

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

Fresno Office
1685 "E" St.
Fresno, CA 93706-2007

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

Redding Office
364 Knollcrest Dr. #205
Redding, CA 96002

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

WASTE DISCHARGE REQUIREMENTS ORDER R5-2023-0007



ORDER INFORMATION

Order Type(s):	Waste Discharge Requirements (WDRs)
Status:	Adopted
Program:	Non-15
Region 5 Office:	Fresno
Discharger(s):	Azteca Milling, L.P. dba Valley Grain Products
Facility:	Azteca Madera Masa Plant
Address:	23865 Avenue 18, Madera
County:	Madera County
Parcel Nos.:	029-280-054, 029-290-011, 029-290-014,
CIWQS Place ID:	270057
Prior Order(s):	70-208

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 27 April 2023.

PATRICK PULUPA,
Executive Officer

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GLOSSARY

Antidegradation Policy.....	Statement of Policy with Respect to Maintaining High Quality Waters in California, State Water Board Resolution 68-16
Basin Plan	Water Quality Control Plan for Sacramento and San Joaquin River Basins
bgs	Below Ground Surface
BOD _[5]	[Five-Day] Biochemical Oxygen Demand at 20°Celsius
BPTC.....	Best Practicable Treatment and Control
CEQA.....	California Environmental Quality Act, Public Resources Code section 21000 et seq.
CEQA Guidelines	California Code of Regulations, Title 14, section 15000 et seq.
C.F.R.....	Code of Federal Regulations
COC[s]	Constituent[s] of Concern
DO.....	Dissolved Oxygen
DWR.....	California Department of Water Resources
EC	Electrical Conductivity
EIR	Environmental Impact Report
FDS	Fixed Dissolved Solids
FEMA	Federal Emergency Management Agency
gpd	Gallons per Day
LAA	Land Application Area
lbs/ac/yr.....	Pounds per Acre per Year
µg/L	Micrograms per Liter
µmhos/cm.....	Micromhos per Centimeter
mgd	Million Gallons per Day

Glossary

mg/L	Milligrams per Liter
msl.....	Mean Sea Level
MRP	Monitoring and Reporting Program
MW.....	Monitoring Well
MCL.....	Maximum Contaminant Level per Title 22
N.....	Nitrogen
ND	Non-Detect
NM.....	Not Monitored
ORP	Oxygen Reduction Potential
R[O]WD.....	Report of Waste Discharge
RCRA	Resource Conservation and Recovery Act
SPRRs	Standard Provisions and Reporting Requirements
SERC	State Emergency Response Commission
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
Unified Guidance.....	Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (USEPA, 2009)
USEPA.....	United States Environmental Protection Agency
VOC[s].....	Volatile Organic Compound[s]
WDRs.....	Waste Discharge Requirements
WQO[s]	Water Quality Objective[s]

FINDINGS

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

Introduction

1. Azteca Milling L.P. dba Valley Grain Products (hereinafter referred to as Azteca or Discharger) operates an industrial food processing plant (referred to as Madera Masa Plant or Facility) that produces corn masa. The Facility is at 23865 Avenue 18 in Madera County. The Facility location is depicted on the Project Location Map in **Attachment A**, and the Facility and the adjacent properties are depicted on the Site Vicinity Map in **Attachment B**.
2. Azteca has owned and operated the Facility since 1996. The Facility is currently regulated by Waste Discharge Requirements (WDRs) Order 70-208, which was originally issued to Valley Grain Drier, Inc. in June 1970. In 1976, Valley Grain Drier, Inc. merged with Valley Grain Products, Inc., and in 1995, Valley Grain Products, Inc. merged with ADM Milling, Inc and became a California-registered limited partnership with Gruma-ADM, Inc. According to Gruma-ADM's website, Azteca Milling, L.P. is the largest "nixtamal" corn producer in the United States.
3. The Facility operates about 360 days of the year and processes about 400,000 pounds of raw corn kernels to produce about 350,000 pounds of corn masa daily. Wastewater generated during the masa making process is currently discharged to an existing land application area (LAA-1). There is an abandoned unlined storage pond near the center of LAA-1 that reportedly has not been used since Azteca purchased the Facility. In 2022, Azteca purchased about 227 acres of farmland currently cropped with almonds to develop as another land application area (LAA-2).
4. The Facility, the associated land application areas, and the effluent storage pond are within portions of Sections 33 and 34, Township 10 S, Range 17 E, Mount Diablo Base and Meridian (MDB&M). The Facility and LAA-1 are within 181.6-acre Madera County Assessor Parcel Number (APN) 029-280-054. LAA-2 and is comprised of two Madera County APNs, 37.7-acre APN 029-290-011 and 189.0-acre APN 029-290-014.
5. LAA-1 covers approximately 128 acres with about 123 acres available for the disposal of wastewater. The Facility occupies the remaining 55 acres of APN 029-280-054. The Facility, LAA-1, and the individual field numbers for LAA-1 are shown on the Facility Map in **Attachment C**. The 227 acres that comprise LAA-2 are shown on the Site Vicinity Map in **Attachment B**.

6. Azteca, as owner and operator of the Facility is responsible for compliance with the WDRs prescribed herein.
7. The following materials are attached and incorporated as part of this Order:
 - a. Attachment A —Project Location Map
 - b. Attachment B —Site Vicinity Map
 - Attachment C —Aerial Photo of Facility and LAA-1
 - d. Attachment D – Flow Schematic
 - e. Standard Provisions & Reporting Requirements dated 1 March 1991 (SPRRs).
 - f. Information Sheet.
8. Also attached is **Monitoring and Reporting Program Order R5-2023-0007 (MRP)**, which requires monitoring and reporting for discharges regulated under these WDRs. The Discharger shall comply with the MRP, and subsequent revisions thereto as ordered by the Executive Officer or adopted by Central Valley Water Board.
9. WDRs are needed for this Facility to ensure the discharge is in compliance with current water quality plans and policies.

Regulatory History and Background

10. The Facility and its discharge are regulated by WDRs Order 70-208, which were originally issued to Valley Grain Dryer, Inc. on 26 June 1970. WDRs Order 70-208 authorizes the discharge of cooking, rinse, and washdown water to land adjacent to the Facility. The WDRs describe a design flow of 21,000 gpd or 0.012 mgd but does not specify a flow limit nor include an MRP. Therefore, there is limited historical monitoring data or information for the Facility.
11. The Facility case file contains various correspondence and inspection records dating back to the 1970s. The file record contains an 11 July 1989 letter from the Central Valley Water Board to Valley Grain Products, Inc., regarding a 10 May 1989 inspection of the Facility. The letter indicates the system was adequately handling the wastewater flows at the time, *“however, the requirements need updating to ensure that it reflects current policies.”* Field testing of the waste stream recorded pH as high as 11.0 standard pH units (s.u). and an EC of 3,800 µmhos/cm.
12. Since 1996, the Facility has been inspected by Central Valley Water Board staff six times (December 2007, July 2011, June 2012, November 2013, June 2021, and October 2022). No violations were noted in the inspection reports, but some

of the reports note the high strength nature of the wastewater and the use of hydrochloric acid to lower the pH of the effluent prior to discharge to LAA-1. Additionally, the 2021 and 2022 inspections note that LAA-1 was not being managed to grow and harvest a crop.

13. On 6 June 2019, the Central Valley Water Board Executive Officer issued Azteca a 13260/13267 letter requiring submittal of a Report of Waste Discharge (RWD). On 19 December 2019, Krazan & Associates, Inc. submitted a RWD on behalf of Azteca Milling, consisting of a Form 200 and technical report.
14. Based on staff's review of the RWD and the June 2021 inspection, staff met (virtually) with the Discharger in August 2021 to discuss various concerns with the current operation of the Facility (e.g., lack of storage during precipitation events, current operation of the land application area, limited monitoring data for the site, and current BOD, nutrient, and salt loading rates to LAA-1). During the meeting, Azteca's representatives expressed a willingness to work towards addressing these issues. As follow-up to the meeting, Central Valley Water Board staff requested Azteca to address these permitting issues in a 2 September 2021 letter.
15. On 1 December 2021, Azteca provided a response to the August 2021 meeting and September 2021 letter. The response included additional monitoring data recently collected at the Facility; a November 2021 Initial Wastewater and Nutrient Management Plan (2021 NMP) characterizing the Facility's current discharge and proposed operation of the existing land application area (LAA-1); and a Tier 1 Pond Design Report proposing to expand and install a double liner at the Facility's existing/abandoned effluent storage pond. Both the Wastewater and Nutrient Management Plan and the Tier 1 Pond Design Report were prepared by Provost and Pritchard Consulting Group.
16. Furthermore, in the December 2021 response, Azteca informed Central Valley Water Board staff that it was in the process of acquiring additional land adjacent to the current Facility for use as an additional wastewater land application (LAA-2). The land (227 acres as discussed in Finding 3) has been purchased and will be added to Azteca's acreage used for the reuse/disposal of wastewater. Prior to the discharge of wastewater to LAA-2, the Discharger shall submit an updated Wastewater and Nutrient Management Plan as required by Provision I.6.

Existing Facility and Discharge

17. Corn is brought to the Facility via rail car and corn kernels are cooked in 10,000-gallon cook tubs, which produces 90 to 95 percent of the process wastewater. The other five to ten percent of the discharge is generated during the cleaning of the processing equipment. Up to 48 batches using about 3,500 gallons

of water per batch can be processed every 24 hours. Calcium hydroxide is added to raise the pH of the cooking water up to around 11.0 s.u.

18. Cooked corn is washed through a wash auger, conveyed to a dewatering hydro sieve, and fed into wet stone grinders via a cross auger to turn the cooked corn into masa dough. After the grinder, the masa dough is flashed dried in suspension driers and packaged in 50-pound bags or 2,200-pound totes. A flow schematic is presented in **Attachment D**.
19. Process wastewater is produced from the cooking, product rinse, and equipment cleaning operations. The high pH wastewater (INF-01) is conveyed through a series of floor drains to the north side of the Facility to a 5,000-gallon polyethylene storage tank where it processed through a hydro-sieve to remove solids and treated with 15 to 31 percent hydrochloric acid to reduce scaling of the hydro-sieve and to lower the pH of the wastewater to between 5.0 and 8.0 s.u. A flow meter is used to measure the flow to the 5,000-gallon storage tank.
20. Approximately 1.5 tons of wet solids are generated daily, which are sold offsite as animal feed. After screening, a screw press reduces the moisture content of the solids to about 70 percent prior to depositing them into bins that are dumped into onsite trailers. Solids are not applied to the LAAs.
21. The 2021 NMP included process wastewater flow data from January 2019 through October 2021. The average annual effluent flow for the period was just over 72 million gallons with total monthly flows ranging from 5.25 million gallons (February) to 6.43 million gallons (October). The daily flow ranged from 0.184 to 0.208 million gallons per day (mgd), with an average flow of 0.197 mgd.
22. The treated process wastewater (EFF-01) is then discharged into two 10,000-gallon polyethylene storage tanks and used to irrigate LAA-1. LAA-1 is subdivided into seven fields comprising about 128 acres. Currently, Field 7 (see Attachment C) contains an existing/abandoned unlined effluent disposal pond on its western half and is fallow on its eastern half due to the area not being plumbed/piped for irrigation. The Discharger has indicated that the majority of Field 7 will be removed for the expansion of the existing storage pond as discussed previously. Therefore, the 5.2 acres for Field 7 is not included in the actual farmable acres for LAA-1. The individual fields for LAA-1 are shown in Attachment C and their acreage summarized in Table 1.

