

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2013-XXXX
NPDES PERMIT CA0083500

MONITORING AND REPORTING PROGRAM
FOR
FRESNO METROPOLITAN FLOOD CONTROL DISTRICT, CITY OF FRESNO, CITY
OF CLOVIS, COUNTY OF FRESNO, AND
CALIFORNIA STATE UNIVERSITY FRESNO
STORM WATER DISCHARGES FROM
MUNICIPAL SEPARATE STORM SEWER SYSTEM
FRESNO COUNTY

I. **MONITORING AND REPORTING PROGRAM REQUIREMENTS**

This Monitoring and Reporting Program (MRP) is issued pursuant to Water Code Sections 13267.

The Permittees (Fresno Metropolitan Flood Control District (District), the City of Fresno, City of Clovis, and the County of Fresno urbanized areas, and California State University Fresno (CSUF)) shall not implement any changes to this MRP unless and until the Regional Water Board or Executive Officer issues a revised MRP. Attachment A shows the Fresno Urbanized Areas which are covered under this Order. To save time and money, and avoid duplication of efforts, the Permittees shall coordinate their monitoring program with local, state, and federal agencies whenever possible.

- A. **Annual Work Plan:** By **1 September of each year**, the Permittees shall submit an Annual Work Plan with the Annual Report that supports the development, implementation, and effectiveness of the approved Storm Water Quality Management Plan (SWQMP) and Waste Discharge Requirements Order R5-2013-XXXX.
- B. **Annual Report:** The Permittees shall submit, in both electronic and paper formats and no later than **1 September of each year** of each year, an Annual Report documenting the progress of the Permittees' implementation of the SWQMP and the requirements of Order No. R5-2013-XXXX. The Annual Report shall cover each fiscal year from **1 July through 30 June**. The status of compliance with permit requirements including implementation dates for all time-specific deadlines shall be described for each program area. If permit deadlines are not met, the Permittees shall report the reasons why the deadlines were not met and how they will be met in the future, including projected implementation dates. A comparison of program implementation results to performance standards established in the SWQMP and WDRs

Order R5-2013-XXXX shall be included for each program area. Specific requirements that must be addressed in the Annual Reports are listed below.

1. An Executive Summary discussing the effectiveness of the SWQMP to reduce storm water pollution to the MEP and to achieve compliance with water quality objectives in receiving waters;.
2. A Summary of activities conducted by the Permittees;
3. Identification of BMPs and a discussion of their effectiveness at reducing urban runoff pollutants; and
4. A Summary of the monitoring data and an assessment of each component of the MRP. To comply with Provisions C.1 and C.2 of WDRs Order R5-2013-XXXX the Permittees, shall compare receiving water and discharge data with applicable water quality standards. The lowest applicable standard from the Basin Plan, California Toxics Rule (CTR), and California Title 22 (Title 22), and constituent specific concentrations limits (e.g., mercury) shall be used for comparison. When the data indicate that discharges are causing or contributing to exceedances of applicable water quality standards or constituent specific concentrations limits, the Permittees shall prepare a Report of Water Quality Exceedance and identify potential sources of the problems, and recommend future monitoring and BMP implementation measures to identify and address the sources.
5. Raw data are required to be submitted in electronic format.
6. For each monitoring program requirement the Annual Reports shall include the following results and information:
 - a. All physical, chemical and biological data collected in the assessment;
 - b. All graphs, charts, statistical analysis, modeling, and any other analytical analyses in support of the Permittees' evaluation of the data and conclusions derived from that analysis; and
 - c. Documentation of quality assurance and control procedures (QA/QC).
7. An effectiveness assessment for each program element, as defined in the SWQMP, shall be conducted annually, shall be built upon each consecutive year, and shall identify any necessary modifications. The

SWQMP shall describe, in detail, the performance standards or goals to use to gauge the effectiveness of the storm water management program. The primary questions that must be assessed for each program element include the following:

