




# Fresno Metropolitan Flood Control District

*Capturing Stormwater since 1956*



## Fresno-Clovis Storm Water Quality Management Program FY 2019-20 Annual Report





# Fresno Metropolitan Flood Control District

*Capturing Stormwater Since 1956*

September 23, 2020

File 510.1816

Mr. Matt Scroggins  
Regional Water Quality Control Board  
Central Valley Region  
1685 E. Street  
Fresno, CA 93706-2020

Dear Mr. Scroggins,

**NPDES Permit No. CAS0085324, Order No. R5-2016-0040  
Annual Report - Fiscal Year 2019-20**

The attached Fresno-Clovis Stormwater Quality Management Program (SWQMP) Annual Report demonstrates the Co-Permittees compliance with the National Pollutant Discharge Elimination System Municipal Stormwater Permit, from July 1, 2019 through June 30, 2020.

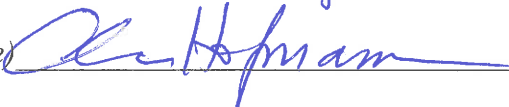
**Certification**

This Annual Report provides an assessment of the Co-Permittees compliance with the letter and intent of the Fresno-Clovis area NPDES municipal stormwater permit. No incidents of non-compliance have been identified to or by any of the Co-Permittees. Each agency has included a signed certification that the Annual Report information submitted on its behalf is true and complete.

*"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 21 day of September 2020, at Fresno, CA,

(Signature)  (Title) General Manager-Secretary

AH/PCM/eh  
Attachment(s)

c: Brian Russell – City of Fresno  
Paul Armendariz – City of Clovis  
Martin Querin – County of Fresno  
Lisa Kao – CSUF







Public Works

Department

Street Maintenance Division  
2101 "G" Street, Bldg E  
Fresno, CA 93706-1620  
Telephone 559-621-1492

September 25, 2020

Mr. Matt Scroggins  
Regional Water Quality Control Board  
Central Valley Region  
1685 E. Street  
Fresno, CA 93706-2020

Dear Mr. Scroggins:

Subject: NPDES Permit No. CAS0085324, Order No. R5-2016-0040, Annual Report -  
Fiscal Year 2019-20

Certification

I certify under the 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 fine and imprisonment for knowing violations.

By: \_\_\_\_\_

A handwritten signature in blue ink, appearing to read "Brian Russell", written over a horizontal line.

Date: 9-25-20

Name: Brian Russell  
Title: Public Works Manager  
Agency: City of Fresno





# CITY *of* CLOVIS

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## PUBLIC UTILITIES

155 N. Sunnyside Avenue, Clovis, CA 93611 (559) 324-2600

September 23, 2020

Mr. Matt Scroggins  
Regional Water Quality Control Board  
Central Valley Region  
1685 E. Street  
Fresno, CA 93706-2020

Dear Mr. Scroggins:

Subject: NPDES Permit No. CAS0085324, Order No. R5-2016-0040, Annual  
Report - Fiscal Year 2019-20

### Certification

I certify under the 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 fine and imprisonment for knowing violations.

By: \_\_\_\_\_ Date: September 23, 2020

Name: Paul Armendariz  
Title: Assistant Public Utilities Director  
Agency: City of Clovis





# County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING  
STEVEN E. WHITE, DIRECTOR

September 23, 2020


Mr. Matt Scroggins  
Regional Water Quality Control Board  
Central Valley Region  
1685 E. Street  
Fresno, CA 93706-2020

Dear Mr. Scroggins:

Subject: NPDES Permit No. CAS0085324, Order No. R5-2016-0040, Annual Report  
- Fiscal Year 2019-20

## CERTIFICATION

I certify under the 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 fine and imprisonment for knowing violations.

By: 

Date: 9-22-2020

Name: Martin Querin  
Title: Division Manager  
Agency: County of Fresno







Discovery. Diversity. Distinction.

September 23, 2020

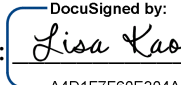
Mr. Matt Scroggins  
Regional Water Quality Control Board  
Central Valley Region  
1685 E. Street  
Fresno, CA 93706-2020

Dear Mr. Scroggins:

Subject: NPDES Permit No. CAS0085324, Order No. R5-2016-0040,  
Annual Report - Fiscal Year 2019-20

Certification

I certify under the 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 fine and imprisonment for knowing violations.

