CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2025-XXXX
FOR
CITY OF LODI
WHITE SLOUGH WATER POLLUTION CONTROL FACILITY
SAN JOAQUIN COUNTY

This Monitoring and Reporting Program Order (MRP) for the City of Lodi (hereafter referred to as Discharger) is issued pursuant to Water Code section 13267. This MRP establishes monitoring and reporting requirements related to the waste discharges regulated under Waste Discharge Requirements (WDRs) Order **R5-2025-XXXX**. Each of the Findings set forth in the WDRs, including those pertaining to the need for submission of reports, are hereby incorporated as part of this MRP. The Discharger shall not implement any changes to this MRP unless and until the Central Valley Regional Water Quality Control Board (Central Valley Water Board) adopts, or the Executive Officer issues, a revised MRP. This MRP may be separately revised by the Executive Officer, in accordance with their delegated authority under Water Code section 13223.

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

I. GENERAL MONITORING REQUIREMENTS

A. FLOW MONITORING

Hydraulic flow rates shall be measured at the monitoring points specified in this MRP. The Central Valley Water Board Executive Officer shall approve any proposed changes to flow monitoring locations prior to implementation of the change. All flow monitoring systems shall be appropriate for the conveyance system (i.e., open channel flow or pressure pipeline) and liquid type. Unless otherwise specified, each flow meter shall be equipped with a flow totalizer to allow reporting of cumulative volume as well as instantaneous flow rate. Flow meters shall be calibrated at the frequency recommended by the manufacturer; typically, at least once per year, and records of calibration shall be maintained for review upon request.

B. MONITORING AND SAMPLING LOCATIONS

Samples and measurements shall be obtained at the monitoring points specified in this MRP. The Central Valley Water Board staff shall approve any proposed changes to sampling locations prior to implementation of the change. The Discharger shall monitor the following locations to demonstrate compliance with the requirements of this MRP as shown in the table below.

Table 1 – Monitoring Location Designations

Monitoring Location	Monitoring Location Description
INF-001	Municipal Influent to Facility
INF-002	Industrial Influent to Facility
REC-001	At the filter pump station effluent box (38º 05' 22.9" N, 121º 23' 07.1" W), at which all waste tributary to the recycled water supply line is present and is representative of the disinfected tertiary recycled water supplied to the Discharger's clients.
EFF-001	Secondary Effluent discharged to Effluent Storage Ponds
PND-001 - 004	At a point in each pond, at which all waste tributary to the pond is present and is representative of the combined recycled water, industrial wastewater, and tailwater return water discharged into the facility pond(s).
PND-T	Tertiary storage pond
LND-001	Land discharge to agricultural fields - at reclaimed water distribution box #2 (38º 05' 19.8" N, 121º 23' 16.3" W), at which all waste tributary to the irrigation line is present and is representative of the irrigation reuse waters applied to the agricultural fields.
WSM-1, WSM-2R, WSM-4, WSM-5, WSM-6, WSM-7, WSM-8, WSM-9, WSM-12, WSM-14, WSM-15, WSM-16, WSM-17, WSM-18, and RMW-1	Monitoring wells that are a part of the monitoring well network, including any new or replaced monitoring wells added to the network.
BIO-001	Representative sample location (varies) for biosolids
IRR-001	Representative sample location for supplemental irrigation supply prior to mixing with land discharge

Note 1: The industrial collections system is occasionally diluted with irrigation well water upstream of the facility headworks to minimize corrosion from high pH canning water. The Discharger will confirm supplemental irrigation water supply is turned off prior to collecting samples at INF-002.

C. SAMPLING AND SAMPLE ANALYSIS

All samples and measurements 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 supply water, wastewater, soil, solids/sludges, and groundwater. The time, date, and location of each sample shall be recorded on the sample chain of custody form.

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; and

3. The instruments are serviced and/or calibrated at the manufacturer's recommended frequency;

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);

5. Standard Methods for the Examination of Water and Wastewater (APHA/AWWA/WEF); and

6. 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 (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. In addition, where technically feasible, laboratory reporting limits shall be lower than concentrations that implement applicable water quality objectives/limits for the constituents to be analyzed.

