

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2022-0801  
FOR  
RATTO BROTHERS, INC.  
STANISLAUS COUNTY

Issued by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) pursuant to Water Code section 13267, subdivision (b)(1), this Order establishes a Monitoring and Reporting Program (MRP) for Ratto Brothers, Inc. (Discharger) for the discharge of vegetable processing wastewater and residual leafy vegetable solids generated from their vegetable processing operation. The Discharger owns and operates the Ratto Brothers, Inc. (Ratto Bros.) processing facility and on-site agricultural fields located at 6312 Beckwith Road in Modesto. All process wastewater generated from the vegetable processing operation is discharged to on-site ponds and land application areas (LAAs). Residual solids (leaves and stems) are applied as a soil amendment to the Discharger's LAAs. The Discharger administers the distribution and application of wastewater and residual solids to minimize nuisance conditions and prevent discharges into surface water drainage courses.

This Order establishes a Monitoring and Reporting Program (MRP) for the discharge of wastewater and residual solids by Ratto Bros. This MRP is required to characterize the wastewater for evaluation of potential impacts to groundwater quality from the discharge for the development of a comprehensive set of Waste Discharge Requirements (WDRs) for Ratto Bros. Pursuant to section 13267 of the Water Code, the Discharger shall implement this MRP and shall submit the monitoring reports described herein.

This MRP may be revised by the Executive Officer, in accordance with their delegated authority under Water Code section 13223. The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts, or the Executive Officer issues, a revised MRP.

## **I. LEGAL AUTHORITY**

Section 13267(b)(1) of the California Water Code states, in part:

In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the

reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports.

Section 13268 of the Water Code states, in part:

(a)(1) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267, or failing or refusing to furnish a statement of compliance as required by subdivision (b) of Section 13399.2, or falsifying and information provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b).

(b)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars (\$1,000) for each day in which the violation occurs.

A glossary of terms used in this MRP is included on the last page.

## II. GENERAL MONITORING REQUIREMENTS

### A. Sampling and Sample Analysis

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. Except as specified otherwise in this MRP, grab samples will be considered representative of water, wastewater, solids, and groundwater.

The time, date, and location of each sample shall be recorded on the sample chain of custody form. All analyses shall be performed in accordance with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as those used to measure pH, electrical conductivity, wind speed, and precipitation) may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are field calibrated at the frequency recommended by the manufacturer;
3. The instruments are serviced and/or calibrated at the manufacturer's recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of the MRP.

Laboratory analytical procedures shall comply with the methods and holding times specified in the following (as applicable to the medium to be analyzed):

- *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA);
- *Test Methods for Evaluating Solid Waste* (EPA);
- *Methods for Chemical Analysis of Water and Wastes* (EPA);
- *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA);
- *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and
- *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125).

Approved editions shall be those that are approved for use by the United States Environmental Protection Agency (EPA) or the State Water Resources Control Board's Environmental Laboratory Accreditation Program (ELAP). The Discharger may propose alternative methods for approval by the Executive Officer. Where technically feasible, laboratory reporting limits shall be lower than concentrations that implement applicable water quality objectives or limits for the constituents to be analyzed.

## **B. Monitoring and Sampling Locations**

Samples shall be obtained at the monitoring points specified in this MRP and shown in the Process Flow Diagram in Attachment C. Central Valley Water Board staff shall approve any proposed changes to sampling locations prior to implementation of the change.

**Table 1. Monitoring Locations**

<b>Location Name</b>	<b>Location Description</b>
PROCWELL-1	Location where a representative sample of the supply water from Process Supply Well 1 can be collected prior to processing use.
PROCWELL-2	Location where a representative sample of the supply water from Process Supply Well 2 can be collected prior to processing use.
DOMWELL-1	Location where a representative sample of the domestic supply water can be collected prior to use as final product rinse water.

Location Name	Location Description
PIT-001	Location where the flow rate of wastewater is measured and a representative sample from the processing Transfer Pit can be collected prior to discharge to Pond 1.
LAA-01	Location where the flow rate of wastewater is measured, and a representative sample can be collected upstream of discharge to the LAAs.