By: \_\_\_\_\_  
A4D1F7F60E304A5...

Date: 9/23/2020

Name: Lisa Kao  
Title: Associate Director  
Office of Environmental Health and Safety and Risk Management  
Agency: California State University Fresno



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## List of Attachments (Submitted Electronically)

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### **Program Management**

PM 1.1 SWQMP Program Coordinating Committee Agenda  
PM 1.2 Table of Internal Meeting and Trainings  
PM 1.3 Table of Statewide Meetings and Workshops  
PM 1.5 Co-Permittee BMP Assignments  
PM 1.6 Master Training List and Schedule  
PM 2.3 Statement of Legal Authority

### **Construction Program**

CON 1.1 Inventory of Construction Sites (FY 2019-2020)  
CON 2.1 Receiving Water Proximity by Drainage Area  
CON 2.3 Construction Site Prioritization Method  
CON 3.1 Single Lot Grading Plan Checklist  
CON 3.2 Construction and Development Committee Agendas and Minutes  
CON 3.3 Erosion and Sediment Control Plan Checklists  
CON 4.1 New Construction Site Guidelines and Inspection Form  
CON 4.5 FMFCD Inspection Activities and Tracking  
CON 5.2 FMFCD Progressive Enforcement Response Plan

### **Industrial and Commercial Program**

IC 1.2 Environmental Inspection Log  
IC 1.3 Co-Permittee Inspections  
IC 2.1 Industrial Sites Prioritization Method  
IC 3.1 Model Facility Pollution Prevention Plan  
IC 4.1 Revised Industrial Fact Sheet  
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IC 4.3 Inspections  
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IC 4.5 Industrial Inspection Database  
IIC 4.5 Maintain Tracking System

### **Municipal Operations Program**

MUN 1.2 Install Inspect and Maintain Basin Inlet Markings  
MUN 2.1 2019 Basin Sediment Maintenance Assessment Annual Report  
MUN 2.2 Summary of System Components Cleaned in FY 2019-20  
MUN 2.3 List of Capital Projects Completed in FY 2019-20  
MUN 4.2 Checklist of Storage Use and Disposal of Pesticides Herbicides Fertilizers

MUN 4.4 Non-Emergency Fire Fighting Flows Fact Sheet  
MUN 4.5 County and City of Fresno Activities Reports  
MUN 5.2 Municipal Parking Facilities Inventory and Maintenance Records FY 2019-20  
MUN 6.1 SSO Public Report Summary City of Fresno and Clovis  
MUN 7.3 Permittee Projects with Coverage Under Construction General Permit

#### **Illicit Connection and Discharge Control Program**

ID 1.3 ID 1.3 2019-2020 PPEC Meeting Agendas  
ID 2.2 Implement Procedures for the Investigation of Illicit Connections and Discharges  
ID 2.3 FMFCD Illegal Discharge Complaint Investigation FY 2019-20

#### **Public Involvement and Education**

PIE 1.1 Public Involvement and Education 5 Year Strategic Implementation Plan, February 2014  
PIE 2.1 City of Fresno Attachment  
PIE 2.1 County of Fresno Attachment  
PIE 2.1 Partners for a Clean Community Committee Minutes 8.22.2019  
PIE 2.2 Fresno State Recycling Poster  
PIE 3.2 2020 Awarded Clean Stormwater Grants  
PIE 4.1 Updated Brochures and Fact Sheets  
PIE 4.2 Outreach Event Inventory  
PIE 4.3 Media Summary 2020  
PIE 4.5 Master Gardeners Activities  
PIE 4.6 2019 Public Awareness Survey  
PIE 5.2 Clean Storm Water Activity Book (Spanish)  
PIE 7.2 Industrial General Permit Factsheet Handout

#### **Planning and Land Development Program**

PLD 1.1 FMFCD Post-Development Standards Technical Manual  
PLD 1.2 FMFCD Master Plan Wall Map  
PLD 1.3 Basin Hydrology Study – Draft – January 2016  
PLD 2.3 Projects Evaluated for Post-Development Standards  
PLD 2.4 Post Development Agreement Sample Template  
PLD 2.5 Post Construction BMPs Inventory  
PLD 3.1 CEQA Review Guidance  
PLD 4.2 Post Development Standards Technical Manual Factsheet Updated 2019