II. SPECIFIC MONITORING REQUIREMENTS

A. MUNICIPAL INFLUENT - MONITORING LOCATION INF-001

1. The Discharger shall monitor the municipal influent to the facility at INF-001 as follows. Influent samples shall be collected at approximately the same time as effluent samples and shall be representative of the influent.

Table 2 – Municipal Influent Monitoring

Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
BOD_5	mg/L	24-hr Composite	Weekly	Quarterly
Total Suspended Solids	mg/L	24-hr Composite	Weekly	Quarterly
Flow	MGD	Meter	Continuous	Quarterly
EC	µmhos/cm	Grab	Weekly	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly	Quarterly

Table Note 1. The BOD_5 and Total Suspended Solids samples shall be 24-hour flow proportioned composites.

B. INDUSTRIAL INFLUENT – MONITORING LOCATION INF-002

1. The Discharger shall monitor the industrial influent to the facility at INF-002 as follows.

Table 3 - Industrial Influent Monitoring

Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Flow	MGD	Meter	Continuous	Quarterly
EC	µmhos/cm	Grab	Weekly	Quarterly
Total Dissolved Solids	mg/L	Grab	Weekly	Quarterly
BOD_5	mg/L	Grab	Weekly	Quarterly
Total Nitrogen	mg/L	Grab	Quarterly	Quarterly
Ammonia as NH4	mg/L	Grab	Quarterly	Quarterly
Nitrate plus Nitrite (as N)	mg/L	Grab	Quarterly	Quarterly
Standard Minerals	mg/L	Grab	Quarterly	Quarterly
Metals	ug/L	Grab	Annually	Annually

Table Note 1. A list of standard minerals is included in the Glossary.

Table Note 2. A list of metals is included in the Glossary. Metals samples shall be collected during the month of February.

Table Note 3. Quarterly sampling should coincide with canning season, non-canning season and first flush.

C. LAND DISCHARGE TO AGRICULTURAL FIELDS – MONITORING LOCATION LND-001

1. At a minimum, the Discharger shall monitor the blended irrigation water discharged to the Agricultural Fields as required in Table 4. Sampling is not required during periods when no blended irrigation water is discharged to The Agricultural Fields.

Table 4 - Land Discharge to the Agricultural Fields Monitoring Requirements

Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Flow	MGD & inch/acre/day	Metered or calculated	Continuous	Quarterly
pH	Standard Units	Grab	Weekly	Quarterly
Total Dissolved Solids	mg/L	Grab	Weekly	Quarterly
Fixed Dissolved Solids	mg/L	Grab	Weekly	Quarterly
EC	µmhos/cm	Grab	Weekly	Quarterly
BOD_5	mg/L & lb/acre/day	Grab	Weekly	Quarterly
Total Nitrogen	mg/L & lb/acre/day	Grab	Weekly	Quarterly
Nitrate as N	mg/L	Grab	Weekly	Quarterly
Ammonia as N	mg/L	Grab	Weekly	Quarterly
Standard Minerals	mg/L	Grab	Monthly	Quarterly
Metals	ug/L	Grab	Monthly	Quarterly

Table Note 1. The total flow directed to the agricultural fields shall be calculated as the sum of the flow pumped from storage ponds (metered), industrial line flow (metered), and supplemental irrigation supply (metered).

Table Note 2. A list of standard minerals is included in the Glossary.

Table Note 3. A list of metals is included in the Glossary.

D. LAND DISCHARGE TO AGRICULTURAL FIELDS - MONITORING LOCATION IRR-001

1. The Discharger shall monitor the supplemental irrigation supply for flow (continuous metered) and total dissolved solids (annual grab) when discharged to the Agricultural Fields.

E. AGRICULTURAL FIELD INSPECTIONS

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

   a. Evidence of berm damage, burrowing, or erosion;

   b. Evidence of damage to standpipes and flow control valve (if applicable);

   c. Evidence of improper use of valves;

   d. Condition of head ditch;

   e. Soil saturation;

   f. Ponding;

   g. Evidence of damage to tailwater ditches and evidence of potential and actual runoff to off-site areas;

   h. Evidence of potential and actual discharge to surface water;

   i. Accumulation of organic solids in ditches and at soil surface;

   j. Soil clogging;

   k. Odors that have the potential to be objectionable at or beyond the property boundary;

   l. Evidence of fly and/or mosquito breeding; and

2. Temperature; wind direction and relative strength; and other relevant field conditions shall also be observed and recorded. The notations shall also document any corrective actions taken based on observations made, including fresh water flushing of the force main and head ditches. A copy of entries made in the log during each month shall be submitted as part of the quarterly self-monitoring report.

