

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

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

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

Redding Office
364 Knollcrest Drive #205
Redding, CA 96002

[Regional Board Website](https://www.waterboards.ca.gov/centralvalley) (<https://www.waterboards.ca.gov/centralvalley>)

WASTE DISCHARGE REQUIREMENTS ORDER
R5-2024-0035



ORDER INFORMATION

Order Type(s):	Waste Discharge Requirements (WDRs)
Status:	Adopted
Program:	Non-15 Discharge to Land
Region 5 Office:	Sacramento (Rancho Cordova)
Discharger(s):	Zamora Pistachio, LLC
Facility:	Zamora Pistachio Facility
Address:	County Roads 13 and 95
County:	Yolo County
Parcel Nos.:	055-150-005-000
WDID:	5A57NC00068
CIWQS Place ID:	886054
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 21 June 2024.

PATRICK PULUPA, Executive Officer

REGIONAL BOARD INFORMATION

Sacramento Office (Main)

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

Fresno Office

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

Redding Office

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

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

(<https://www.waterboards.ca.gov/centralvalley>)

TABLE OF CONTENTS

Findings	1
Introduction	1
Facility and Discharges	2
Site-Specific Conditions	6
Topography, Climate, and Land Use	6
Facility Source Water	7
Groundwater	8
Legal Authorities	10
Basin Plan Implementation	10
Beneficial Uses of Water	11
Water Quality Objectives	11
Salt and Nitrate Control Programs	12
Compliance with Antidegradation Policy	13
California Environmental Quality Act	18
Other Regulatory Considerations	18
Wat. Code Section 13149.2	18
Human Right to Water	19
Threat-Complexity Rating	19
Title 27 Exemption	19
Storm Water	20
Groundwater Well Standards	20
Statistical Data Analysis	20
Scope of Order	20

Reporting Requirements	21
Procedural Matters.....	21
Requirements	22
Enforcement	33
Administrative Review	33
ATTACHMENT A – SITE LOCATION MAP	34
ATTACHMENT B – FACILITY AND MONITORING WELL LOCATION MAP	35
ATTACHMENT C – PROCESS FLOW DIAGRAM.....	36
ATTACHMENT D - ENVIRONMENTAL CHECKLIST AND CEQA ADDENDUM	37
Information Sheet.....	104
Background.....	104
Groundwater Considerations	105
Antidegradation.....	105
Discharge Prohibitions, Effluent Limitations, Discharge Specification, and Provisions	106
Monitoring Requirements.....	106
Salt and Nitrate Control Programs Regulatory Considerations	107
Reopener	107
Legal Effect of Rescission of Prior WDRs or Orders on Existing Violations	108

TABLE INDEX

Table 1. Wastewater Pond Summary.....	3
Table 2. Hulling Wastewater Characterization	4
Table 3. Pasteurization Wastewater Quality.....	5
Table 4. Chemical Usage Summary.....	6
Table 5. Supply Well Quality	7
Table 6. Monitoring Well Details.....	8
Table 7. Groundwater Quality	9
Table 8. Constituents with Potential for Degradation	14
Table 9. Flow Limitations.....	23

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

ZAMORA PISTACHIO, LLC
ZAMORA PISTACHIO FACILITY
YOLO COUNTY

GLOSSARY

msl	mean sea level
MUN	municipal
N	nitrogen
NA	not applicable or not available
NCP	Nitrate Control Program
ND	not detected or non-detect
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

Wat. Code	Water Code
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. Zamora Pistachio, LLC (Discharger) proposes to operate a pistachio hulling and processing facility east of the unincorporated community of Zamora, at the southeast corner of the intersection of County Roads 13 and 95, Yolo County. The Zamora Pistachio Facility (Facility), which includes the processing area, wastewater pond, and land application areas (LAAs) are located on Assessor Parcel Number (APN) 055-150-005 within Section 22, Township 11 N, Range 1 E, Mount Diablo Base and Meridian (MDB&M) as shown on **Attachment A** (Site Location Map) and **Attachment B** (Facility and Monitoring Well Location Map), which are attached hereto.
2. The Discharger submitted a Report of Waste Discharge (RWD) in February 2023, a revised RWD in March 2023, a Baseline Groundwater Assessment Report in November 2023, Source Water Information in April 2024, and Baseline Soil Characterization in May 2024.
3. As the Facility's owner and operator, the Discharger is responsible for compliance with the Waste Discharge Requirements (WDRs) prescribed in this Order.
4. The following materials are attached and incorporated as part of this Order:
 - a. Attachment A – Site Location Map
 - b. Attachment B – Facility and Monitoring Well Location Map
 - c. Attachment C – Process Wastewater Flow Diagram
 - d. Attachment D - Environmental Checklist and CEQA Addendum
 - 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]
5. Also attached is **Monitoring and Reporting Program (MRP) R5-2024-0035**, 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.
6. WDRs are needed for this Facility to ensure the discharge will comply with water quality plans and policies and reflect current treatment and disposal operations.

Facility and Discharges

7. The Discharger proposes to construct and operate a new pistachio hulling and processing facility located on a 480-acre property. The processing facility will be on 40 acres located at the northwestern corner of the property. The remaining 440 acres have been planted with pistachios. Operations will include hulling, drying, storage and fumigation, and roasting and pasteurization. The Facility will be built to process up to 42,000 tons of pistachios annually and generate approximately 50 million gallons per year (MGY) of process wastewater.
8. The Discharger plans to operate in phases. In the initial phase, the Facility will hull approximately 2,000 tons of pistachios and generate approximately 5 MGY of process wastewater. However, the Facility has the disposal capacity to land apply up to 50 MGY. Each year thereafter, production and processing may increase at a rate of 5 MG each year until reaching maximum buildout. The mass of pistachios processed each year will vary depending on the harvest season.
9. Process wastewater is generated during hulling, equipment cleanup, and pasteurization as described below. The majority of the process wastewater during the harvest season is from the hulling, washing, and sorting of the nuts. During the rest of the year, operations include storage and fumigation and roasting and pasteurization. A process flow diagram of the wastewater collection and treatment process is shown in **Attachment C**, which is attached hereto.
 - a. Hulling: Water is used to lubricate nuts during hull removal, washing and sorting nuts.
 - b. Roasting and Pasteurization: Wastewater consists of pasteurizer condensate and small amounts from equipment wash water, approximately 2 gallons of wastewater per day, up to five days a week, 12 hours a day, year-round or 520 gallons annually.
 - c. Outside Equipment Plant Washdown: Pressure washers are used to clean outside equipment before and after the harvest season for one week, approximately 600 gallons annually.
 - d. Quality Assurance and Equipment Cleanup within Processing Plant: Wastewater consists of cleaning chemicals and equipment wash water, approximately 5 gallons of wastewater a week or 260 gallons annually.
10. During the harvest season (August through October), the Facility may operate 24 hours per day, 7 days a week. Pistachios harvested from the fields are delivered to the Facility to be cleaned and processed to remove the hulls. Anticipated daily wastewater flow from hulling operations is approximately 2.0 MGD, based on the fiber filtration rate of 1,400 gallons per minute and 24 hours per day operation. Routine pistachio handling includes:
 - a. Pistachios are routed through a pre-cleaning stage to remove small twigs,

leaves, and other debris.

- b. Next, pistachios are hulled, then washed and sorted in float tanks.
- c. Hulling wastewater, along with hulls and minor amounts of shells are discharged to a concrete-lined huller pit with an approximate capacity of 12,900 gallons for solids settling. Hulling wastewater is then screened and filtered for further solids removal, discharged to a concrete-lined wastewater pit with an approximate capacity of 4,300 gallons, then pumped to the wastewater pond.

Additional wastewater is anticipated from other operations including pasteurizer condensate and equipment cleanup. The combined maximum daily flow for hulling, processing, and routine operational needs is 3.0 MGD.

- 11. The wastewater pond will be clay lined and aerated. The wastewater pond will be constructed to meet a hydraulic conductivity standard of 1×10^{-6} cm/s with a compacted clay liner with a minimum clay thickness of 2 feet. Pond use for wastewater is only during the harvest season. Wastewater retention time in the pond will be limited to two hours or less prior to application to the LAAs. After harvest, any remaining wastewater in the pond will be removed. Wastewater pond dimensions are summarized in the table below.