### III. SPECIFIC MONITORING REQUIREMENTS

The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts, or the Executive Officer issues, a revised MRP.

#### A. Source Water Monitoring

Samples of source water shall be collected from each source (supply well(s), and Modesto Irrigation District irrigation water, when used). Monitoring requirements may duplicate existing requirements under existing requirements from local agencies that regulate irrigation water. Duplication of sampling and monitoring activities are not required if the monitoring activity satisfies the requirements of this Order. At a minimum, the Discharger shall sample the source water and analyze the samples for the parameters listed in the table below.

**Table 2. Source water monitoring parameters and frequencies.**

Parameter	Units	Sample Type	Sampling Frequency	Reporting Frequency
Electrical conductivity (EC)	µS/cm	grab	Semi-annually	Semi-annually
Total Dissolved Solids (TDS)	mg/L	grab	Semi-annually	Semi-annually
Nitrate nitrogen (nitrate N)	mg/L	grab	Semi-annually	Semi-annually
Standard minerals: Bicarbonate alkalinity Hardness Calcium Chloride Potassium Sodium Sulfate Iron, dissolved Magnesium Manganese, dissolved	mg/L	grab	Semi-annually	Semi-annually

## B. Wastewater Effluent Monitoring

Wastewater samples shall be obtained from the effluent at the outlet of the wastewater Transfer Pit (PIT-001) and at the outlet of the Pond 4 Sump (LAA-001). LAA-001 samples shall be representative of wastewater quality that is sent to storage ponds, applied to the LAAs, or used for dust control. Time of the sample collection shall be recorded. At a minimum, wastewater monitoring shall include the following, where “total nitrogen (TN)” is the sum of results for nitrate N, ammonia N, and Total Kjeldahl nitrogen (TKN):

**Table 3. Effluent monitoring parameters and frequencies.**

Parameter	Units	Sample Type	Sample Frequency	Reporting Frequency
EC	µS/cm	Composite	Monthly	Quarterly
Biochemical oxygen demand (BOD)	mg/L	Composite	Monthly	Quarterly
Fixed Dissolved Solids (FDS)	mg/L	Composite	Monthly	Quarterly
TDS	mg/L	Composite	Monthly	Quarterly
pH	standard	Composite	Monthly	Quarterly
Nitrate N	mg/L	Composite	Monthly	Quarterly
Total Kjeldahl nitrogen (TKN)	mg/L	Composite	Monthly	Quarterly
Ammonia N	mg/L	Composite	Monthly	Quarterly
Total nitrogen (TN)	mg/L	Calculation	Monthly	Quarterly
Standard minerals Bicarbonate alkalinity Calcium Chloride Potassium Sodium Sulfate Iron, dissolved Magnesium Manganese, dissolved	mg/L	Composite	Quarterly	Quarterly

## C. Flow monitoring

When wastewater is discharged to the Sump, the Discharger shall monitor wastewater flows from the Settling Ponds at the meter location(s) as shown in Table 4. Unless otherwise specified, the flow meter(s) shall be equipped with a flow totalizer to allow reporting of instantaneous flow rate as well as cumulative

flow volume. Flow meters shall be calibrated at the frequency recommended by the manufacturer and records of calibration shall be maintained for review upon request.

**Table 4. Flow monitoring**

<b>Data Source</b>	<b>Units</b>	<b>Sample Type</b>	<b>Sampling Frequency</b>	<b>Reporting Frequency</b>
Transfer Pit outlet to Pond 1	gallons per day (gpd)	Meter	Weekly	Quarterly
Discharge from Pond 4	gpd	Meter	Weekly	Quarterly
Irrigation well	gpd	Meter	Weekly	Quarterly
Supplemental Irrigation – MID	gpd	Meter	Weekly	Quarterly

**D. Pond Monitoring**

A permanent marker (e.g., staff gauge) shall be placed in all wastewater treatment and storage ponds. The markers shall have calibrations indicating water level at the design capacity and available operational freeboard depth.