F. SECONDARY EFFLUENT TO STORAGE PONDS – MONITORING LOCATION EFF-001

1. At a minimum, the Discharger shall monitor the treated effluent discharged to the storage ponds at Monitoring Location EFF-001 as required in Table 5. Weekly sampling is only required during periods when treated effluent is discharged to ponds.

Table 5 - Discharges of Treated Effluent to Storage Ponds

Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
BOD_5	mg/L	24-hour composite	Weekly	Quarterly
Settleable Solids	mL/L	Grab	Weekly	Quarterly
Total Nitrogen	mg/L	Grab	Weekly	Quarterly

Table Note 1. The BOD 5-day sample shall be a 24-hour flow proportioned composite.

G. TERTIARY RECYCLED WATER – MONITORING LOCATION REC-001

1. The Discharger shall monitor at REC-001 during events when the tertiary level treated recycled water is supplied to the Tertiary Storage Pond as follows:

Table 6 – Recycled Water Monitoring

Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Flow	MGD	Meter	Continuous	Quarterly
BOD_5	mg/L	24-hour composite	Daily	Quarterly
Total Coliform Organisms	MPN/100 mL	Grab	Daily	Quarterly
Total Suspended Solids	mg/L	24-hour composite	Daily	Quarterly
Turbidity	NTU	Meter	Continuous	Quarterly

Table Note 1. The BOD_5 sample shall be a 24-hour flow proportioned composite.

H. EFFLUENT STORAGE PONDS – MONITORING LOCATIONS PND-001 THROUGH PND-004

1. At a minimum, the Discharger shall monitor the effluent storage ponds PND-001 through PND-004 as required in Table 7, below. Grab samples shall be

collected from each pond during the specified sampling frequency and combined to create one composite sample.

Table 7 - Pond(s) Monitoring Requirements

Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Dissolved Oxygen	mg/L	Grab	Weekly	Quarterly
pH	Standard Units	Grab	Weekly	Quarterly
Freeboard	feet	--	Weekly	Quarterly
Available Storage Volume	Acre-feet	--	Monthly	Quarterly
BOD_5	mg/L	Grab	Weekly	Quarterly
Total Dissolved Solids	mg/L	Grab	Weekly	Quarterly
EC	µmhos/cm	Grab	Weekly	Quarterly
Ammonia as N	mg/L	Grab	Monthly	Quarterly
Nitrate as N	mg/L	Grab	Monthly	Quarterly
Nitrite as N	mg/L	Grab	Monthly	Quarterly
Metals	ug/L	Grab	Quarterly	Quarterly
Standard Minerals	mg/L	Grab	Quarterly	Quarterly
Solids/Sludge Thickness	Inches	Measurement	Once every 3 years	Annually

Table Note 1. Report ammonia as total.

Table Note 2. A list of metals is included in the Glossary.

Table Note 3. A list of standard minerals is included in the Glossary.

Table Note 4. 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 from each pond in use, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.

Table Note 5: Solids/sludge depth shall be monitored every three years starting in 2026.

I. TERTIARY STORAGE POND – MONITORING LOCATION PND-T

1. At a minimum, the Discharger shall monitor the Tertiary Storage Pond as specific below. Quarterly monitoring is required only during periods when effluent is either sent to the pond or stored in the pond.

Table 8 - Tertiary Pond Monitoring Requirements

Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Freeboard	feet	Gauge	Quarterly	Annually
Berm Condition	-	Observation	Quarterly	Annually
Odors	-	Observation	Quarterly	Annually

J. GROUNDWATER

1. The Discharger shall monitor the groundwater in existing monitoring wells WSM-1, WSM-2R, WSM-4 through WSM-9, WSM-12, WSM-14 through WSM-18, and RMW-1, or additional monitoring wells as approved by the Executive Officer. Monitoring well RMW-1 shall only be monitored for groundwater elevation and gradient direction.