Table 1 – Existing Land Application Area (LAA-1) Acres

<u>Field ID</u>	<u>Acres</u>	<u>Farmable Acres</u>
1	34.9	34.9
2	20.4	20.4
3	14.2	14.2

<u>Field ID</u>	<u>Acres</u>	<u>Farmable Acres</u>
4	18.4	18.4
5	16.5	16.5
6	18.3	18.3
7	5.2	0
---	127.9	122.7

23. Order 70-208 describes a 300-foot by 500-foot holding-oxidation-percolation pond near the northern boundary but notes the pond was not in use at that time. A December 1985 aerial photo on Google Earth appears to show the pond containing water, but it appears dry in the next available photo in August 1998, (two years after Azteca’s acquisition of the Facility) and from that point on. As previously discussed, a new lined pond will be constructed in the location of the existing/abandoned unlined pond that will allow for the even and agronomic application of wastewater to the LAA.
24. Available effluent data is limited to six samples of the untreated process wastewater (INF-01) and treated effluent (EFF-01). A single effluent sample was collected in 2019 and five additional samples were collected during five weekly sampling events from 22 September 2021 through 12 October 2021. The Discharger noted that the process wastewater sample collected on 22 September 2021 was during a cleaning cycle and as such is not necessarily representative of the typical process wastewater quality. The values were significantly lower and were removed as outliers. The results are summarized in Table 2. The average is the first value shown with the range shown in parentheses. The value shown for pH is the median value.

Table 2 – 2019 and 2021 Influent and Effluent Data

<u>Constituent</u>	<u>Units</u>	<u>INF-01</u>	<u>EFF-01</u>
pH	s.u.	5.4 (4.5 – 11.4)	5.4 (4.9 – 5.7)
EC	µmhos/cm	1,780 (1,100 – 2,700)	1,434 (870 – 2,100)
Chloride	mg/L	98 (42 – 250)	58 (42 – 82)
TDS	mg/L	4,960 (2,100 – 7,000)	4,160 (1,900 – 6,500)
FDS	mg/L	1,868 (450 – 4,700)	1,080 (490 – 1,900)
BOD ₅	mg/L	3,320 (1,800 – 5,800)	2,844 (620 – 4,300)
TSS	mg/L	3,500 (2,800 – 4,200)	2,260 (1,100 – 3,100)
Nitrate (as N)	mg/L	2.9 (2.2 – 3.8)	3.0 (0.3 – 5.6)

<u>Constituent</u>	<u>Units</u>	<u>INF-01</u>	<u>EFF-01</u>
TKN	mg/L	64 (39 – 96)	64 (40 - 93)
TN	mg/L	70 (43 – 99)	67 (42 – 98)
Sulfate	mg/L	24 (20 – 27)	25 (17 – 33)
Calcium	mg/L	407 (370 – 480)	304 (230 – 400)

25. The results show considerable variation in concentrations as shown in Table 2. As previously noted, high pH cooking water makes up 90 to 95 percent of the discharge. The other five to ten percent of the discharge is generated during the cleaning of the processing equipment. The variability in concentrations is likely the result of collecting grab samples of the effluent that don't represent the blended discharge. Upon completion of the proposed lined effluent storage pond (17.3 million gallons), effluent samples collected after storage in the pond will provide a more representative sample of the Facility's effluent.
26. Wastewater is currently applied to LAA-1 using sprinkler irrigation. The sprinklers only have about a 80 to 120-foot diameter and don't irrigate all of the available acreage in LAA-1, which results in a significant portion of LAA-1 not being irrigated as shown on Attachment C. The darker circles represent areas irrigated with effluent and the lighter shaded areas indicate areas of non-irrigation. A new or updated irrigation system (discussed starting with Finding 29) is needed to irrigate existing LAA-1 evenly and agronomically. Currently no crops are grown or harvested from LAA-1. Rather, natural grasses and weeds grow in the irrigated portion of the land, and the weeds and grasses are periodically cut and left on the ground. The cuttings are not removed, which limits the actual amount of nitrogen and salt removed by the vegetation grown in the LAAs. Cattle were previously allowed to graze on LAA-1, but that practice has been discontinued since 2014/2015.
27. The continued Facility operation and wastewater disposal practices pose a significant threat to groundwater quality. Changes to the Facility and disposal practices are necessary to ensure the Facility's operation and discharge is protective of underlying groundwater.
28. The discharge of domestic wastewater is to an onsite septic tank leach field system regulated by Madera County.

Proposed Changes to the Facility Discharge

2021 Initial Wastewater Nutrient Management Plan (NMP)

29. The 2021 NMP proposes the Discharger will grow and harvest a crop on 123-acre LAA-1 and the addition of a double lined storage pond (discussed in more detail starting with Finding 35). Crops are to be grown during both the summer and winter months (double cropped) typically using silage corn during the summer and wheat (triticale) during the winter months and all crops will be harvested. Other potential crops include sorghum and Sudan grass. A new irrigation system (likely pivot or linear sprinkler irrigation) will be required to irrigate the LAAs agronomically.
30. The 2021 NMP also notes about 74 million gallons of supplemental freshwater will be required to successfully manage and farm LAA-1. Irrigation water will be supplied from an irrigation well located in the northeast corner of LAA-1.
31. The 2021 NMP provides loading estimates to the 123-acre LAA-1 using an estimated flow of 0.21 mgd. Total annual effluent flow was estimated at 76.6 million gallons, with total monthly flows ranging from 5.25 million gallons to 6.51 million gallons.
32. The potential nitrogen, salt, and BOD loadings from Azteca’s discharge to LAA-1 are presented in the 2021 NMP. The Discharger used an ammonia volatilization rate of 10 percent (%) and a denitrification rate for nitrate-nitrogen of 5%. As shown in Table 3, the nitrogen balance indicates a net negative balance after crop uptake (i.e., the discharge alone will not provide enough nitrogen for the crop needs and additional fertilizers is needed).

Table 3 – Estimated Annual Nitrogen Loading Rate (LAA-1 Only)

Crop	Effluent Loading (lbs/ac/year) (see 1 below)	Crop Uptake (lbs/ac)	Balance (lbs/ac/year)
Corn (silage)	207	264	-57
Winter Forage	132	226	-94

1. Effluent loading included net losses due to a projected ammonia volatilization rate of 10% and a denitrification rate of 5%.

33. The 2021 NMP notes that the estimated discharge will add 6,139 pounds of salt per year (calculated using FDS) as summarized in Table 4.

Table 4 – Estimated Annual Salt Loading Rate (LAA-1 Only)

Crop	Total Applied (lbs/ac/year)
Corn (silage)	4,034

Crop	Total Applied (lbs/ac/year)
Winter Forage	2,105
Total	6,139

34. BOD loading calculations are presented in the 2021 NMP for LAA-1 and indicate daily BOD loading ranged from 15 to 224 lbs/ac/day. Cycle averages are estimated and presented in Table 15 of the 2021 NMP and are listed as ranging from 4 to 92 lbs/ac/day. The 2021 NMP concludes, “a broad range of total cycle days (irrigation + rest) and depth of effluent applied are possible while maintaining appropriate BOD cycle average loading rates.”

2021 Tier 1 Pond Design Report

35. The November 2021 Tier 1 Pond Design Report proposes a double-walled high-density polyethylene (HDPE) pond liner equipped with a leachate collection and removal system and a gas venting system. The liner will consist of a top conductive HDPE 60-mil liner, 175-mil HDPE geonet, and a bottom non-conductive 60-mil HDPE. The lined effluent storage pond is proposed to be 480 feet long, 260 feet wide, with a depth of 30 feet, and an estimated capacity of 17.3 million gallons (with a two-foot freeboard). The lined effluent storage pond will replace an existing/abandoned unlined storage pond and assist the Discharger in applying effluent agronomically. A Construction Quality Assurance (CQA) Plan was also provided. The Discharger has stated that the proposed effluent storage pond will be aerated to ensure the pond does not cause nuisance conditions.
36. At an effluent flow rate of 0.21 mgd and with a storage capacity of 17.3 million gallons, the pond will provide up to 78 days of effluent storage if empty. The 2021 NMP includes a water balance (assuming only discharge to LAA-1) that indicates the maximum volume of water stored for the 100-year water balance would be 17.241 million gallons, just less than the proposed effluent pond’s capacity of 17.296 million gallons.

Addition of LAA-2 and Proposed Site Improvements

37. As mentioned in Finding 3, the Discharger has purchased additional land application area (LAA-2) for application of the Facility’s wastewater, identified in Attachment B. The 2021 NMP proposes the Discharger will double crop (grow two crops per year) to maximize the potential nutrient/salt uptake of the crops grown in the LAAs as shown in the tables below. Silage corn is proposed as the primary summer crop while triticale, sorghum, and Sudan grass are proposed as the primary winter crops. The loading estimates presented in Findings 32, 33, and

34do not reflect the additional 227 acreage provided by LAA-2. Adding LAA-2 will greatly reduce the loadings as discussed below. However, not all of the 227 acres at LAA-2 will be available for recycling due to access roads, ponds, etc. The following loading rates are estimated using all of LAA-1 (about 123 acres) and all 227 acres for comparison purposes.