Monitoring at Ponds 1-4 and at any future additional ponds shall be performed on any pond containing water more than one foot deep. If any pond is dry, the monitoring report shall so state. If any pond is not dry but has a wastewater level of less than one foot then no sample shall be taken, and the reason shall be noted in the sampling log. The time of collection of a grab sample shall be recorded. Freeboard shall be measured vertically from the water surface to the lowest elevation of pond berm (or spillway/overflow pipe invert) and shall be measured to the nearest 0.1 feet. Pond monitoring shall include at least the following for each pond by number (Pond 1, Pond 2, etc.):

**Table 5. Pond monitoring parameters and frequencies.**

<b>Parameter</b>	<b>Units</b>	<b>Sample Type</b>	<b>Sampling Frequency</b>	<b>Reporting Frequency</b>
Freeboard	feet (to 0.1 ft)	Measurement	Weekly	Quarterly
Odors	--	Observation	Weekly	Quarterly
Pond conditions	--	Observation	Weekly	Quarterly

The Discharger shall inspect the condition of the ponds while wastewater is in the ponds and record visual observations in a logbook. Pond conditions notations when the pond is in use shall include observations of:

1. Presence of weeds in the water or along the berm;

2. Accumulations of dead algae, vegetation, scum, or debris on the pond surface;
3. Animal burrows in the berms;
4. Presence of objectionable odors; and
5. Color of the water (e.g., dark green, black, dull green, brown, etc.).

A summary of the entries made in the log shall be included in the subsequent monitoring report.

#### **E. Land application area monitoring**

##### **1. Field Inspections**

The Discharger shall inspect the LAAs at least once weekly during irrigation events, and observations from those inspections shall be documented for inclusion in the quarterly monitoring reports. The following items shall be documented for each field to be irrigated on that day:

1. Ponding;
2. Potential and actual runoff or discharge to off-site areas;
3. Odors that have the potential to be objectionable at or beyond the property boundary; and
4. Any corrective actions taken based on observations made.

Temperature, wind direction, and other relevant field conditions shall be observed and recorded. The notations shall also document any corrective actions taken based on observations made. A copy of entries made in the log shall be submitted as part of the Quarterly Monitoring Report. If no irrigation with wastewater takes place during a given month, then the monitoring report shall so state.

##### **2. Routine Monitoring**

The Discharger shall perform the following routine monitoring and loading calculations during all months when land application occurs and shall present the data in the Quarterly Monitoring Reports. LAA monitoring shall include at least the parameters and frequencies described in Table 6. Calculations and assumptions shall be clearly documented.

Precipitation data obtained from the nearest National Weather Service rain gauge is acceptable.

Loading rates shall be calculated for each LAA. The total hydraulic loading rate can be calculated based on the duration of flow and the number of sprinklers operating at any one time. BOD loading shall be calculated using the daily applied volume of wastewater, actual application area, and most recent BOD results for the wastewater. Total nitrogen loading rates shall be calculated using the applied volume of wastewater, actual application area, and the most recent total nitrogen results for the wastewater. Loading rates for supplemental nitrogen (including commercial fertilizers, manure from cattle, etc.) shall be calculated using the actual load and application area. FDS loading rates shall be calculated using the daily applied volume of wastewater, actual application area, and most recent FDS results for the wastewater.

**Table 6. LAA monitoring parameters and frequencies.**

<b>Parameter</b>	<b>Units</b>	<b>Measurement</b>	<b>Measurement Frequency</b>	<b>Reporting Frequency</b>
Precipitation	inch (to 0.1 in.)	Rain gauge	Weekly	Quarterly
Field number(s) used for land application (irrigation)	--	Observation	Daily	Quarterly
Acreage used for land application (irrigation)	Acre	Observation	Daily	Quarterly
Total hydraulic loading rate (from each source)	in./day	Calculation	Monthly	Quarterly
Irrigation cycle average BOD loading rate	lb/ac/day	Calculation	Monthly	Quarterly
Total effluent nitrogen loading rate	lb/ac/day	Calculation	Monthly	Quarterly
Total supplemental nitrogen loading rate	lb/ac/day	Calculation	Monthly	Quarterly
FDS loading rate	lb/ac/day	Calculation	Monthly	Quarterly

**F. Groundwater monitoring**

Prior to construction of any additional groundwater monitoring wells, the Discharger shall submit plans and specifications to the Central Valley Water Board for review and approval. Once installed, all new monitoring wells shall be appropriately incorporated into monitoring conducted under this MRP and shall be monitored on a semiannual basis.



