habitat (COLD); migration of aquatic organisms (MIGR), warm and cold; spawning, reproduction, and/or early development (SPWN), warm and cold; and wildlife habitat (WILD)
44. The Basin Plan designates the beneficial uses of groundwater as municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PRO).

Water Quality Objectives

45. The Basin Plan establishes narrative WQO's for chemical constituents, taste and odors, and toxicity in groundwater. It also sets forth a numeric objective for total coliform organisms.
46. 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.
47. The Basin Plan's narrative WQO's for chemical constituents require MUN designated waters to meet the MCLs specified in California Code of Regulations, Title 22 (Title 22), specifically sections 64431, 64444, and 64449. 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.
48. The narrative toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses.
49. 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.
50. 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 $\mu\text{mhos/cm}$, if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop. The list of crops in Finding 13 is not intended as a definitive inventory of crops that are or could be grown in the area affected by the discharge.

Salt Control Program

51. 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 (Resolution R5-2018-0034). The Basin Plan amendments became effective on 17 January 2020 and were revised by the Central Valley Water Board in 2020 with [Resolution R5-2020-0057](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). The revisions to the Basin Plan amendments became effective on 10 November 2021.
52. Under the Salt Control Program, dischargers that are unable to comply with the stringent salinity requirements may instead, to the extent, reasonable, feasible and practicable (and while accounting for conservation and drought, salinity levels in the water supply source, and some appropriate increment of growth), be subject to performance-based requirements as determined appropriate by the Central Valley Water Board, and participate in a basin-wide effort known as the Prioritization and Optimization Study (P&O Study) to develop a long-term salinity strategy for the Central Valley. On 13 June 2023, the Discharger submitted a Notice of Intent and elected to participate in the P&O Study and was issued **CV-SALTS ID 3628**. 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 **1,000 mg/L for FDS** as an annual average on the discharge of wastewater (process wastewater concentration in the storage pond) sent to the LAAs. The Performance Based Salinity Limit is based on 120 percent of the average wastewater pond FDS concentration. Available data from similar nut processing facilities, depth to first encountered groundwater, and current groundwater quality data were considered in developing the limit. This limit is intended to ensure that the Facility's discharge with respect to salinity does not increase over time.

Nitrate Control Program

53. The Nitrate Control Program is a prioritized program. The Facility is within Groundwater Basin 5-022.04 (San Joaquin Valley – Merced), which is a Priority 2 Basin. Notices to Comply were issued to dischargers in Priority 2 Basins in December 2023 and dischargers have until February 2025 to respond to the notice. These notices provided dischargers with a choice to participate in an individual permitting approach (Pathway A) or in a collective permitting approach (Pathway B). The Discharger has indicated they intend to participate in the Pathway B Management Zone Permitting Approach for Groundwater Basin 5.022.04. Under the collective approach, dischargers jointly form “Management Zones” that fulfill the requirements of the Nitrate Control Program.
54. 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. As such, 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

55. State Water Board Resolution 68-16, *Statement of Policy with Respect to Maintaining High Quality Waters of the State* (Antidegradation Policy), which is incorporated as part of the Basin Plan, prohibits the Central Valley Water Board from authorizing degradation of “high quality waters” unless it is shown that the discharge(s) causing such degradation will be consistent with the maximum benefit to the people of California, will not unreasonably affect beneficial uses, and will not result in water quality worse than applicable WQOs. Any discharge to high quality waters must meet requirements that will result in the best practicable treatment or control (BPTC) necessary to assure that pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the State will be maintained.
56. 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.
57. Given the availability of pre-1968 water quality information, compliance with the

Antidegradation Policy will be determined based partly on pre-1968 water quality, as discussed below (Antidegradation Baseline).

58. For the purposes of this Order, constituents/parameters in effluent with the potential to degrade groundwater and/or affect beneficial uses include BOD, salts (represented by chloride, sodium, EC, and FDS), and total nitrogen. The table below provides a comparison of average concentrations of these constituents of concern in the process wastewater pond, and single samples of first encountered groundwater from several nearby wells. Water quality concerns associated with this Facility include salinity and total nitrogen as summarized below.

Table 8 - Constituents with Potential for Degradation

Parameters (see 1 below)	Process Wastewater Pond Quality	Well 1 USGS37255 9120405601	Well 2 USGS372454 120405701	Well 3 CA2400307 001001	Well 4 CA241000 4008008	WQO (reference)
BOD	142	---	---	---	---	---
EC (µmhos/cm)	---	423	439	188	570	900 (sMCL)
Chloride	306	33	6.5	2.8	66	250 (sMCL)
Sodium	259	30	---	11	49	69
FDS	814	---	---	---	---	---
Nitrate as N	0.2	---	12	1.2	8.5	10 (MCL)
Total Nitrogen	15.4	---	---	---	---	---

1. Units are in mg/L unless otherwise specified.

- a. **Salinity (EC and FDS).** The limited groundwater data for the site shows groundwater is good quality with regards to salinity constituents. FDS is the non-volatile fraction of TDS that has the potential to percolate or leach into shallow groundwater. Therefore, a conservative measure for salinity in the process wastewater is FDS. The observed average process wastewater TDS concentration exceeds the drinking water Secondary Maximum Contaminant Level (sMCL).

The RWD estimates discharge to the seven-acre LAA will result in an estimated annual salt loading of approximately 6,900 pounds as FDS per acre. The Discharger implements best management practices to minimize impacts from salts including blending the discharge with irrigation water. Furthermore, the Discharger has elected to participate in the P&O Study under the Salt Control Program. This Order requires continued compliance with Salt Control Program (i.e., continued participation in the P&O Study). To help ensure the Discharger continues to implement salinity reduction measures and protect groundwater

quality, this Order establishes a performance-based salinity limit of 1,000 mg/L for FDS as a flow-weighted annual average. The purpose of this limit is to ensure the Discharger is implementing appropriate performance-based measures and is intended to prevent increases of FDS concentrations in shallow groundwater beyond current conditions.