Table 5 – Estimated Annual Effluent Nitrogen Loading Rates (With LAA-2)

Crop	LAA-1 Only (lbs/ac/year)	LAA-1 & LAA-2 (lbs/ac/year)
Summer crop (e.g., Silage Corn)	207	73
Winter Crop (e.g., Triticale, Sorghum, etc.)	132	46

Table 6 – Estimated Annual Effluent Salt Loading Rates (With LAA-2)

Crop	LAA-1 Only (lbs/ac/year)	LAA-1 & LAA-2 (lbs/ac/year)
Summer crop (e.g., Silage Corn)	4,034	1,418
Winter Crop (e.g., Triticale, Sorghum, etc.)	2,105	740

38. Daily BOD loading to just LAA-1 was estimated to range from 15 to 224 lbs/ac/day and cycle average loading was estimated to range from 4 to 92 lbs/ac/day. Adding the 227-acre LAA-2 reduces the estimated daily loading from a maximum 224 lbs/ac/day to 79 lbs/ac/day and reduces the estimated cycle average BOD loading of 92 lbs/ac/day to approximately 32 lbs/ac/day.
39. During the 14 October 2022 inspection, the Discharger indicated another lined pond would likely be required as an equalization pond to adequately irrigate the recently acquired LAA-2. An updated Wastewater Nutrient Management Plan is necessary to demonstrate how the 227-acre area will be utilized to apply effluent at agronomic rates. If the Discharger proposes to construct an additional effluent storage pond, the Discharger must submit a Report of Waste Discharge for the material change and provide a summary of the construction and land use permits that may be required by the local agency (e.g., Madera County) and whether the pond construction triggers the need for a CEQA evaluation.
40. The proposed changes including growing/harvesting a crop on LAA-1, expanding the land application of process wastewater to LAA-2, and installation of a

double-lined pond are improvements to the Facility that will significantly reduce the Facility's threat on degrading underlying groundwater. However, these changes (besides purchasing the LAA-2) have not yet be completed. Therefore, this Order includes time schedules for the Discharger to implement the proposed changes, including: preparation of a Salinity Evaluation and Minimization Plan (Provision I.5), preparation of an updated Wastewater Nutrient Management Plan that includes developing LAA-2 for the application of wastewater (Provision I.6); modification of LAA-1 to irrigate and harvest crops (Provision I.7), installation of the double-lined storage pond (Provision I.8); preparation of a Pond Operation and Maintenance Plan (Provision I.9); and begin irrigating LAA-2 with Facility effluent and growing a harvestable crop (Provision I.10).

Site-Specific Conditions

Topography, Climate, and Land Use

41. The Facility elevation is about 250 feet above mean sea level and the natural land surface slopes gradually to the west. The nearest surface water is Dry Creek, which borders the northern property line of the Facility. Dry Creek is shown as an intermittent water body that would discharge into the Fresno River about 8 miles southwest of the facility. The Fresno River is about 3 miles south of the Facility.
42. According to the Web Soil Survey published by the United States Department of Agriculture, Natural Resources Conservation Service, soils in LAA-1 consist primarily of San Joaquin sandy loam (> 80 percent) with lesser amounts of Greenfield coarse sandy loam and Delhi sand. Soils in LAA-2 again consist primarily of the San Joaquin sandy loam (about 50 percent) but include Atwater sandy loam, Madera loam, and the Tujunga sandy loam in addition to the Greenfield coarse sandy loam. The San Joaquin sandy loam is a Class 4s soil that has very severe limitations that reduce the choice of plants or that require very careful management, or both. The "s" subclass indicates the soil is limited mainly because it is shallow, droughty, or stony. The San Joaquin sandy loam is described as moderately well drained with a very low capacity to transmit water.
43. The region is characterized by hot dry summers and mild winters. The rainy season generally extends from November through March. Occasional rains occur during the spring and fall months, but summer months are dry. Average annual precipitation is about 12.3 inches. The region has an annual evapotranspiration of 53.4 inches with monthly averages ranging from 0.93 inches in December to 8.1 inches in July (California Irrigation Management Information System [CIMIS], Reference Evapotranspiration Zones, Zone 12).
44. The Facility is within Federal Emergency Management Agency (FEMA) flood map 06039C0900E. According to the flood map, the Facility, LAA-1, and all but a small portion at the southeast corner of LAA-2 is within a 100-year flood zone special

hazards area indicating the potential flood depth of 1 foot. Process wastewater applied via sprinkler irrigation to a crop reduces the potential for ponding on the ground surface and irrigation is not allowed during rainfall events, so impact from a flood covering the LAAs would likely be minimal (once the lined effluent storage pond is installed). The Azteca property (Facility and LAA-1) has an earthen 12 to 18-inch berm surrounding it and the proposed effluent storage pond will be constructed with a four-foot above grade berm that will protect the pond from inundation of flood waters.

45. Land usage surrounding the Facility is a mixture of agricultural, light industrial, and rural residential. The Southern Pacific railway and Highway 99 form the western property line of the Facility and LAA-1. The Facility and LAA-1 are bordered by agricultural properties to the north, east (by LAA-2), and south. LAA-2 is bounded to the north by agriculture. Rural residences are present to the south and west of LAA-2. According to the California Department of Water Resources Land Use Viewer, typical crops grown in the area include deciduous fruits, nuts, and grapes.

Groundwater and Subsurface Conditions

46. Source water is supplied to the Facility by two onsite wells. The depth to water in the two onsite source water wells in February 2017 was 234 and 253 feet bgs in Wells 1 and 2, respectively. Monitoring results of the two wells from December 2019 are presented in Table 7.

Table 7 – Source Water Quality

Constituent	Units	Well 1	Well 2
BOD ₅	mg/L	<1	<1
TDS	mg/L	210	230
FDS	mg/L	170	190
EC	µmhos/cm	250	270
TKN	mg/L	<1	<1
Ammonia as N	mg/L	<0.1	<0.1
Nitrate as N	mg/L	2.9	2.5
pH	s.u.	7.5	7.6
Calcium	mg/L	17	20
Potassium	mg/L	2.6	2.6

Regional Groundwater Occurrence and Quality

47. There are no monitoring wells at the Facility, but WDRs Order 70-208 noted the that the depth to the unconfined groundwater table in the area ranged between 70 and 80 feet bgs and that groundwater samples from the area were collected in 1965 and 1966 and the EC of the groundwater ranged from 150 to 462 $\mu\text{mhos/cm}$. Depth to groundwater information and groundwater elevation maps are available on the [California Department of Water Resources \(DWR\) SGMA Data Viewer \(https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer\)](https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer). Groundwater elevations for spring 2021 show that the predominant flow direction is to the southwest near the location of the Facility. The depth to water was shown at about 270 feet bgs, with a corresponding groundwater elevation of about 20 feet below msl.
48. A review of the California State Water Boards GAMA (GAMA) Groundwater Information System shows three domestic wells (AGW080017006, AGW080017007, AGW080018696) within a half mile of the Facility and cross-gradient from the LAAs. Each well has only one sampling result analyzed for nitrate plus nitrite collected in 2020 and 2021 and results ranged from 2.9 to 7.0 mg/L. The GAMA website also shows the presence of three individual municipal wells in the vicinity of the Facility. Well CA2000682-003 is onsite near the southeast corner of the Facility property. It provides water to the Azteca Office, but not to the Facility. Well CA2000682-002 is located southeast of the intersection of Avenue 18 and Road 24 and is listed as being 295 feet in depth with a 125-foot screened interval. Well CA2000370-002 is located about 1/2 mile southwest, downgradient and west of Highway 99. The results for these three wells are shown on Table 8.

Table 8 – Regional Groundwater Results

Constituent	Units	CA2000682-003 (See 1 below)	CA2000682-002 (See 2 below)	CA2000370-002 (See 3 below)
Calcium	mg/L	62 (14 – 106)	27 (23 – 32)	13 (9 - 16)
Sodium	mg/L	30.6 (21 – 40.4)	24 (22 – 27)	23 (20 – 28)
Nitrate as N	mg/L	3.8 (1.7 – 4.8)	2.5 (1.0 – 2.8)	2.2 (0.6 – 4.3)
EC	$\mu\text{mhos/cm}$	384 (130 – 953)	253 (200 – 306)	218 (190 – 250)
TDS	mg/L	381 (190 – 570)	220	202 (192 – 220)
pH	s.u.	7.2	7.4	7.4

1. Data is from one (pH) to six samples collected from May 2008 through February 2022.

2. Data is from one (TDS and pH) to 16 samples collected from May 2008 through May 2022.
3. Data is from 3 to 24 samples collected from October 2001 through January 2022.

Statutory Authority

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

The regional board, after any necessary hearing, shall prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge..., with relation to the conditions existing in the disposal area or receiving waters upon, or into which, the discharge is made or proposed.

50. Compliance with section 13263, subdivision (a), including implementation of applicable water quality control plans, is discussed in the findings below.
51. The ability to discharge waste is a privilege, not a right, and adoption of this Order shall not be construed as creating a vested right to continue discharging waste. (Wat. Code, § 13263, subd. (g).)
52. 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.

53. 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

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

Beneficial Uses of Water

55. This Order implements the Central Valley Water Board’s Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin (Basin Plan), which designates beneficial uses for surface water and groundwater and establishes water quality objectives (WQOs) necessary to preserve such beneficial uses. (See Wat. Code, § 13241 et seq.).
56. Dry Creek, a tributary to the Fresno River (confluence about eight miles southwest of the Facility), borders the Facility to the north. The existing beneficial uses of Fresno River from Hidden Reservoir to the San Joaquin River (per the Basin Plan) include irrigation and stock watering (AGR); water contact recreation (REC-1); other non-contact water recreation (REC-2); warm freshwater habitat (WARM); and wildlife habitat (WILD) Municipal and Domestic Supply (MUN) and Canoe and Rafting (REC-1) are listed as potential beneficial uses.
57. The Facility is in the San Joaquin Valley Floor hydrologic unit, Madera groundwater hydrologic area. Per the Basin Plan, beneficial uses of underlying groundwater at the Facility are municipal and domestic supply (MUN); agricultural supply (AGR); industrial service supply (IND); and industrial process supply (PRO).

Water Quality Objectives

58. The numeric WQO for bacteria is expressed as the most probable number (MPN) of coliform organisms per 100 mL of water. For MUN-designated groundwater, the objective is an MPN of 2.2 organisms over any seven-day period.
59. The narrative WQO for chemical constituents in groundwater generally provides that groundwater shall not contain constituents in concentrations adversely affecting beneficial uses. For MUN-designated waters, the Basin Plan further provides that water, at a minimum, meet the primary and secondary maximum

contaminant levels (MCLs) specified in California Code of Regulations, title 22 (Title 22)¹ (See Title 22, §§ 64431, 64444, 64449.)

60. The narrative WQO for toxicity provides that groundwater shall be maintained free of toxic substances in concentrations producing detrimental physiological responses in human, animal, plant or aquatic life associated with designated beneficial uses.
61. To the extent necessary, narrative WQOs are quantified, on a site-specific basis, as numeric limits for constituents with potential to adversely impacted designated uses. In determining a site-specific numeric limit, the Central Valley Water Board considers relevant published criteria.
62. In determining a numeric limit for salinity protective of agricultural supply (AGR), the Central Valley Water Board is relying on general salt tolerance guidelines, which indicate that although 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 an eight- to ten-fold range in salt tolerance for agricultural crops. (See, e.g., *Ayers & Westcot, Water Quality for Agriculture* [1985], § 2.3.) For this reason, appropriate salinity values 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.
63. The crops listed in Finding 45 is not intended as a definitive inventory of crops that are or could be grown in the area where groundwater quality is potentially affected by the discharge, but it is representative of current and historical agricultural practices in the area.

