

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

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**WASTE DISCHARGE REQUIREMENTS ORDER R5-2022-0013**

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**ORDER INFORMATION**

<b>Order Type(s):</b>	Waste Discharge Requirements (WDRs)
<b>Status:</b>	ADOPTED
<b>Program:</b>	Non-15 Discharges to Land
<b>Region 5 Office:</b>	Fresno
<b>Discharger(s):</b>	Eriksson, LLC
<b>Facility:</b>	Ingleby US Pistachio Plant
<b>Address:</b>	19210 South Westlawn Avenue, Riverdale California
<b>County:</b>	Fresno County
<b>CIWQS Place ID:</b>	835295
<b>Prior Order(s):</b>	(none)

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**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 17 February 2022.

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PATRICK PULUPA,  
Executive Officer

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## GLOSSARY

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

<b>msl</b>	Mean Sea Level
<b>MRP</b>	Monitoring and Reporting Program
<b>MW</b>	Monitoring Well
<b>MCL</b>	Maximum Contaminant Level per Title 22
<b>mJ/cm<sup>2</sup></b>	Millijoules per Square Centimeter
<b>ORP</b>	Oxygen Reduction Potential
<b>N</b>	Nitrogen
<b>ND</b>	Non-Detect
<b>NE</b>	Not Established
<b>NM</b>	Not Monitored
<b>Recycled Water Policy</b>	<i>Policy for Water Quality Control for Recycled Water, State Water Board Resolution 2009-0011, as amended per Resolutions 2013-0003 and 2018-0057</i>
<b>R[O]WD</b>	Report of Waste Discharge
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>SPRRs</b>	Standard Provisions and Reporting Requirements
<b>SERC</b>	State Emergency Response Commission
<b>TDS</b>	Total Dissolved Solids
<b>Title 22</b>	California Code of Regulations, Title 22
<b>Title 23</b>	California Code of Regulations, Title 23
<b>Title 27</b>	California Code of Regulations, Title 27
<b>TKN</b>	Total Kjeldahl Nitrogen
<b>Unified Guidance</b>	Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (USEPA, 2009)
<b>USEPA</b>	United States Environmental Protection Agency
<b>VOC[s]</b>	Volatile Organic Compound[s]
<b>WDRs</b>	Waste Discharge Requirements
<b>WQO[s]</b>	Water Quality Objective[s]

## FINDINGS

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

### Introduction

1. Eriksson, LLC (or Discharger) owns and operates the Ingleby US Pistachio Plant (Facility) at 19210 South Westlawn Avenue near Riverdale, CA. The Facility and wastewater storage pond are within Section 18, Township 17 S, Range 19 E, MDB&M (36° 27' 22.02" N, 119° 57' 23.58" W). The Facility's location is depicted in **Attachment A** (Site Location Map) and **Attachment B** (Facility Map).
  
2. The Facility is comprised of the following Fresno County Assessor Parcel Numbers (APNs): 053-420-01S and 053-420-02S. The Land Application Area (LAA) consists of approximately 3,700 acres of agricultural land owned by the Discharger within Fresno County as shown in Attachment A. According to the June 2021 addendum to the Report of Waste Discharge (RWD) wastewater will be applied for irrigation of crops on approximately 930 acres on the southern portion of the property (see **Attachment A**). The fields used for wastewater application will be rotated as needed in order of precedence based on crop requirements. The remainder of the LAA, consisting of pistachio orchards, will be used for land application of solids. However, in the future, specific fields within the LAA intended for solids or wastewater applications may be adjusted depending on farming operations. Table 1 provides a list of the existing fields in use for application of wastewater, APNs, acreage, and order of precedence.

**Table 1. Land Application Area (LAA)**

Field	APN	Acreage	Precedence	Crop
A1	050-270-12S	20	1	Pasture
A2	050-270-11S	15	1	Pasture
A3	050-270-55S	26	1	Pasture
A4	050-270-55S	20	1	Pasture
C2	053-050-45S	26	2	Annual Crops
C2	053-050-55S	5	2	Annual Crops
C3	053-050-21S	30	2	Annual Crops
C4	053-050-27S	27	2	Annual Crops
C1	050-240-13S	41	3	Annual Crops
R1	050-240-18S	40	3	Annual Crops
R1	050-240-15S	40	3	Annual Crops

Field	APN	Acreage	Precedence	Crop
R2	050-240-19S	20	3	Annual Crops
R2	050-240-40S	80	3	Annual Crops
R2	050-240-23S	60	3	Annual Crops
SB-10	053-050-51S	76	4	Pistachios
SB-18	050-240-36S	403	5	Pistachios
<b>Total Acreage</b>		<b>930</b>	--	--

3. As the Facility’s owner and operator, the Discharger (Eriksson, LLC) is responsible for compliance with the Waste Discharge Requirements (WDRs) prescribed in this Order.
4. The following materials are attached and incorporated as part of this Order:
  - a. Attachment A—Site Location Map
  - b. Attachment B—Facility Map
  - c. Attachment C—Process Flow Diagram
  - d. Standard Provisions & Reporting Requirements dated 1 March 1991 (SPRRs)
  - e. Information Sheet
5. Also attached is **Monitoring and Reporting Program R5-2022-0013** (MRP), which requires monitoring and reporting for discharges regulated under these WDRs.
6. The Facility was first constructed and began operations in 2017. On 22 May 2017 the Discharger submitted a Report of Waste Discharge (RWD) for operation of a new pistachio processing plant and discharge of process wastewater for irrigation of crops on agricultural land owned by the Discharger. According to the RWD, during the pistachio processing season from mid-August to October the Facility will discharge an average of 0.75 million gallons per day (mgd) of process wastewater, with a maximum daily flow limit of 1.2 mgd and an annual flow limit of 20 million gallons. The Discharger submitted addendums to the RWD on 3 June and 9 December 2021 providing additional details on process wastewater flows and wastewater management. The addendums also proposed a revised maximum daily flow limit of 1.5 mgd and a revised annual flow limit of 33.8 million gallons based on actual facility operations. The annual flow limit was determined using an average water usage at the Facility of 5.2 acre-feet of water per million pounds of pistachios processed (based on data from 2018 to 2020 with a 10% safety factor) and a plant capacity of about 20 million pounds of pistachios per



year. Flow limits shall be monitored at the Processing Meter as shown in Attachment C.

7. WDRs are needed for this Facility to ensure the discharge will comply with water quality plans and policies.

### **Existing Facility and Discharge**

8. According to the RWD, the Facility hulls, dries, and stores pistachio nuts. The Facility consists of an office, truck scales, receiving station and pre-cleaning lines, hulling lines, dryers, storage silos, a pistachio processing building, and equipment/maintenance shop. In addition, there is a 1.8-million-gallon lined storage/settling pond (Lined Settling Pond) for temporary storage and handling of process wastewater.
9. The Facility process and stores approximately 20 million pounds of pistachio nuts per year depending on the season and the quality of the crop.
10. Process wastewater at the Facility consists of hulling water and equipment wash down generated during the pistachio harvest between mid-August and October. During the rest of the year, operations include storage, fumigation, sorting, and packaging of pistachios. According to the Discharger, no wastewater is generated from these operations.
11. Pistachio nuts brought to the Facility are cleaned and processed to remove the hulls. Upon arrival, the trailers are weighed and the nuts unloaded and sent through the pre-cleaning process. The pistachios are pre-cleaned to remove leaves, twigs, and stems before being sent to the hullers. After the hulls are removed, the pistachios are dried and stored in silos until they are packaged and shipped offsite for sale or further processing.
12. Process wastewater and solids (i.e., hulls, shells, and skins removed during the hulling process) are discharged to floor drains and collected in concrete vaults. From the vaults, the wastewater is recycled back into the Facility or pumped to a bank of parabolic screens to remove solids. The screened wastewater is then discharged to the Lined Settling Pond.
13. The Lined Settling Pond is lined with a single layer 60-mil high density polyethylene (HDPE) liner equipped with a leachate collection system consisting of geonet vent strips and a lysimeter pan to monitor for leaks. The pond is approximately 203 feet long by 145 feet wide and 13 feet deep. According to the October 2017 Post-Construction Report prepared and signed by Craig Hartman (RCE 73837), with Hartman Engineering, the Lined Settling Pond was designed with a storage capacity of about 1.8 million gallons (assuming one foot of freeboard), which can provide about one day of storage at peak flows.