**Monitoring Program**

MON 1.1 Receiving Water Monitoring Plan and Standard Operating Procedures River Monitoring

MON 2.1 Annual Monitoring Report FY 2019-20

MON 2.2 Fresno River Data 1996 – 2020

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## Executive Summary

The Fresno-Clovis Stormwater Quality Management Program (SWQMP) Annual Report demonstrates the Co-Permittees' compliance with the National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system (MS4) municipal stormwater permit (CA0085324) from July 1, 2019 through June 30, 2020. The Fresno Metropolitan Flood Control District (FMFCD) is the lead permit agency, and Co-Permittees are the Cities of Fresno and Clovis, the County of Fresno, and California State University, Fresno (CSUF).

The report is organized by the eight major program elements:

1. Program Management
2. Construction Program
3. Industrial and Commercial Program
4. Municipal Operations Program
5. Illicit Connection and Discharge Control Program
6. Public Involvement and Education
7. Planning and Land Development Program
8. Monitoring Program

At the beginning of each program element section, the individuals responsible for SWQMP implementation in each Co-Permittee agency are identified. Each section also includes highlights from the year and a table listing the Control Measures and Performance Standards, the Annual Report Progress, the Annual Work Plan, the Supporting Documents and the December 2013 Stormwater Quality Management Plan (SWQMP) reference pages. The annual stormwater quality monitoring report is attached as an electronic file. The Long Term Effectiveness Assessment Annual Report is located at the end of this report.

FMFCD and the other Co-Permittees coordinate stormwater management program tasks to effectively and efficiently use existing resources and, as needed, create new programs to reduce or eliminate stormwater pollutants and runoff. This includes combining similar public and technical outreach messages, community events and presentations, multi-agency training and inspections, complaint referrals, development planning and review, and program evaluation.

FMFCD continues to perform long-term monitoring on the San Joaquin River upstream and downstream of urban influence. Overall, this reach of the San Joaquin River has few detected concentrations of pesticides and organic constituents, and in cases of detections, the concentrations are most frequently below relevant water quality objectives. In some wet weather conditions, dissolved copper, dissolved lead, and polycyclic aromatic hydrocarbons do show increases downstream, but the frequency of water quality objective exceedance is low and would likely not impair beneficial uses. While increases in



upstream to downstream concentrations may be contributed to by urban runoff, the limited period and volume of outflow from FMFCDs regional basins significantly limits impacts. On average, FMFCD's regional stormwater basin system captures 92% of annual rainfall, of which, 70-85% percent of the captured stormwater runoff is recharged into the local groundwater aquifer. The stormwater basins also remove 50-80 % of the typical stormwater pollutants.

The Permittees jointly prepare an annual fiscal analysis identifying the expenditures made during the Annual Report reporting period and projected the planned future expenditures for FY 2019-20. The analysis included a summary that identifies the stormwater budget for both the previous year and estimated expenditures for the upcoming year using estimated budget figures for each program element. The Permittees have secured the resources necessary to meet the requirements of this Order.

The Long Term Effectiveness Assessment Strategy (LTEA Strategy) was developed pursuant to the municipal NPDES stormwater permit (MS4 Permit) issued on May 31, 2013. The LTEA Strategy outlines the approach for assessing the effectiveness of the stormwater program year to year.

## Program Management

The following table lists agency contacts for the Program Management Section of the Stormwater Quality Management Program.

Agency	Prepared by	Contact Person	Phone #	Manager
FMFCD	Jared Shuman	Jared Shuman	456-3292	Alan Hofmann
City of Clovis	Paul Armendariz	Paul Armendariz	324-2649	Mike Harrison
City of Fresno	Brian Russell	Brian Russell	621-1309	Scott Mozier
County of Fresno	John Thompson	Martin Querin	600-4267	John Thompson
CSU Fresno	Lisa Kao	Lisa Kao	278-6910	Steve Martinez

### Introduction

The Permittees are responsible for implementing the SWQMP with FMFCD being the primary agency responsible for enforcing the Ordinance within FMFCD's service area. The Program Management element includes program coordination among the Co-Permittees, legal authority to implement a municipal stormwater management program, reporting and fiscal analysis.