Salt and Nitrate Control Programs

64. The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting (Resolution R5-2018-0034). The Basin Plan amendments became effective on 17 January 2020 and were revised by the Central Valley Water Board in 2020 with [Resolution R5-2020-0057](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf) (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf).

¹ 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.

65. For the Salt Control Program, dischargers that are unable to comply with stringent salinity requirements will instead need to meet performance-based requirements and participate in a basin-wide effort known as the Prioritization and Optimization Study (P&O Study) to develop a long-term salinity strategy for the Central Valley. The Discharger was issued a Notice to Comply for the Salt Control Program (**CV-SALTS: ID 2595**) on 5 January 2021. On 28 June 2021, Azteca elected to participate in the P&O Study and submitted the required fee to comply with the Salt Control Program. To maintain existing salt discharges and minimize salinity impacts, this Order does the following:
- a. Requires the Discharger to submit a Salinity Evaluation and Minimization Plan to evaluate methods to control salinity in its discharge to the extent feasible; and
 - b. Sets a performance-based effluent limitation of 1,900 mg/L for FDS, calculated as an annual average, on the discharge of wastewater and/or wastewater blended with irrigation water sent to the LAA.
66. For the Nitrate Control Program, dischargers that are unable to comply with stringent nitrate requirements will be required to take on alternate compliance approaches that involve providing replacement drinking water to persons whose drinking water is affected by nitrates. Dischargers may comply with the new nitrate program either individually (Pathway A) or collectively with other dischargers (Pathway B). The Facility is within Groundwater Basin 5-022.06 (San Joaquin Valley – Madera), which is a Priority 2 Basin. Notices to Comply for Dischargers in Priority 2 Basins will be sent sometime between 2023 and 2024.
67. As these strategies are implemented, the Central Valley Water Board may find it necessary to modify the requirements of these WDRs. As such, this Order may be amended or modified to incorporate any newly applicable requirements to ensure that the goals of the Salt and Nitrate Control Programs are met.

Special Considerations for High Strength Waste

68. For the purpose of this Order, “high strength waste” is defined as wastewater that contains concentrations of readily degradable organic matter that exceed typical concentrations for domestic sewage. Such wastes contain greater than 500 mg/L BOD. Typical high strength wastewaters include septage, some food processing wastes, winery wastes, and rendering plant wastes.
69. Excessive application of high organic strength wastewater to land can create objectionable odors, soil conditions that are harmful to crops, and degradation of underlying groundwater with nitrogen species and metals, as discussed below. Such groundwater degradation can be prevented or minimized through implementation of best management practices, which include planting crops to

take up plant nutrients and maximizing oxidation of BOD to prevent nuisance conditions.

70. Regarding BOD, excessive application can deplete oxygen in the vadose zone and lead to anoxic conditions. At the ground surface, this can result in nuisance odors and fly breeding. When insufficient oxygen is present below the ground surface, anaerobic decay of the organic matter can create reducing conditions that convert metals that are naturally present in the soil as relatively insoluble (oxidized) forms to more soluble reduced forms. This condition can be exacerbated by acidic soils and/or acidic wastewater. If the reducing conditions do not reverse as the percolate travels down through the vadose zone, these dissolved metals (primarily iron, manganese, and arsenic) can degrade shallow groundwater quality. Many aquifers contain enough dissolved oxygen to reverse the process, but excessive BOD loading over extended periods may cause beneficial use impacts associated with these metals.
71. Typically, irrigation with high strength wastewater results in high loading on the day of application. It is reasonable to expect some oxidation of BOD at the ground surface, within the evapotranspiration zone and below the root zone within the vadose (unsaturated) zone. The maximum BOD loading rate that can be applied to land without creating nuisance conditions or leaching of metals can vary significantly depending on soil conditions and operation of the land application system.
72. *Pollution Abatement in the Fruit and Vegetable Industry*, published by the United States Environmental Protection Agency, cites BOD loading rates in the range of 36 to 600 lbs/acre-day to prevent nuisance, but indicates the loading rates can be even higher under certain conditions. The studies that supported this report did not evaluate actual or potential groundwater degradation associated with those rates. There are few studies that have attempted to determine maximum BOD loading rates for protection of groundwater quality. Those that have been done are not readily adapted to the varying soil, groundwater, and climate conditions that are prevalent throughout the region.
73. The California League of Food Processors' *Manual of Good Practice for Land Application of Food Processing/Rinse Water* (Manual of Good Practice) proposes risk categories associated with particular BOD loading rate ranges as follows:
 - a. Risk Category 1: (less than 50 lbs/ac/day; depth to groundwater greater than 5 feet) Indistinguishable from good farming operations with good distribution important.
 - b. Risk Category 2: (less than 100 lbs/ac/day; depth to groundwater greater than 5 feet). Minimal risk of unreasonable groundwater degradation with good distribution more important.

- c. Risk Category 3: (greater than 100 lbs/ac/day; depth to groundwater greater than 2 feet) Requires detailed planning and good operation with good distribution very important to prevent unreasonable degradation, as well as use of oxygen transfer design equations that consider site-specific application cycles and soil properties and special monitoring.

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

74. Although it has not been subject to a scientific peer review process, the Manual of Good Practice provides science-based guidance for BOD loading rates that, if fully implemented, are considered a best management practice to prevent groundwater degradation due to reduced metals.

Antidegradation Policy

75. The *Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Water Board Resolution 68-16 (Antidegradation Policy), which is incorporated as part of the Basin Plan, prohibits the Central Valley Water Board from authorizing degradation of “high quality waters” unless it is shown that such degradation: (1) will be consistent with the maximum benefit to the people of California; (2) will not unreasonably affect beneficial uses, or otherwise result in water quality less than as prescribed in applicable policies; and (3) is minimized through the discharger’s best practicable treatment or control (BPTC).
76. The Facility’s discharge is screened to remove solids and treated with hydrochloric acid to lower the pH prior to being discharged to land. These WDRs require the discharge to apply process wastewater to crops at agronomic rates, expand the Facility’s land application area, and install a double lined pond for effluent storage. The anticipated nitrogen, salt, and BOD loadings to LAA-1 and LAA-2 are presenting in the Findings above.
77. Constituents of concern (COCs) that could have the potential to degrade groundwater include salts (e.g., EC and FDS), nitrates, and organics. Table 9 summarizes relevant water quality data for these COCs.

Table 9 – Constituents With Potential for Degradation

Sample Source	EC (µmhos/cm)	TDS (mg/L)	Total N (mg/L)	BOD ₅ (mg/L)
Effluent (see 1 below)	1,434 (870 – 2,100)	4,160 (1900 – 6500)	67 (42 – 98)	2,844 (620 – 4,300)
Source Water (see 2 below)	260 (250 – 270)	220 (210 – 230)	2.7 (2.5 – 2.9) (see 4 below)	Not detected
Regional Groundwater Quality (see 3 below)	262 (130 – 963)	249 (190 – 572)	2.5 (0.6 – 4.8) (see 4 below)	---
WQO	700	500	10 mg/L (Nitrate as N)	---

1. The dataset for treated effluent is discussed in Finding 24 and summarized in Table 2 (one sample from 2019, 5 weekly samples from 22 September 2021 through 12 October 2021 from the Facility effluent).
2. Source water is discussed in Finding 46 and summarized in Table 7 (one sample from each of two onsite wells collected in December 2019).
3. Regional groundwater quality from three nearby municipal wells is discussed in Findings 47 and 48 and summarized in Table 8.
4. Results shown for comparison are nitrate as nitrogen. Total nitrogen results were not available for the source water results or from the regional groundwater database.
 - a. **Salinity.** The limited available groundwater data for the site shows groundwater is good quality with regards to salinity constituents. The Facility’s process wastewater salinity concentrations exceed applicable water quality objectives and, therefore, if not properly stored and discharged could significantly degrade underlying groundwater for salt. These WDRs require the Discharger to install the proposed double-lined pond, which will help ensure the storage of the high-strength process wastewater does not degrade groundwater. Furthermore, these WDRs require the Discharger to apply process wastewater to land at agronomic rates. The 2021 NMP estimates the discharge at 0.21 mgd will result in an estimated annual salt loading of 6,200 pounds per acre if only discharging to LAA-1. However, the Discharger is proposing (and is required per these WDRs) to add 227 additional acres of land application area (LAA-2). The addition of more land for application of process wastewater will significantly reduce the pounds of salt added per acre (potential annual salt loading of around 2,200 lbs/acre/year). The Discharger implements best management practices to minimize impacts from salts including blending with irrigation water.

Furthermore, the Discharger is an active member of the Prioritization and Optimization Study for the Salt Control Program. Therefore, these WDRs include a Performance-Based Effluent Limit of 1,900 mg/L for FDS to ensure the Facility's effluent salinity concentrations do not increase and require the Discharger to conduct a Salinity Evaluation and Minimization Plan to evaluate possible ways to reduce salinity concentrations in the Facility's effluent. Lastly, the MRP requires the Discharger to regularly monitor the Facility's discharge for salinity constituents as well as calculate salinity loading rates on the land application areas.

- b. **Nitrate.** Based on the limited available groundwater data for the site, groundwater is good quality with regard to nitrate. Total nitrogen levels in the effluent (based on limited data) appear to range from 42 mg/L to 98 mg/L, averaging about 67 mg/L. As discussed in the salinity discussion above as well as in previous findings, the Discharger has proposed (and required per these WDRs) to implement various measures to reduce the Facility's potential impact on underlying groundwater (i.e., lining the Facility's pond, application of process wastewater on crops at agronomic rates, and adding additional land application area). Furthermore, the Facility is located in a Priority 2 Zone for the Nitrate Control Program and, therefore, will receive a Notice to Comply for the Nitrate Control Program within the next couple of years.
 - c. **Organics.** The Facility has high-strength process wastewater, with BOD concentrations ranging from 620 mg/L to 4,300 mg/L. Storage of high-strength process wastewater to unlined ponds or over application to land application areas can result in reducing conditions resulting in certain metals (primarily iron, manganese, and/or arsenic) converting to more soluble reduced forms. To address these concerns, in part, the WDRs require the Discharger to install a double lined effluent storage pond at the location of the Facility's existing/abandoned unlined storage pond and comply with a BOD cycle average loading rate of 100 lbs/acre/day.
78. This Order requires the Discharger to implement 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 continued operation:
- a. Comprehensive wastewater/effluent monitoring;
 - b. Wastewater storage in properly lined effluent storage pond(s);
 - c. Wastewater application at agronomic rates;
 - d. Compliance with a BOD cycle average loading rate of 100 lbs/acre/year;
 - e. Solids are screened from the waste stream and sold offsite as cattle feed;

- f. Preparation and implementation of a Salinity Evaluation and Minimization Plan;
 - g. Compliance with a Performance-Based Effluent Limit for FDS; and
 - h. Compliance with the Salt and Nitrate Control Programs.
79. In 2022, Azteca employed about 105 full time and about 20 temporary employees at the Facility. The Facility contributes to the economic prosperity of the region by providing a necessary 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.
80. Based on the foregoing, the adoption of this Order is consistent with the State Water Board's Antidegradation Policy.