- a. Level 1 Outcome: Was the Program Element implemented in accordance with the Permit Provisions, SWQMP Control Measures and Performance Standards?
 - b. Level 2 Outcome: Did the Program Element raise the target audience's awareness of an issue?
 - c. Level 3 Outcome: Did the Program Element change a target audience's behavior, resulting in the implementation of recommended BMPs?
 - d. Level 4 Outcome: Did the Program Element reduce the load of pollutants from the sources to the storm drain system?
 - e. Level 5 Outcome: Did the Program Element enhance or change the urban runoff and discharge quality?
 - f. Level 6 Outcome: Did the Program Element enhance or change receiving water quality?
8. A summary of any Reports of Water Quality Exceedance (RWQEs) that have been completed during the year, and a status update for those in progress. The summary shall include the conclusions and recommendations of completed RWQEs and the status of any additional BMP implementation pursuant to RWQEs;
 9. Pursuant to 40 CFR 122.42(c)(7), the Permittees shall identify water quality improvements in, or degradation of, urban storm water;
 10. An estimate of the amount of pollutant removal provided by the regional storm water management basin system.
 11. For each monitoring component, photographs and maps of all monitoring station locations and descriptions of each location; and
 12. Recommendations to improve the monitoring program, BMPs, Performance Standards, and the SWQMP to address potential receiving

water quality exceedances and potential pollutant sources, and to meet the MEP standard.

- C. Provide operating data from all FMFCD pump stations as an appendix in electronic format only to assist in calculating flow volumes, as applicable, or provide an equivalent means to calculate annual discharge flow volumes.
- D. **Certification:** All work plans and reports submitted to the Regional Water Board shall be signed and certified pursuant to federal regulations at 40 CFR 122.41 (k). Each report shall contain the following completed declaration:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility, of a fine and imprisonment for knowing violations.

Executed on the ___ day of, 201___, at _____.

(Signature)_____ (Title)_____";

The Permittees shall mail the original of each annual report to:

CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD – CENTRAL VALLEY REGION
1685 "E" Street, Suite 100
Fresno, CA 93706-2007

A copy of the annual report shall also be mailed to:

REGIONAL ADMINISTRATOR
ENVIRONMENTAL PROTECTION AGENCY
REGION 9
75 Hawthorne Street
San Francisco, CA 94105

II. **MONITORING PROGRAM**

The primary objectives of the Monitoring Program shall include, but not be limited to:

- Assessing compliance with this WDRs Order R5-2013-XXXX;
- Measuring and improving the effectiveness of the SWQMP;
- Assessing the chemical, physical, and biological impacts on receiving waters resulting from urban runoff;
- Identifying sources of pollutants; and
- Assessing the overall health and evaluating long-term trends in receiving water quality.

Ultimately, the results of the monitoring requirements outlined below shall be used to refine the SWQMP to reduce pollutant loadings and protect and enhance the beneficial uses of the receiving waters in the Fresno Urbanized Area. The Monitoring Program consists of the following elements:

- Baseline Monitoring
 - Receiving Water Monitoring
- Special Studies
 - Canal Monitoring

The Permittees shall implement the Monitoring Program as follows:

Baseline Monitoring

A. Sampling Protocol

1. Samples from each receiving water and canal monitoring station described below shall be collected and analyzed following standard U.S. Environmental Protection Agency (U.S. EPA) protocol (40 CFR Part 136).

2. If a constituent is not detected at or above the method detection limit for its respective test method, as shown in Table 1, in the last 12 consecutive sampling events. The Permittees shall conduct confirmation sampling in the fourth year of the Permit for non-detected constituents during the first storm event monitored at each station.
3. Grab samples shall be used for receiving water monitoring.
4. The Permittees shall collect flow data at the time of sampling for all monitoring stations sampled during a given year. Receiving water or urban discharge flow may be estimated using U.S. EPA methods¹ at sites where flow measurement devices are not in place.