Each year, typically on September 1<sup>st</sup>, the Permittees are required to submit an Annual Work Plan and Annual Report to the Regional Board. The Annual Work Plan summarizes the proposed activities the Permittees will undertake during the next fiscal year. The Annual Report documents the status of the SWQMP implementation, presents the results from activities implemented, provides a compilation of deliverables and milestones reached during the previous fiscal year, and reports on the overall status and effectiveness of the SWQMP. As part of this Annual Report, the Permittees will assess the current NPDES expenditures, as well as the projected expenditures for the next fiscal year, and prepare an annual fiscal analysis. Updates, improvements, or revisions to the SWQMP may also be proposed in the Annual Report.

**Highlights of the efforts conducted in FY 2019-20:**

- Permittees met on September 18, 2019 to discuss permit implementation and reissuance, the efficacy of subcommittees, pyrethroid control program baseline monitoring requirements, MOU, and the stormwater pollution control activities organizational flow chart. FMFCD conducted 48 internal meetings with FMFCD Departments and Co-Permittees to coordinate implementation of the MS4 permit. The meeting topics ranged from evaluating Trash Amendment Strategies to reviewing Public Involvement and Education outreach materials. Meeting topics also included Integrated Pest Management discussions with the Master Gardeners and FMFCD using surface water runoff as basin irrigation.
- FMFCD participated in 52 meetings, workshop, webinars, conference calls and stakeholder's group meetings including the Central Valley RWQCB's region wide MS4 permit, CASQA quarterly webinars and subcommittee conference calls, and Trash Policy work groups.
- The Permittees evaluated the training needs of each responsible agency, correlating the SWQMP's BMPs objectives and necessary training messages to each responsible agency and including the training messages in the corresponding biennial Co-Permittees storm water trainings. The Permittees updated the training schedule to reflect the targeted training messages.

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## MS4 Agency Responsible for Stormwater Control Measures – Program Management 2019/2020

