

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TENTATIVE MONITORING AND REPORTING PROGRAM R5-2021-XXXX

FOR
RIVERMAID TRADING COMPANY
RIVERMAID TRADING COMPANY
SAN JOAQUIN COUNTY

This Monitoring and Reporting Program (MRP) for the Rivermaid Trading Company (Discharger) is issued pursuant to Water Code section 13267. A glossary of terms used in this MRP is included on the last page.

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, soil, and solids/sludges.

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*, 1 March 1991 ed. (SPRRs). Field test instruments (such as those used to measure pH, electrical conductivity, dissolved oxygen, 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.
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):

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

Approved editions shall be those that are approved for use by the U.S. Environmental Protection Agency 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/limits for the constituents to be analyzed.

Source Water Monitoring

Samples of source water used for processing and supplemental irrigation shall be collected beginning in **2022** prior to the start of the processing season and analyzed for the parameters listed in the table below.

Table 1. Source Water Monitoring

Constituent	Units	Sample Type	Sampling and Reporting Frequency
Electrical Conductivity	µmhos/cm	Grab	Every three years.
Total Dissolved Solids	mg/L	Grab	
Fixed Dissolved Solids	mg/L	Grab	
Nitrate as Nitrogen	mg/L	Grab	
Sodium	mg/L	Grab	
Chloride	mg/L	Grab	

Wastewater Effluent Monitoring

Wastewater samples shall be collected from the wastewater pond, shown on Attachment C to WDRs Order R5-2021-XXXX, and shall be representative of wastewater quality. Sampling is only required when wastewater is present in the pond. If wastewater is not present, the monitoring report so shall state. Samples shall be filtered with a 1.5-micron filter prior to sample preservation. At a minimum, standard minerals shall include sodium, chloride, dissolved manganese, and iron. Wastewater monitoring shall include the following:

Table 2. Effluent Monitoring

Constituents	Units	Sample Type	Sample Frequency	Reporting Frequency
Electrical Conductivity	µmhos/cm	Grab	Monthly	Quarterly
BOD ₅	mg/L	Grab	Monthly	Quarterly
TDS	mg/L	Grab	Monthly	Quarterly
Total Nitrogen	mg/L	Grab	Monthly	Quarterly
Nitrate as Nitrogen	mg/L	Grab	Monthly	Quarterly
Chloride Sodium Dissolved Iron (filtered) Dissolved Manganese (filtered)	mg/L	Grab	Annually	Annually

Flow Monitoring

When wastewater is discharged to the pond, the Discharger shall monitor wastewater flows from the compliance flow meter location depicted on Attachment C of WDRs Order R5-2021-XXXX. Flows will be calculated as a portion of the total flow, which will include storm water and process wastewater, and excludes supplemental irrigation water as follows:

Table 3. Flow Monitoring

Flow Source	Units	Sample Type	Sampling Frequency	Reporting Frequency
Flow Meter	Gallons	Meter	Daily (total daily flow)	Quarterly

Pond Monitoring

The Discharger shall monitor the wastewater pond when water is present in accordance with the following. Sampling and monitoring shall be conducted from permanent locations that will provide reasonable samples and observations of the ponds. Freeboard shall be measured vertically from the water surface to the lowest elevation of pond berms (or spillway/overflow pipe invert) and shall be measured to the nearest 0.10 feet. Samples shall be collected at a depth of one foot, opposite the inlet. If any pond is dry, the monitoring report shall so state. Pond monitoring shall include, at a minimum, the following:

Table 4. Pond Monitoring

Constituent/ Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Presence/Absence of Water	--	Observation	Weekly	Quarterly
Freeboard	0.1 feet	Measurement	Weekly	Quarterly
Odors	--	Observation	Weekly	Quarterly
Berm Conditions	--	Observation	Weekly	Quarterly

Land Application Monitoring

A. 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 field to be irrigated on that day:

1. Berm condition
2. Condition of each standpipe and flow control valve (if applicable)
3. Condition of all ditches used for the conveyance of wastewater and tailwater
4. Ponding

5. Potential and actual runoff or discharge to off-site areas, including surface water
6. Odors that have the potential to be objectionable at or beyond the property boundary.

Temperature, wind direction, and other relevant field conditions shall also 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.