- b. Nitrate.** Based on the limited available groundwater data for the site, groundwater varies with regard to nitrate. Available effluent data indicates process wastewater 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).

For nutrients such as nitrate as nitrogen, the potential for groundwater degradation depends on wastewater quality, crop uptake, 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.

Nitrogen loading rates to the LAA are expected to be relatively low based on the annual proposed maximum flow of 2.5 MG of process water applied to the LAA, and the average total nitrogen concentration of 15 mg/L. The annual nitrogen load from process wastewater is estimated to be 45 lbs/ac/year. Using an estimated supplemental irrigation flow of 25.5 MG per year (based on the normal year water balance) and an average total nitrogen concentration of 2.8 mg/L, the annual nitrogen load from supplemental irrigation water is estimated to be 86 lbs/ac-year. After denitrification, nitrogen loading rates are estimated to be 16 lbs/ac-year from process water and 69 lbs/ac/year from supplemental irrigation water. The expected cumulative annual total nitrogen load to the LAA of 85 lbs/ac-year is much less than the nitrogen uptake rate of almond orchards, estimated to be 130 lbs/ac/year.

For the protection of groundwater quality, this Order requires the application of nitrogen from wastewater to be at reasonable agronomic rates. This Order requires effluent monitoring for nitrate and participation in the Merced Management Zone activities to comply with the Nitrate Control Program. Furthermore, this Order requires the Discharger to install/develop a groundwater monitoring well network to evaluate groundwater conditions beneath the pond and LAA (Provision J.5).

- c. Organics.** Organic loading rates of the existing discharge are low, and the discharge is not expected to degrade groundwater due to organic loading. BOD loading is estimated to add a max daily loading of about 0.9 lbs/ac/day. Nevertheless, this Order requires the Discharger to apply wastewater to the LAAs at agronomic rates and limits the cycle average BOD₅ loading rate not to exceed 50 lbs/ac/day. In addition, this Order requires monitoring of BOD₅ in the wastewater and monitoring of iron and manganese in groundwater. Therefore, the discharge should not cause odors or nuisance conditions, mobilization of

metal constituents in soil, or significantly degrade groundwater quality beyond current conditions with constituents related to organic loading.

59. The Discharger implements, or will implement, as required by this Order the following measures, which the Central Valley Water Board has determined constitutes BPTC. These measures will minimize the extent of water quality degradation resulting from the Facility's discharges:
 - a. Wastewater application at agronomic rates;
 - b. Compliance with a BOD cycle average loading rate of 50 lbs/acre/year;
 - c. Development of a groundwater monitoring well network to evaluate groundwater quality beneath the wastewater pond, as described by Provision J.5;
 - d. Compliance with a Performance-Based Effluent Limitation for FDS; and
 - e. Participation and compliance with the Salt and Nitrogen Control Plans.
60. The minimization of environmental impacts and maintenance of economic prosperity of Central Valley communities and associated industry is of maximum benefit to the people of the state and provides justification for allowing 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.
61. The Facility contributes to the economic prosperity 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. 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.
62. Based on the foregoing, the adoption of this Order is consistent with the Antidegradation Policy.

California Environmental Quality Act

63. As previously discussed, these WDRs only authorize flows reflecting existing operations at the Facility. Therefore, the issuance of this Order, which prescribes requirements 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 California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq., pursuant to California Code of Regulations, title 14, section 15301 (CEQA Guidelines).
64. 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, which are exempt from CEQA procedural requirements pursuant to California Code of Regulations, title 14, section 15304 (CEQA Guidelines).

Other Regulatory Considerations

Water Code Section 13149.2

65. 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 through its notice and comment procedures. Pursuant to Water Code section 13149.2, and as discussed in the following finding, 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 previously raised by interested persons with regard to those impacts.
66. 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 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 Merced County: 1) active participation in and compliance with the Salt Control Program and compliance with a performance-based salinity limit, and 2) application of wastewater to crops at agronomic rates with irrigation of good quality supplemental water as needed. These measures are implemented by these WDRs.

Human Right to Water

67. 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 section 106.3, subd. (b)), it nevertheless promotes the policy by requiring discharges to meet maximum contaminant levels (MCLs) for drinking water (excluding salinity), which are designed to protect human health and ensure that water is safe for

domestic use. For salinity, this Order requires compliance with the Salt Control Plan. 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

68. 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-C** 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 "C" - Any discharger for which waste discharge requirements have been prescribed pursuant to Section 13263 of the Water Code not included in Category A or Category B as described above. Included are dischargers having no waste treatment systems or that must comply with best management practices, dischargers having passive treatment and disposal systems, or dischargers having waste storage systems with land disposal.

Title 27 Exemption

69. This Order, which prescribes WDRs for discharges of 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)).

Stormwater

70. State Water Board Order 2014-0057-DWQ (NPDES General Permit CAS000001) specifies waste discharge requirements for discharges of storm water associated with industrial activities and requires submittal of a Notice of Intent by all affected industrial dischargers. Activities at the facility fall under the Standard Industrial Classification (SIC) Code 0723 for Crop Preparation for Market. All water associated with industrial activities at the facility is managed onsite in a storm water pond and the Discharger is working with MID to discharge the stormwater to the Ward Canal. Water associated with industrial activities will not be allowed to discharge off-site or into surface waters. Based on SIC Code and management of the water, enrollment, and coverage under General Order 2014-0057-DWQ is not required at this time.

