

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM 94-013 REV1
FOR
PRINCETON WATER WORKS DISTRICT
WASTEWATER TREATMENT PLANT
COLUSA COUNTY

This Monitoring and Reporting Program (MRP) for Princeton Water Works District (Discharger) is issued pursuant to Water Code section 13267. The Discharger owns and operates the Princeton Wastewater Treatment Plant (Facility). This MRP establishes monitoring and reporting requirements related to the waste discharges regulated under Waste Discharger Requirements (WDRs) Order 94-013. 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. Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff 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 shall be obtained at the monitoring points specified in this MRP. 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

Table 1- Monitoring Location Designations

Monitoring Location Name	Monitoring Location Description
INF-001	Location where a representative sample of the waste stream entering the Facility can be collected prior to any treatment processes.
EFF-001	Location where a representative sample of the effluent can be collected downstream of the aeration ditch and representative of wastewater entering Ponds 1 and 2.
POND-1, POND-2	Evaporation/Percolation Ponds
SLU-001	Sludge monitoring during pond(s) clean out.

C. 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 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. 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; 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):

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.

If monitoring consistently shows no significant variation in a constituent concentration or parameter after at least 12 months of monitoring, the Discharger may request this MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency. This monitoring program shall remain in effect unless and until a revised MRP is issued.

II. SPECIFIC MONITORING REQUIREMENTS

A. INFLUENT FLOW MONITORING (INF-001)

The Discharger shall monitor the influent to the Facility at INF-001 prior to any treatment processes.

Table 2 - Influent Flow Monitoring

Parameter	Units	Sample Type	Sample Frequency	Reporting Frequency
Flow	gpd	Metered	Continuous	Semi-Annual

B. EFFLUENT MONITORING (EFF-001)

Effluent samples shall be downstream of the aeration ditch prior to discharge to the evaporation/percolation ponds. Sampling is only required when wastewater is present in the ponds. If no discharges occur or if any pond is empty, the corresponding monitoring report shall so state. Samples shall be filtered

through a 0.45-micron filter prior to preservation or digestion, as appropriate. At a minimum, wastewater monitoring shall include the following:

Table 3 - Effluent Monitoring

Constituents	Units	Sample Type	Sample Frequency	Reporting Frequency
BOD ₅	mg/L	Grab	Monthly	Semi-Annual
EC	µmhos/cm	Grab	Monthly	Semi-Annual
Nitrate as N	mg/L	Grab	Monthly	Semi-Annual
TKN	mg/L	Grab	Monthly	Semi-Annual

C. POND MONITORING (POND-1, POND-2)

The Discharger shall monitor all ponds used for treatment, storage, or disposal of wastewater in accordance with the following. Sampling and monitoring shall be conducted from permanent locations that will provide reasonable samples and observations of the ponds. Precipitation data obtained from the nearest National Weather Service rain gauge is acceptable. 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 0.50 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	Semi-Annual
Local Precipitation	inches	Rain gauge	Daily	Semi-Annual
Freeboard	0.1 feet	Measurement	Monthly	Semi-Annual
Odors	--	Observation	Monthly	Semi-Annual
Berm Condition	--	Observation	Monthly	Semi-Annual
pH	pH units	Grab	Weekly	Semi-Annual
Dissolved Oxygen	mg/L	Grab	Weekly	Semi-Annual

D. SLUDGE/SOLIDS MONITORING (SLU-001)

Sludge and/or biosolids monitoring shall be conducted as required in Title 40 of the Code of Federal Regulations (40 CFR), Part 503.8(b)(4) at the following frequency, depending on volume of sludge generated and removed from the wastewater treatment system for disposal or treated for beneficial reuse as biosolids. For the purpose of this MRP, “generated” means produced as a separate waste stream by sludge wasting or pond cleanout. It does not apply to sludge that accumulated in treatment or storage ponds until the sludge is removed for treatment or disposal. If no sludge is removed from the ponds, the monitoring report shall so state.

Table 5 - Sludge Solids Monitoring

Volume Generated (dry metric tons/year)	Monitoring Frequency	Reporting Frequency
0 to 290	Annually	Annually
290 to 1,500	Quarterly	Annually
1,500 to 15,000	Bimonthly	Annually
Greater than 15,000	Monthly	Annually

At a minimum, sludge/biosolids samples shall be analyzed to determine the total concentration in mg/Kg for arsenic, lead, nickel, cadmium, mercury, selenium, copper, molybdenum, zinc, total nitrogen, and total solids.

Sludge and/or biosolids monitoring records shall be retained for a minimum of five years in accordance with 40 CFR, Part 503.17. A log shall be kept of sludge quantities generated and of handling, application, and disposal activities (e.g. land application, landfill, etc). The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis to report sludge monitoring.

The Discharger shall demonstrate that treated sludge (i.e., biosolids) meets Class A or Class B pathogen reduction levels by one of the methods listed in 40 CFR, Part 503.32, and shall maintain records of the operational parameters used to comply with the Vector Attraction Reduction requirements in 40 CFR, Part 503.33(b), as well as records of offsite disposal (quantity, date, disposal site).