B. 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. If no discharges occur, the monitoring reports so shall state.

Table 5. LAA Routine Monitoring

Constituent	Units	Measurement	Measurement Frequency	Reporting Frequency
Precipitation	0.1 inch	Rain Gauge	Daily	Quarterly
Irrigation fields	--	Observation	Daily	Quarterly
Hydraulic Loading Rate (from each source)	Inch	Calculated	Per Irrigation	Quarterly
BOD5 Loading Rate	lb/ac/day	Calculated	Daily	Quarterly
Total Nitrogen Loading	lb/ac/year	Calculated	Monthly	Quarterly

Note: Precipitation data obtained from the nearest National Weather Service or governmental rain gauge is acceptable. The hydraulic loading rate shall be calculated for each check within each LAA field. Volumes for each check can be estimated based on the duration of flow, the number of checks being irrigated at any one time, and the daily flow rates for each field. Calculations and assumptions shall be clearly documented. Loading rates shall be calculated for each LAA. BOD5 loading shall be calculated using the daily applied volume of wastewater, actual application area, and most recent BOD₅ 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.

Solids Monitoring

The Discharger shall monitor volumes of residual solids generated and disposed of and reported in quarterly monitoring reports:

1. Volume of Solids Generated. Solids may include pomace, seeds, stems, screenings, and sump solids, or other material.

2. Volume Disposed of Off-site. Describe the disposal method (e.g. animal feed, land application, off-site composting, landfill, etc.); the amount disposed (tons); and the name of the hauling company.

Reporting

All regulatory documents, submissions, materials, data, monitoring reports, and correspondence should 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.

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, California 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: San Joaquin
Facility: Rivermaid Trading Company
Program: Non-15 Compliance
Order Number: R5-2021-XXXX
CIWQS Place ID: 874122

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 MRP shall be reported to the Central Valley Water Board.

A. Quarterly Monitoring Reports

Daily, weekly, and monthly monitoring data shall be reported in the quarterly monitoring report. Quarterly reports shall be submitted to the Central Valley Water Board on the **1st day of the second month following the quarter** (i.e., the January - March quarterly report is due by 1 May). At a minimum, the report shall include:

1. Results of Wastewater Effluent Monitoring in tabular format for each week and month during the reported quarter.
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.
 - c. Calculated **irrigation cycle average BOD loading rate** for each LAA using the following formula:

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

Where:

- M = mass of BOD applied to each LAA field in lb/ac/day/irrigation cycle
- C = concentration of BOD in mg/L based on the most recent monitoring result
- V = volume of wastewater applied to the LAA field in millions of gallons during the irrigation cycle
- A = area of the LAA field irrigated in acres
- T = Irrigation cycle length in days (from the first day water was applied to the last day of the drying time)
- M_x = BOD mass from other sources (e.g., cattle manure, Settling Pond solids, and residual solids) in pounds
- 8.345 = unit conversion factor

- c. Calculated **nitrogen loading rate** for each LAA 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 in lb/ac/yr.
- C_i = Monthly average concentration of total nitrogen for month i in mg/L.
- V_i = volume of wastewater applied to the LAA during calendar month i in millions of gallons.
- A = area of the LAA irrigated in acres.
- i = the number of the month (e.g., Jan. = 1, Feb. = 2, etc.).

- Mx = nitrogen mass from other sources (e.g., fertilizer, manure, and compost) in pounds per acre.
8.345 = unit conversion factor.

5. A comparison of monitoring data to the flow limitations, effluent limitations, and discharge specifications and an explanation of any violation of those requirements.
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 shall be maintained by the Discharger and submitted to the Central Valley Water Board.
8. Summary of the solids monitoring, including volumes of residual solids generated and disposed.
9. Analytical data table showing historical and current source water monitoring results. A narrative description of changes in water quality over time, if any, and the potential impact on the wastewater quality.

Additional Reporting

1. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the WDRs.
2. Monitoring equipment maintenance and calibration records, as described in Section C.4 of the SPRRs, shall be maintained by the Discharger and provided upon request by the Central Valley Water Board.
3. A discussion of the following:
 - a. Waste constituent reduction efforts implemented in accordance with any required workplan;
 - b. Other treatment or control measures implemented during the calendar year either voluntarily or pursuant to the WDRs, this MRP, or any other Order; and
 - c. Based on monitoring data, an evaluation of the effectiveness of the treatment or control measures implemented to date.
4. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring network or reporting program.

A letter transmitting the self-monitoring reports shall accompany each report. The letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the submitting Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the submitting Discharger, or its authorized agent, as described in the Section B.3 of the SPRRs (General Reporting Requirements).

I, PATRICK PULUPA, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of the Monitoring and Reporting Program issued by the California Regional Water Quality Control Board, Central Valley Region on XX October 2021.

PATRICK PULUPA, Executive Officer

GLOSSARY

BOD ₅	Five-day biochemical oxygen demand
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
TKN	Total Kjeldahl nitrogen
TDS	Total dissolved solids
Daily	Every day except weekends or holidays
Weekly	Once per week
Monthly	Once per calendar month
Quarterly	Once per calendar quarter
Semiannually	Once every six calendar months (i.e., two times per year) during non-consecutive quarters
Annually	Once per year
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
gpd	Gallons per day
mgd	Million gallons per day