Groundwater Well Standards

71. 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

72. Statistical data analysis methods outlined in the US EPA's Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, 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

73. This Order is strictly limited in scope to those waste discharges, activities, and processes described and expressly authorized herein.
74. 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 RWD per Water Code section 13260.
75. 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.
76. 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

77. All of the above, and the supplemental information in the attached Information Sheet (incorporated herein), was considered in establishing the following conditions of discharge.
78. 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, section 13167.5)
79. At a public meeting, the Central Valley Water Board heard and considered all comments pertaining to the discharges regulated under this Order.
80. The Central Valley Water Board will review and revise the WDRs in this Order as necessary.

REQUIREMENTS

IT IS HEREBY ORDERED that pursuant to Water Code sections 13263 and 13267, Olam Food Ingredients, its agents, successors, and employees shall comply with the following:

A. Standard Provisions

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 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. Wastewater treatment, storage, and disposal shall not cause pollution, or a nuisance as defined by Water Code section 13050
4. Discharge of waste at a location or in a manner different from that described in the Findings is prohibited.
5. Waste constituents shall not be discharged or otherwise released from the Facility (including during treatment and storage activities) in a manner that results in:
 - a. Violations of the Groundwater Limitations of this Order; or
 - b. Conditions of "nuisance" or "pollution," as defined per Water Code section 13050.
6. Storage of residual solids on areas not equipped with a means to prevent storm water infiltration, or a paved leachate collection system is prohibited.

C. Conditional Discharge Prohibitions

1. During Phase I of the Salt Control Program, the Discharger is prohibited from discharging salts at concentrations exceeding the salinity numeric value of 700 $\mu\text{mhos/cm}$ (as a monthly average) unless the Discharger is implementing the Phase I requirements of the Salt Control Program (i.e., full participation in the P&O Study).
2. The Discharger is prohibited from discharging nitrate and other forms of nitrogen speciation (e.g., total inorganic nitrogen and total Kjeldahl nitrogen) unless the Discharger is implementing the requirements of the Nitrate Control Program.

D. Flow Limitation

1. Discharges of process wastewater to the LAAs shall not exceed the following:

Table 9 - Flow Limitations

Flow Measurement	Flow Limit
Maximum Daily Process Wastewater Flow	8,500 gpd
Total Annual Flow (1 January through 31 December)	2.5 MGY

E. Performance Based Salinity Limit

1. The annual average effluent concentration of FDS in the storage pond shall not exceed **1,000 mg/L**. As discussed in Finding 52, this FDS limit is a performance-based salinity limit since the Discharger has elected to participate in the P&O Study. As part of the Annual Monitoring Report required per the MRP, the Discharger shall evaluate the annual average effluent FDS concentration to the performance-based salinity limit. If the Facility's discharge exceeds the limit, the Discharger shall submit a Performance-Based Salinity Limit Evaluation Report as described in the Provisions Section J.6 of the WDRs.

F. Discharge Specifications

1. Waste discharges shall remain in the wastewater pond, storm water pond, within the LAAs, and authorized containment structures.
2. All systems and equipment shall be operated to optimize discharge quality.
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. 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.
5. As a means of ensuring compliance with Discharge Specification F.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 DO concentrations in the pond(s) is below 1.0 mg/L for any 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 of the first date of violation.

6. 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.
7. 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.
8. On or about **1 October** of each year, available capacity shall at least equal the volume necessary to comply with Discharger Specifications F.6 and F.7.
9. 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.
10. 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.

11. The Discharger shall monitor residual solids accumulation in the pond(s) annually and shall periodically remove solids as necessary to maintain adequate storage capacity.
12. Storage of residual solids on areas not equipped with means to prevent storm water infiltration, or a paved leachate collection system is prohibited.

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. BOD₅ loading to the LAAs, calculated as a cycle average as determined by the methods described in the attached MRP, shall not exceed 50 pounds per acre per day.
2. The Discharger shall ensure that all water is applied and distributed with reasonable uniformity across each LAA block.
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 Discharger.
4. Crops shall be grown on the LAAs. Crops shall be selected based on nutrient uptake, consumptive use of water, irrigation requirements to maximize crop uptake of water and nutrients.
5. Application of waste constituents to the LAAs shall be at reasonable agronomic rates
6. Hydraulic loading of combined effluent and supplemental irrigation water shall be managed to:
 - i. Provide water only when water is needed and in amounts consistent with crop needs;
 - ii. Maximize crop nutrient uptake;
 - iii. Maximize breakdown of organic waste constituents in the root zone; and
 - iv. Minimize the percolation of waste constituents below the root zone.

The Central Valley Water Board recognizes that some leaching of salts is necessary to manage salt in the root zone of the crops. Leaching shall be managed to minimize degradation and maintain or reduce, to the extent

practicable, concentrations of saline constituents and nitrate (and other forms of nitrogen speciation) in receiving waters.

7. The resulting effect of the discharge on soil pH shall not exceed the buffering capacity of the soil profile.
8. Land application of wastewater shall be managed to minimize erosion.
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 should be maintained free of emergent, marginal, and floating vegetation; and
 - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitos shall not be used to store process wastewater.
10. Irrigation of the LAAs shall occur only when appropriately trained personnel are on duty.
11. Discharge to the LAAs shall not be initiated when the ground is saturated. (e.g., during or after significant precipitation).
12. Any irrigation runoff (tailwater) shall be confined to the LAAs or returned to the process wastewater system and shall not enter any surface water drainage courses or surface waters.
13. 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. Groundwater Limitations

Release of waste constituents of the combined or individual waste streams from any treatment, storage, delivery system, or LAA associated with the Facility's discharges shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or natural background groundwater 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 provided the Discharger complies with Provision J.3.

2. Contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses, (e.g., by creating off-tastes and/or odor, producing detrimental physiological responses in human, plant, animal, or aquatic life [i.e., toxicity]).

I. Solids Disposal Specification

1. For the purpose of this Order, residual solids include organic matter removed by screens and filters and soil sediments removed during the treatment process. Residual solids mean organic processing byproducts such as leaves, twigs, hulls and shells, that will not be subject to treatment prior to disposal.
2. Residual solids shall be removed from any screens, pits, and ponds as needed to ensure optimal operation, prevent nuisance conditions, and maintain adequate storage capacity.
3. Any handling and storage of 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.
4. If removed from the site, solid waste and residual 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.
5. Any proposed change in residual solids use or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

J. Provisions

1. The Discharger shall comply with the separately issued **Monitoring and Reporting Program R5-2024-XXXX**, 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.
2. 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.

3. The Discharger shall comply with the applicable provisions of the Salt and Nitrate Control Programs adopted in Resolution R5-2018-0034 (as revised per Resolution R5-2020-0057) to address 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.
4. 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.
5. The Discharger shall install/develop and maintain a groundwater monitoring well network to monitor changes in groundwater quality associated with its discharge at the Facility.

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

Task	Description	Due Date
a.	<p>Submit a Groundwater Monitoring Workplan, for Executive Officer approval, to install/develop a groundwater monitoring well network at the Facility. At a minimum, the monitoring well network shall include one monitoring well up-gradient of the unlined pond to establish background groundwater quality and two downgradient monitoring wells.</p> <p>The Workplan shall include a timeline for installing the monitoring wells in accordance with the deadlines specified in this Order. Furthermore, the Workplan shall satisfy the information needs specified in the monitoring well installation section of Attachment D, <i>Requirements For Monitoring Well Installation Workplans And Monitoring Wells Installation Reports</i>. The monitoring wells shall comply with appropriate 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), and any more stringent standards adopted by local agencies pursuant to Water Code section 13801.</p>	<p>By 60 days from the adoption of this Order.</p>

Task	Description	Due Date
b.	The Discharger shall complete the installation of the groundwater monitoring well network in accordance with the approved Workplan submitted as required by Task J.5.a and commence groundwater monitoring as specified in Monitoring and Reporting Program R5-2024-XXXX.	No later than 120 days from Executive Officer approval of the Groundwater Monitoring Workplan.
c.	Submit a technical report detailing the installation of the monitoring well network and results of the initial sampling event. The technical report shall meet the requirements of the Monitoring Well Installation Report Section (Section 2) of Attachment D .	No later than 180 days from Executive Officer approval of the Groundwater Monitoring Workplan.

6. If the Facility's discharge exceeds the performance-based salinity limit specified in section E.1 the Discharger shall submit a **Performance-Based Salinity Limit Evaluation Report by 1 March of the following year**. The Report shall, at a minimum, include the following:
- i. An evaluation of the Facility's salinity effluent levels. This evaluation shall discuss any changes to the source water, any increased conservation efforts implemented, and any other changes to the operations that could have contributed to the increased salinity concentrations.
 - ii. If additional time is needed to investigate the source(s) of the salinity in the Facility's discharge, the Report shall include a detailed work plan describing what actions the Discharger will conduct (with completion dates) to investigate the source(s) of salinity and report its findings to the Central Valley Water Board. The findings from the investigations shall be submitted to the Central Valley Water Board no later than **1 December of the year following** the exceedance of the Performance Based Salinity Limit.
 - iii. The Report shall evaluate the potential impact the increased salinity concentrations could have on underlying groundwater and

downgradient users. If additional time is needed for this evaluation, the Report shall propose a submittal date (**no later than 1 December of the year following** exceedance of the Performance Based Salinity Limit).

7. 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.
8. 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.
9. 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.
10. The Discharger shall use the best practicable cost-effective control technique(s), including proper operation and maintenance, to comply with this Order.
11. 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.
12. 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.

section 11023), the Discharger shall also report the same information to the Central Valley Water Board within 15 days of the report to the SERC.

13. 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.
14. 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.
15. 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 1 March 1991 SPRRs 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.
16. 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 Compliance and Enforcement Unit to coordinate appropriate wastewater treatment, storage, and conveyance closure requirements.
17. 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.
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.

