

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TENTATIVE MONITORING AND REPORTING PROGRAM R5-2021-XXXX
FOR
JAMESTOWN SANITARY DISTRICT
JAMESTOWN WASTEWATER TREATMENT FACILITIES
TUOLUMNE COUNTY

This Monitoring and Reporting Program (MRP), which is separately issued pursuant to California Water Code section 13267 subdivision (b)(1), establishes monitoring and reporting requirements related to the waste discharges regulated under Waste Discharge Requirements Order R5-2021-XXXX (WDRs Order). Each of the Findings set forth in the WDRs Order, including those pertaining to the need for submission of reports, are hereby incorporated as part of this MRP.

The Jamestown Sanitary District (hereafter JSD, District, or Discharger) owns and operates the JSD Wastewater Treatment Facilities (JSD Facilities or WWTF) subject to WDRs Order R5-2021-XXXX. The JSD Wastewater Treatment Facilities consist of the Woods Creek Facility and Quartz WWTF. The two locations are operated in combination to provide domestic wastewater treatment service for the community of Jamestown. 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.

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

This MRP may be separately revised by the Executive Officer, in accordance with their delegated authority under Water Code section 13223.

I. GENERAL MONITORING REQUIREMENTS

A. FLOW MONITORING

Hydraulic flow rates shall be measured at the monitoring points specified in this MRP. All flow monitoring systems shall be appropriate for the conveyance system (i.e., open channel flow or pressure pipeline) and liquid type. The measurements may be based on flow meter readings or pump run time estimate. The method of measurement must be specified. 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. 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 Locations

Monitoring Location	Monitoring Location Description
INF-001	Location where a representative sample of the waste stream entering the Quartz WWTF can be collected prior to any additives, treatment processes, or WWTF return flow.
EFF-001	Location where a representative sample of the disinfected secondary-treated effluent can be taken prior to discharge to the Tuolumne Utilities District's (TUD) reclamation system (i.e., Quartz reservoir).
EFF-002	Location where a representative sample of the disinfected tertiary-treated effluent can be taken prior to discharge to the recycled water reuse areas (e.g., TUD'S reclamation system, land application area, and/or the recycled water fill station).
MW-1 to MW-3	Existing groundwater monitoring wells at the Woods Creek Facility and any future monitoring wells added to the Woods Creek Facility groundwater monitoring network.
BIO-001	Sludge/Biosolids monitoring
CMP-001	Composting Facility Monitoring

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 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, temperature, 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 by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in the "Reporting" section of this 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 (State Water Board), Division of Drinking Water's 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 the applicable water quality objectives for the constituents to be analyzed.

II. SPECIFIC MONITORING REQUIREMENTS

A. INFLUENT MONITORING (INF-001)

The Discharger shall monitor the influent to the Facility at Monitoring Location INF-001. At a minimum, the influent shall be monitored as specified in Table 2:

Table 2. Influent Monitoring (INF-001)

Constituent/Parameter	Units	Sample Type	Frequency
Flow	mgd	Metered	Continuous
pH	pH Units	Grab	1/Week
EC	µmhos/cm	Grab	1/Week
BOD ₅	mg/L	Grab	1/Month
TSS	mg/L	Grab	1/Month

B. DISINFECTED SECONDARY EFFLUENT MONITORING (EFF-001)

The Discharger shall monitor the Quartz WWTF's discharge of disinfected secondary effluent at EFF-001, prior to discharge to the TUDs reclamation system. At a minimum, the effluent shall be monitored as specified in Table 3 below:

Table 3. Disinfected Secondary Effluent Monitoring (EFF-001)

Constituent/Parameter	Units	Sample Type	Frequency
Flow	mgd	Metered (see 1 below)	Continuous
Total Coliform Organisms	MPN/100 mL	Grab	1/Day
Chlorine Residual	mg/L	Continuous	Continuous
CT (see 2 below)	mg-min/L	Calculate	1/Day
EC	µmhos/cm	Grab	1/Week
TSS	mg/L	Grab	1/Week
BOD ₅	mg/L	Grab	1/Week
Nitrate (as N)	mg/L	Grab	2/Month
Total Nitrogen	mg/L	Calculation or Grab	2/Month
General Minerals	mg/L	Grab	1/Quarter

1. Flow measurements may be based on flow meter readings or pump run time estimates. The method of measurement must be specified.
2. CT is the product of chlorine residual and modal contact time measured at the same point.