This groundwater monitoring program applies to groundwater monitoring wells subsequently installed under approval of the Central Valley Water Board.

Prior to sampling, depth to groundwater measurements shall be measured in each monitoring well to the nearest 0.01 feet based on depth-to-water measurements using a surveyed measuring point elevation on the well and a surveyed reference elevation. Groundwater elevations shall then be calculated to determine groundwater gradient and flow direction.

Sampling activities shall be conducted in accordance with an approved *Sampling and Analysis Plan*. Low or no-purge sampling methods are acceptable, if described in an approved *Sampling and Analysis Plan*. Otherwise, each monitoring well shall be purged of at least 3 to 5 casing volumes until pH, electrical conductivity and turbidity have stabilized prior to sampling. Samples shall be collected and analyzed using standard EPA methods. Groundwater monitoring shall include, at a minimum, the parameters and constituents listed in Table 7, below. After eight (8) sampling events, the sampling frequency may be reduced to semi-annually.

**Table 7. Groundwater monitoring parameters and frequencies.**

<b>Parameter</b>	<b>Units</b>	<b>Type of Sample</b>	<b>Sampling Frequency</b>	<b>Reporting Frequency</b>
Depth to groundwater	feet (to 0.01 ft.)	Measurement	Quarterly	Semi-annually
Groundwater elevation	feet	Calculation	Quarterly	Semi-annually
Hydraulic gradient	feet/feet	Calculation	Quarterly	Semi-annually
Hydraulic gradient direction	degrees	Calculation	Quarterly	Semi-annually
EC	µS/cm	Grab	Quarterly	Semi-annually
TDS	mg/L	Grab	Quarterly	Semi-annually
Total Nitrogen (Sum of nitrate N + nitrite N + TKN)	mg/L	Grab	Quarterly	Semi-annually
Nitrate Nitrogen	mg/L	Grab	Quarterly	Semi-annually
Standard minerals (as listed in Table 2)	mg/L	Grab	Semi-annually	Semi-annually

### **G. Solids monitoring**

The Discharger shall monitor the residual solids generated and disposed of on a monthly basis. The following shall be monitored and reported annually:

1. Volume of Solids Generated. Solids may include leaves, stems, and other vegetable material.
2. Volume Disposed of On-site. Describe the amount disposed (tons); location and dates of on-site disposal (e.g., LAA field or zone name); method of application, spreading, and incorporation; application rate (tons/acre), and monthly grab sample analysis for total nitrogen.
3. Volume Disposed of Off-site. Describe the disposal method (e.g., animal feed, land application, off-site composting, landfill, etc.); the amount disposed (tons); the name of the hauling company; and the destination of the solids (name and location of facility).

#### IV. REPORTING

All regulatory documents, submissions, materials, data, monitoring reports, and correspondence shall be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to: [CentralValleySacramento@waterboards.ca.gov](mailto:CentralValleySacramento@waterboards.ca.gov)

Documents that are 50 MB or larger should be transferred to a CD, DVD, or flash drive and mailed to the following address:

Central Valley Regional Water Quality Control Board  
ECM Mailroom  
11020 Sun Center Drive, Suite 200  
Rancho Cordova, CA 95670

To ensure that your submittals are routed to the appropriate staff, the following information block should be included in any correspondence used to transmit documents to this office:

County: Stanislaus  
Facility: Ratto Brothers, Inc.  
Program: Non-15 Permitting  
Order Number: R5-2022-0801  
CIWQS Place ID: 876792

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, pond, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported to the Central Valley Water Board in the next scheduled monitoring report.

All monitoring reports shall comply with the signatory requirements in Standard Provision B.3. For a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

Laboratory reports submitted in compliance with this MRP shall include the constituent name, sample location, sample name, sample date, analysis date, analytical method, dilution factor, result, units, definitions of abbreviations, and method detection limits (MDLs).

In addition to the details specified in Standard Provision C.3, monitoring information shall include the MDL and the reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated.