California Environmental Quality Act

81. As previously discussed, these WDRs only authorize flows reflecting existing operations at the Facility and reconstruction of an existing pond to reduce its potential impacts on the environment. Therefore, the issuance of this Order, which prescribes requirements and monitoring of waste discharges at an existing facility, with negligible or no expansion of its existing use, is exempt from the procedural requirements of California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq., pursuant to California Code of Regulations, title 14, section 15301 (CEQA Guidelines).
82. To the extent that the construction of any new basins, ponds, surface impoundments, and/or use of existing irrigated lands as new LAAs are authorized under this Order, such features involve minor alterations to land, which are exempt from CEQA procedural requirements pursuant to California Code of Regulations, title 14, section 15304 (CEQA Guidelines).

Other Regulatory Considerations

Water Code Section 13149.2

83. These WDRs regulate a facility that may impact a disadvantaged community and tribal community and includes an alternative compliance path that allows the Discharger time to come into compliance with a water quality objective (i.e., salinity). The Discharger has selected the Alternative Salinity Permitting Approach for the Salt Control Program, which provides an alternative approach for compliance with salinity limits through implementation of specific requirements (i.e., support facilitation and completion of the Salinity P&O Study). The Central Valley Water Board has satisfied the outreach requirements set forth in Water Code section 189.7 by conducting outreach in affected disadvantaged and tribal

communities through its notice and comment procedures. Pursuant to Water Code section 13149.2, and as discussed in the following finding, the Central Valley Water Board reviewed readily available information and information raised to the Board by interested persons concerning anticipated water quality impacts in disadvantaged or tribal communities resulting from adoption of these WDRs. The Board also considered environmental justice concerns within the Board's authority previously raised by interested persons with regard to those impacts.

84. The Central Valley Water Board anticipates that the issuance of these WDRs will result in water quality impacts within the scope of the Board's authority. Specifically, these WDRs authorize the continued discharge of wastewater with salinity concentrations above applicable water quality objectives. The Facility's effluent, based on limited data, has an average EC around 1,400 $\mu\text{mhos/cm}$ and TDS average around 4,200 mg/L. While these concentrations exceed the water quality objectives for MUN (municipal and domestic supply), the available groundwater data indicates the Facility's historical discharge has not caused a significant impact to surrounding communities. Water quality data from nearby wells have water quality levels below the applicable drinking water MCLs for salinity (see Groundwater and Subsurface and Antidegradation sections for further information). 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 Madera County: 1) requiring active participation in the P&O Study and compliance with the Salt Control Program, which is intended to identify long-term salinity management and control practices and/or technologies, 2) maintain current discharge concentrations for salt (e.g., establishing a performance-based salinity limit) 3) requiring the Discharger to properly line its wastewater effluent storage pond, 4) requiring application of wastewater to crops at agronomic rates with irrigation of supplemental water as needed, and 5) requiring the preparation and implementation of Salinity Evaluation and Minimization Plan to establish goals for potentially reducing salinity concentrations in the Facility's discharge. All of these measures are implemented by these WDRs.

Human Right to Water

85. Pursuant to Water Code section 106.3, subdivision (a), it is "the established policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes." Although this Order is not subject to Water Code section 106.3, as it does not revise, adopt, or establish a policy, regulation, or grant criterion (see § 106.3, subd. (b)), it nevertheless promotes the policy by requiring discharges to meet 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 and nitrate, this Order requires compliance with the SCP and NCP, respectively. Although the Basin Plans' Exceptions Policy for Salinity, Nitrate,

and/or Boron allows participants in these Programs to obtain limited-term exceptions from MCLs for salinity, nitrate, and/or boron, these Programs are 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

86. For the purposes of California Code of Regulations, title 23 (Title 23), section 2200, the Facility has a threat-complexity rating of 2-B.
- a. Threat Category “2” reflects waste discharges that can impair receiving water beneficial uses, cause short-term water quality objective violations, cause secondary drinking water standard violations, and cause nuisances.
 - b. Complexity Category “B” reflects any discharger not included in Category A, with either (1) physical, chemical or biological treatment systems (except for septic systems with subsurface disposal), or (2) any Class II or Class III WMUs.

Title 27 Exemption

87. 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, § 20090, subd. (b).)

Stormwater

88. Stormwater at the Facility is routed to and collected in two onsite unlined stormwater basins where it either percolates into the underlying soil or evaporates. Because all stormwater at the Facility is collected and disposed of onsite, the Discharger is not required to obtain coverage under the *Statewide General Permit for Storm Water Discharges Associated with Industrial Activities*, State Water Board Order 2014-0057-DWQ, NPDES General Permit CAS000001 (Industrial General Permit) at this time.

Scope of Order

89. This Order is strictly limited in scope to those waste discharges, activities and processes described and expressly authorized herein.
90. Pursuant to Water Code section 13264, subdivision (a), the Dischargers are prohibited from initiating the discharge of new wastes (i.e., other than those described herein), or making material changes to the character, volume and

timing of waste discharges authorized herein, without filing a new RWD per Water Code section 13260.

91. 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.
92. This Order is also strictly limited in applicability to those individuals and/or entities specifically designated herein as "Dischargers," subject only to the discretion to designate or substitute new parties in accordance with this Order.

Procedural Matters

93. All of the above information, as well as the information contained in the attached Information Sheet (incorporated herein), was considered by the Central Valley Water Board in prescribing the WDRs set forth below.
94. The Discharger, interested agencies and other 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. (See Wat. Code, § 13167.5.)
95. At a public meeting, the Central Valley Water Board heard and considered all comments pertaining to the discharges regulated under this Order.
96. The Central Valley Water Board will review and revise the WDRs in this Order as necessary.

REQUIREMENTS

It is Hereby Ordered, pursuant to Water Code sections 13263 and 13267, that WDRs Order 70-208 is rescinded (except for enforcement purposes); and that the Discharger and their agents, employees and successors shall comply with the following.

A. Standard Provisions

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

B. Discharge Prohibitions

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

2. Waste classified as “hazardous” (per Cal. Code Regs., tit. 22, §66261.1 et seq.), shall not be discharged at the Facility under any circumstance.
3. Treatment system bypass of untreated or partially treated waste is prohibited, except as allowed by Standard Provision E.2 of the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991 (SPRRs), the entirety of which is incorporated herein.
4. Discharge of waste at a location or in a manner different from that described in the Findings is prohibited.
5. Waste constituents shall not be discharged or otherwise released from the Facility (including during treatment and storage activities) in a manner that results in:
 - a. Violations of the Groundwater Limitations of this Order; or
 - b. Conditions of “nuisance” or “pollution,” as defined per Water Code section 13050.
6. The discharge of process wastewater to the onsite septic systems is prohibited.
7. Discharge of domestic wastewater to the storage pond(s), storm water pond(s), or LAA is prohibited.

C. Flow Limitation

1. The discharge of process wastewater from the Facility to the LAAs (monitored at EFF-001 in the MRP) shall not exceed a monthly average daily flow limit of **0.21 million gallons per day (mgd)**.

D. Effluent Limitation

1. To comply with the Salt Control Program, the Discharger has selected the Alternative Salinity Permitting Approach (i.e., participate in the Prioritization and Optimization [P&O] Study). Therefore, as discussed in Findings 65, 77, and 78), these WDRs establish a **FDS performance-based effluent limitation of 1,900 mg/L** (as an annual average). As part of the Fourth Quarter Monitoring Report required in the MRP, the Discharger shall evaluate the Facility’s annual average effluent FDS (monitored at EFF-001) to the performance-based effluent limitation. If the Facility’s discharge exceeds the performance-based effluent limitation, the Discharger shall submit a **Salinity Report by 1 March** of the year following the exceedance of the performance-

based effluent limitation. The Salinity Report shall, at a minimum, include the following:

- a. An evaluation of the Facility's salinity effluent levels. This evaluation should include a discussion of any changes to the source water for the Facility, any changes to the Facility's operations or chemical usage, any increased conservation efforts implemented within the Facility (with flow data demonstrating decreased flows from the Facility), and any other changes to Facility that could have contributed to the increased salinity concentrations.
- b. If additional time is needed to investigate the source(s) of the salinity in the Facility's discharge, the Salinity 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 investigation shall be submitted to the Central Valley Water Board no later than October 1st of the year following the exceedance of the salinity performance-based effluent limitation.
- c. The Salinity 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 Salinity Report shall propose a submittal date (no later than October 1st of the year following the exceedance of the salinity performance-based effluent limitation).

E. Discharge Specifications

1. Waste discharges shall remain within the LAAs and lined effluent storage pond(s) 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 at an intensity that creates or threatens to create nuisance conditions.
5. As a means of ensuring compliance with Discharge Specification E.4, the dissolved oxygen (DO) content in the upper one foot of any wastewater

treatment or storage pond shall not be less than 1.0 mg/L for three consecutive sampling events. Notwithstanding the DO monitoring frequency specified in the monitoring and reporting program, if the DO in the pond(s) is below 1.0 mg/L for any single sampling event, the Discharger shall implement daily DO monitoring of that pond until the minimum DO concentration is achieved for at least three consecutive days. If the DO in the pond is below 1.0 mg/L for three consecutive days, the Discharger shall report the findings to the Central Valley Water Board in accordance with Section B.1 of the SPRRs. The written notification shall include a specific plan to resolve the low DO results within 30 days of the first date of violation.

6. 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.
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. The Discharger shall monitor residual solids accumulation from the ponds annually and shall periodically remove residual solids as necessary to maintain adequate storage capacity.