2. Prior to construction and/or sampling 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.

3. Prior to sampling, groundwater elevations shall be measured and the wells shall be purged of at least three well volumes until temperature, pH and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Samples shall be collected and analyzed using standard USEPA methods. Except as noted above, groundwater monitoring shall include, at a minimum, the following:

Table 9 - Groundwater Monitoring Requirements

Constituent/Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Depth to groundwater	0.01 feet	Measurement	Quarterly	Quarterly
Groundwater elevation	feet	Calculated	Quarterly	Quarterly
Gradient magnitude	feet/feet	Calculated	Quarterly	Quarterly
Gradient direction	degrees	Calculated	Quarterly	Quarterly
pH	Standard Units	Grab	Quarterly	Quarterly
Total dissolved solids	mg/L	Grab	Quarterly	Quarterly
Fixed dissolved solids	mg/L	Grab	Quarterly	Quarterly
TOC	mg/L	Grab	Quarterly	Quarterly
EC	µmhos/cm	Grab	Quarterly	Quarterly
Chloride	mg/L	Grab	Quarterly	Quarterly
Sodium	mg/L	Grab	Quarterly	Quarterly
Total Kjeldahl nitrogen	mg/L	Grab	Quarterly	Quarterly
Nitrate as N	mg/L	Grab	Quarterly	Quarterly
Nitrite as N	mg/L	Grab	Quarterly	Quarterly
Total Nitrogen	mg/L	Grab	Quarterly	Quarterly
Dissolved iron	µg/L	Grab	Quarterly	Quarterly
Dissolved manganese	µg/L	Grab	Quarterly	Quarterly
Dissolved arsenic	µg/L	Grab	Quarterly	Quarterly
Standard Minerals	mg/L	Grab	Quarterly	Quarterly
Total coliform organisms	MPN/100 mL	Grab	Annually	Annually
Metals	ug/L	Grab	Annually	Annually

Table Note 1. Groundwater elevation shall be determined based on depth-to-water measurements using a surveyed measuring point elevation on the well and a surveyed reference elevation.

Table Note 2. Dissolved iron, manganese and arsenic samples shall be filtered with a 0.45-micron filter prior to sample preservation.

Table Note 3. A list of metals is included in the Glossary. Metals samples shall be filtered with a 0.45-micron filter prior to preservation, digestion, and analysis.

Table Note 4. A list of standard minerals is included in the Glossary.

K. BIOSOLIDS – MONITORING LOCATION BIO-001

1. Samples of biosolids shall be collected at Monitoring Location BIO-001 and analyzed as indicated in Table 9 and in accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989. Sampling records shall be retained for a minimum of 5 years.

Table 10 - Biosolids Monitoring Requirements

Parameter	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Quantity	dry tons	--	1/application	Quarterly
Solids Content	percentage	--	1/application	Quarterly
Disposal Location	--	--	1/application	Quarterly
Metals	mg/kg	Composite	Quarterly	Quarterly
Organic Nitrogen	mg/kg (dry)	Composite	Quarterly	Quarterly
Ammonia Nitrogen	mg/kg (dry)	Composite	Quarterly	Quarterly
Nitrate Nitrogen	mg/kg (dry)	Composite	Quarterly	Quarterly
Plant Available Nitrogen (PAN)	lb N/acre	Composite	Quarterly	Quarterly
Total Phosphorus	mg/kg (dry)	Composite	Quarterly	Quarterly
Total Potassium	mg/kg (dry)	Composite	Quarterly	Quarterly

Table Note 1. Composite samples mean several grab samples combined

Table Note 2. A list of metals is included in the Glossary. Metals samples may be collected from either the biosolids storage lagoon or the stockpiled biosolids.

Table Note 3. Nitrogen, phosphorus and potassium samples to be collected from stockpiled biosolids.

Table Note 4. Calculate PAN using the procedure, volatilization factors, and mineralization rates described in USEPA's Guide for [Biosolids] Land Appliers (EPA/831-B-03-002b).

Table Note 5. If a biosolids application event is scheduled to occur during a given quarter, quarterly monitoring should be completed prior to the application event.

III. REPORTING REQUIREMENTS

1. Upon written request of the Central Valley Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).

2. Reporting Protocols. The Discharger shall report with each sample result the applicable Reporting Limit (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 Code of Federal Regulations Part 136.