14. According to the Discharger, fresh irrigation water is pumped into the Lined Settling Pond and blended with the wastewater before the blended water is pumped into the irrigation system and sent to the available land application area (LAA). The Discharger currently does not measure influent wastewater flows prior to blending. This Order requires the Discharger to monitor wastewater flows prior to blending in order to comply with the wastewater flow limit specified in this Order. According to the Discharger, the Processing Meter (as shown in Attachment C) will be used to monitor wastewater influent flows entering the Lined Settling Pond prior to blending.
15. Leaves, twigs, stems, and other debris removed during the pre-cleaning process are transferred to a temporary onsite green material storage area. The green material is used to create a mulch, which is applied to the soil as a soil amendment within the surrounding pistachio orchards.
16. Residual solids (from the hulling operations) removed from the screens and the pond are pressed to reduce the water content and collected in bins to be shipped offsite for reuse (e.g., cattle feed, soil amendment, biomass feedstock, or composting, etc.). Residual solids may also be mixed with the green material (from pre-cleaning operations) and other soil amendments and applied to soil as a soil amendment within the surrounding pistachio orchards. According to the Discharger, samples are taken of the solids mixture to ensure the application of solids and fertilizers are at agronomic rates. In addition, solids may be applied to fields receiving process wastewater at agronomic rates, if needed.
17. Source water for the Facility is supplied by groundwater wells. Since 2018, the Discharger has sampled its source water annually for electrical conductivity (EC) and nitrate. The results of this monitoring are presented in Table 2 below.

**Table 2. Source Water Characterization**

<b>Constituent/Parameter</b>	<b>Units</b>	<b>Average</b>
EC	µmhos/cm	1,063
Nitrate (as N)	mg/L	< 0.5

18. On 23 September 2021, Central Valley Water Board staff conducted an inspection at the Facility. During the inspection, staff observed that the source water well is equipped with a water treatment system to remove arsenic. The water treatment system consists of two activated carbon vessels. According to the Discharger, hydrochloric acid and ferric chloride are added to disinfect and enhance the carbon filtration process and the carbon vessels are routinely backwashed to remove debris and sediment trapped in the carbon. The backwash water is currently discharged into the onsite stormwater collection area.

19. As part of the Inspection Report issued on 9 November 2021, Central Valley Water Board staff requested additional information on the water treatment system including volume and frequency of backwash. On 9 December 2021, the Discharger indicated that they plan to divert the backwash discharge to the Lined Settling Pond where it will be mixed with the process wastewater and dispersed to the LAA. According to the Discharger, the backwash water accounts for about 1% of the water in use at the Facility. During the processing season, the system will be backwashed about once every 3.5 days. Approximately 9,500 gallons of backwash water will be discharged to the Lined Settling Pond where it will be blended with the process wastewater and irrigation water before being sent to the LAA. During the off-season, the water treatment system will be backwashed about once a month and the backwash water will be sent to the Lined Settling Pond and allowed to evaporate.
20. According to the Discharger, wastewater generated from sanitation purposes is a minor component of the waste stream. The Discharger conducts deep cleaning at the beginning and end of the processing season using a high-pressure/low-volume wash with a diluted potassium hydroxide solution. During the processing season, additional washing is done with chlorine or alcohol-based products and sodium hypochlorite is added to the water in the float tanks to minimize bacterial growth. According to the Discharger chemicals used for equipment maintenance and fumigation do not encounter or enter the waste stream.
21. Since this is a new facility, the data in Table 3 below showing average concentrations from similar facilities was used in the RWD to show that the proposed application could be done at agronomic rates.

**Table 3. RWD Estimated Wastewater Quality**

<b>Constituent/Parameter</b>	<b>Units</b>	<b>RWD Estimate</b>
BOD <sub>5</sub>	mg/L	5,200
Fixed Dissolved Solids	mg/L	1,410
Total Nitrogen	mg/L	217
Potassium	mg/L	440

22. In 2017 the Discharger was issued Monitoring and Reporting Program (MRP) R5-2017-0837 to collect information on wastewater quality at the Facility. However, the Discharger has only analyzed samples of the wastewater after it has been blended with irrigation water in the Lined Settling Pond prior to discharge. Table 4 provides average concentrations for constituents of concern in the blended water for the 2017 through 2020 seasons.

**Table 4. Wastewater Quality (2017 – 2020)**

<b>Constituent/ Parameter</b>	<b>Units</b>	<b>2017 (see 1 below)</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Annual Flow	Million gallons	1.38	26.0	9.6	22.2
pH	std. units	6.4 – 6.6	5.3 – 6.1	4.8 – 5.9	5.0 – 6.2
EC	µmhos/cm	2,562	2,328	1,795	1,818
BOD <sub>5</sub>	mg/L	1,940	2,280	1,627	1,828
Total Dissolved Solids	mg/L	2,720	2,893	1,700	2,122
Fixed Dissolved Solids	mg/L	1,350	1,287	878	890
Total Nitrogen	mg/L	87	140	77	125
Potassium	mg/L	444	444	280	292

1. Discharges for the 2017 season were part of a 3-day pilot test to test the equipment as part of the Plant start up.
  
23. From the data, the discharge is high in biochemical oxygen demand (BOD), nitrogen, and salts (primarily potassium). Blending with fresh irrigation water reduces some constituent concentrations. This is similar to wastewater quality data from other pistachio processing facilities regulated by the Central Valley Water Board where wastewater and irrigation water are blended prior to application.
  
24. Comparing total dissolved solids (TDS) with fixed dissolved solids (FDS) it appears that organic dissolved solids make up about 53 percent of the TDS in the discharge. In addition, potassium appears to make up about 67 percent of the FDS.
  
25. Domestic wastewater is handled by an on-site septic tank/leach field system regulated by Fresno County.
  
26. Generally, stormwater is not generated during the pistachio processing season (i.e., mid-August through October). According to the RWD, all stormwater that falls within the pistachio processing areas is retained onsite. According to the Discharger, the area around the Facility is sloped to divert storm water runoff into man-made swells around the perimeter of the property that collects the runoff and directs it into a shallow spreading basin where the solar panels are set up just south of the Facility. This was confirmed by staff during an inspection at the Facility on 23 September 2021.

### Land Application Areas (LAA)

27. The LAA consists of approximately 3,700 acres of farmland owned by the Discharger. According to the 2021 RWD addendum, approximately 930 acres on the southern portion of the property will be available for land application of wastewater. Crops to be grown within these fields include pasture for grazing, annual row crops (e.g., sorghum, wheat, corn, etc.), and pistachios. As discussed in Finding 2, the remaining acreage on the northern portion of the site consisting primarily of pistachio orchards, will be used for land application of solids including green material and residual solids from hulling operations.
28. Given the short processing season, BOD loading does not appear to be an issue and no odor complaints have been reported for the Facility. In addition, staff did not detect any significant odors at the Facility during its 23 September 2021 inspection except for a slight odor around the collection vaults and the Lined Settling Pond, which dissipated within a couple of feet. Based on the available data (estimated unblended BOD concentration of 5,200 mg/L with an annual flow of 33.8 million gallons), the average BOD loading to the 930-acre LAA would be about 35 pounds per acre per day over the course of the season. Nevertheless, as discussed in further detail in subsequent findings, this Order sets a BOD loading limit of 100 pounds per acre per day (calculated as a cycle average) for wastewater applications.
29. Table 5 below summarizes projected annual loading rates for nitrogen and potassium using half the available acreage (450 acres) or the entire 930 acres. Projected annual loading rates are in pounds per acre per year (lbs/ac/yr) assuming an annual discharge of 33.8 million gallons with average unblended total nitrogen and potassium concentrations of 220 mg/L and 440 mg/L, respectively and compares it to anticipated crop uptake rates.