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
<b>PM 1.0 - Program Coordination</b>				
1.1 Co-Permittees meet periodically	Permittees met on September 18, 2019 to discuss permit implementation and reissuance, the efficacy of subcommittees, pyrethroid control program baseline monitoring requirements, MOU, and the stormwater pollution control activities organizational flow chart.	The Co-Permittees will continue to meet as necessary to coordinate permit requirements and implement SWQMP performance measures (BMPs)	SWQMP PROGRAM COORDINATING COMMITTEE Agenda	PM1– Program Coordination (page 1-17)
1.2 Participate in periodic internal Stormwater Program meetings to provide staff training and to facilitate coordination between departments	FMFCD conducted numerous internal meetings with FMFCD Departments and Co-Permittees to coordinate implementation of the MS4 permit. The meeting topics ranged from evaluating homeless encampments trash generation to reviewing Public Involvement and Education outreach materials, campaigns, and strategies. Meeting topics also included Integrated Pest Management discussions with the Master Gardeners and enforcement procedures with and through co-permittees.	FMFCD will continue to initiate and participate in periodic internal stormwater program meetings to provide staff training and to facilitate coordination between Co-Permittee agencies and departments in implementing SWQMP performance measures.	PM 1.2 Table of Internal Meetings and Trainings	PM1– Program Coordination (page 1-17)
1.3 Participate in statewide stormwater related meetings, conferences, and stakeholder groups as needed	FMFCD participated in 52 meetings, workshop, webinars, conference calls and stakeholder's group meetings including the Central Valley RWQCB's region wide MS4 permit, CASQA quarterly webinars and subcommittee conference calls, and Trash Policy work groups.	FMFCD will continue to participate in statewide stormwater related meetings, conferences, and stakeholder groups as needed.	PM 1.3 Table of Statewide Meetings and Workshops	PM1– Program Coordination (page 1-17)
1.4 Review and revise MOUs as necessary	In FY 2013-14, FMFCD submitted to the RWQCB revised MOUs between FMFCD and the City of Clovis and FMFCD and the City of Fresno. The County of Fresno revised MOU and is being circulated among the County Departments.	Submit to the RWQCB the revised County of Fresno MOU.		PM1– Program Coordination (page 1-17)
1.5 Permittees shall identify all departments within their jurisdiction that conduct stormwater pollution control activities and their roles and responsibilities under the Order	Permittees developed a database correlating SWQMP water pollution control activities to the responsible Co-Permittee agencies and departments.	FMFCD and Co-Permittees annually update the SWQMP tracking database.	PM 1.5 Co-Permittee BMP Assignments	PM1– Program Coordination (page 1-17)
1.6 Permittees shall evaluate existing training for each program element and revise as necessary	The Permittees evaluated the training needs of each responsible agency, correlating the SWQMP's BMPs objectives and necessary training messages to each responsible agency and including the training messages in the corresponding biennial Co-Permittees storm water trainings. The Permittees updated the training schedule to reflect the targeted training messages.	The Permittees will continue to provide regular training for each program element and evaluate the need for changes on an annual basis.	PM 1.6 Master Training List and Schedule	PM1– Program Coordination (page 1-17)
<b>PM 2.0 - Legal Authority</b>				
2.1 Review legal authority as needed to ensure that Permittees have the authority to implement the Permit	FMFCD has confirmed that current legislation, coupled with the Permittees' ordinances, provide sufficient legal authority to implement the new MS4 permit and the revised SWQMP. The County of Fresno and California State University Fresno have not provided similar statements of legal authority.	FMFCD will review its legal authority during the update of the Stormwater Quality Management Plan (SWMP) as part of the re-issuance of its MS4 permit. The SWMP is scheduled to be finalized by the RWQCB in May 22, 2021. As stated in the permit, the SWMP shall describe the applicable approaches and options to enforce its legal authority, as necessary, to achieve compliance with the requirements of the order.	See PM 2.3 for Statement of Legal Authority	PM2- Legal Authority (page 1- 18)
2.2 Review and update ordinances as necessary	FMFCD has reviewed its ordinance and determined that the ordinance is sufficient to implement the current MS4 permit and SWQMP. The Permittees received approval on the Stormwater Quality Management Plan with an adopted Resolution #R5-2015-0046 from the Central Valley Regional Water Quality Control Board approved on April 17, 2015.	FMFCD will review its stormwater ordinance during the update of the Stormwater Quality Management Plan as part of the re-issuance of its MS4 permit. The SWQMP is scheduled to be finalized by the RWQCB in May 22, 2021.	N/A	PM2- Legal Authority (page 1- 18)
2.3 Provide statement of legal authority to Regional Board	In FY 2014-15, FMFCD, the City of Fresno and the City of Clovis submitted Statements of Legal Authority to the RWQCB.	The County of Fresno and the CSUF need to finalize their Statements of Legal Authority and submit them to the RWQCB.	PM 2.3 Statement of Legal Authority	PM2- Legal Authority (page 1- 18)
<b>PM 3.0 - Reporting and Fiscal Analysis</b>				
3.1 Permittees jointly develop and/or update the standardized format(s) for all reports required under this Order (e.g., annual reports, monitoring reports, fiscal analysis reports, and program effectiveness reports, etc.)	In FY 2013-14, FMFCD developed a database to track and assess its SWMP. FMFCD also developed a fiscal analysis template for its Co-Permittees to be included in its annual LTEA report.	FMFCD and its Co-Permittees will continue to jointly develop and/update the standardized format(s) for reports under the SWQMP as necessary.	N/A	PM3- Reporting and Fiscal Analysis (page 1- 19)
3.2 Prepare and submit annual work plan in conjunction with the Annual Report	FMFCD and its Co-Permittees included an annual work plan in its Annual Report submittal by October 1, 2019.	FMFCD and its Co-Permittees will continue to jointly develop and/update the standardized format(s) for reports under the SWQMP as necessary.	N/A	PM3- Reporting and Fiscal Analysis (page 1- 19)
3.3 Prepare and submit annual report by September 1 each year	The annual report was submitted to the RWQCB by October 1, 2019.	FMFCD will prepare and submit an annual report by October 1 of each year.	N/A	PM3- Reporting and Fiscal Analysis (page 1- 19)

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MS4 Agency Responsible for Stormwater Control Measures – Program Management  
2019/2020