9. Newly constructed or rehabilitated berms or levees (excluding internal berms that separate ponds or control the flow of water within a pond) shall be designed and constructed under the supervision of a California registered civil engineer.
10. The Discharger shall regularly inspect the liner condition of the proposed lined effluent storage pond(s). The Discharger shall maintain and repair the liner as necessary to ensure the integrity of the pond liner is maintained and leakage from the liner is minimized
11. Starting 29 April 2025, 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 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.
12. Starting 29 April 2025, on or about 1 October of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specifications E.7 and E.11.
13. The proposed lined effluent storage pond will contain a Leachate Collection and Removal System (LCRS). This order includes an Action Leakage Rate (ALR) for the LCRS. If leachate generated in the LCRS exceeds the ALR, the Discharger is required to take actions to inspect and repair the primary liner system if applicable. Based on the November 2021 Tier 1 Pond Design Report, the ALR for the proposed effluent storage pond and LRCS is 1.3 gallons per minute.

F. Land Application Area Specifications

For the purposes of this Order, “land application area” or “LAAs” refers to the discharge areas described in the Findings (i.e., LAA-1 and LAA-2) and shown in Attachment B. The requirements specified in this section shall be applicable to LAA-1 and LAA-2 no later than **29 April 2025** per Provisions I.7 and I.10.

1. Crops shall be grown on the LAAs. Crops shall be selected based on nutrient uptake, consumptive use of water, and irrigation requirements to maximize uptake of nutrients.
2. The perimeter of the LAAs shall be graded to prevent ponding along public roads or other public areas and prevent runoff or overspray onto adjacent properties not owned or controlled by the Dischargers.

3. 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.
4. 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).
5. 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 pounds per acre per day**.
6. The resulting effect of the discharge on soil pH shall not exceed the buffering capacity of the soil profile.
7. Land application of wastewater shall be managed to minimize erosion.
8. The Discharger shall not discharge process wastewater to the LAA when soils are saturated (e.g., during or after significant precipitation).
9. Any irrigation runoff shall be confined to the LAA and shall not enter any surface water drainage course or storm water drainage system.
10. The LAA shall be managed to prevent breeding of mosquitos. More specifically:
 - a. All applied irrigation water must infiltrate completely within 48 hours;
 - b. Ditches not serving as wildlife habitat shall be maintained free of emergent marginal, and floating vegetation; and
 - c. Low-pressure and unpressurized pipeline and ditches accessible to mosquitos shall not be used to store process wastewater.
11. Irrigation of the LAAs shall occur only when appropriately trained personnel are on duty.
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.

G. Groundwater Limitations

Release of waste constituents from any treatment unit, storage unit, delivery system or disposal location associated with the Facility and process wastewater discharge shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or in excess of background groundwater quality, whichever is greater:

1. Contain constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations, excluding salinity.
2. Contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

H. Solids Disposal Specifications

1. For the purpose of this Order, residual solids include the solid, semisolid, and liquid organic matter removed during the screening of wastewater.
2. Residual solids shall be removed from screens, and vaults as needed to ensure optimal operation, prevent nuisance conditions, and maintain adequate storage capacity.
3. Any handling and storage of residual solids shall be temporary and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate the groundwater limitations of this Order.
4. If removed from the site, residual solids shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27, division 2. Removal for reuse as animal feed, 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 solids use or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

I. Provisions

1. The Discharger shall comply with the separately issued **Monitoring and Reporting Program (MRP) R5-2023-0007**, and any revisions thereto as ordered by the Executive Officer. The submittal dates of Discharger

self-monitoring reports shall be no later than the submittal date specified in the MRP.

2. A copy of this Order (including Information Sheet, Attachments and SPRRs) and the MRP, shall be kept at the Facility for reference by operating personnel. Key operating personnel shall be familiar with their contents.
3. 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.
4. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for investigations and studies, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall bear the professional's signature and stamp.
5. **By 27 October 2023**, the Discharger shall submit and implement a **Salinity Evaluation and Minimization Plan** that includes salinity reduction goals and an implementation schedule. The Plan shall identify existing salinity control measures and propose additional measures to further reduce the salinity of the discharge. The control plan shall include an estimate of the load reductions to be obtained and provide a description of the tasks, cost, and time required to investigate and implement the various elements in the Salinity Control and Minimization Plan. At a minimum, the plan shall include:
 - a. An estimate of all of the sources of pollutants contributing, or potentially contributing, to the loadings of salinity in Facility's process wastewater discharge.
 - b. An analysis of the methods that could be used to prevent/reduce the discharge of salinity into the facility, including changes in facility processes, reduction in chemical usage, changing chemicals used at the Facility.

- c. A description of the Discharger's existing salinity minimization programs (if any).
 - d. A description of the tasks, costs, and time required to investigate and implement various elements in the Salinity Evaluation and Minimization Plan.
 - e. A plan for monitoring the results of the Salinity Evaluation and Minimization Plan.
6. **By 27 October 2023**, the Discharger shall submit an **Updated Wastewater Nutrient Management Plan** that describes how the Discharger will apply wastewater to LAA-2 in accordance with these WDRs, including what type of irrigation system that will be used. The Updated Plan shall include a time schedule for development of the adjacent 227 acres contained in APN Nos 029-290-011 and 029-290-014-000 into a land application area (LAA-2) for the Facility's process wastewater with a final completion date **no later than 29 April 2025**. The work plan will evaluate the type of irrigation system proposed and the location and construction details of any additional effluent retention ponds if warranted.
7. **By 29 April 2025**, the Discharger shall submit confirmation that LAA-1 has been modified to allow the Discharger (or contractor) to farm the proposed crops and apply wastewater at agronomic rates per the current Wastewater Nutrient Management Plan. The confirmation shall describe the irrigation system used to deliver wastewater and irrigation water to LAA-1 and confirm the crops being grown on LAA-1 can provide sufficient nutrient uptake for the application of the Facility's process wastewater.
8. **By 29 April 2025** the Discharger shall have completed construction of the effluent storage pond proposed in the November 2021 Tier 1 Pond Design Report and submit a **Post-Construction Report** that describes the pond construction details and certifies the effluent storage pond was constructed as proposed in the November 2021 Tier 1 Pond Design Report and per the Construction Quality Assurance Report.
9. **By 2 December 2024**, submit a **Pond Operation and Maintenance Plan** for the effluent storage pond. The Discharger shall not commence the discharge of wastewater to the effluent storage pond until the Central Valley Water Board Executive Officer approves the Pond Operation and Maintenance Plan. The Plan shall discuss how the Discharger will operate the pond to ensure that the pond liner integrity is maintained and regularly tested. Furthermore, the Plan shall describe the aeration system that will be used in the pond and shall provide the technical demonstration that the

proposed aeration system will be sufficient to maintain dissolved oxygen concentrations at or above 1.0 mg/L and to mitigate odors generated from the pond. If offensive odors are detected at the pond, the Plan shall describe what procedure(s) the Discharger will follow to resolve the odor issue. Additionally, the Plan shall include a detailed plan for pond sludge removal, treatment (dewatering and/or stabilization), and disposal. If sludge is proposed to be dried onsite, the Plan shall describe the measures to be used to control odors, flies, and other vectors, and the measures to control runoff or leachate from the sludge as it is drying.

10. **By 29 April 2025**, the Discharger shall certify that LAA-2 is being farmed and receiving process wastewater in a manner compliant with these WDRs and per the Updated Nutrient Management Plan. The confirmation shall accurately describe the irrigation system used to deliver wastewater and irrigation water to LAA-2 and confirm the crops being grown on LAA-2 can provide sufficient nutrient uptake for the application of the Faculty's process wastewater.
11. 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.
12. 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.
13. 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 includes 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.

14. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with this Order.
15. As described in the SPRRs, the Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.
16. In the event of any change in control or ownership of the Facility or the LAA, 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.
17. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.
18. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

ENFORCEMENT

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

ADMINISTRATIVE REVIEW

Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. The State Water Board must receive the petition by 5:00 p.m. on the 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 p.m. on the next business day. Copies of [the law and regulations applicable to filing petitions](#) are available on the Internet (at the address below) and will be provided upon request.

(http://www.waterboards.ca.gov/public_notices/petitions/water_quality)

ATTACHMENTS

Attachment A — Project Location Map

Attachment B — Site Vicinity Map

Attachment C — Aerial Photo of Facility and LAA-1

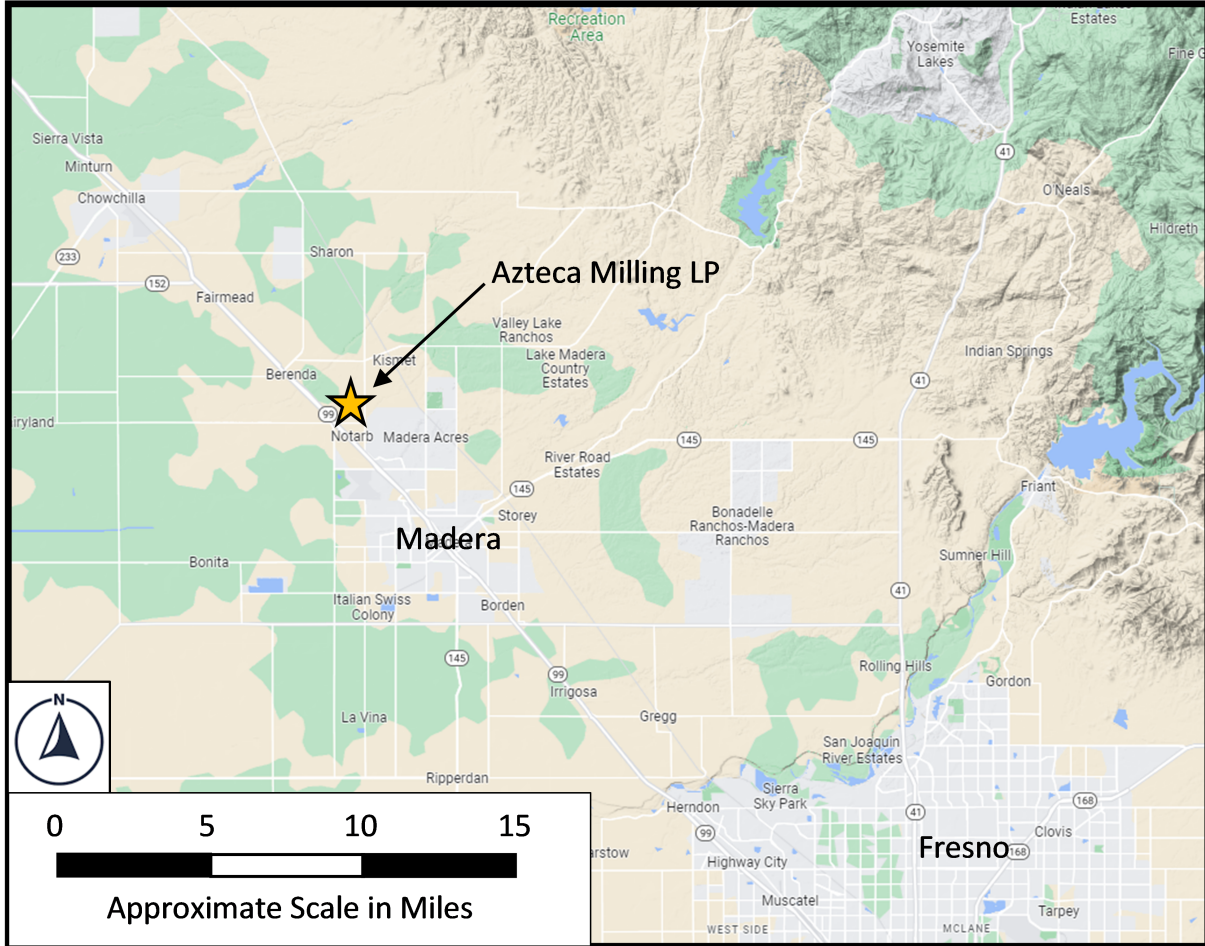
Attachment D – Azteca Madera Facility Flow Schematic