3. The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

    a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

    b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

        For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

    c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

4. **Multiple Sample Data**. When determining compliance with an AMEL, AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

   a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

   b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

All reports with monitoring data shall be submitted electronically via the State Water Board's Geotracker Database (https://geotracker.waterboards.ca.gov). After uploading a report, the Discharger shall notify Central Valley Water Board staff via email CentralValleySacramento@waterboards.ca.gov. The following information shall be included in the body of the email:

Attention: Non-15 Compliance
Title: [Enter Report Title]
GeoTracker Upload ID: [Number]
Facility: White Slough Water Pollution Control Facility, San Joaquin County
Order Number: R5-2025-XXXX
County: San Joaquin County
CIWQS Place ID: 272444

A transmittal letter shall accompany each monitoring report. The letter shall include a discussion of all violations of the WDRs and this MRP during the reporting period and actions taken or planned for correcting each violation. If the Discharger has previously submitted a report describing corrective actions taken and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the following

penalty of perjury and shall be signed by the Discharger or the Discharger's authorized agent.

> *I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.*

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.

Contract laboratory analysis reports shall be included in the monitoring reports. All laboratory reports must be retained for a minimum of three years in accordance with Section C.3 of the 1 March 1991 SPRRs. For a Discharger conducting any of its own analyses, reports must also include a letter signed by the chief of the laboratory that certifies the results completed by the Discharger's laboratory.

In addition to the requirements of Section C.3 of the 1 March 1991 SPRRs, monitoring information shall include the method detection limit (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.

All monitoring reports that involve planning, investigation, evaluation or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared under the direction of persons registered to practice in California pursuant to California Business and Professions Code Business and Professions Code sections 6735, 7835, and 7835.1.

A. MONITORING REPORT DUE DATES

Monitoring reports are due as described in the table below.

Table 11 - Monitoring Report Due Dates

Monitoring Report	Monitoring Period	Report Due Date
First Quarter	January 1 - March 31	May 1
Second Quarter	April 1 - June 30	August 1
Third Quarter	July 1 - September 30	November 1
Fourth Quarter	October 1 - December 31	February 1
Annually	January 1 - December 31	February 1

The transmittal letter for all monitoring reports shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions General Reporting Requirements Section B.3.

B. QUARTERLY SELF MONITORING REPORTS

Daily, weekly, monthly and quarterly monitoring data shall be reported in the quarterly self-monitoring report. At a minimum, the self-monitoring report shall include:

1. The results of the required monitoring in this MRP for municipal influent (Section II.A), the industrial influent (Section II.B.), all land application area monitoring (Sections II.C and II.D), secondary effluent (Section II.F), tertiary recycled water (Section II.G.), effluent storage ponds (Section II.H), groundwater (Section II.J) and biosolids (Section II.K) in tabular format.

2. Daily precipitation data in tabular form accompanied by starting and ending dates of irrigation for each field. Precipitation data obtained from the nearest National Weather Service or California Irrigation Management Information System (CIMIS) rain gauge is acceptable.

3. Daily field inspection reports, during periods when land application operations is conducted, including records of the date and time.

4. A comparison of monitoring data to the discharge specifications and applicable limitations and an explanation of any violation of those requirements

5. Daily discharge volumes and acres irrigated shall be tabulated. The report shall include discharge volumes and irrigation practices used (water source, method of application, application period/duration, drying times, etc.) for each field or group of fields utilized during the month. **Hydraulic loading rates** (inches/acre/month) shall be calculated.

6. **Maximum daily BOD_5 loading rates** (lb/acre/day) shall be calculated for each irrigation field using the total volume applied on the day of application, estimated application area, and a running average of the three most recent results of BOD_5 for the applicable source water, which also shall be reported along with supporting calculations.

7. **Cycle average BOD_5 loading rates** for each field shall be calculated using the total volume applied on the day of application, the number of days between applications, the total application period, the irrigation application area, and a running average of the three most recent results of BOD_5 for the applicable source wastewater. Cycle average BOD_5 for each field shall be calculated using the equation below, however, for compliance determination, the quadrant cycle average BOD_5 loading shall be calculated as the average of all the non-zero cycle average values within that quadrant.