**Table 5. Projected Nitrogen & Potassium Loading Rates & Crop Uptake Rates**

Constituent	Loading Rate for 450 acres of LAA	Loading Rate for 930 acres of LAA	Pasture Crop Uptake Rate (see 1 below)	Corn & Sorghum Crop Uptake Rate (see 1 below)	Pistachios Crop Uptake Rate (see 2 below)
Total Nitrogen (lbs/ac/yr)	138	67	115	250	160-300
Potassium (lbs/ac/yr)	276	133	150	200-240	140-300

1. Information on nitrogen and potassium requirements for crops pasture grasses, sorghum, and corn were taken from the Western Fertilizer Handbook, 8<sup>th</sup> Edition.

2. The Western Fertilizer Handbook does not provide data on crop requirements for pistachios specifically. However, data for a similar nut tree, such as almonds, estimates nitrogen and potassium requirements around 200 lbs/ac/yr and 100-200 lbs/ac/yr, respectively. More recent studies by [UC Davis California Department of Food and Agriculture \(UC/CDFA\)](https://www.cdfa.ca.gov/is/ffldrs/frep/FertilizationGuidelines/Pistachio.html) (<https://www.cdfa.ca.gov/is/ffldrs/frep/FertilizationGuidelines/Pistachio.html>) for pistachios shows nitrogen requirements ranging from about 160-300 lbs/ac/yr and potassium requirements ranging from 140-300 lbs/ac/yr depending on soil conditions and whether it is an “on” or “off” year.
30. This Order includes a Discharge Specification requiring application of wastewater and fertilizers to be at reasonable agronomic rates. Calculations show that with the available 930-acre LAA the Discharger can meet agronomic loading rates for nitrogen with careful management of the types of crops and rotation of fields.
31. Calculations show that potassium loading to the LAA may exceed agronomic rates for potassium depending on the type of crops and the actual acreage in use. However, potassium is an essential nutrient and crops will often take up more potassium than is required if it is available. In addition, potassium tends to bind readily to soil until needed. According to the Discharger, fertilizer may be applied to the wastewater LAA, if needed. Applications will be done at agronomic rates after accounting for the applied wastewater.
32. There are surface water bodies in the vicinity of the Facility and LAA. As shown in **Attachment A**, the Fresno Slough runs along the western boundary of the site and the Murphy Slough cuts through the center of the property just north of the Facility. According to the Discharger, there are no direct connections between the irrigation system used to carry wastewater and any off-site surface water bodies. This Order includes a prohibition against any discharge of waste to off-site surface waters or drainage courses. To ensure compliance with this prohibition, the MRP requires the Discharger to inspect its irrigation system annually prior to the start of the processing season identifying all irrigation lines and runoff controls used to transport or contain wastewater and confirming that there are no direct connections to off-site surface waters.

### **Site-Specific Conditions**

33. The Facility and LAA are in western Fresno County. Topography in the area is generally level with an approximate elevation ranging from 200 to 210 feet above mean seal level (msl). The Facility and LAA are surrounded by agricultural farmland. The Fresno Slough runs along the western boundary of the LAA and the Murphy Slough runs through the center of the site just north of the Facility.
34. Soil in the vicinity of the LAA is predominantly fine textured sand and clay loams from alluvial marine deposits. According to the United States Department of

Agriculture, Natural Resources Conservation Service soil survey maps predominant soil types in the vicinity of the site include Dello sandy loam, Temple loam, Temple clay loam, and Merced clay loam. These soils are somewhat poorly to poorly drained, non-saline to slightly saline with a high to moderate water holding capacity. Permeabilities for these soils are moderately high ranging from about 0.2 to 0.57 inches per hour. These soils have a land capability classification of 1 or 2s. Soils with a Class 1 or 2 rating have slight to moderate limitations that reduce the choice of plants or require minor conservation practices, or both. Subclass "s" shows that the soil may be limited mainly because it is shallow, droughty, or stony. The majority of the LAA meets the US Department of Agriculture's criteria for prime farmland if irrigated and drained.

35. Climate in the Central Valley 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. According to information published by the California Department of Water Resources (DWR), average annual precipitation and evaporation (Class 'A' pan) in the area are about 11 inches and 69 inches, respectively.
36. The National Oceanic and Atmospheric Administration (NOAA) Precipitation Frequency Atlas 14, Vol. 6 (rev. 2014), 100-year and 500-year, 24-hour rainfall events are estimated to result in 9.78 and 12.9 inches of precipitation, respectively.<sup>1</sup>
37. The current Federal Emergency Management Agency's (FEMA) [Flood Insurance Rate Map](https://msc.fema.gov/portal) (https://msc.fema.gov/portal), Map 06019C2875J dated 20 January 2016, indicates the Facility is within Zone X, which has a minimal flood hazard. However, some of the available LAA to the south and west of the Facility is within Flood Zone A with a 1% chance of annual flooding where the base flood elevation has not been determined. Planting and wastewater applications will be adjusted, if needed, to address this issue. In addition, the area around the Murphy Slough to the north of the Facility has a 1% annual chance of flood which would be contained in the slough. In general, the potential for rain during the pistachio processing season is extremely low. Furthermore, this Order includes Land Application Area Specification F.8 which prohibits application of wastewater when soils become saturated due to rain events.
38. Land uses in the vicinity are primarily agricultural, with some rural residences. Crops grown in the area include pistachios, almonds, grapes, corn, and hay and

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<sup>1</sup> Source: [NOAA Precipitation Frequency Data Server](https://hdsc.nws.noaa.gov/hdsc/pfds) (https://hdsc.nws.noaa.gov/hdsc/pfds)

grain crops. In addition, there are several dairies and a poultry operation within a five-mile radius of the site.

### Groundwater Conditions

39. Groundwater in the area is contained in two primary aquifers. The unconfined aquifer is present above the E-Clay (or Corcoran Clay). The E-Clay is reported to be at about 450 feet below ground surface (bgs) and about 80 to 100 feet thick.
40. There are no groundwater monitoring wells at the site and the exact depth to first encountered groundwater beneath the Facility is unknown. According to the [SGMA Data Viewer \(ca.gov\)](https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels), (https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels), depth to groundwater in the vicinity of the Facility and LAA ranged from about 160 feet bgs in Spring 2012 to 220 feet bgs in Spring 2020. Regional groundwater flow in the area is generally to the southwest.
41. Regional groundwater quality data can be found on the State Water Resources Control Board's (State Water Board) [Groundwater Ambient Monitoring Program \(GAMA\) database](https://www.waterboards.ca.gov/gama/) (https://www.waterboards.ca.gov/gama/). A search of the GAMA database identified several wells in the vicinity of the Facility and LAA with water quality prior to 1968. Analytical results for nitrate and salinity constituents are provided in Table 6 below.

**Table 6. Regional Groundwater Quality (pre-1968)**

Well	Depth (feet bsg)	EC (µmhos/cm)	Nitrate as N (mg/L)	Sodium (mg/L)	Chloride (mg/L)	Potassium (mg/L)
17S19E08R001M (7/21/1954)	--	493	<0.1	98	16	0.6
17S18E12N001M (8/28/1963)	--	1,070	<0.1	216	70	1.2
17S19E07D001M (8/14/1963)	600	554	0.1	105	62	3.1
17S19E07A001M (8/14/1963)	700	498	0.6	95	60	2.3
17S18E02P001M (7/17/1968)	700	747	5.6	150	71	--
362905119571101 (8/14/1963)	216	606	0.2	110	32	0.7
362605119573701 (8/28/1963)	220	1,170	0.2	250	170	0.8
362551119580401 (7/17/1968)	390	2,640	0.3	460	700	--



42. Based on the available data, groundwater quality in the vicinity of the Facility and LAA was of relatively good quality with respect to nitrate prior to 1968. However, salinity does appear to increase as you move further south.