C. DISINFECTED TERTIARY EFFLUENT MONITORING (EFF-002)

The Discharger shall monitor the Quartz WWTF's disinfected tertiary-treated effluent at EFF-002 when disinfected tertiary effluent is being produced. At a minimum, the effluent shall be monitored as specified in Table 4 below:

Table 4. Disinfected Tertiary Effluent Monitoring (EFF-002)

Constituent/Parameter	Units	Sample Type	Frequency
Flow	mgd	Metered (see 1 below)	Continuous
Total Coliform Organisms	MPN/100 mL	Grab	1/Day
Chlorine Residual	mg/L	Continuous	Continuous
CT (see 2 below)	mg-min/L	Calculate	1/Day
Turbidity (see 3, 4, 5, and 6 below)	NTU	Meter	Continuous (see 7 below)
EC	µmhos/cm	Grab	1/Week
TSS	mg/L	Grab	2/Month
BOD ₅	mg/L	Grab	2/Month
Nitrate as N	mg/L	Grab	2/Month

Constituent/Parameter	Units	Sample Type	Frequency
Total Nitrogen	mg/L	Calculation or Grab	1/Month

1. Flow measurements may be based on flow meter readings or pump run time estimates. The method of measurement must be specified.
2. CT is the product of chlorine residual and modal contact time measured at the same point.
3. The turbidity meter shall be stationed immediately after the filters.
4. When coagulation is used, the Discharger shall conduct turbidity monitoring at a location representative of the effluent from the filtration system prior to disinfection. When coagulation is not used, the Discharger shall also conduct turbidity monitoring at a location representative of the influent to the filtration system.
5. If the influent turbidity exceeds 5 NTU for more than 15 minutes when not coagulating, the Discharger shall add chemicals or divert the wastewater. If the influent turbidity exceeds 10 NTU when not coagulating and the wastewater is not diverted, the Discharger shall collect a sample as soon as practicable for total coliform immediately downstream of the disinfection system and report the duration of the turbidity exceedance.
6. If the effluent turbidity exceeds 10 NTU when coagulation is used or 2 NTU when coagulation is not used, and the wastewater is not diverted, the Discharge shall collect a sample as soon as practicable for total coliform after filtration but prior to disinfection and report the duration of the turbidity exceedance.
7. Report daily average turbidity and maximum turbidity.

D. GROUNDWATER MONITORING (MW-1 TO MW-3)

After measuring water levels and prior to collecting samples, each monitoring well shall be adequately purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water. Purging shall continue until pH, EC, and turbidity have stabilized. Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging is typically from 3 to 5 casing volumes.

The Discharger shall monitor the current wells in its monitoring well network (MW-1 through MW-3) and any subsequent additional wells as follows:

Table 5. Groundwater Monitoring (MW-1 through MW-3 and any future wells)

Constituent/Parameter	Units	Sample Type	Frequency
Depth to Groundwater	0.01 Feet	Measurement	1/Quarter
Groundwater Elevation (see 1 below)	Feet	Calculation	1/Quarter
Groundwater Gradient	Feet/Foot	Calculation	1/Quarter

Constituent/Parameter	Units	Sample Type	Frequency
pH	pH Units	Grab	1/Quarter
EC	µmhos/cm	Grab	1/Quarter
Nitrate (as N)	mg/L	Grab	1/Quarter
Ammonia (as N)	mg/L	Grab	1/Quarter
General Minerals	mg/L	Grab	1/Year (see 2 below)

1. Groundwater elevation shall be calculated based on depth-to-water measurements from a surveyed measuring point.
2. For constituents with Secondary MCLs listed in Title, 22 Table 64449-A (e.g., aluminum, copper, iron, manganese, silver, zinc, color and turbidity), samples shall be filtered with a 1.5-micron filter prior to preservation, digestion, and analysis. For all other constituents, samples shall be filtered with a 0.45-micron filter prior to preservation, digestion, and analysis.

In addition, the Discharger shall maintain its groundwater monitoring well network. If a monitoring well(s) is dry for more than four consecutive sampling events or is damaged, the Discharger shall submit a workplan and proposed time schedule to replace the monitoring well(s). The monitoring wells(s) shall be replaced following Executive Officer approval of the workplan. Once installed, all new monitoring wells shall be added to the existing groundwater monitoring well network.