B. Receiving Water Monitoring

1. The Discharger shall continue to implement receiving water monitoring in accordance with the *Fresno-Clovis Metropolitan Storm Water Quality Management Program: Receiving Water Monitoring Plan* (6 January 1995) until it is updated and the update approved by the **Executive Officer**. The Permittee's are no longer required to monitor the receiving water for organochlorine pesticides, organophosphate pesticides and chlorinated herbicides. Additionally, the Permittees shall monitor each receiving water location for the following:

- Total Recoverable Mercury
- Total Recoverable and Dissolved Metals (As, Cd, Cr, Cu, Pb, Ni, Se, Ag, Zn)
- Ammonia
- Oil & Grease
- Total & Fecal Coliform
- E. coli and/or enterococcus²
- Cations (Al, Ba, B, K, Na)
- Chemical Oxygen Demand
- Anions (Chloride, Nitrate, Nitrite, Sulfate, Phosphate)
- Total phosphorus
- Hardness

¹ NPDES Storm Water Sampling Guidance Document, U.S. EPA 833-B-92-001, July 1992

² Monitoring of E. coli and/or enterococcus shall begin following the update by the State Water Resources Control Board of its indicator bacteria water quality objectives, in accordance with any implementation schedule adopted with the update. If the update contains no implementation schedule, monitoring of E. coli and or enterococcus shall begin within 30 days of the final approval of the update.

- Total Kjeldahl Nitrogen
 - Total Dissolved Solids
 - Total Organic Carbon
 - Dissolved Organic Carbon
 - Total Suspended Solids
 - Polynuclear Aromatic Hydrocarbons
2. River monitoring sample stations shall be those described in *Standard Operating Procedures for the Fresno-Clovis Storm Water Quality Monitoring Program: River Monitoring* (Larry Walker Associates, 2011) until updated as described below.
3. The Permittees shall append the current monitoring database to include at minimum:
- a. Date of Sample (specify “first-flush”)
 - b. Constituent Name
 - c. Minimum Limit
 - d. Method Detection Limit
 - e. Unit of Measure
 - f. Test Method
 - g. Water Quality Objective
 - h. Water Quality Objective source and reference (e.g. CA Primary MCL, California Toxics Rule, Basin Plan, etc.)
 - i. Water Quality Objective Exceedance (Y/N)
 - j. Sampling Station ID No.

By (120 days of the adoption of this MRP), the Discharger shall submit an update to the *Fresno-Clovis Metropolitan Storm Water Quality Management Program: Receiving Water Monitoring Plan* (Larry Walerk Associates, 1995) and the *Standard Operating Procedures for the Fresno-Clovis Storm Water Quality Monitoring Program: River Monitoring* (Larry Walker Associates, 2011) to assess changes that have occurred in the field of storm water monitoring and national policy and to reflect the above changes.

III. SPECIAL STUDIES

Canal Monitoring

By (120 days of the adoption of this MRP), the Discharger shall submit an update of the *Fresno-Clovis Metropolitan Storm Water Quality Management Program: Receiving Water Monitoring Plan* that includes a plan for characterizing the discharges of

pollutants discharge into the San Joaquin River via the Herndon Canal. This plan shall include, at a minimum, two monitoring locations: one at the point where the canal waters enter the NPDES permit area and one at least 100 feet downstream of the NPDES permit area on the Herndon Canal prior to discharge into the San Joaquin River. Further the plan shall include a minimum of, if flow conditions exist, two annual wet weather sampling events for the first four years of the permit term at each monitoring location for the same pollutants which are currently sampled in the receiving water per II.C above and flow.

IV. STANDARD MONITORING PROVISIONS

All monitoring activities shall meet the following requirements:

A. Monitoring and Records [40 CFR 122.41(j)(1)]

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

B. Monitoring and Records [40 CFR 122.41(j)(2)] [California Water Code §13383(a)]

The Permittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge and application for this Order, for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Water Board or U.S. EPA at any time and shall be extended during the course of any unresolved litigation regarding this discharge.

C. Monitoring and Records [40 CFR 122.41(j)(3)]. Records of monitoring information shall include:

1. Date, location, and time of sampling or measurements;
2. Individual(s) who performed the sampling or measurements;
3. Date analyses were performed;
4. Individual(s) who performed the analyses;
5. The analytical techniques or methods used; and
6. Results of such analyses.

D. Monitoring and Records [40 CFR 122.41(j)(4)]

All sampling, sample preservation, and analyses must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this Order.

E. Monitoring and Records [40 CFR 122.41(j)(5)]

The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by both.

F. All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by an appropriate governmental regulatory agency.

G. For priority toxic pollutants that are identified in the CTR (65 Fed. Reg. 31682), the MLs published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California 2005 (SIP) shall be used for all analyses, unless otherwise specified. Appendix 4 of the SIP is included as Table 1. For pollutants not contained in Appendix 4 of the SIP, the test method and method detection limit (MDL) listed in Table 1 shall be used for all analyses, and the ML for these parameters shall be lower than or equal to the lowest applicable water quality criteria from the Basin Plan and/or the SIP.

H. The Annual Monitoring Report shall specify the analytical method used, the MDL and the ML for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported with one of the following methods, as appropriate:

1. An actual numerical value for sample results greater than or equal to the ML;
2. "Not-detected (ND)" for sample results less than the laboratory's MDL with the MDL indicated for the analytical method used; or

3. "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML. The estimated chemical concentration of the sample shall also be reported. This is the concentration that results from the confirmed detection of the substance by the analytical method below the ML value.
 4. For priority toxic pollutants, if the Permittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the SIP. The Permittee must submit documentation from the laboratory to the Central Valley Water Board Executive Officer for approval prior to raising the ML for any constituent.
- I. Monitoring Reports [40 CFR 122.41(l)(4)(ii)]

If the Permittees monitor any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Annual Report.
 - J. Monitoring Reports [40 CFR 122.41(l)(4)(iii)]

Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order.
 - K. If no flow occurred during the reporting period, the Monitoring Report shall so state.
 - L. The Executive Officer or the Central Valley Water Board, consistent with 40 CFR 122.41, may approve changes to the Monitoring Program, after providing the opportunity for public comment, either:
 1. By petition of the Permittees or by petition of interested parties after the submittal of the Annual Report. Such petition shall be filed not later than 60 days after the Annual Report submittal date, or
 2. As deemed necessary by the Executive Officer following notice to the Permittees.

Ordered by _____

PAMELA C. CREEDON, Executive Officer

Date

Attachment: Table 1

TABLE 1
LIST OF CONSTITUENTS AND THEIR ANALYTICAL LIMITS
ORDER R5-2013-XXXX
Fresno Metropolitan Flood Control District, Fresno County, Cities Of Fresno And
Clovis, And California State University Fresno
Municipal Separate Storm Sewer System

CONSTITUENTS	RLs ¹
CONVENTIONAL POLLUTANTS	mg/L
Oil and Grease	5
pH	0 - 14
Dissolved Oxygen	Sensitivity to 5 mg/L
FIELD MEASUREMENTS	
Date	mm/dd/yyyy
Sample Time	hr:min (regular time)
Weather	degrees F
Water Temperature	degrees C
BACTERIA	
Fecal coliform	<20 mpn/100ml
Total coliform	<20 mpn/100ml
GENERAL	mg/L
Turbidity	0.1 NTU
Total Suspended Solids	2
Total Dissolved Solids	2
Total Organic Carbon	1
Biochemical Oxygen Demand	2
Chemical Oxygen Demand	20-900
Total Kjeldahl Nitrogen	0.1
Alkalinity	2
Total Ammonia as Nitrogen	0.1

¹ For Priority Pollutants, the Reporting Levels (RLs) shall be equal to or less than the most stringent applicable criterion. If the lowest Minimum Level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP) is not below the most stringent applicable criterion, the RL shall be equal to the lowest ML.

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 FRESNO METROPOLITAN FLOOD CONTROL DISTRICT, FRESNO COUNTY, CITIES OF
 FRESNO AND CLOVIS, AND CALIFORNIA STATE UNIVERSITY FRESNO
 MUNICIPAL SEPARATE STORM SEWER SYSTEM
 FRESNO COUNTY

Nitrate-Nitrite as Nitrogen	0.1
Total Phosphorus	0.05
Specific Conductance	1 umho/cm
Total Hardness	2
METALS	µg/L
Arsenic	2
Aluminum, Dissolved	50
Aluminum, Total	50
Cadmium	0.25
Chromium	0.5
Copper, Dissolved	0.5
Copper, Total	0.5
Iron, Total	100
Lead, Dissolved	0.5
Lead, Total	0.5
Mercury	0.5 ng/L
Nickel	1
Selenium	2
Zinc	1