Standard Provisions & Reporting Requirements

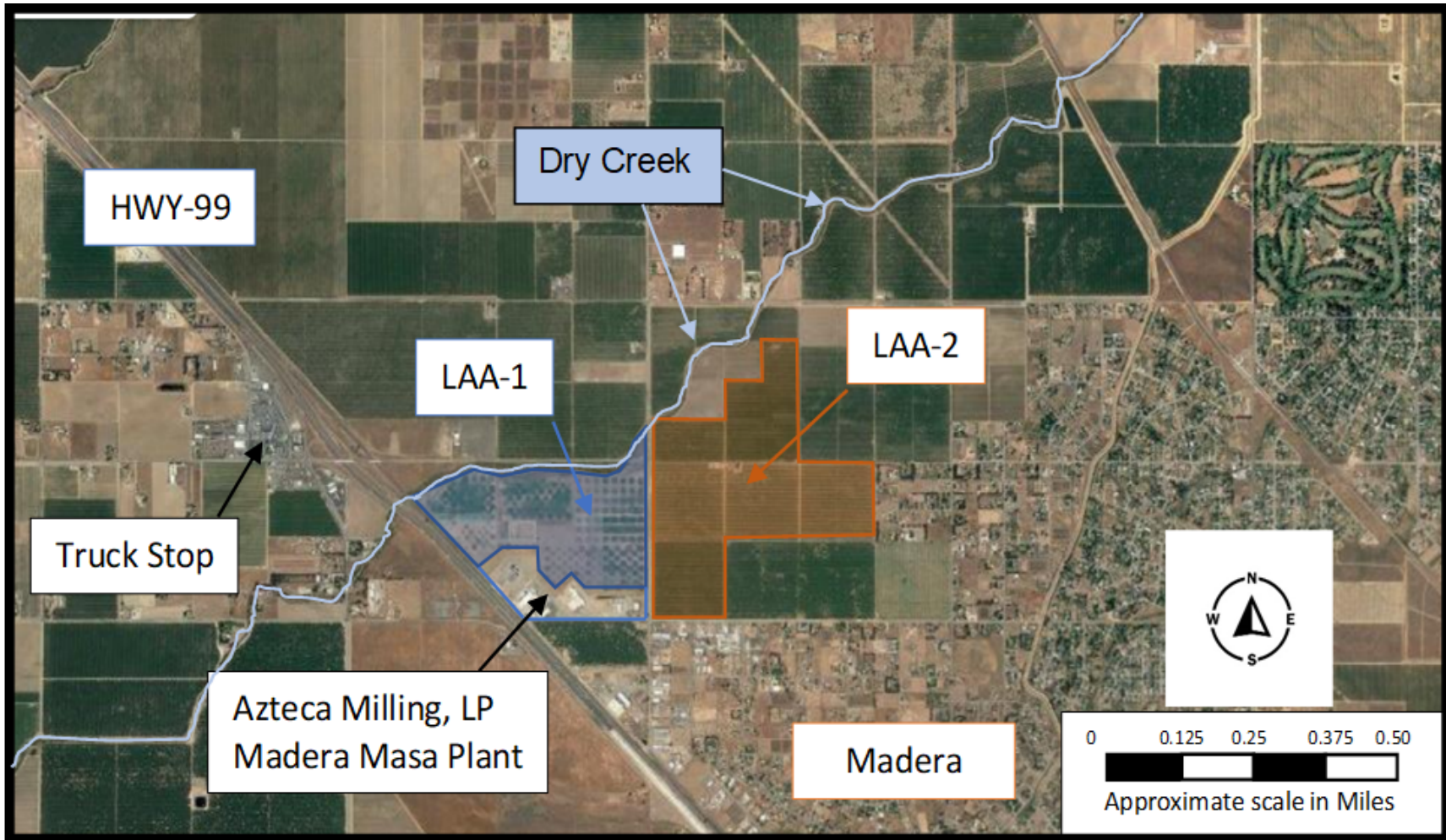
Information Sheet

Monitoring and Reporting Program R5-2023-0007

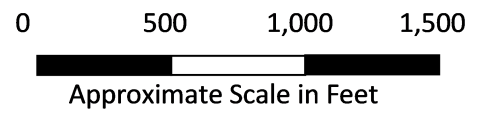
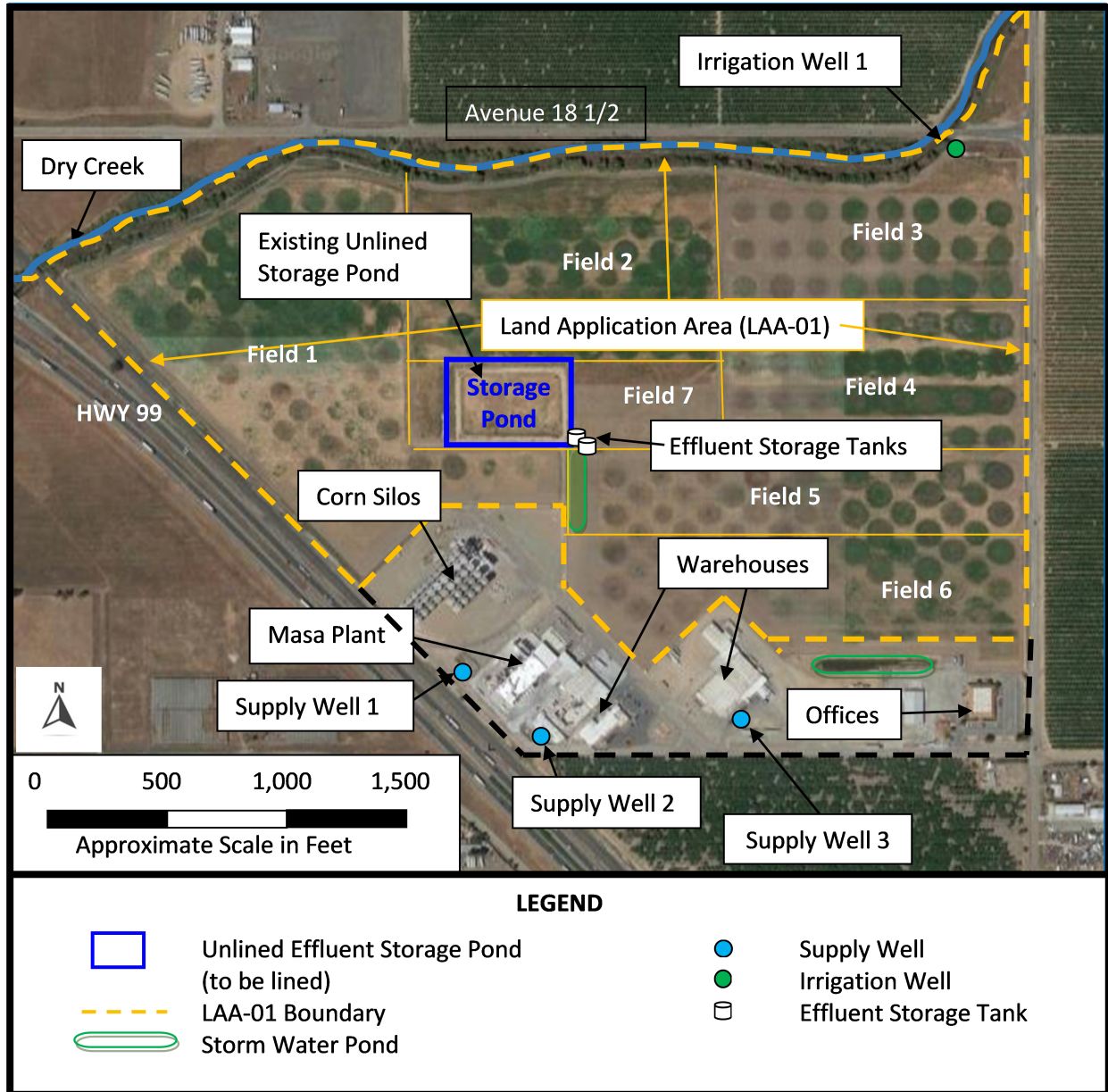
Attachment A — Project Location Map