### **Legal Authorities**

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

The regional board, after any necessary hearing, shall prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge..., with relation to the conditions existing in the disposal area or receiving waters upon, or into which, the discharge is made or proposed. The requirements shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonable required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241.

44. Compliance with section 13263, subdivision (a), including implementation of applicable water quality control plans, is discussed in the findings below.
45. 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).)
46. This Order and its associated MRP are also adopted pursuant to Water Code section 13267, subdivision (b)(1), which provides as follows:

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

47. 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**

48. 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**

49. This Order implements the Central Valley Water Board’s Water Quality Control Plan for the Tulare Lake 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.)
50. Local drainage is to the Fresno Slough fed by the North Fork of the Kings River. The beneficial uses of the Kings River (Peoples Weir to Stinson Weir on North Fork and to Empire Weir No.2 on South Fork) include: agricultural supply (AGR); water contact recreation (REC-1) and non-contact recreation (REC-2); wildlife habitat (WILD); warm freshwater habitat (WARM); and groundwater recharge (GWR).
51. Per the Basin Plan, beneficial uses of underlying groundwater in the area include: municipal and domestic supply (MUN); agricultural supply (AGR); industrial service supply (IND); industrial process supply (PRO); water contact recreation (REC-1); and wildlife habitat (WILD).

#### **Water Quality Objectives**

52. The Basin Plan establishes narrative WQO’s for chemical constituents, taste and odors, and toxicity in groundwater. The toxicity objective, in summary, requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial uses.
53. The Basin Plan’s narrative WQO’s for chemical constituents require MUN designated water to at least meet the MCLs specified in California Code of Regulations, title 22 (Title 22). The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

54. Quantifying a narrative WQO requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses. The Basin Plan states that when compliance with a narrative objective is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations to implement the narrative objective.
55. In the absence of specific numerical water quality limits, the Basin Plan methodology is to consider any relevant published criteria. General salt tolerance guidelines, such as *Water Quality of Agriculture* by Ayers and Westcot and similar references indicate that yield reductions in nearly all crops are not evident when irrigation water has an electrical conductivity (EC) of less than 700  $\mu\text{mhos/cm}$ . There is, however, an eight-to ten-fold range in salt tolerance for agricultural crops and the appropriate salinity values to protect agriculture in the Central Valley are considered on a case-by-case basis. It is possible to achieve full yield potential with groundwater EC up to 3,000  $\mu\text{mhos/cm}$ , if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop.

#### Salt and Nitrate Control Programs

56. The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting. The Basin Plan amendments were conditionally approved by the State Water Board on 16 October 2019 (Resolution 2019-0057) and the Office of Administrative Law on 15 January 2020 (OAL Matter No. 2019-1203-03) and became effective on 17 January 2020.
57. 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 (CV-SALTS ID 3576) was issued a Notice to Comply for the Salt Control Program on 11 March 2021. On 11 October 2021 Eriksson, LLC submitted its Notice of Intent and the fee payment to join the P&O Study. In the interim, to maintain existing salt discharges and minimize salinity impacts this Order:
  - a. Requires the discharger to continue efforts to control salinity in its discharge to the extent feasible; and
  - b. Sets a performance-based effluent EC limit of 2,600  $\mu\text{mhos/cm}$ , calculated as a seasonal average, on the discharge of wastewater and/or blended wastewater and irrigation water sent to the LAA. This performance-based EC limit was set based on the average EC of the discharge over the last

four years plus 25 percent to allow some flexibility for water conservation efforts.

58. 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 falls within Groundwater Sub-Basin 5-022.08 (San Joaquin Valley - Kings Basin), a Priority 1 Basin. The Discharger was issued a Notice to Comply for the Nitrate Control Program on 11 March 2021. On 11 November 2021, Eriksson, LLC submitted its Notice of Intent for the Nitrate Control Program selecting Pathway B and joining the Kings Water Alliance Management Zone Group.
59. As these strategies are implemented, the Central Valley Water Board may find it necessary to modify the requirements of these WDRs to ensure the goals of the Salt and Nitrate Control Programs are met.

### **Special Considerations for High Strength Waste**

60. For the purpose of this Order, "high strength waste" is defined as wastewater that contains concentrations of readily degradable organic matter that exceed typical concentrations for domestic sewage. Such wastes contain greater than 500 mg/L BOD. Typical high strength wastewaters include septage, some food processing wastes (e.g., pistachio processing facilities), winery wastes, and rendering plant wastes.
61. 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<sub>5</sub> to prevent nuisance conditions.
62. 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.

63. Typically, irrigation with high strength wastewater results in heavy 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.
64. *Pollution Abatement in the Fruit and Vegetable Industry*, published by the United States Environmental Protection Agency, cites BOD<sub>5</sub> loading rates in the range of 36 to 600 lbs/ac/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<sub>5</sub> 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.
65. In a properly managed land application area, a cycle average BOD loading rate of less than 100 lbs/ac/day should not result in objectional odors or unreasonably threaten underlying groundwater. This Order sets an irrigation cycle average BOD loading rate for the LAA of 100 lbs/ac/day.

### **Compliance with Antidegradation Policy**

66. 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).
67. Given the availability of pre-1968 water quality information, compliance with the Antidegradation Policy will be determined based partly on pre-1968 water quality, as discussed below (Antidegradation Baseline).
68. According to the Discharger wastewater is blended with irrigation water in the Lined Settling Pond prior to land application. The Discharger collects samples of the blended wastewater and irrigation water during the processing season.

Table 7 below shows the average concentration of the blended irrigation and wastewater concentrations for constituents of concern alongside pre-1968 regional groundwater quality.

**Table 7. Blended Irrigation Water and Groundwater Evaluation**

Constituent/Parameter	Units	Number of Samples	Average Blended Water	Regional Groundwater (pre-1968)
EC	µmhos/cm	--	1,907	493-2,640
TDS	mg/L	18	2,272	--
FDS	mg/L	18	1,044	--
Nitrate (as N)	mg/L	18	0.2	<0.1 – 5.6
Total Nitrogen	mg/L	18	112	--
Sodium	mg/L	--	--	95 – 460
Chloride	mg/L	--	--	16 – 700
Potassium	mg/L	18	347	0.6 – 3.1

69. Constituents of concern (COCs) that have the potential to degrade groundwater include organics, nutrients, and salts.
- a. **Organics.** Application of organic materials (as measured by BOD) at excessive rates can cause anerobic conditions that may result in nuisance odor conditions, dissolution of metals, and degradation of groundwater. This Order requires the Discharger to apply wastewater to the LAA at agronomic rates and limits the cycle average BOD loading rate to the LAA to less than 100 lbs/ac/day. Given the short processing season (i.e., about six weeks) and implementation of best management practices, including blending with irrigation water, rotating fields, and even application of wastewater, the discharge should not unreasonably degrade groundwater quality with constituents related to organic loading or cause nuisance odor conditions.
  - b. **Nitrate.** Based on the available data, prior to 1968, nitrate (as N) in the groundwater in the vicinity of the Facility was below the MCL of 10 mg/L. To address nitrogen concentrations in the discharge, this Order requires the application of nutrients from wastewater and fertilizers to be at reasonable agronomic rates. Calculations show that at the proposed annual flow limit of 33.8 million gallons and with the available 930-acre LAA, the Discharger can meet agronomic loading rates for nitrogen with careful management of the types of crops and rotation of fields. With storage in a lined pond, blending with better quality irrigation water, and application at agronomic rates the discharge should not cause significant degradation of groundwater for nitrates. In addition, the Discharger has joined the Kings Management Zone

Group to address nitrate impacted groundwater within the Kings Groundwater Basin.