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

Where,

M =	Mass of BOD_5 applied to the LAA on a monthly basis in lb/ac/day
C_i =	Concentration of BOD5 in mg/L for the irrigation cycle in mg/L.
Vi =	Total volume of wastewater applied to the LAA in MG
A =	Area of the LAA irrigated in ac
8.345 =	Unit conversion factor for mg/L and MG to lb

8. **Total nitrogen and metals loading rates** shall be calculated for each irrigation field on monthly basis using the daily applied volume of blended irrigation water (if applicable), daily application area, and the most recent monitoring results as an average monthly concentration, which shall also be reported along with supporting calculations. Total Nitrogen and metals loading from other sources (fertilizers and biosolids), when applicable, shall be calculated and included in the total loading rate for each irrigation field on a monthly basis using the actual daily applied load and the estimated daily application area. Cumulative nitrogen and metals loading rates for each irrigation field for the cropping cycle to date shall be calculated as a running total of monthly loadings to date from all sources. Loading should be calculated using the following formula:

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

Where:

M = Mass of total nitrogen or metals applied to the LAA in lb/acre/year.

C_{i} = Monthly average concentration of total nitrogen or metals for month *i* in mg/L.

V_{i} = Total volume of recycled water/effluent applied to the LAAs during the calendar month *i* in MG.

A = Area of the LAA's irrigated with blended irrigation water in acres

i = The number of the month (e.g., January = 1, February = 2, etc.)

M_{x} = Nitrogen and metals from other sources (e.g., fertilizer and biosolids, and nitrogen in tailwater included as a negative load, in lb.

8.345 = Unit conversion factor for mg/L and MG to lb.

9. **Flow-Weighted Average Annual TDS Concentration** shall be calculated using the following formula:

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

Where:

C_a = Flow-weighted average annual TDS concentration in mg/L

i = the number of the month (e.g., January = 1, February = 2, etc.)

C_{Pi} = Monthly average land discharge water TDS concentration at sample location LND-001 for calendar month *i* in mg/L

V_{Pi} = volume of land discharge water applied to LAA during calendar month *i* in MG

C_{Si} = Supplemental irrigation water TDS concentration for the calendar year *i* in mg/L (considering each supplemental source separately). As TDS concentration in supplemental irrigation water is only sampled annually, the annual concentration value shall be used along with the monthly volume to calculate monthly flow.

V_{Si} = Volume of supplemental irrigation water applied to LAA during the calendar month *i* in MG (considering each supplemental source separately)

10. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDRs for this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater, parameters measured before, during and after purging; method of purging; calculation of casing volume; and total volume of water purged;

11. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends, if any;

12. Summary data tables of historical and current groundwater elevations and analytical results; and

13. 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 mean sea level.

14. Copies of contract laboratory analytical reports(s) for groundwater monitoring.

15. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether the discharge complies with waste discharge requirements. The highest daily maximum for the month, monthly and weekly averages, and medians shall be determined and recorded as needed to demonstrate compliance.

16. With the exception of flow, all constituents monitored on a continuous basis (metered), shall be reported as daily maximums, daily minimums, and daily averages; flow shall be reported as the total volume discharged per day for each day of discharge.

17. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.

C. ANNUAL SELF MONITORING REPORTS

The annual monitoring report shall be included in the fourth quarter monitoring report and shall include the following:

1. The results from annual monitoring of the industrial influent (Section II.B), effluent storage ponds (Section II.H), tertiary storage pond (Section II.I), supplemental irrigation supply (Section II.D) and groundwater (Section II.J).

2. When pond sludge thickness is measured, supporting information describing the method used to measure pond sludge thickness and an evaluation of the results of sludge thickness monitoring as it relates to compliance with requirements I.3 and M.1 of the Order. If determined necessary based on evaluation of sludge thickness, proposed timeline for developing a Sludge Cleanout Plan.

3. An evaluation of the groundwater quality beneath the wastewater treatment facility and land application area, and determination of compliance with the groundwater limitations of the WDRs based on statistical analysis for each constituent monitored for each compliance well. The evaluation shall also include a discussion of metal concentration trends in groundwater as potentially related to BOD_5 mass loading to the LAAs. Include all calculations and data input/analysis tables derived from use of statistical software, as applicable.

4. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge in full compliance with the waste discharge requirements.

5. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

6. A letter transmitting the self-monitoring reports shall accompany each report. Such a 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 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 Discharger, or the Discharger's authorized agent, as described in the 1 March 1991 SPRRs.

7. Monitoring periods and reporting for all required monitoring shall be completed according to the schedule in Table 11.

D. OTHER MONITORING REPORTS

1. Cropping and Irrigation Annual Monitoring Report and Plan

An Annual Cropping and Irrigation Annual Monitoring Report and Plan shall be submitted to the Regional Water Board by **1 February** each year and shall include the following:

a. Tabular and graphical summaries of historical monthly total loading rates for water (hydraulic loading in gallons and inches), BOD_5, total nitrogen, fixed dissolved solids, and total dissolved solids (TDS).

b. The flow-weighted average TDS concentration shall be calculated based on land discharge and supplemental irrigation water monitoring results for the year and compared to the Performance-Based Salinity Limit.

c. A mass balance relative to constituents of concern and hydraulic loading along with supporting data and calculations. The report shall describe the types of crops planted and dates of planting and harvest for each crop.

d. The agronomic rate for plant available nitrogen (PAN) for the type of crop to be grown on each field, as specified in the most recent edition of the Western Fertilizer Handbook. Calculations for PAN shall consider mineralized organic nitrogen from previous cycle applications. Agronomic rates for nitrogen may consider onsite denitrification processes consistent with the California League of Food Processors' Manual of Good Practice for Land Application of Food Processing/Rinse Water. For biosolids application rates, the Discharger must calculate the PAN using the procedure, volatilization factors, and mineralization rates described in USEPA's Guide for [Biosolids] Land Appliers (EPA/831-B-03-002b).

e. For each violation of the Discharge Specifications and applicable Prohibitions of the WDRs, the report shall describe in detail the nature of the violation, date(s) of occurrence, cause(s), mitigation or control measures taken to prevent or stop the violation, and additional operational or facility modifications that will be made to ensure that the violation does not occur in the following year.

f. A comprehensive evaluation of the effectiveness of the past year's wastewater application operation in terms of odor control, including

consideration of application management practices (i.e. waste constituent and hydraulic loadings, application cycles, drying times, and cropping practices).

g. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the land application discharge into full compliance with the requirements in this Order, including groundwater limits.

h. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

i. Based on this information, the Discharger shall develop and include a Cropping and Irrigation plan for the following season.

j. A detailed map of the LAA fields to be used each year to facilitate tracking annual wastewater application and nutrient release to the land.

k. In areas where wells are exceeding groundwater limitations or background quality, the Discharger should consider ceasing biosolids applications or provide explanation for why biosolids application will not impact compliance with the groundwater limitations.

l. The Discharger is encouraged to comply with the “Manual of Good Practice for Agricultural Land Application of Biosolids” developed by the California Water Environment Association.

2. State Water Board Volumetric Annual Reporting

Per State Water Resources Control Board’s Water Quality Control Policy (https://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/),amended in December 2018, dischargers of treated wastewater and recycled water are required to report annually monthly volumes of influent, wastewater produced, and effluent, including treatment level and discharge type. The Discharger shall submit an annual report to the State Water Board by April 30 of each calendar year furnished with the information detailed below. The Discharger must submit this annual report containing monthly data in electronic format via the State Water Board’s Internet GeoTracker system (http://geotracker.waterboards.ca.gov/). Required data shall be submitted to the GeoTracker database under a site-specific global identification number. Any data will be made publicly accessible as machine readable datasets. The Discharger must report all applicable items listed below:

a. **Influent.** Monthly volume of wastewater collected and treated by the wastewater treatment plant.

b. **Production.** Monthly volume of wastewater treated, specifying level of treatment.

c. **Discharge.** Monthly volume of treated wastewater discharged to land, where beneficial use is not taking place, including evaporation or percolation ponds, overland flow, or spray irrigation disposal, excluding pasture of fields with harvested grounds.

d. **Reuse.** Monthly volume of recycled water distributed.