E. SLUDGE/BIOSOLIDS MONITORING (BIO-001)

A composite sample of dewatered sludge/biosolids shall be collected at Monitoring Location BIO-001 in accordance with US EPA's *POTW Sludge. Sampling and Analysis Guidance Document*, (August 1989) and tested for the metals listed in Title 22 whenever sludge/biosolids is removed from the WWTF for disposal. Sampling records shall be retained for a minimum of five years. A log shall be kept of sludge qualities generated and handling, application, and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis for part of the Fourth Quarter Annual Monitoring Report.

F. COMPOSTING FACILITY MONITORING (CMP-001)

Composting facility monitoring per this provision shall commence upon satisfaction of the Provision H.2 of this Order and provided the Composting Facility is **not** enrolled under the State Water Resources Control Board's Order WQ 2020-0012-DWQ General Waste Discharge Requirements for Commercial Composting Operations (Composting General Order)

The Discharger shall inspect the composting facility on a daily basis and record the volume of compost generated daily. The Discharger shall also record the volume and

the date of application of any water/liquid used for moisture control of the compost windrows. This information shall be submitted as part of the fourth quarter monitoring report. Evidence of erosion, windrow saturation, runoff, or the presence of nuisance conditions (i.e., flies, ponding, etc.) shall be noted in field logs and kept on site.

III. REPORTING REQUIREMENTS

All monitoring reports should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to: centralvalleyfresno@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
Region 5 – Fresno Office
1685 “E” St.
Fresno, California 93706

To ensure that your submittal is routed to the appropriate staff person, the following information should be included in the body of the email or transmittal sheet:

Program: Non-15,
Facility: Jamestown Sanitary District Wastewater Treatment Facilities
Order: MRP R5-2021-XXXX
County: Tuolumne
Place ID: 233460

A transmittal letter shall accompany each monitoring report. The letter shall include a discussion of all violations of 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 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, groundwater, 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 in the next scheduled monitoring report.

Laboratory analysis reports shall be included in the monitoring reports. All laboratory reports must also be retained for a minimum of three years. For a discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

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 by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1.

A. QUARTERLY MONITORING REPORTS

Quarterly Monitoring Reports shall be prepared and submitted to the Central Valley Water Board by the **1st day of the second month after the quarter** (i.e., the 1st Quarter [January – March] quarterly report is due 1st May). Each Quarterly Monitoring Report shall include the following:

1. Results of **Influent Monitoring** as specified in Section II.A, including calculating the maximum daily and monthly average flow for each month.
2. Results of **Effluent Monitoring** as specified in Section II.B. (Disinfected Secondary -Treated Effluent) and II.C. (Disinfected Tertiary-Treated Effluent).
3. Results of **Groundwater Monitoring** as specified in Section II.D. Including the following:
 - a. A narrative description of all preparatory, monitoring, sampling, and sample handling for groundwater monitoring.
 - b. A field log for each well documenting depth to groundwater; sample preparation (e.g., filtering); and sample preservation. For each sampling event, the Discharger may provide a table summarizing this information for all groundwater monitoring wells sampled in lieu of providing a field log for each well. The field logs should be made available on request of the Central Valley Water Board.
 - c. Calculation of groundwater elevation at each monitoring well, and determination of groundwater flow direction and gradient on the date of the measurement.
 - d. For each monitoring well, a table showing groundwater depth, elevation, and constituent concentrations for at least the five previous years, up through the current quarter.
 - e. Summary data tables of analytical results collected during the quarter and the current water table elevations.
 - f. A scaled map showing relevant structures and features of the Facility, the locations of monitoring wells, surface waters, and groundwater elevation

contours referenced to an appropriate datum (e.g., National Geodetic Vertical Datum).

4. Results of **Sludge/Biosolids Monitoring** as specified in Section II.E.
5. Results of **Composting Facility Monitoring** as specified in Section II.F.
6. Copies of all laboratory analytical reports.