As required by the Business and Professions Code sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a Registered Professional Engineer or Professional Geologist and signed by the registered professional.

### A. Quarterly Monitoring Reports

Daily, weekly, monthly, and quarterly monitoring data shall be reported in the quarterly monitoring report. Quarterly reports shall be submitted to the Central Valley Water Board by the **1<sup>st</sup> day of the second month after the calendar quarter**. Therefore, monitoring reports are due as follows.

First Quarter Monitoring Report (January – March):	<b>1 May</b>
Second Quarter Monitoring Report (April – June):	<b>1 August</b>
Third Quarter Monitoring Report (July – September):	<b>1 November</b>
Fourth Quarter Monitoring Report (October – December):	<b>1 February</b>

At a minimum, the report shall include:

1. Results of wastewater Effluent Monitoring in tabular format for each sampling period during the reported quarter, including:
2. Results of Pond Monitoring in tabular format for each month during the reported quarter.
3. Results of Flow Monitoring in tabular format for each month during the reported quarter, including calculated values for the total flow and average daily flow for each month and total annual flow to date.
4. Results of LAA Monitoring, including:
  - a. Calculated **hydraulic loading rate** for each month during the reported quarter, and cumulative annual loading to date.
  - b. **FDS loading rate** (mass of FDS applied to each LAA field on a daily basis), calculated using the following formula:

$$M = \frac{8.345(CV)}{A}$$

Where:

- |   |   |
|---|---|
| M | = mass of FDS applied to an LAA field in lb/ac/day  |
| C | = concentration of FDS in mg/L based on the most recent wastewater effluent monitoring result |
| V | = volume of wastewater applied to the LAA in millions of gallons per day (MGD)                |

A = area of the irrigated LAA in acres (ac.)  
8.345 = unit conversion factor

- c. **Irrigation cycle average BOD loading rate** (mass of BOD applied to each LAA field on a daily basis), calculated using the following formula:

$$M = \frac{8.345(CV) + M_x}{AT}$$

Where:

M = mass of BOD applied to an LAA field in lb/ac/day  
C = concentration of BOD in mg/L based on the most recent wastewater effluent monitoring result  
V = volume of wastewater applied to the LAA in millions of gallons (MG) during the irrigation cycle  
A = area of the irrigated LAA in acres (ac.)  
T = irrigation cycle length in days, where irrigation cycle is the number of days from the first day water was applied to the last day of the drying time  
M<sub>x</sub> = BOD mass from other sources (e.g. cattle manure, wastewater residual solids) in pounds (lb)  
8.345 = unit conversion factor

5. A summary of the notations made in the pond monitoring log during the quarter, including copies of inspection log page(s);
6. A calibration log verifying calibration of all handheld monitoring instruments and devices used to comply with the prescribed monitoring program; and
7. Copies of the laboratory analytical data reports.

## **B. Semi-annual Monitoring Reports**

Semi-annual Reports shall be submitted once every six (6) months (twice per year), along with that calendar quarter's Quarterly Report. Semi-annual Monitoring Reports shall include results of source water and groundwater monitoring. When no groundwater monitoring can occur due to lack of installed monitoring wells or dry conditions, that shall be noted in the report.

## **C. Annual Monitoring Reports**

An Annual Report shall be submitted by **1 February** of each year. In addition to the fourth quarter monitoring report items listed above, it shall include the following:

1. Flow Monitoring

- a. Total annual flow discharged from the Facility.
- b. Calculated flow-weighted average annual FDS effluent concentration using the following formula:

$$C_a = \frac{\sum_{i=1}^{12} [(C_{Pi} \times V_{Pi}) + (C_{Si} \times V_{Si})]}{\sum_{i=1}^{12} (V_{Pi} + V_{Si})}$$

Where:

- $C_a$  = Flow-weighted average annual FDS concentration in mg/L
- $i$  = the number of the month (e.g., January = 1, February = 2, etc.)
- $C_{Pi}$  = Monthly average process wastewater FDS concentration for calendar month  $i$  in mg/L
- $C_{Si}$  = Monthly average supplemental irrigation water FDS concentration for calendar month  $i$  in mg/L (considering each supplemental source separately)
- $V_{Pi}$  = volume of process wastewater applied to LAA during calendar month  $i$  in million gallons
- $V_{Si}$  = volume of supplemental irrigation water applied to LAA during calendar month  $i$  in million gallons (considering each supplemental source separately)

2. Process Supply Water Monitoring

- Analytical data table showing historical and current results.