Table 1. Wastewater Pond Summary

Pond Length	Pond Width	Pond Depth	Capacity
377 feet	377 feet	9 feet	20 acre-feet (or 6.5 million gallons)

- 12. From the wastewater pond, the wastewater is filtered again then applied to the LAAs, approximately 440 acres via subsurface irrigation. If needed, supplemental irrigation water from an onsite irrigation well will be applied separately by surface irrigation. The LAAs will be divided into four (4) blocks, each block consisting of at least 100 acres. The LAAs will be cropped with pistachios and a cover crop, including but not limited to winter wheat. Based on the RWD which referenced UC Davis Fruits & Nut Research and Information Center, during an “on” year pistachio crops can utilize between 200 to 225 lb/ac/yr of nitrogen and 110 to 200 lb/ac/yr of potassium. During an “off” year, pistachios can utilize 100 to 113 lb/ac/yr of nitrogen and 36 to 100 lb/ac/yr of potassium. Nitrogen uptake of common wheat in the San Joaquin Valley is estimated to be 108 lb/ac/yr and potassium uptake is 67 lb/ac/yr.
- 13. This is a new facility, and wastewater quality was not available for the development of these WDRs. The RWD estimated hulling wastewater quality

based on three similar pistachio facilities¹ that operate within the Central Valley area as summarized below. From the data, the discharge is high in BOD, salts and total nitrogen. Potassium is a form of salt and would contribute to concentrations in TDS and FDS.

Table 2. Hulling Wastewater Characterization

Constituent	Units	Average (Min – Max) Concentration	No. Data Points
BOD ₅	mg/L	3,927 (120 – 5,900)	12
TSS	mg/L	293 (210 – 420)	3
TDS	mg/L	5,355 (3,400 – 8,600)	11
FDS	mg/L	1,659 (270 – 3,200)	13
Chloride	mg/L	149 (42 – 200)	6
Sulfate	mg/L	73 (44 – 110)	6
Sodium	mg/L	113 (36 – 200)	6
Potassium	mg/L	760 (12 – 1,700)	8
Boron	mg/L	0.5 (0.28 – 0.81)	6
Iron	mg/L	3.28 (0.30 – 5.60)	6
Manganese	mg/L	0.20 (0.35 – 0.28)	6
Ammonia as N (see Note 1 below)	mg/L	70 (16 -170)	3
Nitrate as N	mg/L	Non-detect	15
TKN	mg/L	163 (16 -360)	13
Total Nitrogen	mg/L	163 (16 -360)	13

Table Note:

1. Pistachio facilities may use ammonia in the processing of pistachios associated with dehulling and roasting. However, the Discharger has stated no ammonia use in their operations and concentrations of ammonia are not expected in the discharge.

14. The processing area will house roasters with flavoring drums and steam pasteurizers. The roasting equipment and pasteurizers will be cleaned by mechanical methods (e.g., sweeping and/or hand brushing) then pressure washed and dried with hand towels, and lastly sanitized with hand-spray

¹ Hulling wastewater quality was based on data obtained from Terra Bella Pistachio Processing Plant, Tulare County; Lost Hills Pistachio Processing Plant, Kern County; and Dry Ranch Pistachio Plant, Madera County.

methods. Pasteurizer condensate and minimal equipment wash water will drain to the irrigation system, which discharges to the LAAs via subsurface irrigation. This will take place up to five days a week, year-round. Approximately 520 gallons per year of wastewater is anticipated. The RWD estimated wastewater quality from the roasting and pasteurization operation based on a similar operation is summarized below.

Table 3. Pasteurization Wastewater Quality

Constituent	Units	Concentration
BOD ₅	mg/L	280
TSS	mg/L	33
TDS	mg/L	300
FDS	mg/L	70
Ammonia as N	mg/L	<0.8
Nitrate as N	mg/L	2.2
Nitrite as N	mg/L	0.25
TKN	mg/L	42
Total Nitrogen	mg/L	44.5

15. Pressure washers will be used to wash down the outside equipment. Washdown water will be collected in the storm drainage system and discharged to a 4.1 acre-feet storm water pond. The storm water pond will be lined with crushed rock and filter fabric. The storm drain system will be a closed system with no outfall point to any surface water. Washdown water may be a source of supplemental irrigation. This water will be filtered and tested prior to discharging to the LAAs via subsurface irrigation. Outside equipment washdown will be performed before and after harvest for approximately one week. Approximately 300 gallons of washdown wastewater will be generated annually.
16. Cleaning chemicals will be used inside the processing plant for quality assurance and equipment cleanup. Approximately 5 gallons per week of wastewater (approximately 260 gallons per year) will be generated from this process and will be routed to the storm water pond.
17. Chemicals that will be used for cleaning and equipment maintenance at the Facility are identified in the table below.

Table 4. Chemical Usage Summary

Chemical	Use
Isopropyl Alcohol	500 gal
Alka Clean Plus	1,050 lb
Cleantech Ultra-pure (2 % hand soap)	55 gal
Sodium Hypochlorite	500 gal
Quaternary Ammonia	175 gal

18. Solids generated from the screens and filters will be placed directly into trucks and trucked offsite to a composting or animal feed site. Solids are anticipated to be about 86 percent moisture. No onsite drying of solids is planned.
19. The water balance submitted with the RWD demonstrated that the proposed annual flow limit of 50 MGY is less than the total crop demand for the LAAs and that supplemental irrigation is needed. The water balance demonstrates the ability to accommodate a daily flow of 3 MGD for hulling, processing, and operational needs. The water balance was created using anticipated wastewater flows, reasonable estimates of local evapotranspiration, precipitation, and 440 acres of LAAs cropped with pistachios and a cover crop. Application of wastewater will be done daily when there is wastewater in the wastewater pond. Pasteurizer condensate and equipment cleanup/wash water make up a small fraction of the supplemental irrigation water. Most of the supplemental irrigation water will come from onsite irrigation wells.
20. Domestic waste will be generated from toilets, sinks, and breakroom facilities that serve employees and any visitors to the Facility. Three septic systems, located at the scale house, maintenance building, and near the breakroom of the processing area will be permitted by the County.

Site-Specific Conditions

Topography, Climate, and Land Use

21. Local land use is agriculture. The site is surrounded by farmland. Irrigation water is supplied to the LAA by three existing on-site agricultural wells.
22. The Facility and general vicinity slopes gently to the north-northeast with a slope of 20 to 40 feet per mile at elevations ranging from approximately 40 to 70 feet above mean sea level. Surface water eventually drains to the Colusa Basin Drainage Canal located approximately 3.0 miles to the northeast.
23. 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.

24. Soils within the vicinity of the wastewater pond and LAAs are a Marvin silty clay loam, Yolo silt loam, and Rincon silty clay loam. Boring logs from the groundwater monitoring well construction reports show clay or sand and clay to 25 feet below ground surface. In addition, the Discharger provided baseline soil characterization in a submittal dated 2 May 2024. Soil sampling was conducted on 28 March 2024. Samples were collected at five locations within the proposed LAAs (S-1) and three locations in an area within the site that is unlikely to be impacted by pistachio wastewater (S-2). Soil samples were collected from each location at 2-foot and 4-foot depths. Samples from each location and depth were thoroughly mixed to create one composite sample. Composite sample data are provided in the Information Sheet which is attached and incorporated as part of this Order.
25. The Facility is in an arid climate characterized by dry summers and mild winters. Based on information using the Woodland – Station 226, approximately 8.5 miles south of Zamora from the California Management Information Systems (CIMIS), the annual average precipitation is 10.1 inches. The annual reference evapotranspiration is 58.11 inches. The 100-year 365-day precipitation is 12.73 inches.

Facility Source Water

26. At the time the RWD was submitted, water analysis from an existing onsite agricultural well was provided because water quality was expected to be similar to that of the planned new domestic well. Average concentrations shown below are based on four data points. The Discharger installed the new domestic well in November 2023 located on the northeastern end of the processing area. The domestic well has a well depth of 1,000 feet with a screen interval between 480 feet and 960 feet. The well was sampled on 20 March 2024 and analytical data is shown in the table below.