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
3.4 Prepare and submit a Report of Waste Discharge 180 days prior to the expiration of the Order	The District and Co-Permittees submitted an NOI on April 19, 2018 to the Central Valley RWQCB on April 19, 2018 to obtain coverage under Order R5-2016-0040. The RWQCB approved the NOI submittal and issued a Notice of Applicability to the District and Co-Permittees on May 17, 2018. The District and Co-Permittees submitted the results of their Assessment and Prioritization and the proposed methodology for Reasonable Assurance Analysis on November 15th, 2018 to the RWQCB.	The District and its Co-Permittees will incorporate RWQCB comments on the RAA and PWQC Assessment & Prioritization. In addition, the District has planned on completing the RAA during the 2020-2021 FY.	N/A	PM3- Reporting and Fiscal Analysis (page 1- 19)
3.5 Report the fiscal analysis in the Annual Report	Fiscal Analysis completed and included in the Permittees Annual Report’s Long Term Effectiveness Assessment section, submitted to the RWQCB by October 1, 2019.	Fiscal Analysis will be updated and included in the Permittees Annual Report submittal by October 1, 2021.	N/A	PM3- Reporting and Fiscal Analysis (page 1- 19)

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## Construction Program

The following table lists agency contacts for the Construction and Development Evaluation of the Stormwater Quality Management Program.

Agency	Prepared by	Contact Person	Phone #	Manager
FMFCD	Paige Moretto	Paige Moretto	456-3292	Jared Shuman
City of Clovis	Paul Armendariz	Paul Armendariz	324-2649	Mike Harrison
City of Fresno	Charles Clark	Charles Clark	621-8094	Jennifer Clark
County of Fresno	Augie Ramirez	Augie Ramirez	600-4266	William Kettler
CSU-Fresno	Lisa Kao	Lisa Kao	278-6910	Steve Martinez

### Introduction

Construction and development contributes pollutants to stormwater runoff during the construction phase, when sites are being disturbed, and after construction is complete. Construction stormwater pollutants include sediment from grading activities and a variety of other pollutants associated with vehicles, construction materials, and construction waste (including petroleum hydrocarbons, paints, solvents, and concrete truck washout). Post-construction phase pollutants are typically those associated with human activity at developed sites and include particulates from vehicle emissions, brake and tire wear, nutrients from fertilizers, pesticides and herbicides, motor oil and other automobile fluids, and contaminants related to specific land use types and practices.

Municipalities are required to control stormwater discharges from construction sites and developed sites (post-construction) that result in a land disturbance of one acre or more. In addition to requiring municipalities to track stormwater discharges from construction sites, the federal stormwater regulations require the owner of a construction site that results in a land disturbance of one acre or more to obtain an NPDES stormwater permit.

### Highlights of the efforts conducted in FY 2019-20:

- District staff worked with Co-Permittees throughout the wet weather season to identify idle sites, completed construction sites that no longer required inspection and to add to the inspection site inventory non-Construction General Permit sites that were reported as complaints.

- FMFCD Development Review uses a Single Lot Grading Plan Checklist to ensure development site plans are in compliance with FMFCD Storm Drain Master Plan. FMFCD updates its "Single Lot Grading Plan Checklist" to include new criteria listed in the FMFCD Storm Drain Master Plan as necessary.
- FMFCD conducted internal meetings with FMFCD staff to discuss the new Post Development Standards Technical Manual.
- The City of Fresno requires all Grading Plans over 1 acre of site disturbance to submit an Erosion and Sediment (E&S) control plan before issuance of the grading plan. They also require a WDID number to verify that the site has coverage under the States' Construction General Permit. In FY 2019-20, all grading plans over 1 acre submitted an E&S Plan. The E&S plan is stapled to the grading permit submittal and scanned into their electronic records database. The scanned E&S plan is available to the public for review.
- The District implemented the Progressive Enforcement Response Plan (PERP) as necessary.
- The District implemented the Progressive Enforcement Response Plan (PERP) as necessary. The PERP procedures were used at eighteen (18) sites. No sites were issued a Notice of Violation.
- In FY 2019-2020, no sites were referred to the Central Valley Water Board for potential violations of the State's Construction General Permit.