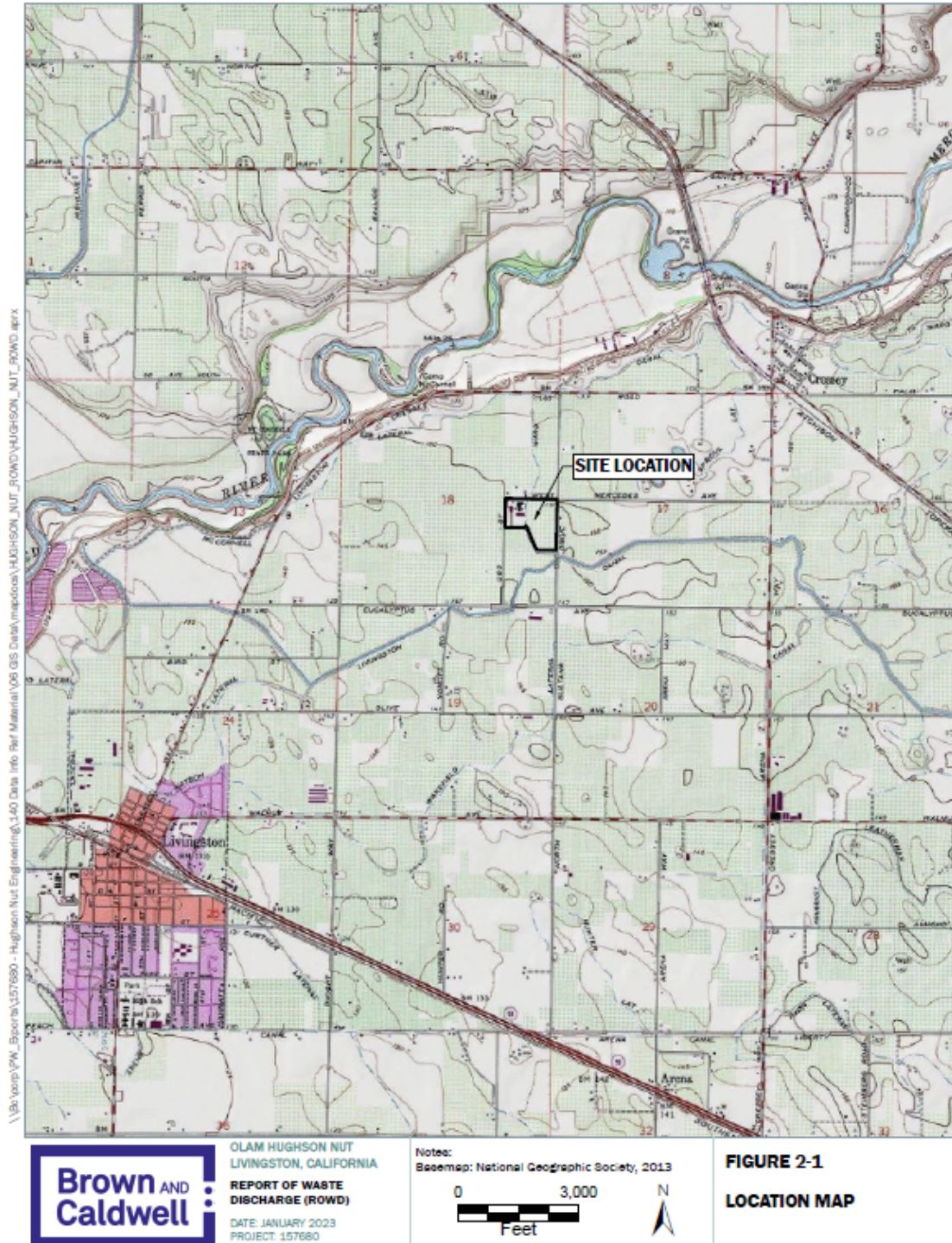
ENFORCEMENT

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

ADMINISTRATIVE REVIEW

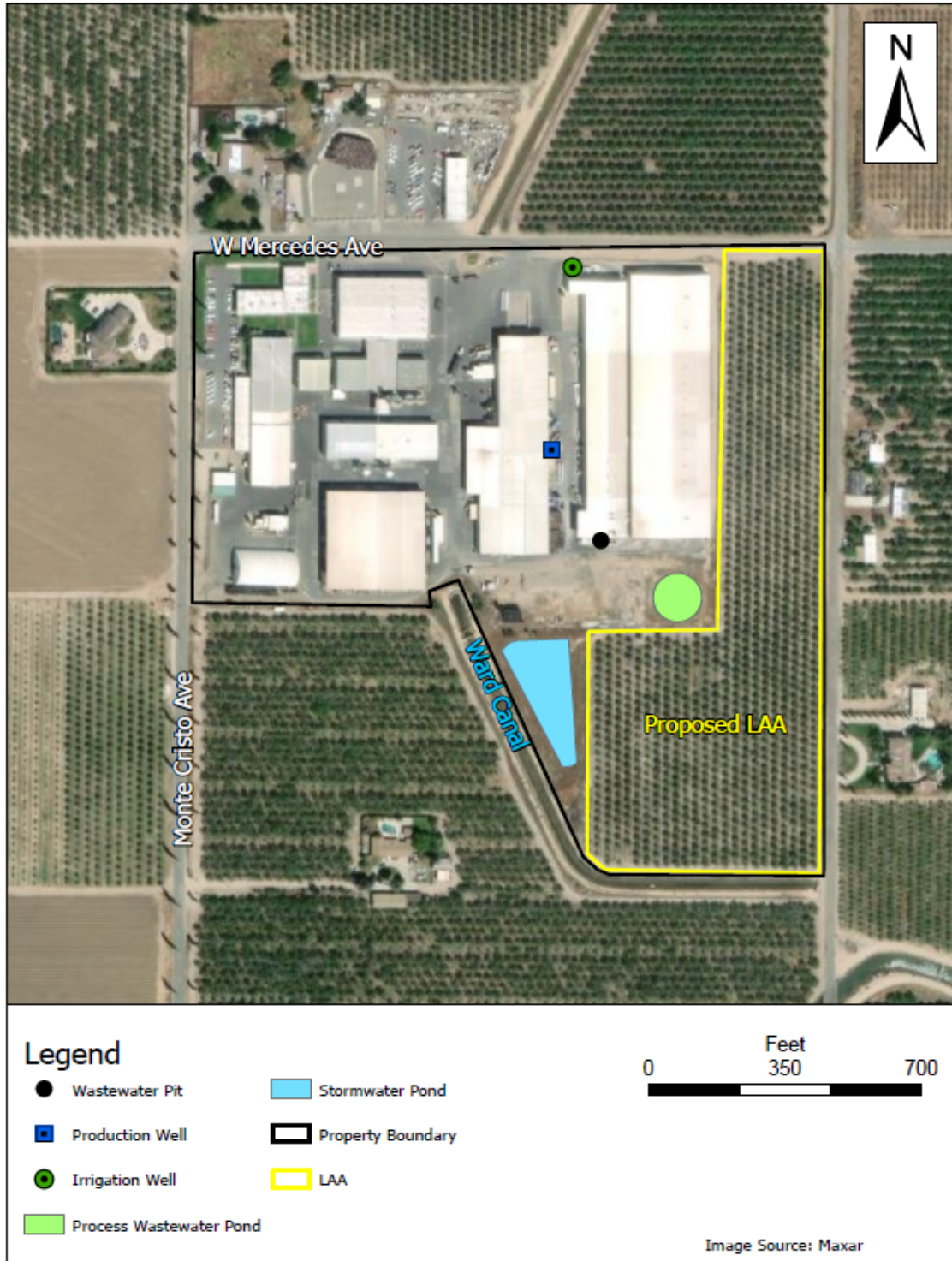
Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. To be timely, the petition must be received by the State Water Board by 5:00 pm on 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. Copies of 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) (http://www.waterboards.ca.gov/public_notices/petitions/water_quality). Copies will also be provided upon request.