Table 5. Supply Well Quality

Constituent	Units	Existing Agricultural Well Average (Min – Max) Concentration	New Domestic Well Concentration
EC	µmhos/cm	995 (860 – 1,130)	593
TDS	mg/L	Not analyzed	330
Nitrate as N	mg/L	8.9 (6.6 – 13.8)	Not analyzed
Total Nitrogen	mg/L	Not analyzed	1.8

Constituent	Units	Existing Agricultural Well Average (Min – Max) Concentration	New Domestic Well Concentration
Chloride	mg/L	67 (50 – 94)	38
Sodium (total)	mg/L	82 (69 – 98)	39
Boron (total)	mg/L	2.4 (1.8 – 3.2)	Not analyzed
Iron (total)	mg/L	Non-detect	Not analyzed
Iron, dissolved	mg/L	Not analyzed	Non-detect
Manganese (total)	mg/L	Non-detect	Not analyzed

Groundwater

27. Three groundwater monitoring wells were installed in 2023 to provide baseline groundwater information. Well locations are shown in **Attachment B** and well construction details are provided in the table below. Depth to water is based on two monitoring events collected on 2 October 2023 and 24 October 2023. Based on this data, groundwater flow is to the northeast.

Table 6. Monitoring Well Details

Well Name	Location	Top of Casing Elevation	Total Well Depth	Screen Interval	Average Depth to Groundwater
MW-1	South end of the property, near wastewater pond.	55.57 ft	60 ft	35 – 60 ft	23.5 ft
MW-2	Northeast corner of property, near LAAs.	51.97 ft	60 ft	35 – 60 ft	20.25 ft
MW-3	Northwest corner of property and near no process wastewater discharge activities.	47.22 ft	60 ft	35 – 60 ft	14.75 ft

28. Groundwater quality based on samples collected on 2 October 2023 from Monitoring Wells MW-1, MW-2, and MW-3 are summarized below for select parameters. WQO denotes water quality objective. MCL denotes Maximum Contaminant Level. sMCL denotes Secondary MCL. Ag denotes Agricultural Water Quality Goal. ND denotes non-detect, MDL (Method of Detection Level)

shown.

Table 7. Groundwater Quality

Constituents	WQO (Reference)	MW-1	MW-2	MW-3
pH, std units	6 – 8 (USEPA sMCL)	7.5	7.55	7.67
EC, µmhos/cm	700 (see Note 1 below)	1,420	1,740	1,280
TDS, mg/L	500 (sMCL)	838	914	712
Nitrate as N, mg/L	10 (primary MCL)	23	16	7.1
TKN, mg/L	---	ND, 0.24	ND, 0.24	0.57
Ammonia as N, mg/L	---	ND, 0.095	ND, 0.095	ND, 0.095
Sodium, mg/L	69 (Ag)	100	210	140
Potassium, mg/L	---	1.2	1.1	1.2
Sulfate, mg/L	250 (sMCL)	91	83	73
Chloride, mg/L	250 (sMCL)	100	110	61
Boron, mg/L	0.7 (Ag)	ND, 0.01	0.17	ND, 0.01
Manganese, mg/L	0.05 (sMCL)	ND, 0.04	0.17	ND, 0.04
Iron, mg/L	0.3 (sMCL)	1.1	1.3	ND, 0.22

Table Note:

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

29. Based on available groundwater data:

- a. EC concentration exceeds 700 µmhos/cm, the conservative numeric value for Phase 1 of the Salt Control Program.
- b. TDS concentration exceeds the sMCL recommended level of 500 mg/L but is below 1,000 mg/L, the sMCL upper level.
- c. Nitrate as N concentration exceeds the primary MCL of 10 mg/L, with the exception of MW-3, which is located in an area of the property where no wastewater discharges will occur.
- d. Boron concentration does not exceed 0.7 mg/L, the Agricultural Water Quality Goal.
- e. Manganese concentration does not exceed 0.05 mg/L, the sMCL.

- f. Iron concentration exceeds the MCL of 0.3 mg/L, with the exception of MW-3.

Legal Authorities

30. This Order is adopted pursuant to Wat. 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 [Wat. Code] Section 13241.

31. The ability to discharge waste is a privilege, not a right, and adoption of this Order shall not be construed as creating a vested right to continue discharging waste. (Wat. Code, section 13263, subd. (g).)
32. 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.

33. 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

34. Pursuant to Wat. Code section 13263, subdivision (a), WDRs must “implement any relevant water quality control plans and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required

for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241.”

Beneficial Uses of Water

35. This Order implements the Central Valley Water Board’s *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (Basin Plan), which designates beneficial uses for surface water and groundwater and establishes water quality objectives (WQOs) necessary to preserve such beneficial uses. (See Wat. Code, section 13241 et seq.).
36. The Facility is within the Yolo Bypass Hydrologic Area (No. 510.00), as depicted on interagency hydrologic maps prepared by the Department of Water Resources in August 1986. The beneficial uses of the Yolo Bypass are agriculture (AGR); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); migration of aquatic organisms (MIGR); spawning, reproduction, and/or early development (SPWN); and wildlife habitat (WILD).
37. The beneficial uses of underlying groundwater are municipal and domestic water supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PRO).

Water Quality Objectives

38. 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.
39. 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.
40. 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). 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.
41. 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.
42. 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.

43. 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 Westcott 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 12 is not intended as a definitive inventory of crops that are or could be grown in the area affected by the discharge.

Salt and Nitrate Control Programs

44. On 31 May 2018, the Central Valley Water Board adopted Basin Plan amendments incorporating the Salt Control Program and Nitrate Control Program (Resolution R5-2018-0034). The Basin Plan amendments became effective on 17 January 2020. On 10 December 2020, the Central Valley Water Board adopted revision to the Basin Plan amendments with [Resolution R5-2020-0057](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf) (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf). Those revisions became effective on 10 November 2021.
45. For the Salt Control Program (SCP), the Discharger was issued a Notice to Comply (**CV-SALTS ID 3631**). The Discharger submitted a Notice of Intent and elected to participate in the Prioritization and Optimization Study (P&O Study) under the Alternative Salinity Permitting Approach. In the interim, to maintain existing salt discharges and minimize salinity impacts, this Order does the following:
 - a. Requires the Discharger to continue efforts to control salinity in its discharge to the extent reasonable, feasible, and practicable; and
 - b. Sets a Performance Based Salinity Limit of **2,200 mg/L for FDS** as a flow-weighted annual average on the discharge of wastewater (hulling wastewater and supplemental irrigation water including pasteurizer condensate and equipment/plant wash water) sent to the LAAs. The Performance Based Salinity Limit is based on available data from similar pistachio processing facilities and consideration of the short duration discharge activities, depth to first encountered groundwater, and current groundwater quality data. This limit is intended to ensure that the Facility's discharge with respect to salinity does not increase over time.

46. For the Nitrate Control Program (NCP), dischargers proposing new or expanded discharges of nitrate to any groundwater basin/sub-basin, regardless of priority generally must comply with the Nitrate Control Program, including the Conditional Prohibition of Nitrate Discharges to Groundwater. The Executive Officer retains the discretion to issue time schedules extending the due dates for compliance with the NCP, including submission of preliminary NCP submittals, where appropriate. This Order contains a time schedule (i.e., a compliance schedule) (see Provision J.2) for the Discharger to begin implementation of the NCP by submitting an Initial Assessment, an Early Action Plan (as needed), and an Alternative Compliance Project(s) by the prescribed deadlines. Issuance of this time schedule is appropriate because the discharge of waste regulated by this Order is to a non-prioritized basin/sub-basin (Sub-Basin 5-21.52, Colusa Subbasin) for which notices to comply have not been issued and a management zone(s) does not yet exist.
47. 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

48. State Water Resources Control Board (State Water Board) Resolution 68-16, *Policy with Respect to Maintaining High Quality Waters of the State* prohibits degradation of high-quality groundwater unless it is shown that such degradation:
- a. Will be consistent with the maximum benefit to the people of state;
 - b. Will not unreasonably affect present and anticipated future beneficial uses;
 - c. Will not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives.
- Resolution 68-16 further requires that any discharge to existing high quality waters be required to meet waste discharge requirements that will result in the best practicable treatment or control (BPTC) of the discharge necessary to assure that pollution and/or nuisance will not occur and that the highest quality consistent with the maximum benefit to the people of the state will be maintained.
49. Given the unavailability of pre-1968 water quality information, compliance with the Antidegradation Policy will be determined on current groundwater quality. Groundwater monitoring wells MW-1, MW-2, and MW-3 were installed in October 2023 to determine baseline shallow groundwater quality.
50. 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.