## MS4 Agency Responsible for Stormwater Control Measures – Construction 2019/2020

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
<b>CON 1.0 - Construction Site Inventory</b>				
1.1 Maintain inventory of active sites	FMFCD staff downloaded records from the State Water Board system for all active NPDES Construction General Permit sites within the FMFCD permit service area. Prioritization of construction sites is based on the proximity to receiving waters. Those sites that ranked as High or Medium priority and where construction had not yet finished during the previous year's inspections formed the core inspection list for winter 2019-2020 construction inspections.	Staff will download records from the SWRCB SMARTS system by September 1, 2020 to establish the regional inspection site inventory for rainy season inspections.	CON 1.1 Inventory of construction Sites (FY 2019-2020)	CON1-Construction Site Inventory (page 2-4)
1.2 Update inventories throughout the wet weather season	District staff works with Co-Permittees throughout the wet weather season to identify idle sites, completed construction sites and complaint based non-Construction General Permit sites to add to the inspection site inventory.	In consultation with co-permittees, District staff will add inspection sites to the construction site inventory in response to complaints and other special cases and will remove sites from the base list where construction is finished and the site stabilized. FMFCD will also update the list of permitted construction sites by monthly throughout the wet weather season and redistribute updated lists to co-permittees.	N/A	CON1-Construction Site Inventory (page 2-4)
<b>CON 2.0 - Threat to Water Quality Prioritization</b>				
2.1 Develop threat to water quality criteria	FMFCD implemented the threat to water quality criteria prioritization system that was developed in FY 2013-14. This system prioritized construction sites based on proximity and connectivity to receiving waters and assigned each site a construction priority/frequency reflective of the site's potential threat to receiving water quality. The list is updated throughout the year to reflect additional connections to receiving waters.	The threat to water quality prioritization developed in FY 2013-14 will be used to structure wet weather season construction inspections in FY 2019-20.	CON 2.1 Receiving Water Proximity By Drainage Area	CON2- Threat to Water Quality Prioritization (page 2-5)
2.2 Inventoried Site Mapping	The Construction General Permit construction site inventory extracted from the SMARTS system was cross-referenced against FMFCD's drainage area mapping to assign each construction site to its respective drainage area. See CON 1.1.	The Construction General Permit construction site inventory extracted from the SMARTS system will be cross-referenced against FMFCD's drainage area mapping to assign each construction site to its respective drainage area.	N/A	CON2- Threat to Water Quality Prioritization (page 2-5)
2.3 Prioritize sites for inspection	The assignment of construction sites to their respective drainage area in CON 2.2, combined with the threat to water quality criteria established in CON 2.1 combine to yield an inspection priority for each construction site, wherein higher threat sites are inspected more frequently.	Construction sites will be assigned to their respective drainage area per CON 2.2 which, in combination with the threat to water quality criteria established in CON 2.1 yields an inspection priority for each construction site which in turns corresponds to the site's wet weather season inspection frequency.	CON 2.3 Construction Site Prioritization Method	CON2- Threat to Water Quality Prioritization (page 2-5)
<b>CON 3.0 - Plan Review</b>				
3.1 Update Construction and Development Stormwater NPDES Assessment Checklist	The Construction and Development Stormwater NPDES Assessment Checklist, also known as a Construction Site Compliance Assessment Checklist, reflects the BMPs described in CON 3 and required of sites per EC/SC checklists required in Con 3.3.	FMFCD will continue to update and amend its "Construction and Development Stormwater NPDES Assessment Checklist/Construction Site Compliance Assessment Checklist", as necessary. See Con 4.1 for checklist.	N/A	CON3- Plan Review (page 2-8)
3.2 Conduct construction and development committee meetings	The District contacted the City of Fresno, City of Clovis, and County of Fresno Building and Planning Departments in order to populate the Construction and Development Committee with members. The committee held it's first meeting in August of 2019. The committee met 3 times during this reporting year.	The District and Co-Permittees will continue to meet and discuss relevant construction and development issues on an as needed basis.	CON 3.2 Construction and Development Committee Agendas and Minutes	CON 3.2, page 2-7
3.3 Review and update EC/SC plan requirements	The Cities of Fresno and Clovis, as well as the County, require all Grading Plans over 1 acre of site disturbance to submit an Erosion and Sediment (E&S) control plan before issuance of the grading plan. They also require a WDID number to verify that the site has coverage under the States' Construction General Permit. In FY 2019-20, all grading plans over 1 acre submitted an E&S Plan. The E&S plan is stapled to the grading permit submittal and scanned into their electronic records database. The scanned E&S plan is available to the public for review.	Co-permittee agencies will continue to require EC/SC plan submittal before a grading permit is approved.	CON 3.3 Erosion & Sediment Control Plan Checklists	CON3- Plan Review (page 2-7)
3.4 Review construction plans and grading permits to ensure consistency with requirements	In conjunction with CON 3.3, the District and Co-Permittees implemented the MS4 Permit plan review process.	Permittees will continue to follow the MS4 Permit related plan review processes developed in FY 2013-14.	N/A	Permittees will continue to follow the MS4 Permit related plan review processes developed in FY 2013-14.
3.5 Provide guidance for Co-Permittees plan check and grading permit process.	FMFCD staff trained city and county plan check staff on how to fulfill Co-Permittee obligations to implement the EC/SC plan requirements. City of Clovis staff Steve White and Marianne Mollring were trained on 12/19/13 and City of Fresno staff Brian Leong and City consultant John Slater were trained on 1/10/13.	The plan check and grading permit process established in 2013-14 will continue to be implemented by the Co-Permittees. Retraining of staff is necessary as changes in Co-Permittee staffing has occurred.	N/A	CON3- Plan Review (page 2-7)
<b>CON 4.0 - Inspection and Follow-up</b>				
4.1 Review and revise the construction site guidelines, as needed	The updated Fresno-Clovis Storm Water Quality Management Program Construction Site Storm Water Quality Mgmt. Guidelines have been updated to reflect the requirements of the MS4 Permit and District Ordinance 96-1.	Continue to follow the updated Fresno-Clovis Storm Water Quality Management Program Construction Site Storm Water Quality Mgmt. Guidelines.	CON 4.1 New Construction Site Guidelines & Inspection Form	CON4- Inspection and Follow-up (page 2-8)