3. Groundwater Monitoring

- a. A narrative description of all preparatory, monitoring, sampling, handling, and analytical testing for groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with this MRP and the Standard Provisions.
- b. A field log for each well documenting depth to groundwater; method of purging, parameters measured before, during, and after purging; sample preparation (e.g., filtering); and sample preservation. Low or no-purge sampling methods are acceptable if described in an approved *Sampling and Analysis Plan*.

- c. Summary data tables of historical and current water table elevations and analytical results, comparison with previous flow direction and gradient data, and discussion of seasonal trends if any.
  - d. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to an appropriate datum (e.g., NGVD 29 or NAVD 88).
  - e. An evaluation of the groundwater quality beneath the site.
  - f. Copies of the laboratory analytical data reports shall be maintained by the Discharger and submitted to the Central Valley Water Board.
4. Solids monitoring
- a. Volume of solids generated in the year
    - 1) Volume disposed of on-site, with a table of total nitrogen content data
    - 2) Volume disposed of off-site, disposal method, and name and location of receiver.

5. LAA monitoring results

- a. **Nitrogen loading rate** (mass of nitrogen applied to each LAA field on a yearly basis), calculated using the following formula:

$$M = \sum_{i=1}^{12} \frac{(8.345(C_i V_i) + M_x)}{A}$$

Where:

- M = mass of nitrogen applied to LAA field in lb/ac/year
- $C_i$  = monthly average concentration of Total Nitrogen for calendar month  $i$  in mg/L based on the most recent wastewater effluent monitoring result
- $V_i$  = volume of wastewater applied to the LAA during calendar month  $i$  in millions of gallons (MG)
- A = area of the irrigated LAA in acres (ac.)
- $M_x$  = nitrogen mass applied during the year from other amendments (e.g. fertilizer, manure, compost) in pounds (lb)
- 8.345 = unit conversion factor

## 5. Additional Reporting

- a. Monitoring equipment maintenance and calibration records, as described in Section C.4 of the Standard Provisions, shall be maintained by the discharger, and provided upon request to the Central Valley Water board.
- b. A discussion of the treatment or control measures implemented during the calendar year, either voluntarily or pursuant to this MRP, or any other Order.
- c. A brief discussion of any data gaps and potential deficiencies or redundancies in the monitoring system or reporting program.

A letter transmitting the self-monitoring reports shall accompany each report. The letter shall include a discussion of unplanned events impacting effluent or land application during the reporting period, and actions taken or planned for addressing the unplanned event, such as operation or facility modifications. The transmittal letter shall contain the penalty of perjury statement by the submitting Discharger or its authorized agent as described in Section B.3 of the Standard Provisions.

The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

This Order is issued under authority delegated to the Executive Officer by the Central Valley Water Board pursuant to Resolution R5-2018-0057 and is effective upon signature.

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., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order 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 State Water Board's website [State Water Board's website](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) ([http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality)), the address below, and will also be provided upon request.

Ordered by: \_\_\_\_\_  
for PATRICK PULUPA, Executive Officer



## V. GLOSSARY

µS/cm	Micro-siemens per centimeter; same as micro-mhos per cm (µmhos/cm)
Annually	Once per year
BOD	Five-day biochemical oxygen demand at 20°C
Daily	Every day except weekends or holidays
EC	Electrical conductivity at 25°C
FDS	Fixed dissolved solids
ft	feet
gpd	gallons per day
in.	inch
LAA	Land application area
MDL	method detection limit
mg/L	milligrams per liter
Monthly	Once per calendar month
MRP	Monitoring and Reporting Program
Quarterly	Once per calendar quarter
Semi-annually	Once every six months
TDS	Total dissolved solids
TKN	Total Kjeldahl nitrogen
Weekly	Once per week