III. REPORTING REQUIREMENTS

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:

Facility: Princeton Wastewater Treatment Plant, Colusa County
Program: Non-15 Compliance
Order Number: 94-013
CIWQS Place ID: 249211

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. Pursuant to Section B.3 of the SPRRs, the transmittal letter shall contain a statement by the Discharger or the Discharger's authorized agent certifying under penalty of perjury that the report is true, accurate and complete to the best of the signer's knowledge.

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.

Laboratory analysis reports shall be included in the monitoring reports. In addition, all laboratory reports must be retained for a minimum of three years in accordance with Section C.3 of the SPRRs. For a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

In addition to the requirements of Section C.3 of the 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.

As required by the Business and Professions Code sections 6735, 7835, and 7835.1, 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 direct supervision of a Registered Professional Engineer or Professional Geologist and signed by the registered professional.

A. MONITORING REPORT DUE DATES

Semi-annual monitoring reports are due as described in the table below.

Table 6 - Monitoring Report Due Dates

Monitoring Report	Monitoring Period	Report Due Date
First Semi-Annual	1 January to 30 June	1 August
Second Semi-Annual/ Annual	1 July to 31 December	1 February
State Water Board Volumetric Annual Reporting	1 January to 31 December	30 April

B. SEMI-ANNUAL MONITORING REPORT

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

1. Results of Influent Flow Monitoring in tabular format during the reported monitoring period for the following:
 - a. Calculation of total monthly precipitation.
 - b. Calculation of the total flow and average daily flow for each month, and total annual flow to date.
2. Results of Effluent Monitoring in tabular format for each month during the reported monitoring period.
3. Results of Pond Monitoring in tabular format for each week or month during the reported monitoring period.

4. A comparison of monitoring data to the flow limitations, effluent limitations, and discharge specifications and an explanation of any violation of those requirements.
5. Copies of the laboratory analytical data reports shall be maintained by the Discharger and submitted to the Central Valley Water Board.

C. ANNUAL MONITORING REPORT

In addition to the above, the Discharger shall submit the following additional information as part of the Second Semi-Annual Report and shall include the following:

1. Influent Flow Monitoring

- a. Total annual influent flow.

2. Sludge/Solids Monitoring

- a. Annual sludge/solids monitoring sludge when pond sludge is removed for treatment or disposal. If no sludge is removed from the ponds, the monitoring report shall so state.

3. Additional Reporting

- a. 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.
- b. 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. Calibration records shall verify calibration of all handheld monitoring instruments and devices used to comply with the prescribed monitoring program.
- c. A discussion of the following:
 - i. Waste constituent reduction efforts implemented in accordance with any required workplan.
 - ii. Other treatment or control measures implemented during the calendar year either voluntarily or pursuant to the WDRs, this MRP, or any other Order.
 - iii. Based on monitoring data, an evaluation of the effectiveness of the treatment or control measures implemented to date.

- d. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring network or reporting program.

D. 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/) (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/) (<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:

1. **Influent.** Monthly volume of wastewater collected and treated by the wastewater treatment plant.
2. **Production.** Monthly volume of wastewater treated, specifying level of treatment.
3. **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.
4. **Reuse.** Monthly volume of recycled water distributed.
5. **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:
 - a. Agricultural irrigation: pasture or crop irrigation.
 - b. 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.
 - c. Golf course irrigation: irrigation of golf courses, including water used to maintain aesthetic impoundments within golf courses.

- d. Commercial application: commercial facilities, business use (such as laundries and office buildings), car washes, retail nurseries, and appurtenant landscaping that is not separately metered.
- e. Industrial application: manufacturing facilities, cooling towers, process water, and appurtenant landscaping that is not separately metered.
- f. Geothermal energy production: augmentation of geothermal fields.
- g. Other non-potable uses: including but not limited to dust control, flushing sewers, fire protection, fill stations, snow making, and recreational impoundments.
- h. 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.
- i. 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).
- j. 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).
- k. Other potable uses: both indirect and direct potable reuse other than for groundwater recharge, seawater intrusion barrier, reservoir water augmentation, or raw water augmentation.

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).

The Discharger shall begin implementing the above monitoring program one month following issuance of the date of this MRP.

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.

for PATRICK PULUPA, Executive Officer

GLOSSARY

BOD ₅	Five-day biochemical oxygen demand
EC	Electrical conductivity at 25° C
EPA	Environmental Protection Agency
ELAP	State Water Resources Control Board's Environmental Laboratory Accreditation Program
FDS	Fixed dissolved solids
MRP	Monitoring and Reporting Program
MW	Monitoring Well
MCL	Maximum Contaminant Level per Title 22
N	Nitrogen
TKN	Total kjeldahl nitrogen
TDS	Total dissolved solids
TSS	Total suspended 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
gpd	Gallons per day
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter
mg[d]	Million gallons [per day]