B. FOURTH QUARTER MONITORING REPORT

In addition to the above information, the fourth quarter monitoring report, due **1st February of each year** shall include the following:

1. Names, title, and contact information for persons to contact regarding the Facility for emergency and routine situations.
2. Statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, include identification of who performed the calibrations (SPRRs C.4).
3. A discussion of compliance and corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the WDRs Order.
4. Copy of the most recent Consumer Confidence Report for the community of Jamestown's public water supplier.
5. Tabulated summary of all monitoring data collected over the year.
8. An evaluation of the Jamestown's major industrial dischargers (if any), including permitted flows and loading limits as well as any water quality monitoring data collected.
9. An evaluation of the JSD wastewater treatment and disposal facility's performance, including discussion of capacity issues, infiltration and inflow rates, nuisance conditions, and forecast of flows anticipated in the following year (SPRRs E.4) including the continuing submittal of an Annual Inflow and Infiltration report summarizing mitigation measures completed during the past year and proposing measures to be implemented in the coming year.
10. A summary of information on the disposal and/or composting of sludge/biosolids during the calendar year. The summary should include production totals, description of disposal methods, and results of any monitoring as required in Section II.G.
11. Statement of when the Facility's Operation and Maintenance Manual was last reviewed for adequacy and a description of any changes made during the year.

C. VOLUMETRIC 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 influent wastewater collected and treated by the wastewater treatment facility.
2. **Production.** Monthly volume of wastewater treated, specifying level of treatment.
3. **Discharge.** Monthly volume of treated wastewater discharged to each of the following, specifying level of treatment:
 - a) Inland surface waters, specifying volume required to maintain minimum instream flow.
 - b) Enclosed bays, estuaries and coastal lagoons, and ocean waters.
 - c) Natural systems, such as wetlands, wildlife habitats, and duck clubs, where augmentation or restoration has occurred, and that are not part of a wastewater treatment plant or water recycling treatment plant.
 - d) Underground injection wells, such as those classified by U.S. EPA's Underground Injection Control Program, excluding groundwater recharge via subsurface application intended to reduce seawater intrusion into a coastal aquifer with a seawater interface.
 - e) Land, where beneficial uses is not taking place, including evaporation or percolation ponds, overland flow, or spray irrigation disposal, excluding pasture or fields with harvested crops.
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) Seawater intrusion barrier: groundwater recharge via subsurface application intended to reduce seawater intrusion into a coastal aquifer with a seawater interface.
- j) 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 section 13561).
- k) 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 section 13561).
- l) Other potable uses: both indirect and direct potable reuse other than for groundwater recharge, seawater intrusion barrier, reservoir water augmentation, or raw water augmentation.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control Board to review the action in accordance with California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Resources Control Board must receive the petition by 5:00 p.m., 30 days after the date of this MRP, 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 Resources Control Board by 5:00 p.m. on the next business day. [Copies of the law and regulations applicable to filing petitions](#) may be found on the internet (http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided on request.

The Discharger shall implement the above monitoring program **starting <1st day of the month following adoption of the MRP>**.

I, PATRICK PULUPA, Executive Officer, do hereby certify the forgoing is a full, true and correct copy of the Monitoring and Reporting Program R5-2021-XXXX issued by the California Regional Water Quality Control Board, Central Valley Region, on XX August 2021.

PATRICK PULUPA, Executive Officer

IV. GLOSSARY

amsl	Above mean sea level
BOD ₅	Five-day biochemical oxygen demand
CaCO ₃	Calcium carbonate
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
TDS	Total dissolved solids
TKN	Total Kjeldahl nitrogen
TSS	Total suspended solids
Continuous	The specified parameter shall be measured by a meter continuously.
24-hr Composite	Samples shall be a flow-proportioned composite consisting of at least eight aliquots over a 24-hour period.
Daily	Once per day.
1/Week	Once per week.
2/Week	Twice per week on non-consecutive days.
1/Month	Once per month.
2/Month	Twice per month in non-consecutive weeks.
1/Quarter	Once per quarter.
2/Year	Once every six calendar months (i.e., two times per year) in non-consecutive quarters unless otherwise specified.
1/Year	Once per year.
mg/L	Milligrams per liter
mg/kg	Milligrams per kilogram
mL/L	Milliliters [of solids] per liter
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
gpd	Gallons per day
mgd	Million gallons per day
MPN/100 mL	Most probable number [of organisms] per 100 milliliters
General Minerals	Analysis shall include; alkalinity (as CaCO ₃), bicarbonate (asCaCO ₃), boron, calcium, carbonate (as CaCO ₃), chloride, iron, magnesium, manganese, nitrate as N, phosphate, potassium, sodium, sulfate, total dissolved solids, and verification that the analysis is complete (i.e., cation/anion balance).