ATTACHMENT A – SITE LOCATION MAP



Source: December RWD

ATTACHMENT B – FACILITY LOCATION MAP



ATTACHMENT C – PROCESS FLOW DIAGRAM

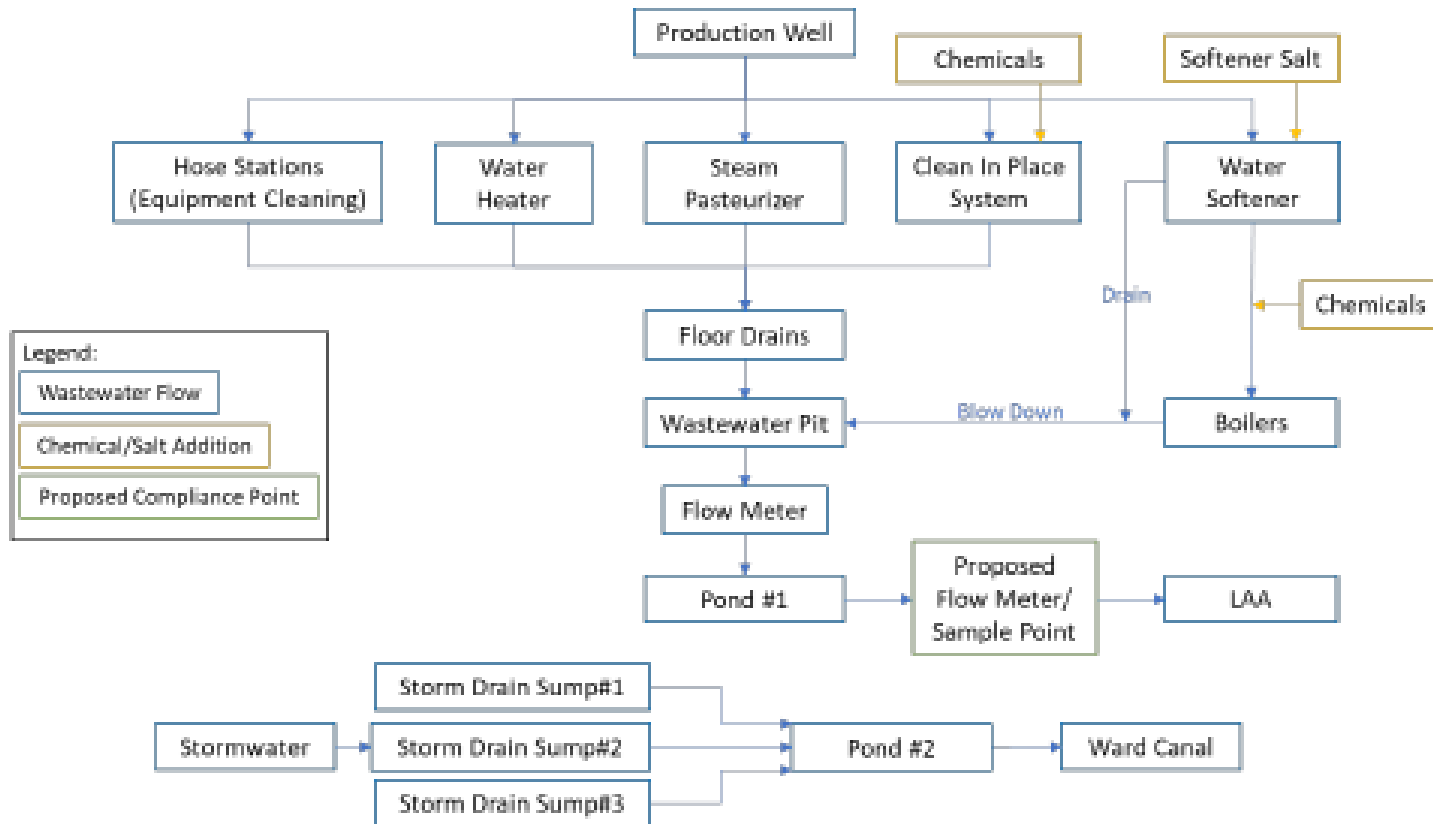


Figure 3-1. Process flow diagram

Source: December RWD

**ATTACHMENT D — REQUIREMENTS FOR MONITORING WELL INSTALLATION
WORKPLANS AND MONITORING WELLS INSTALLATION REPORTS**

Prior to installation of groundwater monitoring wells, the Discharger shall submit a workplan containing, at a minimum, the information listed in Section 1, below. Wells may be installed after staff approves the workplan. Upon installation of the monitoring wells, the Discharger shall submit a well installation report which includes the information contained in Section 2 below. All workplans and reports must be prepared under the direction of, and signed by, a registered geologist or civil engineer licensed by the State of California.