Attachment B — Site Vicinity Map



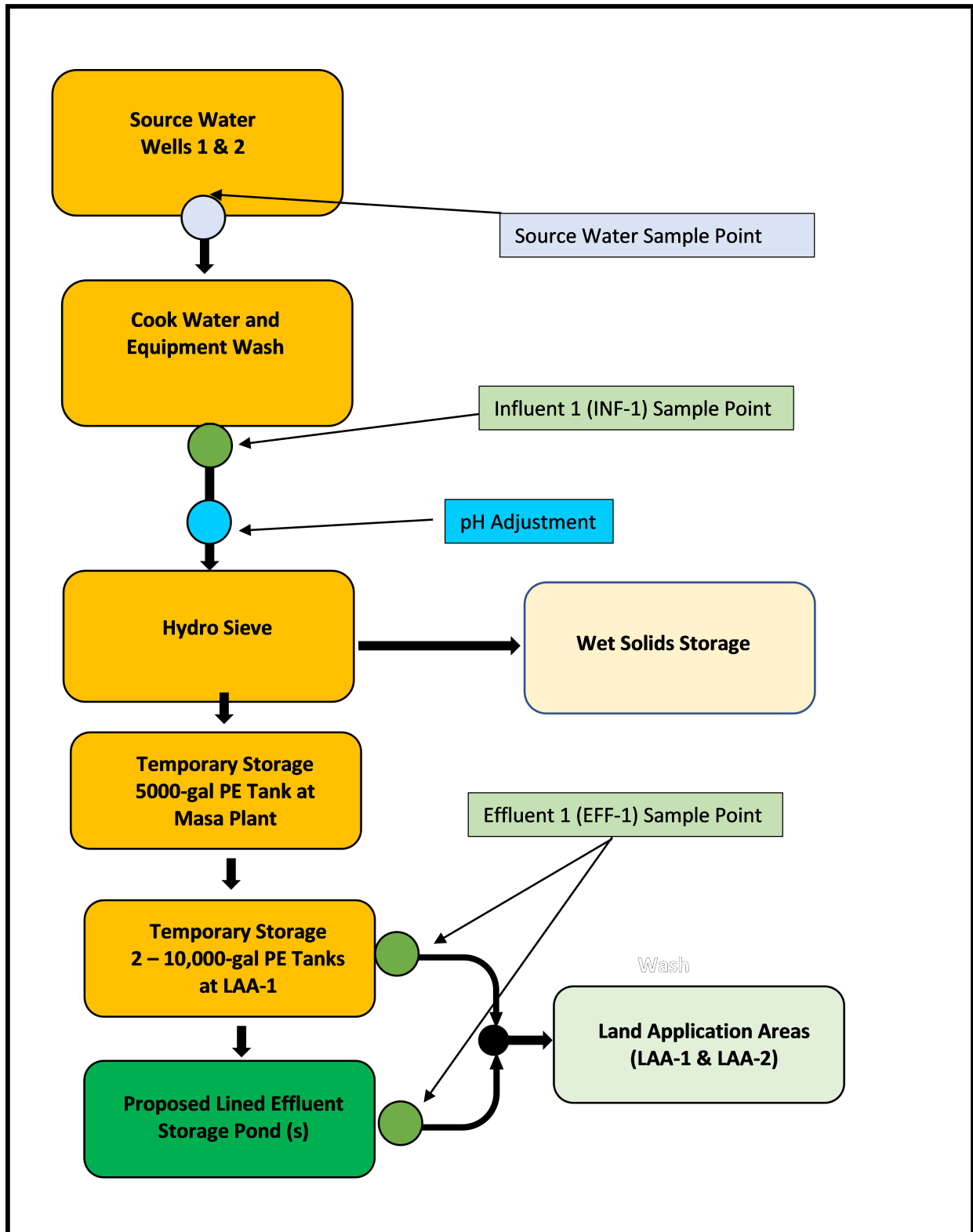
Attachment C — Aerial Photo of Facility and LAA-1



LEGEND

- Unlined Effluent Storage Pond (to be lined)
- LAA-01 Boundary
- Storm Water Pond
- Supply Well
- Irrigation Well
- Effluent Storage Tank

Attachment D — Azteca Madera Masa Plant Flow Schematic



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

WASTE DISCHARGE REQUIREMENTS ORDER R5-2023-0007
FOR
AZTECA MILLING, L.P. DBA VALLEY GRAIN PRODUCTS,
AZTECA MADERA MASA PLANT
MADERA COUNTY

INFORMATION SHEET

BACKGROUND

Azteca Milling L.P. dba Valley Grain Products (hereinafter referred to as Azteca or Discharger) is an industrial food processor that produces corn masa at its Madera Masa Processing Plant (Facility). Azteca has owned and operated the Facility at 23865 Avenue 18 just northwest of Madera since 1996. The Facility is currently set on about 182 acres of property, of which, about 123 acres are available for the disposal of processing wastewater with the remaining acres containing the facility buildings, associated parking, and two storm water storage ponds.

The Facility is currently regulated under Waste Discharge Requirements (WDRs) Order 70-208. WDRs Order 70-208 was issued on 26 June 1970 for a flour mill facility where whole grain corn was cooked, washed, dried, and ground into corn flour. WDRs Order 70-208 states the facility had a 21,000 gallon per day (gpd) design flow but does not specify an effluent flow limit nor include a Monitoring and Reporting Program (MRP). On 6 June 2019, the Central Valley Water Board issued Azteca Milling a 13267/13260 letter requiring submittal of a Report of Waste Discharge (RWD). On 19 December 2019, Krazan & Associates, Inc., submitted a RWD on behalf of Azteca. The RWD consisted of a Form 200 and technical report. Additional information to supplement the RWD was submitted by Azteca staff at later dates.

Central Valley Water Board staff inspected the Facility on 11 June 2021 resulting in a virtually meeting with Azteca staff on 24 August 2021 to discuss concerns regarding the lack of storage during precipitation events, current operation of the land application area (LAA), and the limited monitoring data for the discharge. The Central Valley Water Board staff requested Azteca to address these issues in a 2 September 2021 letter.

In December 2021, Azteca provided a November 2021 Initial Wastewater and Nutrient Management Plan (2021 NMP) characterizing the Facility's current discharge and proposed operation of the existing land application area (LAA-1). The 2021 NMP included effluent monitoring data collected in September and October 2021 at the Facility. Azteca also provided a Tier 1 Pond Design Report that proposed expanding and installing a double liner on the Facility's exiting pond. Flow from the Facility ranged from 159,000 gpd to 210,375 gpd.

Azteca Milling, L.P. dba Valley Grain Products

Azteca Madera Masa Plant

INFORMATION SHEET**WASTEWATER GENERATION AND DISPOSAL**

Azteca operates the Facility basically year-round producing about 197,000 gallons of processing wastewater daily from the cooking, product rinse, and cleaning operations at the Facility. All water used for processing and washdown is pH adjusted with 15-31% Hydrochloric Acid and sent through a hydro sieve for removal of corn solids before being pumped to a 5,000-gallon polyethylene tank at the Facility. Azteca attempts to keep effluent in the range of 6.5 to 8.5 by testing the effluent weekly and adjusting the hydrochloric acid feed as needed. Approximately 1.5 tons of wet solids are generated daily, which are sold offsite as animal feed.

From the temporary storage tank, wastewater is pumped to two 10,000-gallon polyethylene tanks located in the southwest corner of Field 7 of the existing land application area designated LAA-1. The pH adjusted process wastewater is then applied to the LAA-1 via sprinkler irrigation. The existing/abandoned unlined pond is not in use at this time. The Nutrient Management Plan included wastewater flow data from January 2019 through October 2021. The 2021 NMP uses monthly averages from data ranging from January 2019 through September 2021 to provide an annual average. The average annual effluent flow for the period was just over 72 million gallons with total monthly flows ranging from 5.25 million gallons in February to 6.43 million gallons in October. The daily flow ranged from 0.184 to 0.208 million gallons per day (mgd) with an average flow of 0.197 mgd.

Effluent data is limited to six samples as described in Finding 24 of the WDRs and summarized in Table 2. The discharge contains elevated levels of salts, primarily EC, TDS, and FDS, at concentrations above the applicable water quality objectives and/or background groundwater quality. Nitrate as nitrogen averaged 3.0 mg/L and total nitrogen averaged 70 mg/L in the discharge. Current application levels are a concern and could threaten the underlying groundwater quality. However, the 2021 NMP submitted by Azteca indicates effluent will be used as a supplemental source of irrigation water used to irrigate the existing 127-acre LAA-1 and will be blended with nearly equal amounts of freshwater to grow crops such as silage corn and winter wheat. This Order requires influent, effluent, soil, and source water monitoring to accurately evaluate the salt and organic loadings to the soils of the land application areas. It requires land application area and plant tissue monitoring to ensure application at agronomic rates and evaluate the actual nutrient uptake by the proposed crops.

Azteca received a Salt Control Program Notice to Comply on 5 January 2021 and has selected Path B or the Alternative Option. This Order sets a performance based effluent limit (Finding 65) for FDS and requires the preparation of a Salinity Evaluation and Minimization Plan (Provision I.5). The Facility is within Groundwater Basin 5-022.06 (San Joaquin Valley – Madera), which is a Priority 2 Basin. Notices to Comply for Dischargers in Priority 2 Basins will be sent sometime between 2023 and 2024.

Azteca Milling, L.P. dba Valley Grain Products

Azteca Madera Masa Plant

INFORMATION SHEET

GROUNDWATER CONSIDERATIONS

Groundwater conditions are discussed in Findings 46 to 48 of the Order.

ANTIDegradation

Antidegradation analysis and conclusions are discussed in Findings 75 to 80 of the Order

DISCHARGE PROHIBITIONS, EFFLUENT LIMITATIONS, DISCHARGE SPECIFICATIONS, AND PROVISIONS

The Order sets a monthly average maximum daily flow limit of 0.21 mgd for the Facility's discharge to the land application areas (LAA-1 and LAA-2). The Order also specifies a Performance-Based Effluent Limit of 1,900 mg/L for FDS (as an annual average) since the Discharger selected to participate in the Prioritization and Optimization Plan for the Salt Control Program.

This Order also contains the following provisions including:

Provision I.5 requires the Discharger to submit a Salinity Evaluation and Minimization Plan.

Provision I.6 requires the Discharger to submit an updated Nutrient Management Plan that describes how process wastewater will be applied to LAA-2 in accordance to these WDRs.

Provision I.7 requires the Discharger to commence farming activities on LAA-1 with wastewater application at agronomic rates to grow crops such as silage corn, triticale, and sorghum that are harvested.

Provision I.8 requires the Discharger to certify the double-lined effluent storage pond was constructed as proposed and Provision I.9 requires the Discharger to submit a Pond Operation and Maintenance Plan.

Provision I.10 requiring the Discharger to certify that LAA-2 is being farmed and receiving process wastewater in a manner compliant with these WDRs and per the Updated Nutrient Management Plan.

MONITORING REQUIREMENTS

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

Azteca Milling, L.P. dba Valley Grain Products

Azteca Madera Masa Plant

INFORMATION SHEET**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 Central Valley at its 31 May 2018 Board Meeting. On 16 October 2019, the State Water Resources Control Board adopted Resolution No. 2019-0057 approving the Central Valley Water Board Basin Plan amendments and also directed 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 approved the Basin Plan amendments on 15 January 2020 (OAL Matter No. 2019-1203-03) and were revised by the Central Valley Water Board in 2020 with [Resolution R5-2020-0057](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf) (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf).

For the Salt Control Program, a Notice to Comply for the Salt Control Program was issued to Azteca Milling, L.P. (CV-SALTS ID 2595) on 5 January 2021. On 28 June 2021, the Discharger submitted the required fee payment to comply with the Salt Control Program by joining the P&O Study.

The Facility is within Groundwater Basin 5-022.06 (San Joaquin Valley – Madera), which is a Priority 2 Basin. Notices to Comply for Dischargers in Priority 2 Basins will be sent sometime between 2023 and 2024.

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 on 11 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.