e. **Reuse Categories.** Annual volume of treated wastewater distributed for beneficial use in compliance with California Code of Regulations, Title 22 in each of the use categories listed below:

i. Agricultural irrigation: pasture or crop irrigation.

ii. Landscape irrigation: irrigation of parks, greenbelts, and playgrounds; school yards; athletic fields; cemeteries; residential landscaping, common areas; commercial landscaping; industrial landscaping; and freeway, highway, and street landscaping.

iii. Golf course irrigation: irrigation of golf courses, including water used to maintain aesthetic impoundments within golf courses.

iv. Commercial application: commercial facilities, business use (such as laundries and office buildings), car washes, retail nurseries, and appurtenant landscaping that is not separately metered.

v. Industrial application: manufacturing facilities, cooling towers, process water, and appurtenant landscaping that is not separately metered.

vi. Geothermal energy production: augmentation of geothermal fields.

vii. Other non-potable uses: including but not limited to dust control, flushing sewers, fire protection, fill stations, snow making, and recreational impoundments.

viii. Groundwater recharge: the planned use of recycled water for replenishment of a groundwater basin or an aquifer that has been designated as a source of water supply for a public water system. Includes surface or subsurface application, except for seawater intrusion barrier use.

ix. Reservoir water augmentation: the planned placement of recycled water into a raw surface water reservoir used as a source of domestic drinking water supply for a public water system, as defined in section 116275 of the Health and Safety Code, or into a constructed system conveying water to such a reservoir (Water Code § 13561).

x. Raw water augmentation: the planned placement of recycled water into a system of pipelines or aqueducts that deliver raw water to a drinking water treatment plant that provides water to a public water system as defined in section 116275 of the Health and Safety Code (Water Code§ 13561).

xi. Other potable uses: both indirect and direct potable reuse other than for groundwater recharge, seawater intrusion barrier, reservoir water augmentation, or raw water augmentation.

ENFORCEMENT

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to $1,000 per violation, per day, depending on the violation, pursuant to Water Code section 13268. The Central Valley Water Board reserves the right to take any enforcement actions authorized by law.

ADMINISTRATIVE REVIEW

Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Wat. Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. To be timely, the petition must be received by the State Water Board by 5:00 pm on the 30th day after the date of this Order; except that if the 30th day falls on a Saturday, Sunday or State Holiday, the petition must be received by the State Water Board by 5:00 pm on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet on the Water Boards Public Notice webpage. (http://www.waterboards.ca.gov/public_notices/petitions/water_quality).

The Discharger shall implement the above monitoring program starting 1 September 2025.

PATRICK PULUPA, Executive Officer

GLOSSARY

AMEL	Average Monthly Effluent Limit
AWEL	Average Weekly Effluent Limit
BOD_5	[5-day] biochemical oxygen demand at 20 degrees Celsius
DNQ	Detected, but Not Quantified
EC	Electrical Conductivity at 25° C
EPA	Environmental Protection Agency
ELAP	State Water Resources Control Board's Environmental Laboratory Accreditation Program
LAAs	Land Application Areas
MDL	Method Detection Limit
MDEL	Maximum Daily Effluent Limit
MRP	Monitoring and Reporting Program
MCL	Maximum Contaminant Level per Title 22
N	Nitrogen
ND	Not Detected
PQL	Practical Quantitation Limit
RL	Reporting Limit
SPRRs	Standard Provisions and Reporting Requirements
Title 22	California Code of Regulations, Title 22
Title 23	California Code of Regulations, Title 23
TDS	Total Dissolved Solids
Wat. Code	Water Code
Daily	Every day except weekends or holidays
Weekly	Once per week
Monthly	Once per calendar month
Quarterly	Once per calendar quarter
Annually	Once per year
lb N/acre	pounds of nitrogen per acre
lb/ac/day	pounds per acre per day
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter

MG [D]	Million gallons [per day]
mg/kg	Milligram per kilogram
mL/L	Milliliters per liter

Standard Minerals

Analysis shall include boron, bromide, calcium, fluoride, iron, magnesium, manganese, total potassium, sodium, chloride, total phosphorus, sulfate, total alkalinity (including alkalinity series), and total hardness as CaCO3, and include verification that the analysis is complete (i.e., cation/anion balance).

Metals

Analysis shall include at least the following: arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc.