CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

REVISED MONITORING AND REPORTING PROGRAM NO. R5-2010-0120-01
FOR
CITY OF REEDLEY
WASTEWATER TREATMENT FACILITY
FRESNO COUNTY

This Revised Monitoring and Reporting Program (MRP) is issued pursuant to California Water Code (CWC) section 13267 and is incorporated in Waste Discharge Requirements Order No. R5-2010-0120 (WDRs). This MRP supersedes MRP R5-2010-0120, which was adopted with the WDRs on 10 December 2010. The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts or the Executive Officer issues a revised MRP. Changes to sample locations shall be established with concurrence of Central Valley Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. All analyses shall be performed in accordance with **Standard Provisions and Reporting Requirements for Waste Discharge Requirements**, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as pH) may be used provided that the operator is trained in the proper use of the instrument and each instrument is serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions.

Analytical procedures shall comply with the methods and holding times specified in the following: *Methods for Organic Chemicals 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 or the California Department of Public Health's Environmental Laboratory Accreditation Program). The Discharger may propose alternative methods for approval by the Executive Officer.

If monitoring consistently shows no significant variation in magnitude of a constituent concentration or parameter after at least 24 months of monitoring, the Discharger may request the MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

Pursuant to Section 13267 of the California Water Code, the Discharger shall implement this MRP and shall submit the required monitoring reports described herein.

A glossary of terms used within this MRP is attached and a list of the constituents required for the monitoring of Priority Pollutants is included in Table 1, also attached.

INFLUENT MONITORING

Influent samples shall be collected at the inlet of the headworks of the WWTF. Time of collection of the sample shall be recorded. Influent monitoring shall include at least the following:

Frequency	Constituent/Parameter	Units	Sample Type
Continuous	Flow	mgd	Meter
Weekly	pH	pH Units	Grab
Weekly	EC	µmhos/cm	Grab
Weekly	BOD_5	mg/L	24-hour composite
Weekly	TSS	mg/L	24-hour composite
Monthly	Monthly Average Flow	mgd	Computed

EFFLUENT MONITORING

Effluent samples shall be collected at a point in the system following treatment and before discharge to the effluent percolation ponds. Time of collection of the sample shall be recorded. Effluent monitoring shall include the following:

Frequency	Constituent/Parameter	Units	Sample Type
Weekly	pH	pH Units	Grab
Weekly	EC	µmhos/cm	Grab
Weekly	BOD_5	mg/L	24-hour composite
Weekly	TSS	mg/L	24-hour composite
Monthly	Nitrate (as N)	mg/L	24-hour composite
Monthly	TKN	mg/L	24-hour composite
Monthly	Total Nitrogen	mg/L	Computed
Biannually[1]	General Minerals	mg/L	24-hour composite
Once every 5 years	Priority Pollutants (see Table 1)	Varies[2]	Varies

[1] Biannual monitoring shall consist of two samples per year.
[2] mg/L or µg/L, as appropriate.

POND MONITORING

Permanent markers (e.g., staff gages) shall be placed in all percolation ponds. The markers shall have calibrations indicating water level at the design capacity and available operational freeboard.

Effluent percolation pond monitoring shall include at least the following:

Frequency	Constituent/Parameter	Units	Sample Type
As Required[1]	DO	mg/L	Grab[2]
Weekly	Freeboard	Feet[3]	Observation

[1] If offensive odors are detected by or brought to the attention of WWTF personnel, the Discharger shall monitor affected pond(s) daily in the morning prior to 9 a.m. until dissolved oxygen concentrations equal or exceed 1.0 mg/L.
[2] Samples shall be collected at a depth of one foot from each pond, opposite the inlet. Time of sampling shall be recorded.
[3] To nearest tenth of a foot

The Discharger shall inspect the condition of the percolation ponds weekly and record visual observations in a bound logbook. Notations shall include observations of whether weeds are developing in the water or along the bank, and their location; whether grease, dead algae, vegetation, scum, or debris are accumulating on the percolation pond surface and their location; whether burrowing animals or insects are present; and the color of the reservoirs (e.g., dark sparkling green, dull green, yellow, gray, tan, brown, etc.). A summary of the entries made in the log shall be included in the subsequent monitoring report.

GROUNDWATER MONITORING

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. Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging is typically from 3 to 5 volumes of standing water within the well casing and screen, or additionally the filter pack pore volume.

The Discharger shall monitor all wells in its Groundwater Monitoring Network, and any additional wells installed pursuant to this MRP, for the following:

Frequency	Constituent/Parameter	Units	Sample Type
Quarterly	Depth to groundwater	Feet[1]	Measured
Quarterly	Groundwater Elevation	Feet[2]	Computed
Quarterly	pH	pH Units	Grab
Quarterly	EC	µmhos/cm	Grab
Quarterly	Nitrate (as N)	mg/L	Grab
Quarterly	TKN	mg/L	Grab
Quarterly	Ammonia	mg/L	Grab
Quarterly	Total Nitrogen	mg/L	Computed
Quarterly	Total Organic Carbon	mg/L	Grab
Annually	Arsenic[3]	mg/L	Grab
Annually	Iron[3]	mg/L	Grab
Quarterly	Manganese[3]	mg/L	Grab

Frequency	Constituent/Parameter	Units	Sample Type
Quarterly	General Minerals	mg/L	Grab
Annually	Total Coliform Organisms[4]	MPN/100 mL	Grab

[1] To nearest tenth of a foot
[2] To nearest tenth of a foot above Mean Sea Level
[3] Groundwater samples placed in an acid-preserved bottle for metals analysis must first be filtered. If filtering in the field is not feasible, sampling shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain of custody form) to immediately filter then preserve the sample.
[4] Quarterly groundwater monitoring for total coliform is required for monitoring well MW-16.

SOURCE WATER MONITORING

For each source (either well or surface water supply), the Discharger shall calculate the flow-weighted average concentrations for the specified constituents utilizing monthly flow data and the most recent chemical analysis conducted in accordance with Title 22 drinking water requirements. Alternatively, the Discharger may establish representative sampling stations within the distribution system serving the same area as is served by the WWTF.

Frequency	Constituent/Parameter	Units	Sample Type
Annually	Flow-Weighted EC	µmhos/cm	Computed average
Once every three years	General Minerals	mg/L	Computed average

SLUDGE MONITORING

Sludge shall be sampled for the following constituents:

Arsenic	Copper	Nickel
Cadmium	Lead	Selenium
Molybdenum	Mercury	Zinc

Monitoring shall be conducted: using the methods in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” (SW-846), as required in Title 40 of the Code of Federal Regulations (40 CFR), Part 503.8(b)(4). The constituents listed above shall be monitored at the following frequency, depending on volume generated:

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

The Discharger needs to comply with Title 40 CFR, Part 503 and demonstrate that the facility where sludge is hauled to also complies with these regulations.

INDUSTRIAL PRETREATMENT PROGRAM MONITORING

The Discharger shall submit an annual report to the Regional Water Board, with copies to the EPA Regional Administrator and the State Water Resources Control Board, describing the Discharger's pretreatment activities over the previous 12 months. In the event that the Discharger is not in compliance with any conditions or requirements of this Order, the Discharger shall include the reasons for noncompliance and state how and when the Discharger shall comply with such conditions and requirements. This annual report shall be submitted by **28 February** and shall contain, but not limited to items E.7.a through E.7.j of Standard Provisions dated 1 March 1991 (Standard Provisions).

In addition to the information required in the annual report, the Discharger shall report quarterly the information in E.7.d (1) through (7) of Standard Provisions. Quarterly reports shall also describe progress towards compliance with audit or pretreatment compliance inspection requirements. Quarterly reports shall be submitted by **1st day of the second month following the end of each quarter**. The fourth quarterly report may be included as part of the annual report. If none of the aforementioned conditions exists, at a minimum, the Discharger must submit a letter certifying that all industries are in compliance and no violations or changes to the pretreatment program have occurred during the quarter.

REPORTING

All monitoring results shall be reported in **Quarterly Monitoring Reports** which are due by the first day of the second month after the calendar quarter. Therefore, monitoring reports are due as follows:

First Quarter Monitoring Report:	**1 May**
Second Quarter Monitoring Report:	**1 August**
Third Quarter Monitoring Report:	**1 November**
Fourth Quarter Monitoring Report:	**1 February**

A transmittal letter shall accompany each monitoring report. The transmittal letter shall discuss any violations that occurred during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions or a time schedule for implementing the corrective actions, reference to the previous correspondence is satisfactory.

All monitoring reports and other correspondence 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 50MB or larger should be transferred to a disk and mailed to the Central Valley Water Board office at

1685 E Street, Fresno, CA 93706. To ensure that your submittals are routed to the appropriate staff, the following information block should be included in any email used to transmit documents to this office:

Program: Non-15,
Place ID: 273131,
Facility Name: Reedley WWTF
Order: R5-2010-0120

In reporting 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 that illustrates clearly, whether the Discharger complies with waste discharge requirements.

In addition to the details specified in Standard Provision C.3, 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.

Laboratory analysis reports need to be included in the monitoring reports. In addition, the laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3.

All monitoring reports shall comply with the signatory requirements in Standard Provision B.3. Monitoring data or discussions submitted concerning WWTF performance must also be signed and certified by the chief plant operator. If the chief plant operator is not in direct line of supervision of the laboratory function for a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

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. All Quarterly Monitoring Reports shall include the following:

Wastewater reporting

1. The results of influent, effluent, and percolation pond monitoring.

2. For each month of the quarter, calculation of the maximum daily flow and the monthly average flow.

3. For each month of the quarter, calculation of the 12-month rolling average EC of the discharge using the EC values recorded for that month averaged with the monthly average EC values for the previous 11 months.

4. For each month of the quarter, calculation of the monthly average effluent BOD and TSS concentrations, and calculation of the percent removal of BOD and TSS compared to the influent.

5. A summary of the notations made in the percolation pond monitoring log during each quarter. Copies of log pages covering the quarterly reporting period shall not be submitted unless requested by Central Valley Water Board staff.

Groundwater reporting

1. The results of groundwater monitoring.

2. For each monitoring well, a table showing constituent concentrations for at least five previous years, up through the current quarter.

3. A groundwater contour map based on groundwater elevations for that quarter. The map shall show the gradient and direction of groundwater flow under/around the facility and/or effluent disposal area(s). The map shall also include the locations of monitoring wells and wastewater discharge areas.

Source water reporting

1. The results of source water monitoring.

2. For each month of the quarter, calculation of the flow-weighted 12-month rolling average EC of the source water using monthly flow data and the source water EC values for the most recent four quarters.

B. Fourth Quarter Monitoring Reports, in addition to the above, shall include the following:

Wastewater treatment facility information

1. The names, certificate grades, and general responsibilities of all persons in charge of wastewater treatment and disposal.

2. The names and telephone numbers of persons to contact regarding the WWTF for emergency and routine situations.

3. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4).

4. A statement whether the current operation and maintenance manual, sampling plan, and contingency plan, reflect the WWTF as currently constructed and operated, and the dates when these documents were last reviewed for adequacy.

5. The results of an annual evaluation conducted pursuant to Standard Provision E.4 and a figure depicting monthly average discharge flow for the previous five calendar years.

6. A summary of percolation pond maintenance operations during the calendar year. The summary should identify the percolation ponds that were in service during the calendar year and percolation ponds that were taken out of service for maintenance.

7. Identification of the available percolation pond capacity on or about 1 October and a statement certifying that the available capacity was sufficient to comply with Discharge Specification C.5.

Solids/Sludge monitoring

1. Annual production totals in dry tons or cubic yards.

2. A description of disposal methods, including the following information related to the disposal methods used. If more than one method is used, include the percentage disposed of by each method.
   a. For landfill disposal, include: the name and location of the landfill, and the Order number of WDRs that regulate it.
   b. For land application, include: the location of the site, and the Order number of any WDRs that regulate it.
   c. For incineration, include: the name and location of the site where incineration occurs, the Order number of WDRs that regulate the site, the disposal method of ash, and the name and location of the facility receiving ash (if applicable).
   d. For composting, include: the location of the site, and the Order number of any WDRs that regulate it.

The Discharger shall implement the above monitoring program on the first day of the month following its issuance.

Ordered by: *Original Signed by W. Dale Harvey for:*
PATRICK PULUPA, Executive Officer

8/11/2023
(Date)

Attachments: Glossary
Table 1

GLOSSARY

BOD_5	Five-day biochemical oxygen demand
CBOD	Carbonaceous BOD
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
NTU	Nephelometric turbidity unit
TKN	Total Kjeldahl nitrogen
TDS	Total dissolved solids
TSS	Total suspended solids
Continuous	The specified parameter shall be measured by a meter continuously.
24-Hour Composite	Samples shall be a flow-proportioned composite consisting of at least eight aliquots.
Daily	Samples shall be collected at least every day.
Twice Weekly	Samples shall be collected at least twice per week on non-consecutive days.
Weekly	Samples shall be collected at least once per week.
Twice Monthly	Samples shall be collected at least twice per month during non-consecutive weeks.
Monthly	Samples shall be collected at least once per month.
Bimonthly	Samples shall be collected at least once every two months (i.e., six times per year) during non-consecutive months.
Quarterly	Samples shall be collected at least once per calendar quarter. Unless otherwise specified or approved, samples shall be collected in January, April, July, and October.
Semiannually	Samples shall be collected at least once every six months (i.e., two times per year). Unless otherwise specified or approved, samples shall be collected in April and October.
Annually	Samples shall be collected at least once per year. Unless otherwise specified or approved, samples shall be collected in October.
mg/L	Milligrams per liter
mL/L	milliliters [of solids] per liter
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
mgd	Million gallons per day

MPN/100 mL	Most probable number [of organisms] per 100 milliliters
General Minerals	Analysis for General Minerals shall include at least the following:

Alkalinity	Chloride	Sodium
Bicarbonate	Hardness	Sulfate
Calcium	Magnesium	TDS
Carbonate	Potassium	

General Minerals analyses shall be accompanied by documentation of cation/anion balance.

Table 1. Priority Pollutant Scan

Inorganics[1]	***Organics***		
Antimony	Acrolein	1,1,1-Trichloroethane	Bis(2-chloroethyl) ether
Arsenic	Acrylonitrile	1,1,2-Trichloroethane	Bis(2-chloroisopropyl) ether
Beryllium	Benzene	Trichloroethylene (TCE)	Bis(2-Ethylhexyl)phthalate
Cadmium	Bromoform	Vinyl chloride	4-Bromophenyl phenyl ether
Chromium (III)	Carbon tetrachloride	2-Chlorophenol	Butylbenzyl Phthalate
Chromium (VI)	Chlorobenzene	2,4-Dichlorophenol	2-Chloronaphthalene
Copper	Chlorodibromomethane	2,4-Dimethylphenol	4-Chlorophenyl Phenyl Ether
Lead	Chloroethane	2-Methyl-4,6-Dinitrophenol	Chrysene
Mercury	2-Chloroethylvinyl Ether	2,4-Dinitrophenol	Dibenzo(a,h)Anthracene
Nickel	Chloroform	2-Nitrophenol	1,2-Dichlorobenzene
Selenium	Dichlorobromomethane	4-Nitrophenol	1,3-Dichlorobenzene
Silver	1,1-Dichloroethane	3-Methyl-4-Chlorophenol	1,4-Dichlorobenzene
Thallium	1,2-Dichloroethane	Pentachlorophenol	3,3'-Dichlorobenzidine
Zinc	1,1-Dichloroethylene	Phenol	Diethyl phthalate
Cyanide	1,2-Dichloropropane	2,4,6-Trichlorophenol	Dimethyl phthalate
Asbestos	1,3-Dichloropropylene	Acenaphthene	Di-n-Butyl Phthalate
	Ethylbenzene	Acenaphthylene	2,4-Dinitrotoluene
Dioxin Congeners	Methyl Bromide	Anthracene	2,6-Dinitrotoluene
2,3,7,8-TCDD	Methyl Chloride	Benzidine	Di-n-Octyl Phthalate
	Methylene Chloride	Benzo(a)Anthracene	1,2-Diphenylhydrazine
	1,1,2,2-Tetrachloroethane	Benzo(a)pyrene	Fluoranthene
	Tetrachloroethylene (PCE)	Benzo(b)fluoranthene	Fluorene
	Toluene	Benzo(g,h,i)perylene	Hexachlorobenzene
	1,2-Trans-Dichloroethylene	Benzo(k)fluoranthene	Hexachlorobutadiene
		Bis(2-chloroethoxy) methane	Hexachlorocyclopentadiene

Organics (Cont.)	Phenanthrene	delta-BHC	Endrin
Hexachloroethane	Pyrene	Chlordane	Endrin Aldehyde
Indeno(1,2,3-c,d)pyrene	1,2,4-Trichlorobenzene	4,4'-DDT	Heptachlor
Isophorone		4,4'-DDE	Heptachlor epoxide
Naphthalene	***Pesticides***	4,4'-DDD	Polychlorinated biphenyls
Nitrobenzene	Aldrin	Dieldrin	Toxaphene
N-Nitrosodimethylamine	alpha-BHC	alpha-Endosulfan	
N-Nitrosodi-n-Propylamine	beta-BHC	beta-Endosulfan	
N-Nitrosodiphenylamine	gamma-BHC (Lindane)	Endosulfan Sulfate	

[1] With the exception of wastewater samples, samples placed in an acid-preserved bottle for metals analysis must first be filtered. If filtering in the field is not feasible, samples shall be collected in unpreserved containers and submitted to the laboratory within 24 hours with a request (on the chain of custody form) to immediately filter then preserve the sample.