**SECTION 1 -Monitoring Well Installation Workplan and Groundwater Sampling and
Analysis Plan**

The monitoring well installation workplan shall contain the following minimum information:

A. General Information:

- Purpose of the well installation project
- Brief description of local geologic and hydrogeologic conditions
- Proposed monitoring well locations and rationale for well locations
- Topographic map showing facility location, roads, and surface water bodies
- Large-scaled site map showing all existing on-site wells, proposed wells, surface drainage courses, surface water bodies, buildings, waste handling facilities, utilities, and major physical and man-made features

B. Drilling Details:

- Description of the on-site supervision of drilling and well installation activities
- Description of drilling equipment and techniques
- Equipment decontamination procedures
- Soil sampling intervals (if appropriate) and logging methods

C. Monitoring Well Design (in narrative and/or graphic form):

- Diagram of proposed well construction details:
 - o Borehole diameter
 - o Casing and screen material, diameter, and centralizer spacing (if needed)
 - o Type of well caps (bottom cap either screw on or secured with stainless steel screws)
 - o Anticipated depth of well, length of well casing, and length and position of perforated interval
 - o Thickness, position and composition of surface seal, sanitary seal, and sand pack
 - o Anticipated screen slot size and filter pack

D. Well Development (not to be performed until at least 48 hours after sanitary seal placement):

- Method of development to be used (i.e., surge, bail, pump, etc.)
- Parameters to be monitored during development and record keeping technique
- Method of determining when development is complete
- Disposal of development water

E. Well Survey (precision of vertical survey data shall be at least 0.01 foot):

- Identify the Licensed Land Surveyor or Civil Engineer that will perform the survey
- Datum for survey measurements
- List well features to be surveyed (i.e. top of casing, horizontal and vertical coordinates, etc.)

F. Schedule for Completion of Work

G. Appendix: Groundwater Sampling and Analysis Plan (SAP)

The Groundwater SAP shall be included as an appendix to the workplan, and shall be utilized as a guidance document that is referred to by individuals responsible for conducting groundwater monitoring and sampling activities.

Provide a detailed written description of standard operating procedures for the following:

- Equipment to be used during sampling
- Equipment decontamination procedures
- Water level measurement procedures
- Well purging (include a discussion of procedures to follow if three casing volumes cannot be purged)
- Monitoring and record keeping during water level measurement and well purging (include copies of record keeping logs to be used)
- Purge water disposal
- Analytical methods and required reporting limits
- Sample containers and preservatives
- Sampling
 - o General sampling techniques
 - o Record keeping during sampling (include copies of record keeping logs to be used)
 - o QA/QC samples
- Chain of Custody

- Sample handling and transport

SECTION 2 - Monitoring Well Installation Report

The monitoring well installation report must provide the information listed below. In addition, the report must also clearly identify, describe, and justify any deviations from the approved workplan.

A. General Information:

- Purpose of the well installation project
- Brief description of local geologic and hydrogeologic conditions encountered during installation of the wells
- Number of monitoring wells installed and copies of County Well Construction Permits
- Topographic map showing facility location, roads, surface water bodies
- Scaled site map showing all previously existing wells, newly installed wells, surface water bodies, buildings, waste handling facilities, utilities, and other major physical and man-made features.

B. Drilling Details (in narrative and/or graphic form):

- On-site supervision of drilling and well installation activities
- Drilling contractor and driller's name
- Description of drilling equipment and techniques
- Equipment decontamination procedures
- Soil sampling intervals and logging methods
- Well boring log (including the following):
 - o Well boring number and date drilled
 - o Borehole diameter and total depth
 - o Total depth of open hole (same as total depth drilled if no caving or back-grouting occurs)
 - o Depth to first encountered groundwater and stabilized groundwater depth
 - o Detailed description of soils encountered, using the Unified Soil Classification System

C. Well Construction Details (in narrative and/or graphic form).

- Well construction diagram, including:
 - o Monitoring well number and date constructed
 - o Casing and screen material, diameter, and centralizer spacing (if needed)
 - o Length of well casing, and length and position of perforated interval
 - o Thickness, position and composition of surface seal, sanitary seal, and sand pack
 - o Type of well caps (bottom cap either screw on or secured with stainless steel screws)

TENTATIVE WDRS R5-2024-XXXX
OLAM FOOD INGREDIENTS
HUGHSON NUT PROCESSING FACILITY
MERCED COUNTY
ATTACHMENT D

D.4

D. Well Development:

- Date(s) and method of development
- How well development completion was determined
- Volume of water purged from well and method of development water disposal
- Field notes from well development should be included in report

E. Well Survey (survey the top rim of the well casing with the cap removed):

- Identify the coordinate system and datum for survey measurements
- Describe the measuring points (i.e. ground surface, top of casing, etc.)
- Present the well survey report data in a table

Include the Registered Engineer or Licensed Surveyor's report and field notes in appendix.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TENTATIVE Waste Discharge Requirements Order R5-2024-XXXX
For
Olam Food Ingredients
Hughson Nut Processing Facility
Merced County

INFORMATION SHEET

Background

Olam Food Ingredients (hereafter referred to as OFI or Discharger) is an industrial food processor that processes raw almonds and macadamia nuts at its Hughson Nut Processing Facility (Facility). OFI owns and operates the Facility at 11173 Merced Ave, Hughson, CA. The earliest available facility construction records date to 1983. In 2002, the previous owners of Hughson Nut, Inc., APB Partners, acquired the Facility, which was used for nut processing. OFI acquired Hughson Nut, Inc. in 2019.