- c. **Salinity.** For salinity, the discharge is high in salts, specifically potassium. There is no MCL or other numeric limit established for potassium except for overall limits for EC and TDS, to which potassium would contribute. Potassium is an important nutrient for crops and, if readily available, plants will take up potassium in excess of their needs. Therefore, the application of wastewater high in potassium to crops would be beneficial. Furthermore, the positively charged ion in potassium binds readily to soils allowing for greater retention time in the root zone for crop uptake. The Discharger implements best management practices to minimize impacts from potassium including blending with irrigation water low in potassium. In addition, to minimize impacts from salinity this Order sets a performance-based effluent EC limit of 2,600  $\mu\text{mhos/cm}$  (seasonal average) for the discharge of blended wastewater to the LAA and requires the Discharger to comply with the new Salt Control Program.
70. The Discharger implements, or will implement, as required by this Order, the following BPTC measures:
    - a. Mechanical solids removal (wastewater screening);
    - b. Wastewater storage and settling in the Lined Settling Pond;
    - c. Application of blended wastewater and irrigation water at agronomic rates (except for potassium);
    - d. BOD cycle average loading rate less than 100 lbs/acre/year;
    - e. Performance-based EC limit of 2,600  $\mu\text{mhos/cm}$  (seasonal average) for the discharge of blended water to the LAA; and
    - f. Compliance with the Salt and Nitrate Control Programs.
  71. The Discharger's implementation of the above-listed BPTC measures will minimize the extent of water quality degradation resulting from the Facility's continued operation.
  72. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the state and, therefore, sufficient reason exists to accommodate growth and limited groundwater degradation around the Facility, provided that the terms of the Basin Plan are met. Degradation of groundwater by some typical waste constituents released with discharge from the Facility after effective source reduction, treatment and control, and considering

the best efforts of the Discharger and magnitude of degradation, is of maximum benefit to the people of the state.

73. 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. Accordingly, to the extent that any degradation occurs as the result of the Facility's operation, such degradation is consistent with the maximum interest of the people of the State of California.
74. Based on the foregoing, the adoption of this Order is consistent with the State Water Board's Antidegradation Policy.

### **California Environmental Quality Act**

75. In accordance with the California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq., Fresno County, on 11 August 2016, adopted a Mitigated Negative Declaration in connection with its issuance of Conditional Use Permit (CUP #3505) for construction and operation of a pistachio processing plant at South Westlawn and West Cerini Avenues near Riverdale. The Mitigated Negative Declaration (MND) found that the "project," which includes the following pertinent elements, would not have a significant effect on the environment, provided that specified mitigation measures were implemented:
  - a. Construction of a pistachio processing plant for hulling, drying, storage, sorting, and packaging of pistachios from nearby lands;
  - b. Year-round packaging and shipping of pistachios; and
  - c. Reuse of process wastewater for irrigation of nearby farmland owned by the Discharger.
76. The Central Valley Water Board, as a "responsible agency" under CEQA, was consulted in the lead agency's development of the MND. The discharges and other activities authorized under this Order also fall within the scope of the proposed project (as contemplated in the MND). Additionally, there are no substantial changes to either the proposed project or the attendant circumstances under which the proposed project will be undertaken, and no new information requiring revision of the MND. The MND is therefore presumed compliant with CEQA for use by the Central Valley Water Board as a "responsible agency" under CEQA. (See Cal. Code Regs., tit. 14, §15162.) Accordingly, no further environmental review is required under CEQA.



### Other Regulatory Considerations

77. Pursuant to Water Code section 106.3, subdivision (a), it is “the established policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.” Although this Order is not subject to Water Code section 106.3, as it does not revise, adopt or establish a policy, regulation or grant criterion, (see §106.3, subd. (b)), it nevertheless promotes the policy by requiring discharges to meet maximum contaminant levels (MCLs) for drinking water, which are designed to protect human health and ensure that water is safe for domestic use.
78. 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.
79. 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).)
80. Because all storm water 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 Permit No. CAS000001 (Industrial General Permit).

### Scope of Order

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

83. 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.
84. This Order is also strictly limited in applicability to those individuals and/or entities specifically designated herein as “Discharger,” subject only to the discretion to designate or substitute new parties in accordance with this Order.

### **Procedural Matters**

85. 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.
86. 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.)
87. At a public meeting, the Central Valley Water Board heard and considered all comments pertaining to the discharges regulated under this Order.
88. 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 the Discharger and their agents, employees and successors in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted thereunder, shall comply with the following.

#### **A. Discharge Prohibitions**

1. Discharge of wastes to off-site surface waters or surface water drainage courses is prohibited.
2. Discharge of waste classified as ‘hazardous’, as defined in the California Code of Regulations, title 22, section 66261.1 et seq., is prohibited.
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 WDRs, 1 March 1991 ed. (SPRRs), which are incorporated herein.

4. Discharge of waste at a location or in a manner different from that described in the Findings herein is prohibited.
5. Discharge of toxic substances into any wastewater treatment system or the LAA such that biological treatment mechanisms are disrupted is prohibited.
6. Discharge of domestic wastewater to the process wastewater treatment system, Lined Settling Pond, and/or LAA fields is prohibited.
7. Discharge of industrial wastewater to the septic systems is prohibited.

**B. Flow Limitations**

1. The wastewater discharge to the Lined Settling Pond, monitored at INF-001 (as defined in the MRP), shall not exceed the following:
  - a. A maximum daily flow limit of 1.5 mgd, or
  - b. An annual flow limit of 33.8 million gallons,

**C. Effluent Limitations**

1. The discharge of wastewater and blended irrigation water sent to the LAA, monitored at EFF-001 (as defined in the MRP), shall not exceed a seasonal average EC of 2,600  $\mu\text{mhos/cm}$ .

**Table 8. Effluent Limits**

Constituent/Parameter	Limit	Basis for Compliance Determination
Electrical Conductivity (EC)	2,600 $\mu\text{mhos/cm}$	Seasonal Average (see 1 and 2 below)

1. The EC effluent limitation is a performance-based effluent limit (as discussed in Finding 57) since the Discharger has selected to participate in the P&O Study. The purpose of this limit is to ensure the Discharger is implementing appropriate performance-based measures at the Facility to control and manage salinity.
2. The seasonal average shall be calculated as the average of all EC readings collected at EFF-001 of the wastewater and/or blended wastewater and irrigation water discharged from the Lined Settling Pond over the course of the pistachio processing season (i.e., from mid-August to October).

#### **D. Discharge Specifications**

1. No waste constituent shall be released, discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations of this Order.
2. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.
3. The Discharger shall operate all systems and equipment to optimize the quality of the discharger.
4. The discharge shall remain within the permitted wastewater pond, conveyance structures, and the LAA at all times.
5. The Facility and wastewater pond shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
6. Objectionable odors shall not be perceivable beyond the limits of the property where the waste is generated, treated, and/or discharged at an intensity that creates or threatens to create nuisance conditions.
7. As a means of ensuring compliance with Discharge Specification D.6, 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 any single pond 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 any single 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.
8. Ponds and open containment structures shall be managed to prevent breeding of mosquitos or other vectors. Specifically:
  - a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.

- b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.
  - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
  - d. The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding, as needed, to supplement the above measures.
9. The Discharger shall design, construct, operate, and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. The operating freeboard in any pond shall never be less than one foot (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 or other suitable measurement device with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard.
10. The Discharger shall monitor residual solids accumulation in the Lined Settling Pond annually and shall periodically remove residual solids as necessary to maintain adequate storage capacity. Specifically, if the estimated volume of solids in the pond exceeds five percent of the permitted capacity, the Discharger shall complete the cleanout within 12 months after the date of the estimate.
11. The Discharger shall regularly inspect the liner condition of the Lined Settling Pond. 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.

#### **E. Groundwater Limitations**

1. Release of waste constituents from any treatment unit, storage unit, delivery system or disposal location associated with the Facility shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or in excess of natural background quality, whichever is greater:
  - a. Constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations, excluding salinity and nitrate.