51. 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 potassium, TDS and FDS), and total nitrogen (primarily TKN and nitrate as nitrogen). The table below provides a comparison of average concentrations from constituents of concern in the effluent and a single sample of first encountered groundwater. Water quality concerns associated with this Facility include salinity, nitrate, and metals as summarized below. Units are in mg/L unless otherwise shown.

Table 8. Constituents with Potential for Degradation

Parameters	Effluent	MW-1	MW-2	MW-3	WQO (reference)
BOD	3,927	---	---	---	---
EC, μ mhos/cm	---	1,420	1,740	1,280	700 (Ag)
TDS	5,355	838	914	712	500 (sMCL)
FDS	1,659	---	---	---	NA
Potassium	760	1.2	1.1	1.2	NA
Nitrate as N	ND	23	16	7.1	10 (MCL)
TKN	163	ND	ND	0.57	NA
Iron	3.28	1.1	1.3	ND	0.30 (sMCL)
Manganese	0.20	ND	0.17	ND	0.05 (sMCL)

52. **Salinity (TDS and FDS).** For salinity, the discharge is high in salts, specifically potassium. There is no MCL or other numeric limit established for potassium except for overall limits for EC and TDS, to which potassium would contribute. Potassium is an important nutrient for crops and if readily available, plants will take up potassium in excess of their needs. Therefore, the application of wastewater high in potassium to crops would be beneficial. Further, the positively charged ion in potassium binds readily to soils allowing for greater retention time in the root zone for crop uptake. The Discharger implements best management practices to minimize impacts from potassium including monitoring potassium in

effluent and groundwater, and applying potassium to cropped LAAs at rates not exceeding reasonable agronomic demand.

For the purpose of evaluation, TDS is representative of overall salinity. The best measure for total salinity in groundwater is TDS. FDS is the non-volatile fraction of TDS that has the potential to percolate or leach into shallow groundwater. Therefore, the best measure for total salinity in the process wastewater is FDS. EC is a measure of the capacity of water to conduct electrical current and is an indicator of salinity. Concentrations of EC in the wastewater were not available, however concentrations of EC within first-encountered groundwater show groundwater is not high-quality water.

Treatment is provided in a clay-lined pond via aeration and through land application areas. Site conditions (climate and soils) are relied upon to control the persistence and transport of constituents into the aquifer.

The RWD estimated effluent quality based on similar pistachio facilities operating in the Central Valley. Average effluent quality was estimated to be in the following concentrations: average TDS approximately 5,355 mg/L and average FDS approximately 1,659 mg/L.

Concentrations of TDS in baseline groundwater ranged from 838 mg/L to 914 mg/L, which exceeds the WQO for TDS of 500 mg/L, the recommended sMCL. This indicates first-encountered groundwater in the vicinity of the Facility is not identified as high-quality water regarding salinity, which is likely the result of long-term agricultural use of the area.

The Discharger has elected to participate in the P&O Study under Pathway Option 2 for the Salt Control Program. For the protection of groundwater from discharges of wastewater, this Order establishes a **Performance Based Salinity Limit of 2,200 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 TDS concentrations in shallow groundwater beyond current conditions. Compliance with the Performance Based Salinity Limit shall constitute compliance with the water quality control plan and shall be deemed adequately protective of beneficial uses. In addition, the Discharger is required to evaluate TDS concentrations to determine if degradation that may impact beneficial uses of groundwater has been mitigated or what actions will be necessary to minimize groundwater degradation.

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

Based on available data, pistachio 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).

Nitrate as N concentrations in monitoring wells MW-1 and MW-2 are 23 and 16 mg/L, respectively, exceeding the primary MCL of 10 mg/L. Nitrate as N concentration in MW-3 was detected at 7.1 mg/L. Based on the available data, first-encountered groundwater is not identified as high-quality water regarding nitrate, with the exception near MW-3.

For the protection of groundwater quality, this Order requires the application of nitrogen from wastewater to be at reasonable agronomic rates. The discharge should not cause a significant impact to groundwater quality based on short duration of stored wastewater in a clay-lined pond and careful management of the LAAs including crop types and application at agronomic rates. This Order requires groundwater monitoring for nitrate and includes a compliance schedule requiring the Discharger to (1) conduct a Sensitive Receptor Survey and determine if any water supply wells are impacted by the Discharger's discharge of nitrate; (2) implement an Early Action Plan as needed; and (3) implement an Alternative Compliance Project(s) as needed for compliance with the Nitrate Control Program.

54. **Iron and Manganese.** Iron and manganese can be present in groundwater as a result of excessive BOD₅ loading rates, which can deplete oxygen resulting in anoxic conditions. An anoxic environment can solubilize naturally occurring metals in soil, such as iron and manganese.

Pistachio wastewater consists of high organic material. Based on similar existing facilities operating in the Central Valley, BOD₅ concentrations in pistachio wastewater can range from 120 – 5,900 mg/L. Multiple methods of screening will be used for solids recovery. The wastewater pond will be aerated to reduce organic loading. The wastewater pond will be constructed to meet a hydraulic conductivity standard of 1×10^{-6} cm/s with a compacted clay liner with a minimum clay thickness of 2 feet. Given the limited use of the pond (wastewater storage during the harvest season), use of the clay-lined pond, and implementation of best management practices including crop types and even application of wastewater, the discharge should not cause odors or nuisance conditions or significantly degrade groundwater quality beyond current conditions with constituents related to organic loading.

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 100 lb/ac/day. This Order requires monitoring of BOD₅ in the wastewater and monitoring of iron and manganese in groundwater. Baseline groundwater data show iron and manganese concentrations as non-detect or below the sMCL. The Discharger is required to evaluate iron and manganese groundwater

concentrations to determine if degradation that may impact beneficial uses has been mitigated or what actions will be necessary to minimize groundwater degradation. Groundwater samples for dissolved metals shall be filtered prior to analysis.

55. 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. Hulling water will be collected in concrete-lined pits and routed through several filtration steps to reduce the total suspended solids before entering the wastewater pond. Wastewater undergoes additional filtration prior to application to the LAAs.
 - b. The wastewater pond will be clay-lined and aerated, which will help to reduce BOD and odors. Wastewater pond use is limited to the harvest season. Process wastewater will be retained in the pond for a short time, prior to being discharged to the LAAs.
 - c. Approximately 440 acres of LAAs will be available. Crops (pistachios and cover crops including but not limited to winter wheat) will be planted in the LAAs to assimilate nutrients in the treated wastewater and harvested and removed from the site.
 - d. Application of wastewater to the LAAs will be at agronomic rates.
 - e. BOD cycle average loading rates will not exceed 100 lbs/acre/day.
 - f. Participation and compliance with the Salt and Nitrogen Control Plans.
56. 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.
57. 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. The Facility will employ approximately 150 full-time employees year-round and up to 350 employees during the harvest season. 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.
58. Based on the foregoing, the adoption of this Order is consistent with the State Water Board Resolution 68-16.

California Environmental Quality Act

59. In accordance with the California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq., on 9 November 2009, Yolo County certified a Final Environmental Impact Report (Yolo County FEIR) with comments and responses for a new General Plan for the County of Yolo (2030 Countywide General Plan).
60. In accordance with Public Resources Code section 21080.5 and California Code of Regulations title 14, section 15241(g), in December 2016, the Central Valley Water Board prepared the Central Valley Salt and Nitrate Management Plan Substitute Environmental Documentation (Salt and Nitrate Management Plan SED).
61. On 21 June 2024, Central Valley Water Board, prepared an Environmental Checklist and CEQA Addendum for the issuance of WDRs to the Facility, attached as Attachment D pursuant to California Code of Regulations title 14 section 15164.
62. When adopting this Order, the Central Valley Water Board considered the Yolo County FEIR, the Salt and Nitrate Management Plan SED, and the Environmental Checklist and CEQA Addendum.