The Facility is not currently regulated under Waste Discharge Requirements (WDRs). On 5 April 2023, Lance Hershman (RCE 70296) with Brown and Caldwell submitted a Report of Waste Discharge (RWD) consisting of a Form 200 and a technical report. On 25 May 2023, Central Valley Water Board staff received the application fee and reviewed the submitted RWD. Based on staff's review of the RWD, the technical report was incomplete and additional information was needed. On 15 December 2023, Brown and Caldwell submitted a revised RWD (December 2023 RWD) on behalf of the Discharger that satisfied the additional information needed.

Facility and Discharge

The Hughson Nut Processing Facility is an existing facility which processes approximately 50,000 tons of raw almond and macadamia nuts per year and pasteurizes approximately 23,000 tons of nuts each year. The remaining 17,000 nuts are either packaged or shipped to another facility for further processing. The main processing season is from August through December, but the facility operates year-round. Processing activities include sorting, sizing, pasteurization, and packaging. Supply water is produced from an onsite well. Process wastewater is generated from boiler steam/condensate during pasteurization activities, intermittent equipment cleaning, and water softener discharge.

Process wastewater is collected via floor drains in a covered underground sump. Currently, wastewater is pumped to a 0.16-acre unlined pond for storage. Wastewater in the process wastewater pond is disposed of through evaporation, percolation, and discharge onto the adjacent seven-acre land application area (LAA) using a portable manual pump. The LAA acreage is owned and operated by OFI and used to grow almonds. Minimal solids are generated from the manufacturing and pasteurization processes, and effluent is not screened prior to discharge to the storage pond.

Percolation from the process wastewater pond is expected to be reduced due to long term solids accumulation on the sides and bottom of the ponds. A second 0.71-acre unlined pond is used for retention of a portion of the site's stormwater runoff. Stormwater is currently disposed of through evaporation and percolation; however, OFI is coordinating with Merced Irrigation District (MID) to discharge all stormwater to the adjacent Ward Canal in the future.

According to the December 2023 RWD, process wastewater flows were not historically measured but flow monitoring of the process wastewater pond began in January 2022. Average monthly flows in 2022 ranged from 3,800 gallons per day (gpd) to 8,500 gpd. The effluent flow for 2022 was approximately two million gallons. Hughson has indicated that flows are expected to be relatively consistent throughout the year, and reoccurring seasonal peak flows have not been observed. Boiler blowdown occurs twice per day, once in the morning and once in the afternoon. A 5-hour sanitation washdown of processing facilities and equipment occurs every Friday. Once a month, OFI conducts an allergen change washdown, which has an 8-hour duration. The water softener discharges automatically based on measured conductivity.

Effluent data consists of 15 samples as described in Finding 14 of the WDRs and as summarized in Table 3. The discharge contains elevated levels of salts, primarily EC, TDS, and FDS, at concentrations above the applicable water quality objectives and/or background groundwater quality. However, this Order sets a performance based effluent limit calculated as an annual average concentration (Finding 52) for FDS. Only effluent data from wastewater pond sampling was considered when developing the FDS limit, as it is most representative of the discharge to the LAA.

The Facility's septic system is not permitted by the Central Valley Water Board, and Merced County (County) records indicate that a permit was issued for the Facility in the 1980s. While the County does not have more recent records for the septic system, it is likely that the system may be covered under the County's Local Agency Management Program (LAMP) as an existing onsite wastewater treatment system (Tier 0), in accordance with the State Water Board's [Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems](https://www.waterboards.ca.gov/water_issues/programs/owts/docs/owts_policy.pdf) (https://www.waterboards.ca.gov/water_issues/programs/owts/docs/owts_policy.pdf).

Groundwater Considerations

Groundwater conditions are discussed in Findings 32 to 36 of the Order.

Antidegradation

Antidegradation analysis and conclusions are discussed in Findings 55 to 62 of the Order.

Discharge Prohibitions, Effluent Limitations, Discharge Specification, and Provisions

This Order sets the following flow limits:

- Process wastewater discharges to the LAAs shall not exceed **8,500 gpd**.
- Total process wastewater annual discharges to the LAAs shall not exceed **2.5 MGY** for the calendar year (1 January through 31 December).

This Order sets a Performance Based Salinity Limit of **1,000 mg/L for FDS** as an **annual average**. This limit was based on effluent data collected by the Discharger and reported in the December 2023 RWD. By choosing to participate in the P&O Study, the Discharger may continue implementing reasonable, feasible, and practicable efforts to control salinity through performance-based measures. In addition, this Order prescribes a total nitrogen mass loading limit not to exceed crop demand and a BOD loading limit of **50 lbs/ac/year as an irrigation cycle average**.

This Order includes a provision requiring a submittal of a workplan to install/develop a groundwater monitoring well network.

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 wastewater, pond, LAAs, groundwater, and residual solids 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).

Pursuant to the Basin Plan amendments, dischargers received 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). Dischargers were required to submit a Notice of Intent, no more than six months following receipt of the Notice to Comply, 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 (**CV-SALTS ID 3628**) has chosen to pursue Option 2 (Alternative Salinity Permitting Approach).

For the Nitrate Control Program, dischargers may comply with the new nitrate program either individually (Pathway A) or collectively with other dischargers (Pathway B). The Facility is in the Groundwater Sub-basin 5-22.004 (San Joaquin Valley Groundwater Basin – Merced Sub-basin), a Priority 2 basin/sub-basin. The Discharger was sent a Notice to Comply letter for the Nitrate Control Program on 29 December 2023; however, the Discharger preemptively submitted a 13 June 2023 Notice of Intent and selected the Pathway B Management Zone Permitting Approach and will participate in the Merced Management Zone.

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/):
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.