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

**F. Land Application Area Specifications**

1. For the purposes of this Order, "land application area" or "LAA" refers to the discharge area described in the Findings and shown in Attachment A.
2. Crops shall be grown within the LAA. Crops shall be selected based on nutrient uptake, consumptive use of water, and irrigation requirements to maximize uptake of nutrients.
3. Application of waste constituents to the LAA 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 to the LAA, 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 LAA 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. The Discharger shall not discharge process wastewater to the LAA when soils are saturated (e.g., during or after significant precipitation events).
8. Any irrigation runoff shall be confined to the LAA and shall not enter any surface water drainage course or storm water drainage system.
9. Discharge of process wastewater to any land not having a fully functional tailwater/runoff control system is prohibited.
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 pipelines and ditches accessible to mosquitos shall not be used to store process wastewater.

#### **G. Solids Disposal Specifications**

1. For the purpose of this Order, sludge includes the solid, semisolid, and liquid organic matter removed from the wastewater treatment system. Solid waste refers to solid inorganic matter removed from screens and soil sediments for washing of unprocessed nuts. Except for waste solids originating from meat processing, residual solids means organic food processing byproducts such as blanks, culls, hulls, stems, and leaves that will not be subject to treatment prior to disposal or land application.
2. Residual solids shall be removed from screens, vaults, and ponds 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.

#### **H. Provisions**

1. The Discharger shall comply with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991 (SPRRs), which are a part of this Order. This attachment and its individual paragraphs are referred to as Standard Provisions.
2. The Discharger shall comply with the separately issued **Monitoring and Reporting Program (MRP) R5-2022-0013**, 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.

3. 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.
4. The Discharger shall comply with the Basin Plan amendments adopted in Resolution R5-2018-0034 incorporating new programs (Salt and Nitrate Control Programs) 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
5. Prior to initiating any modifications to the LAA, including adding or subtracting fields intended for wastewater and/or solids applications, the Discharger shall submit a revised **Wastewater and Nutrient Management Plan**. The main objective of the Plan is to identify how the Discharger will manage the LAA to ensure nutrient and hydraulic wastewater loading will occur at reasonable agronomic rates. At a minimum, the Plan must include:
  - a. An action plan to deal with objectionable odors and/or nuisance conditions;
  - b. Supporting data and calculations for monthly and annual hydraulic, nitrogen, and salinity (i.e., potassium) loading rates; and
  - c. Management practices that will ensure wastewater, irrigation water, fertilizers, solids, and salts are applied at reasonable rates to preclude nuisance conditions and unreasonable degradation of groundwater.
6. 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.



7. The Discharger shall submit the technical reports and work plans required by this Order for consideration by the Executive Officer and incorporate comments the Executive Officer may have in a timely manner, as appropriate. Unless expressly stated otherwise in this Order, the Discharger shall proceed with all work required by the foregoing provisions by the due dates specified.
8. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports. On or before each report due date, the Discharger shall submit the specified document to the Central Valley Water Board or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharger shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board in writing when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
9. The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also 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.
10. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with this Order.
11. Per 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.
12. In the event that the Discharger reports toxic chemical release data to the State Emergency Response Commission (SERC) pursuant to section 313 of the Emergency Planning and Community Right to Know Act (42 U.S.C. § 11023), the Discharger shall also report the same information to the Central Valley Water Board within 15 days of the report to the SERC.

13. In the event of any change in control or ownership of the Facility or 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.
14. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.
15. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

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.