Other Regulatory Considerations

Wat. Code Section 13149.2

63. 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 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 Wat. Code section 13149.2, the Central Valley Water Board reviewed readily available information and information raised to the Board by interested persons concerning anticipated water quality impacts in disadvantaged or tribal communities resulting from adoption of these WDRs. The Board also considered environmental justice concerns within the Board's authority and raised by interested persons with regard to those impacts. No comments from disadvantaged and/or tribal communities were submitted.
64. 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 Yolo County: 1) active participation in and compliance with the Salt Control Program, 2) compliance with the Nitrate Control Program, 3) compliance with a Performance Based Salinity Limit, 4) properly lining the wastewater treatment pond, 5) application of wastewater to crops at agronomic rates with irrigation of good quality supplemental water as needed, 6) preparation and implementation of Salinity Evaluation and Minimization Plan to establish goals for potentially reducing salinity concentrations in the Facility's discharge, and 7) implementation of the BPTC described in Finding 55.

Human Right to Water

65. Pursuant to Wat. 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 and nitrate), which are designed to protect human health and ensure that water is safe for domestic use. For salinity, this Order requires compliance with the SCP. Although the Basin Plans' Exceptions Policy for Salinity allows participants in this Program to obtain limited-term exceptions from MCLs for salinity, this Program is consistent with the Human Right to Water Policy because their over-arching management goals and priorities include short-term provision of safe drinking water to impacted users and long-term restoration of impacted groundwater basins and sub-basins where reasonable, feasible, and practicable.

Threat-Complexity Rating

66. For the purposes of the California Code of Regulations (CCR), title 23 (Title 23), section 2200, the Facility has a threat and complexity rating of **2-B** as defined below:
- a. Threat Category "2" – Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance.
 - b. Complexity Category "B" - Any discharger not included in Category A that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal), or any Class 2 or Class 3 waste management units.

Title 27 Exemption

67. 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).)

Storm Water

68. 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 requiring 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 may be used as a supplemental irrigation source for the land application areas. 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

69. 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

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

Scope of Order

71. This Order is strictly limited in scope to those waste discharges, activities, and processes described and expressly authorized herein.
72. Pursuant to Wat. Code section 13264, subdivision (a), the Discharger is prohibited from initiating the discharge of new wastes (i.e., other than those described herein), or making material changes to the character, volume and timing of waste discharges authorized herein, without filing a new RWD per Wat. Code section 13260.
73. 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.

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

Reporting Requirements

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

[T]he regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region ... shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

76. The technical reports required under this Order, as well as those required under the separately issued MRP, are necessary to ensure compliance with prescribed WDRs. Additionally, the burdens associated with such reports are reasonable relative to the need for their submission.
77. Failure to comply with the reporting requirements under this Order and the MRP may result in enforcement action pursuant to Wat. Code section 13268.

Procedural Matters

78. All of the above and the supplemental information and details in the attached Information Sheet (incorporated herein), were considered in establishing the following conditions of discharge.
79. The Discharger, interested agencies, and interested persons were notified of the Central Valley Water Board’s intent to prescribe the WDRs in this Order, and provided an opportunity to submit their written views and recommendations at a public hearing. (Wat. Code, section 13167.5)
80. At a public meeting, the Central Valley Water Board heard and considered all comments pertaining to the discharges regulated under this Order.
81. 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, Zamora Pistachio, LLC, its agents, successors, and employees shall comply with the following:

A. Standard Provisions

1. Except as expressly provided herein, the Discharger shall comply with the Standard Provisions and Reporting Requirements dated 1 March 1991 (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 classified as “hazardous”, as defined in Water Code, Title 22, section 66261.1 et seq.), is prohibited.
5. Discharge of waste classified as “designated”, as defined in Water Code section 13173, in a manner that causes violation of Groundwater Limitations, is prohibited.
6. Treatment system bypass of untreated or partially treated waste is prohibited, except as allowed by Standard Provision E.2 of the 1 March 1991 SPRRs.
7. Discharge of waste at a location or in a manner different from that described in the Findings is prohibited.
8. Discharge of toxic substances into any wastewater treatment system or land application area such that biological treatment mechanisms are disrupted is prohibited.
9. Waste constituents shall not be discharged or otherwise released from the Facility (including during treatment and storage activities) in a manner that results in conditions of “nuisance” or “pollution,” as defined per Water Code section 13050.
10. Storage of residual solids on areas not equipped with a means to prevent storm water infiltration, or a paved leachate collection system is prohibited.

11. Application of residual solids to the LAAs is prohibited.

C. Flow Limitation

1. Discharges of wastewater including supplemental irrigation water consisting of pasteurizer condensate and equipment wash down water to the LAAs shall not exceed the following:

Table 9. Flow Limitations

Flow Measurement	Flow Limit
Maximum Daily	3.0 MGD
Total Annual (as determined by the total flow for the calendar year 1 January through 31 December)	50 MGY

D. Performance Based Salinity Limit

1. A flow-weighted annual average concentration of FDS in effluent to the LAAs shall not exceed **2,200 mg/L**. As discussed in Finding 45, this FDS limit is a performance-based salinity limit since the Discharger has elected to participate in the P&O Study in the SCP. As part of the Annual Monitoring Report required per the MRP, the Discharger shall evaluate the effluent flow-weighted annual average FDS concentration to the Performance Based Salinity Limit. If the Facility's discharge exceeds the Performance Based Salinity Limit, the Discharger shall submit a Performance Based Salinity Limit Evaluation Report as described in the Provisions section of the WDRs.

E. Mass Loading Limitations

1. The total nitrogen loading from the discharge to the LAAs, as determined by the methods described in the attached MRP, shall not **exceed crop demand**.
2. The BOD loading to the LAAs, calculated as a cycle average as determined by the methods described in the attached MRP, shall not exceed **100 lb/ac/day/irrigation cycle**.

F. Discharge Specifications

1. Waste discharges shall remain in the wastewater pond, storm water pond, within the LAAs and authorized waste treatment and/or 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 that affects an entire community or neighborhood, or any considerable number of persons.
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. Process wastewater pond(s) shall be properly lined using a compacted clay liner with a minimum clay thickness of two feet and maintained to ensure a hydraulic conductivity standard of 1×10^{-6} cm/s or less.
7. The Discharger shall design, construct, operate, and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. Unless a California-registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard.
8. Wastewater treatment, storage, and disposal ponds or structures shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring continuous compliance with all requirements of this Order. Design seasonal precipitation shall be based on total annual

precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

9. On or about **1 October** of each year, available capacity shall at least equal the volume necessary to comply with Discharger Specifications F.7 and F.8.
10. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. Specifically:
 - a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.
 - b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.
 - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
 - d. The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.
11. Newly constructed or rehabilitated berms or levees (excluding internal berms that separate ponds or control the flow of water within a pond) shall be designed and constructed under the supervision of a California registered civil engineer.
12. The Discharger shall monitor residual solids accumulation in the pond(s) annually and shall periodically remove solids as necessary to maintain adequate storage capacity.
13. 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 100 pounds per acre per day.
2. Crops or other vegetation (which may include, but not limited to pasture grasses, native grasses, orchard trees, and/or ornamental landscaping) shall be grown on the LAAs or any areas where on-site irrigation using wastewater may occur. Crops shall be selected based on nutrient uptake,

consumptive use of water, and irrigation requirements to maximize uptake of nutrients.