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

## **ATTACHMENTS**

Attachment A—Site Location Map

Attachment B—Facility Map

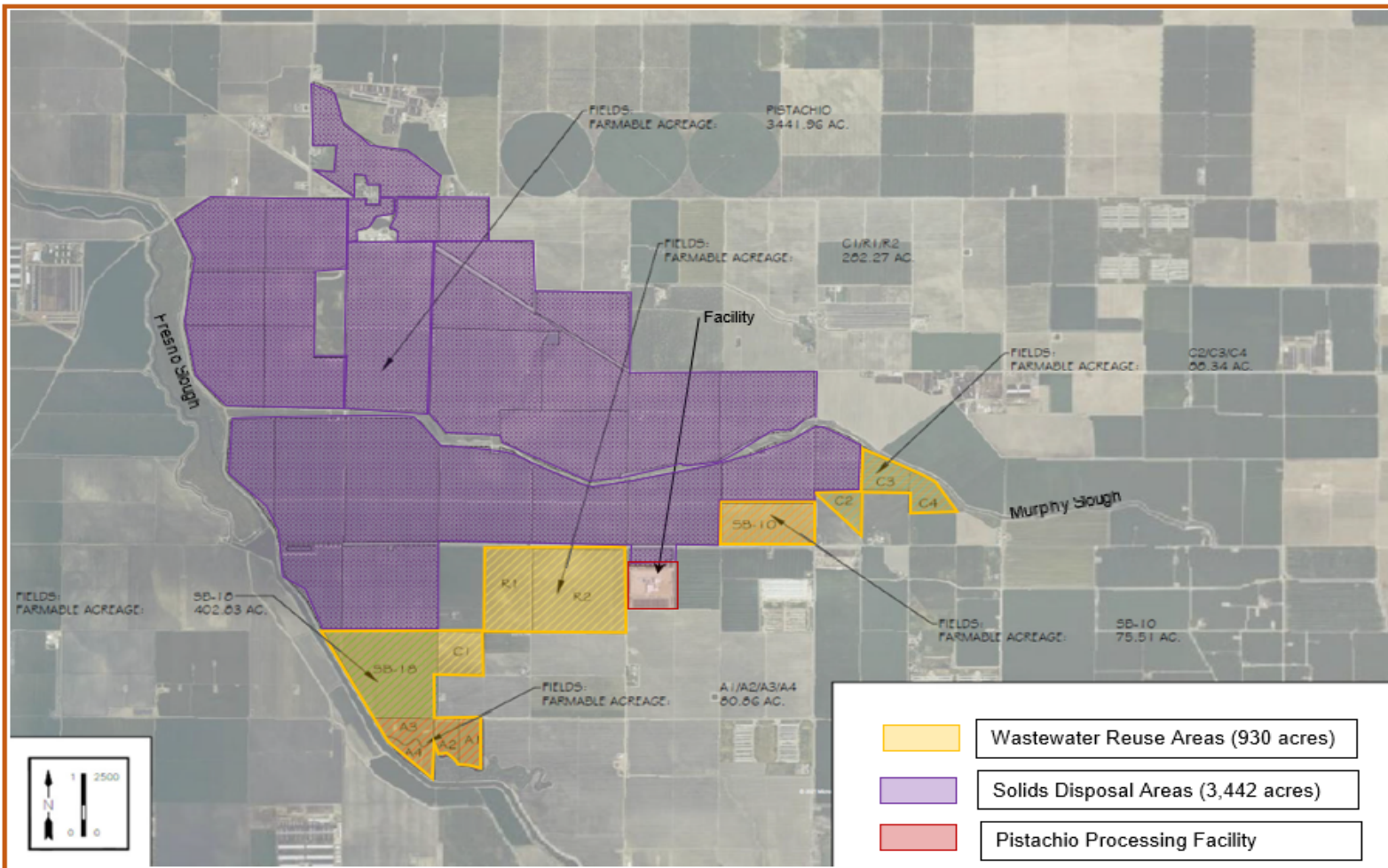
Attachment C—Process Flow Diagram

Information Sheet

Standard Provisions and Reporting Requirements (SPRRs), dated 1 March 1991

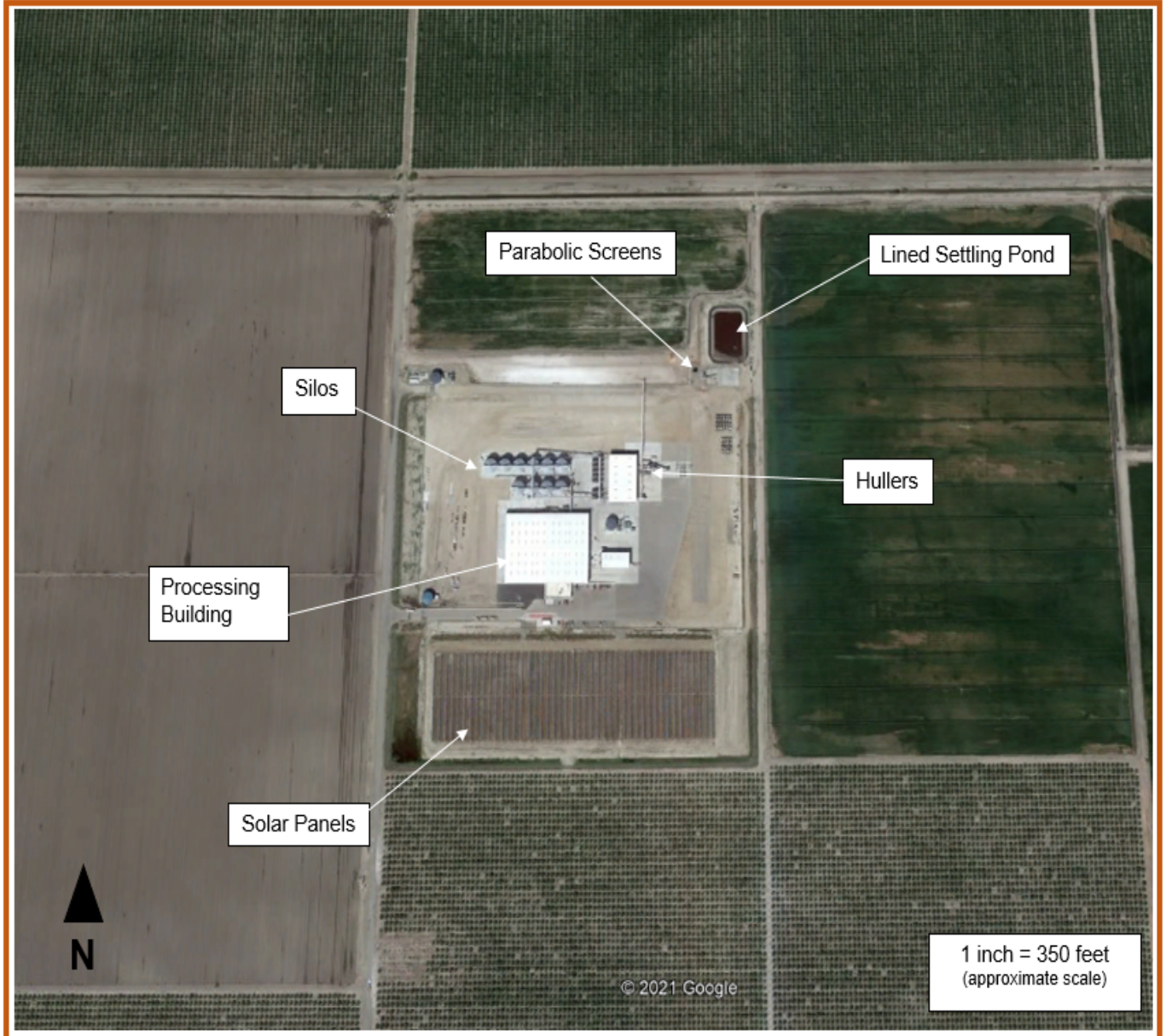
Monitoring and Reporting Program R5-2022-0013

### ATTACHMENT A—SITE LOCATION MAP

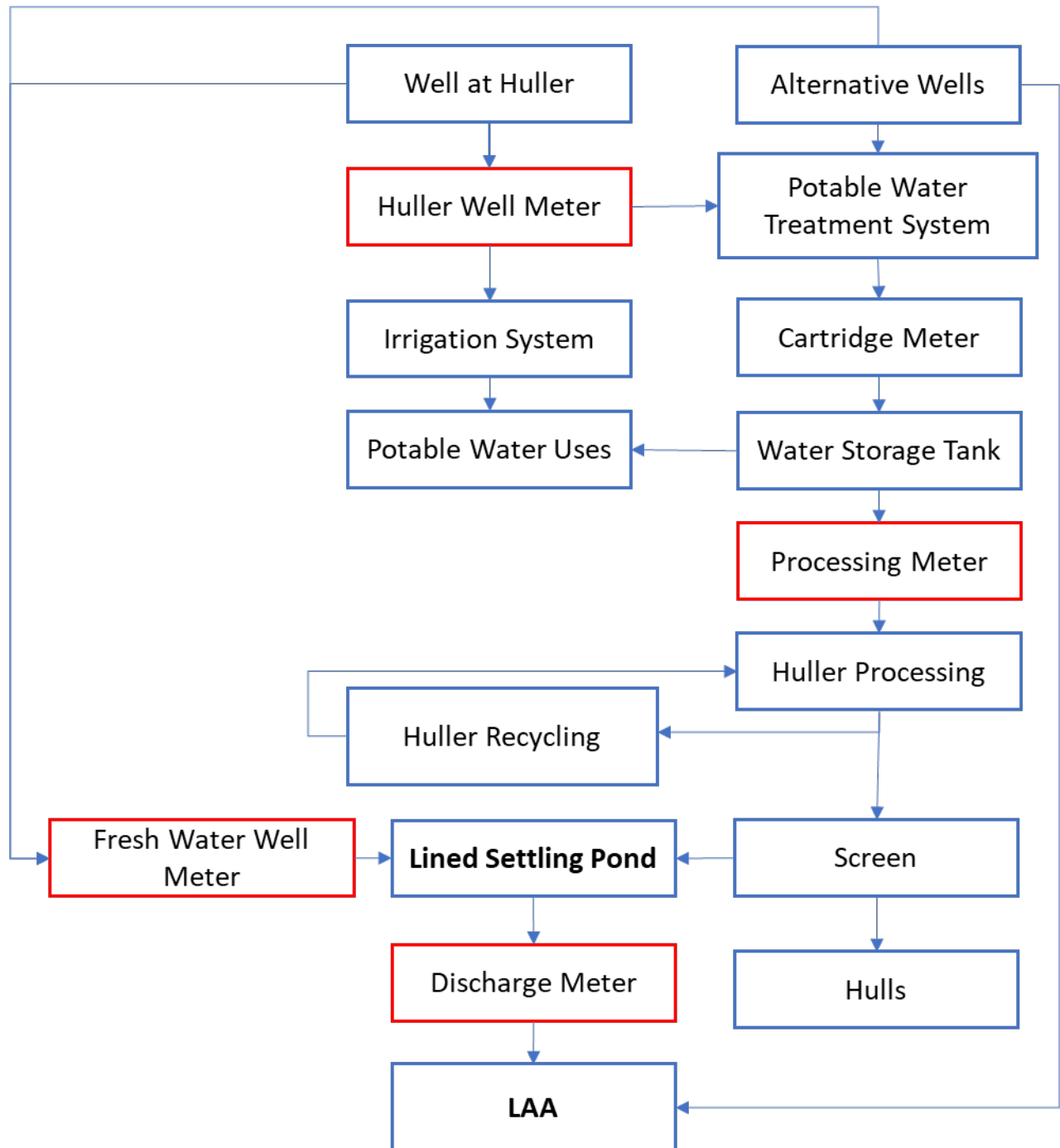


Design Reference: Hartman Engineering (Report of Waste Discharge Addendum, 3 June 2021)

**ATTACHMENT B—FACILITY MAP**



**ATTACHMENT C—PROCESS FLOW DIAGRAM**



Design Reference: 3 June 2021 Report of Waste Discharge Addendum

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

WASTE DISCHARGE REQUIREMENTS ORDER R5-2022-0013  
FOR  
ERIKSSON, LLC  
INGLEBY US PISTACHIO PLANT  
FRESNO COUNTY

**INFORMATION SHEET**

**BACKGROUND**

Eriksson, LLC (Discharger), owns and operates the Ingleby US Pistachio Plant (Facility) at 19210 South Westlawn near Riverdale in Fresno County. The Facility was first constructed and began operations in 2017. The Facility hulls, dries, and stores pistachio nuts from the surrounding area. Process wastewater is generated from hulling operations and equipment wash down, which takes place during the six-week pistachio harvest between mid-August and October.