3. The Discharger shall ensure that all water is applied and distributed with reasonable uniformity across each LAA block.
4. 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.
5. Application of waste constituents to the LAAs shall be at reasonable agronomic rates to preclude creation of a nuisance or unreasonable degradation of groundwater, considering crop, soil, climate, and irrigation management system. The annual nutritive loading of the LAAs, including nutritive value of organic and chemical fertilizers, and the wastewater, shall not exceed the annual crop demand.
6. Hydraulic loading of wastewater and irrigation water shall be at reasonable agronomic rates designed to minimize the percolation of wastewater and irrigation water below the root zone (i.e., deep percolation).
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 or other vectors.
10. Discharge to the LAAs shall not be initiated when the ground is saturated. (e.g., during or after significant precipitation).
11. Any irrigation runoff (tailwater) shall be confined to the LAAs or returned to the treatment system and shall not enter any surface water drainage courses or surface waters.
12. 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

Discharge of waste from any portion of the Facility and LAAs shall not cause or contribute to groundwater containing constituent concentrations in excess of the

concentrations specified below or in excess of baseline quality, whichever is greater:

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

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

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

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 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 following reports shall be submitted pursuant to Water Code section 13267:
 - a. **Within 45 days after adoption of the WDRs**, a Pond Completion Report shall be submitted. The report shall include verification that the wastewater pond meets the requirements of the WDRs as specified in Discharge Specification F.6 including documentation of any quality assurance testing and observations; certification that the pond was constructed as designed; and as-builts diagrams. Discharges of wastewater to the wastewater pond shall commence upon issuance of a concurrence letter from Water Board staff.
 - b. **Within 90 days after adoption of the WDRs**, the Discharger shall submit a Sampling and Analysis Plan (SAP). The SAP shall be maintained at the facility and shall be presented to the Regional Water Board staff upon request. At a minimum, the SAP shall describe the following:
 - i. Sample chain-of-custody procedures and documentation.
 - ii. Sampling locations.
 - iii. Sampling frequencies.
 - iv. Sample handling/preservation procedures.
 - v. Analytical methods.
 - vi. Sample containers, preservatives, and holding times.
 - vii. For groundwater monitoring, well purging and field methods.
 - c. If the Facility's discharge exceeds the Performance Based Salinity Limit, 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).
- d. **Within 120 days** after discharge activities cease and prior to rescission of the WDRs, soil samples as described below shall be collected and reported as part of the wastewater treatment, storage, and conveyance closure requirements. Samples shall be collected at the same time of the year as when the initial soil samples were obtained as reported in the Baseline Soil Characterization submittal dated 2 May 2024. Soil samples shall be collected at five locations within the land application areas and three locations in an area not likely to be impacted by the discharge. Soil samples shall be collected from each sampling location at the following depth intervals: 2 to 3 feet and 4 to 5 feet below the interval of disturbed soils from the ground surface. Each sample shall be thoroughly mixed to create a composite sample representative of the depth interval. Samples shall be taken at a location within the LAAs where discharges have not occurred. Samples shall be analyzed for the parameters shown in the table below.

Parameters/Constituents	Units	Test Method
Cation Exchange Capacity	meq/100 g	NAPT S-10.1 or S-10.2
pH	Standard units	USEPA Method 9045D
EC	µmhos/cm	USEPA Method 9050A
TDS	mg/L	NAPT ³ S-1.20
Nitrate as N	mg/kg	NAPT S-3.10
TKN	mg/kg	USEPA Method 351.2
Potassium	mg/kg	NAPT S-5.10

2. Compliance Schedule for Nitrate Control Plan Implementation. As described in Finding 46, the Discharger must implement the following tasks within the specified time limits to maintain compliance with the requirements of the Nitrate Control Program. Failure to timely meet the

requirements of this compliance schedule may subject the Discharger to the Conditional Prohibition of Nitrate Discharges to Groundwater until compliance is restored.

Task Description	Due Date
a. Submit report evaluating potential impact on sensitive receptors in the area (i.e., drinking water wells).	Within 90 days after effective date of this Order.
b. If the sensitive receptor survey determines that the Discharger is causing any public water supply or domestic well to exceed the nitrate water quality objective, submit and implement an Early Action Plan (EAP)	Within 6 months after completion of the sensitive receptor survey.
c. Submit Proposed Alternative Compliance Project (ACP) Report, including, at a minimum (1) identification of public water supply and domestic wells that exceed the nitrate WQO and are within the discharge area of contribution (may be satisfied by sensitive receptor survey); (2) a schedule, with identified milestones, for addressing those nitrate-related drinking water issues (may be satisfied by EAP); (3) identification of steps to be taken to meet the three goals of the Nitrate Control Program ² , which may be phased over time.	Within 18 months following completion of the sensitive receptor survey and notification that an ACP is required.

3. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for investigations and studies, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall bear the professional's signature and stamp.

² The three goals are (1) safe drinking water supplies, (2) balanced nitrate loadings, and (3) managed aquifer restoration.

4. The Discharger shall submit the technical reports and work plans required by this Order for consideration by the Executive Officer and incorporate comments the Executive Officer may have in a timely manner, as appropriate. Unless expressly stated otherwise in this Order, the Discharger shall proceed with all work required by the foregoing provisions by the due dates specified.
5. The Discharger shall comply with the separately issued **Monitoring and Reporting Program (MRP) R5-2024-0035**, 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.
6. The Discharger shall comply with the 1 March 1991 SPRRs.
7. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports. On or before each report due date, the Discharger shall submit the specified document to the Central Valley Water Board or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharger shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board in writing when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
8. The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger when the operation is necessary to achieve compliance with the conditions of this Order.
9. The Discharger shall use the best practicable cost-effective control technique(s), including proper operation and maintenance, to comply with this Order.
10. As described in the 1 March 1991 SPRRs, the Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.

11. In the event that the Discharger reports toxic chemical release data to the State Emergency Response Commission (SERC) pursuant to section 313 of the Emergency Planning and Community Right to Know Act (42 U.S.C. 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.
12. At least 90 days prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.
13. In the event of any change in control or ownership of the Facility, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.
14. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of 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.
15. In order to secure rescission of WDRs that are no longer necessary because the discharge to land permitted under this Order has ceased, the Discharger must contact the Central Valley Water Board Compliance and Enforcement Unit to coordinate appropriate wastewater treatment, storage, and conveyance closure requirements.
16. A copy of this Order including the MRP, Information Sheet, Attachments, and 1 March 1991 SPRRs, shall be kept at the Facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
17. The Discharger shall comply with the Basin Plan amendments adopted in Resolution R5-2018-0034 and revised per Resolution R5-2020-0057

incorporating new programs (Salt and Nitrate Control Program) for addressing ongoing salt and nitrate accumulation in the Central Valley developed as part of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative.

18. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Central Valley Water Board by 31 January.
19. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

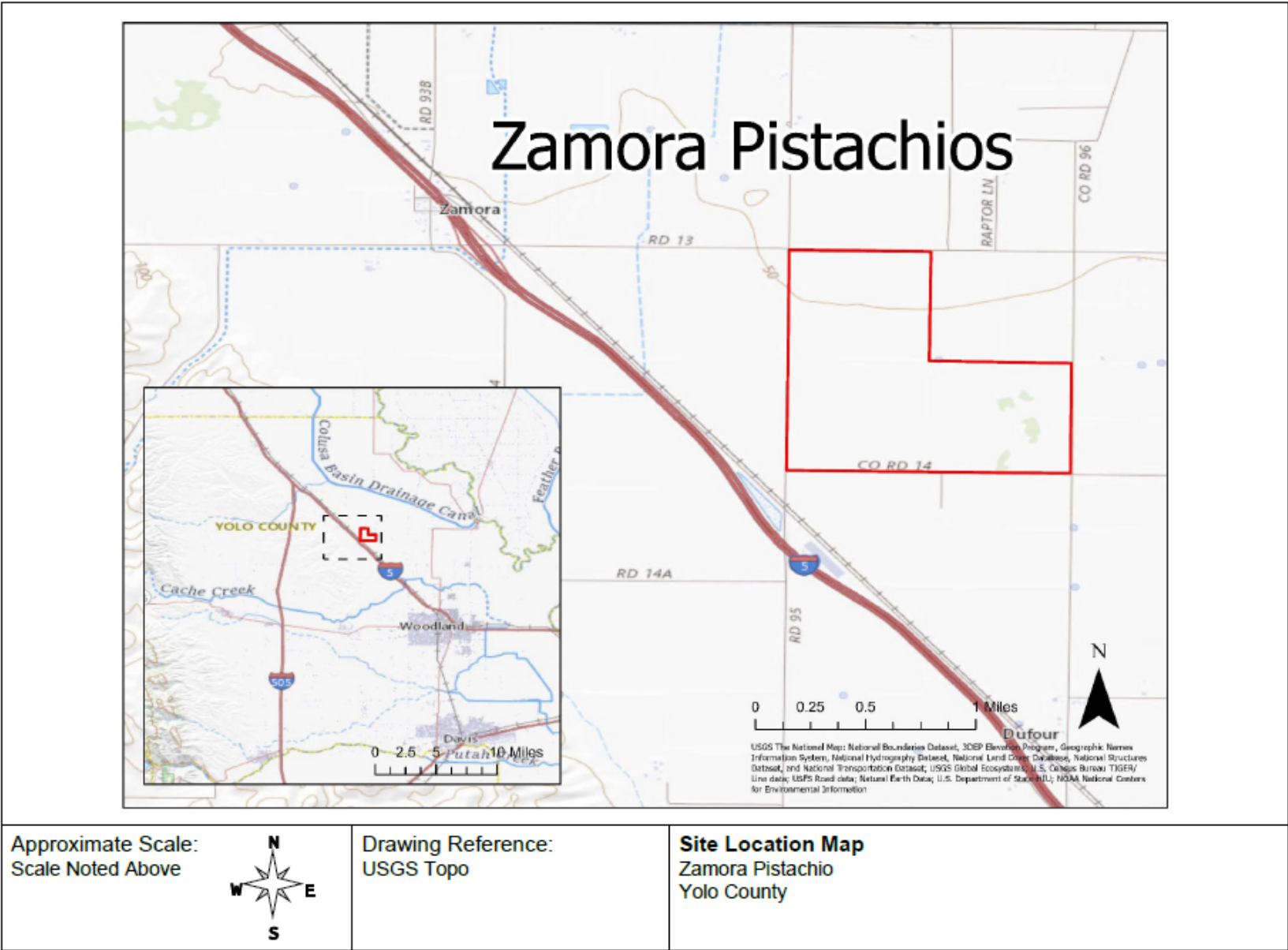
ENFORCEMENT

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to Wat. Code section 13268, 13350, and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

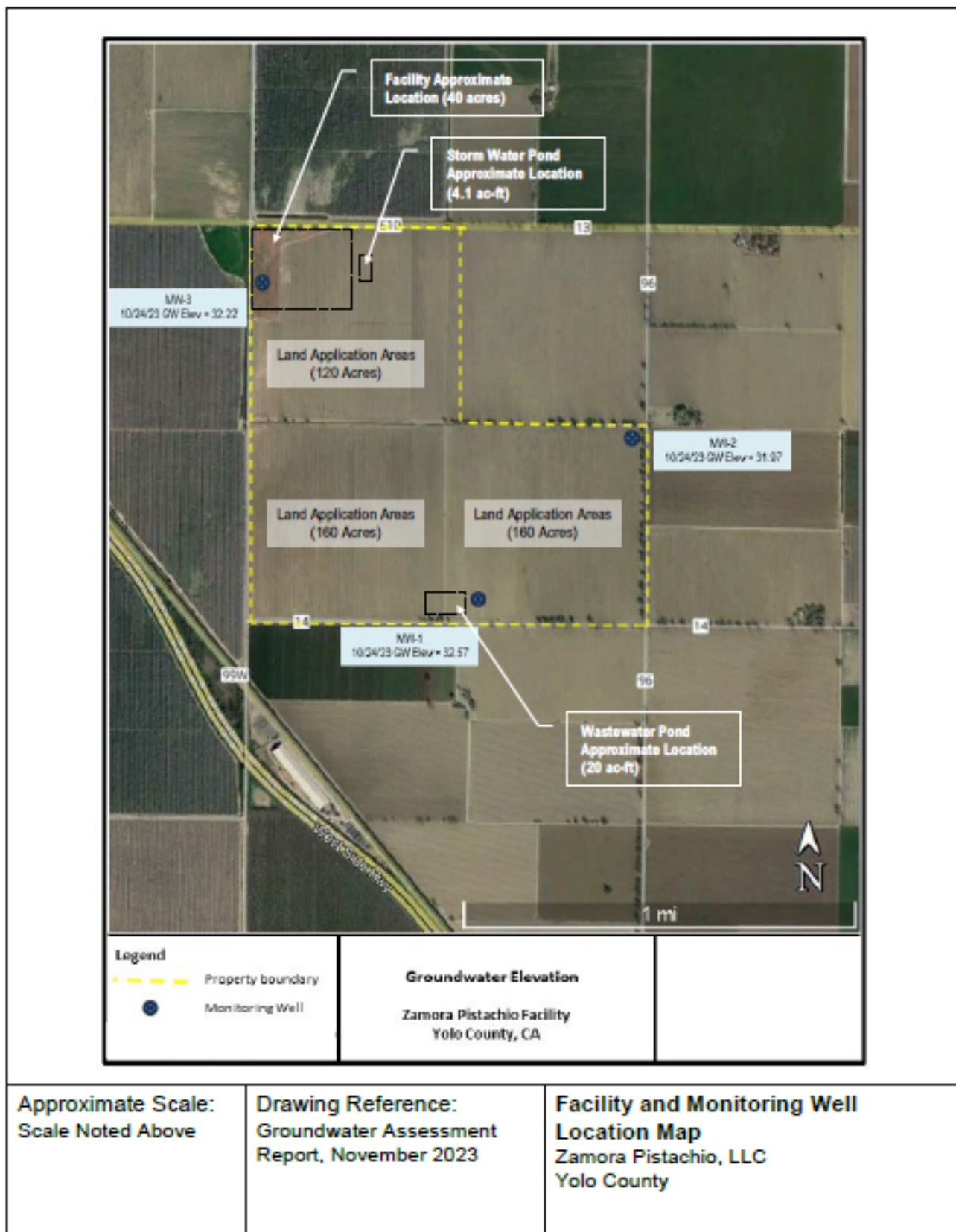
ADMINISTRATIVE REVIEW

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.