The Facility has not previously been regulated by waste discharge requirements (WDRs). On 22 May 2017, the Discharger submitted a Report of Waste Discharge (RWD) for a new pistachio processing plant to discharge process wastewater for irrigation of crops on agricultural land owned by the Discharger. According to the RWD, the Facility will have an average discharge of 0.75 million gallons per day (mgd) during the pistachio processing season from mid-August to October with a proposed a maximum daily flow limit of 1.2 mgd, and an annual flow limit of 20 million gallons. The Discharger submitted addendums to the RWD on 3 June and 9 December 2021 providing additional details on process wastewater flows and wastewater management. The addendums proposed a revised maximum daily flow limit of 1.5 mgd, and a revised annual flow limit of 33.8 million gallons based on actual operations. The annual flow limit was determined using an average water usage at the Facility of 5.2 acre-feet of water per million pounds of pistachios processed (based on data from 2018 to 2020 with a 10% safety factor) and a plant capacity of about 20 million pounds of pistachios per year.

**WASTEWATER GENERATION AND DISPOSAL**

The Facility consists of an office building, truck scales, receiving station and pre-cleaning lines, two hullers, dryers, storage silos, a packaging building, and equipment/maintenance shop. The Facility will operate year-round processing and storing up to 21.5 million pounds of pistachios each year depending on the season and the quality of the crop. However, process wastewater, consisting of hulling water and equipment wash down, will only be generated during the pistachio harvest between mid-August through October. During the rest of the year, operations include storage, fumigation, sorting, and bulk packaging of pistachios. According to the Discharger, no wastewater is generated from

### **INFORMATION SHEET**

these operations. During an inspection of the Facility on 23 September 2021, Central Valley Water Board staff observed that the source water well is equipped with a water treatment system to remove arsenic. The water treatment system consists of two activated carbon vessels. According to the Discharger, the carbon vessels are routinely backwashed to remove debris and sediment trapped in the carbon. The backwash water is discharged into the onsite stormwater collection area. In the 9 November 2021 Inspection Report Staff requested additional information on the water treatment system including volume and frequency of backwash. On 9 December 2021 the Discharger indicated that they plan to divert the backwash discharge to the Lined Settling Pond. According to the Discharger, during the processing season, the water treatment system will be backwashed about once every 3.5 days and approximately 9,500 gallons of backwash water will be discharged to the Lined Settling Pond where it will be blended with the process wastewater and irrigation water before being sent to the LAA. During the off season the system will be backwashed about once a month and the backwash water sent to the Lined Settling Pond where it will be allowed to evaporate.

Process wastewater and solids (consisting of hulls, shells, and skins removed during the hulling process) is discharged to floor augers and collected in concrete vaults. From the vaults the wastewater is pumped through a bank of parabolic screens to remove solids. The screened wastewater is then discharged to a lined storage pond for temporary storage and settling of the wastewater (Lined Settling Pond). Per the October 2017 Post-Construction Report prepared and signed by Craig Hartman (RCE 73837), with Hartman Engineering the Lined Settling Pond was designed with a storage capacity of about 1.8 million gallons assuming one foot of freeboard. According to the Discharger, fresh irrigation water may be added to the pond as needed and the blended water pumped into the irrigation system and sent to the available land application area (LAA) for irrigation of crops.

The LAA consists of approximately 3,700 acres of farmland owned by the Discharger. According to the 2021 RWD addendum, approximately 930 acres on the southern portion of the property will be available for land application of wastewater. Crops to be grown within these fields include pasture for grazing, row crops (e.g., sorghum, wheat, corn, etc.), and pistachios. The remaining acreage on the northern portion of the site is used for land application of green material removed during the pre-cleaning process and residual solids removed from the screens and the storage/settling pond. Residual solids may also be shipped offsite for use as animal feed or biomass feedstock. Per the RWD the fields intended for wastewater and solids applications may be modified or adjusted in the future depending on farming operations.

### **GROUNDWATER CONSIDERATIONS**

Groundwater conditions are discussed in Findings 39 to 42 of the Order.

### **ANTIDEGRADATION**

Antidegradation analysis and conclusions are discussed in Findings 66 to 74 of the Order.



ERIKSSON, LLC  
INGLEBY US PISTACHIO PLANT  
FRESNO COUNTY

**INFORMATION SHEET****DISCHARGE PROHIBITIONS, EFFLUENT LIMITATIONS, DISCHARGE SPECIFICATIONS, AND PROVISIONS**

The Order sets a maximum daily average and annual flow limit of 1.5 mgd and 33.8 million gallons, respectively for the discharge of unblended wastewater to the Lined Settling Pond. The Order sets a cycle average BOD loading limit of 100 lbs/ac/day to the LAA and requires application of blended wastewater and irrigation water to be at agronomic rates. In addition, the Order sets a performance-based EC limit of 2,600  $\mu\text{mhos/cm}$ , calculated as a seasonal average, on the discharge of blended wastewater from the pond.

**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, LAA, solids, and water supply monitoring requirements. This monitoring is necessary to characterize the discharge and evaluate compliance with the requirements and specifications in the Order.

**SALT AND NITRATE CONTROL PROGRAMS REGULATORY CONSIDERATIONS**

At its 31 May 2018 Board Meeting 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 (i.e., Salt and Nitrate Control Programs). These Basin Plan amendments were conditionally approved by the State Water Resources Control Board on 16 October 2019 (Resolution 2019-0057) and by the Office of Administrative Law on 15 January 2020. (OAL Matter No. 2019-1203-03) and became effective on 17 January 2020. For more information regarding the Salt and Nitrate Control Programs, you are encouraged to go to the [CV-SALTS Info Webpage](https://www.cvsalinity.org/public-info) (<https://www.cvsalinity.org/public-info>).

As these programs are implemented, the Central Valley Water Board may find it necessary to modify the requirements of these WDRs to ensure the goals of the Salt and Nitrate Control Programs are met.

For the Salt Control Program, dischargers unable to comply with stringent salinity requirements will need to meet performance-based requirements and participate in a basin-wide planning effort known as the Prioritization and Optimization Study (or P&O Study) to develop a long-term salinity strategy for the Central Valley. A Notice to Comply for the Salt Control Program was issued to Eriksson, LLC (CV-SALTS ID 3576) on 11 March 2021. On 11 October 2021 the Discharger submitted its Notice of Intent and fee payment to comply with the Salt Control Program by joining the P&O Study.

For the Nitrate Control Program, dischargers that are unable to comply with stringent nitrate requirements will be required to take on alternative compliance approaches that involve providing replacement drinking water to persons whose drinking water is affected

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by nitrates. Dischargers may comply with the Nitrate Control Program either individually (Pathway A) or collectively as part of a Management Zone Group (Pathway B). The Facility falls within Groundwater Sub-Basin 5-022.08 (San Joaquin Valley - Kings Basin), a Priority 1 Basin. Eriksson, LLC was issued a Notice to Comply for the Nitrate Control Program on 11 March 2021. On 11 November 2021, the Discharger submitted its Notice of Intent for the Nitrate Control Program selecting Pathway B and joining the Kings Water Alliance Management Zone Group.

**REOPENER**

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

**LEGAL EFFECT OF RESCISSION OF PRIOR WDRS OR ORDERS ON EXISTING VIOLATIONS**

The Central Valley Water Board's rescission of prior waste discharge requirements and/or monitoring and reporting orders does not extinguish any violations that may have occurred during the time those waste discharge requirements or orders were in effect. The Central Valley Water Board reserves the right to take enforcement actions to address violations of prior prohibitions, limitations, specifications, requirements, or provisions of rescinded waste discharge requirements or orders as allowed by law.