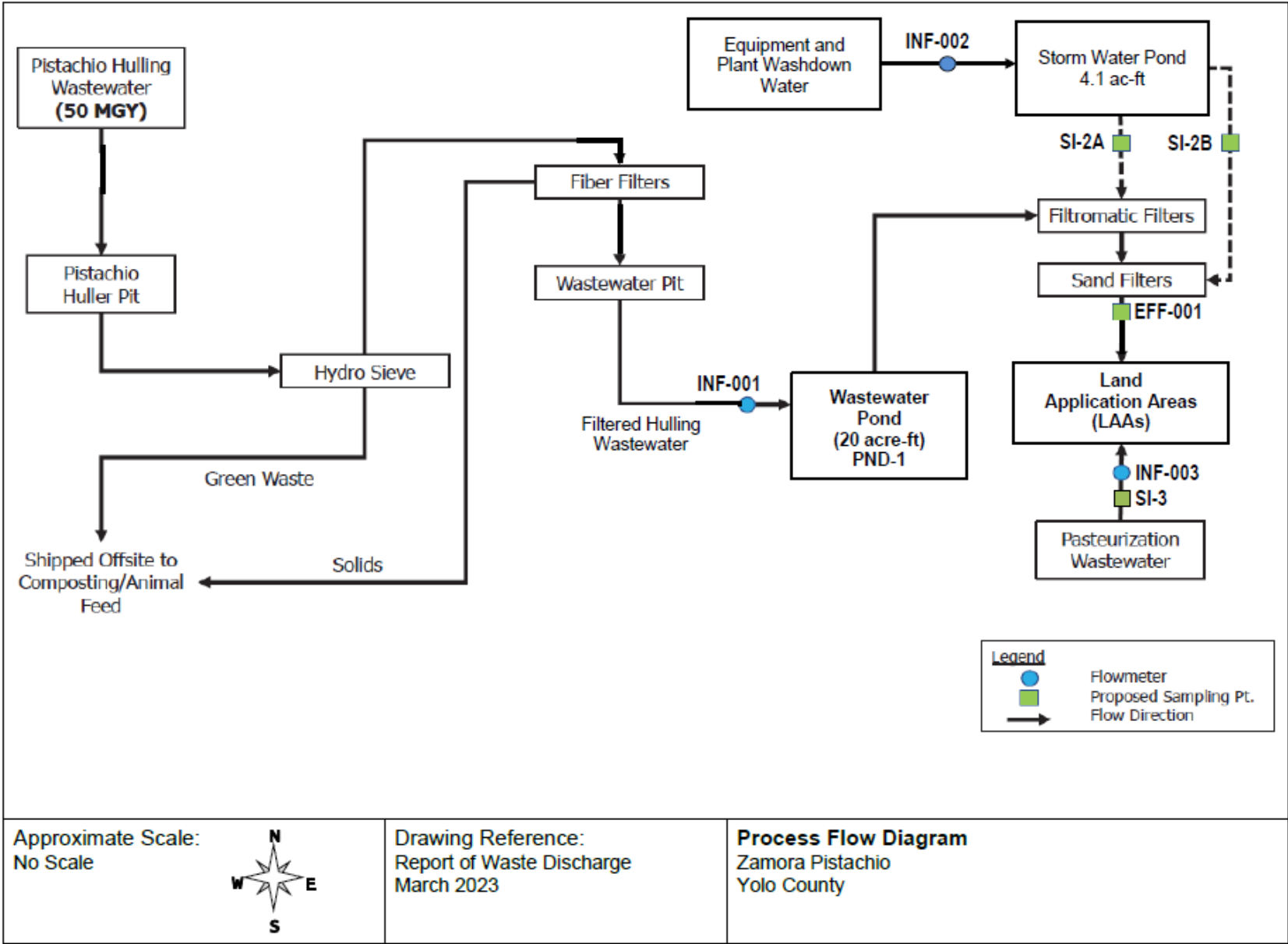
ATTACHMENT A – SITE LOCATION MAP



ATTACHMENT B – FACILITY AND MONITORING WELL LOCATION MAP



ATTACHMENT C – PROCESS FLOW DIAGRAM



**ATTACHMENT D -
ENVIRONMENTAL CHECKLIST AND CEQA ADDENDUM**

INFORMATION SHEET

Background

The Zamora Pistachio Facility is a new pistachio nut hulling and processing facility, that will process up to approximately 42,000 tons of pistachios annually and generate approximately 50 million gallons of process wastewater per year. Process wastewater will be generated from hulling, equipment cleanup/wash down, and pasteurizer condensate. Wastewater is primarily from the hulling, sorting and washing of nuts. A small volume of wastewater is from equipment cleanup/wash down and pasteurizer condensate. Wastewater will be screened and filtered, discharged to a clay-lined pond, then applied to approximately 440 acres cropped with pistachio orchards and cover crops.

This is a new facility, and wastewater quality was not available for the development of these WDRs. The RWD estimated hulling wastewater quality based on three similar pistachio facilities (Terra Bella Pistachio Processing Plant, Tulare County; Lost Hills Pistachio Processing Plant, Kern County; and Dry Ranch Pistachio Plant, Madera County) that operate within the Central Valley area.

The domestic wastewater treatment system will consist of multiple septic tanks and a leach field system(s) regulated by Yolo County.

Site Specific Conditions

Soil sampling was conducted on 28 March 2024 to determine baseline soil characterization. Samples were collected at five locations within the proposed LAAs (S-1) and three locations in an area within the site that is unlikely to be impacted by pistachio wastewater (S-2). Soil samples were collected from each location at 2-foot and 4-foot depths. Samples from each location and depth were mixed to create one composite sample. Composite sample data are shown in the table below.

Parameters	LAA (S-1) @ 2 ft	LAA (S-1) @ 4 ft	Non-LAA (S-2) @ 2 ft	Non-LAA (S-2) @ 4 ft
EC, $\mu\text{mhos/cm}$	720	1,500	6,840	2,370
Nitrate as N, mg/Kg	8.5	6.1	11	13
TKN, mg/Kg	510	410	430	560
TDS, mg/L	7,620	1,300	11,400	1,600
Potassium, mg/Kg	850	810	1,000	1,100
pH, std units	7.97	8.53	8.40	8.89

Parameters	LAA (S-1) @ 2 ft	LAA (S-1) @ 4 ft	Non-LAA (S-2) @ 2 ft	Non-LAA (S-2) @ 4 ft
Cation Exchange Capacity, meq/100g	135	207	117	272

Groundwater Considerations

Groundwater monitoring wells MW-1, MW-2, and MW-3 were installed in October 2023. Monitoring wells were sampled on 2 October 2023 to determine baseline groundwater quality. Groundwater quality is discussed in Finding 27 through 29.

Antidegradation

Antidegradation analysis and conclusions are discussed in Findings 48 through 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 potassium, TDS and FDS), and total nitrogen (primarily TKN and nitrate as nitrogen).

Based on the available data, first-encountered groundwater in the vicinity of the Facility is not identified as high-quality water regarding salinity. The Discharger has elected to participate in the Salt Control Program and has enrolled in the P&O Study. This Order sets a Performance Based Salinity Limit for FDS of 2,200 mg/L as a flow-weighted annual average. Salinity issues will be addressed by the Salt Control Program. The discharge is high in salts, specifically potassium, which would contribute to EC and TDS. Potassium is an important nutrient for crops and if readily available, plants will take up potassium in excess of their needs. Further, the positively charged ion in potassium binds readily to soils allowing for greater retention time in the root zone for crop uptake. The Discharger implements best management practices to minimize impacts from potassium including monitoring potassium in effluent and groundwater, and applying potassium to cropped LAAs at rates not exceeding reasonable agronomic demand.

Pistachio wastewater character is primarily high in TKN, which consists of organic nitrogen and ammonia nitrogen. Based on the available data, first-encountered groundwater in the vicinity of the Facility is not identified as high-quality water regarding nitrates, with the exception near MW-3. This Order requires the application of nitrogen from wastewater to be at reasonable agronomic rates. The discharge should not cause a significant impact to groundwater quality based on the short duration of stored wastewater in a clay-lined pond and careful management of the LAAs including crop types and application at agronomic rates. This Order contains a time schedule for the Discharger to begin implementation of the Nitrate Control Program by submitting an Initial Assessment, and Early Action Plan (as needed), and an Alternative Compliance Project(s) by the prescribed deadlines.

High BOD concentrations are typical of hulling wastewater. Multiple methods of screening or equipment will be used for solids recovery. The wastewater pond will be aerated to reduce organic loading. Given the limited use of the clay-lined pond (wastewater storage during the harvest season) and aerator(s) in the pond, implementation of best management practices including LAAs cropped with pistachios and cover crops and even application of wastewater, the discharge should not cause odors or nuisance conditions or significantly degrade groundwater quality beyond current conditions with constituents related to organic loading. This Order sets BOD₅ as a loading limit not to exceed 100 lb/ac/yr. Currently, manganese and iron concentrations in groundwater are non-detect or below sMCLs. If concentrations show increasing trends, the BOD₅ effluent limit may be re-evaluated.

Discharge Prohibitions, Effluent Limitations, Discharge Specification, and Provisions

This Order sets the following flow limits:

- Waste discharges to the LAAs shall not exceed **3.0 MGD**.
- Waste discharges to the LAAs shall not exceed **50 MGY** for the calendar year (1 January through 31 December).

Anticipated daily wastewater flow from hulling operations is approximately 2.0 MGD. The maximum anticipated daily wastewater flow of 3.0 MGD accommodates additional wastewater from other routine hulling, processing, and operational needs.

This Order sets a Performance Based Salinity Limit of **2,200 mg/L for FDS** as a **flow-weighted annual average**. This limit was based on effluent data from similar pistachio facilities (Lost Hills Pistachio Processing Plant, Kern County and Dry Ranch Pistachio Plant, Madera County) operating within the Central Valley. 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 **100 lb/ac/year as an irrigation cycle average**.

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, residual solids, and groundwater monitoring requirements. This monitoring is necessary to characterize the discharge and evaluate any impacts to groundwater and compliance with the requirements and specifications in the Order.

Salt and Nitrate Control Programs Regulatory Considerations

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

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). Upon receipt of the Notice to Comply, the Discharger will have no more than six months to inform the Central Valley Water Board of their choice between Option 1 (Conservative Option for Salt Permitting) or Option 2 (Alternative Option for Salt Permitting). The level of participation required of dischargers whose discharges do not meet stringent salinity requirements will vary based on factors such as the amount of salinity in the discharge, local conditions, and type of discharge. The Discharger (**CV-SALTS ID 3631**) has chosen to pursue Option 2 (Alternative Salinity Permitting Approach).

For the Nitrate Control Program, this Order includes a compliance schedule requiring the Discharger to (1) conduct a Sensitive Receptor Survey and determine if any water supply wells are impacted by the Discharger's discharge of nitrate; (2) implement an Early Action Plan as needed; and (3) implement an Alternative Compliance Project(s) as needed.

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.