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## MS4 Agency Responsible for Stormwater Control Measures – Construction 2019/2020

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
4.2 Update Construction Inspection Checklist	During FY 2015-2016, FMFCD updated the FMFCD Official Construction Inspection Checklist as required in FMFCD's Municipal Separate Storm Water Sewer System Permit. FMFCD will amend and update the Official Construction Inspection Checklist as necessary.	The Construction and Development Committee members will be working to merge the different stormwater construction inspection checklists used by each co-permittee into a single cohesive checklist common to all.	N/A	CON4- Inspection and Follow-up (page 2-8)
4.3 Inspect sites at designated frequencies and require BMPs	In October 2019, FMFCD and Co-permittees initiated their annual wet weather season inspections of construction General Permit sites within the FMFCD NPDES Permit Boundary. Provisions of our MS4 Permit Inspection Prioritization program, which ranks sites by threat to receiving waters and calls for annual inspection of every site posing a "High"= 1 or "Medium"= 2a Risk. In 2019-2020, there were 9 High and 129 Medium Priority Construction General Permit sites within the FMFCD service area. FMFCD gave the Cities of Clovis and Fresno medium priority sites, as identified in CON 1.1, to inspect at least once during wet weather season. The City of Fresno received 94 medium priority sites while the City of Clovis received 35 medium priority sites. Sites received initial and follow-up inspections as needed to bring the sites into compliance. In cases where the Cities of Fresno or Clovis could not bring the sites into compliance, FMFCD pursued our Progressive Enforcement Response Plan (PERP) to bring sites into compliance. FMFCD inspected High Risk sites, defined by proximity to receiving waters, monthly during the wet season. It should be kept in mind that the original SMARTS download of active NOIs in our area included numerous cases where construction was found to be not active.	FMFCD will continue to work with Co-Permittees to inspect constructions sites within Medium and High Priority drainage areas, as well as sites referred to the District from co-permittees and complaints from the general public.	N/A	CON4- Inspection and Follow-up (page 2-8)
4.4 Permittees will meet at the beginning of the rainy season to review and prepare for inspections.	FMFCD conferred with the City of Clovis and the City of Fresno to review winter construction and inspection coordination, including referrals of sites in consistent non-compliance. See PM 1.1 for the dates of the construction meetings.	FMFCD will meet with its Co-Permittees at the beginning of the wet weather season to review and prepare for inspections.	N/A	CON4- Inspection and Follow-up (page 2-8)
4.5 Maintain a tracking system for the construction site inspections and follow up	FMFCD developed a SQL database to track construction inspections and follow-up inspections. The City of Clovis and the City of Fresno maintain electronic files of their inspections.	FMFCD and the cities of Clovis and Fresno will continue to track construction inspections with their electronic databases. Furthermore, FMFCD will begin to include construction inspections from the cities of Clovis and Fresno in its database to better keep track of all inspections conducted within the NPDES Permit boundary.	CON 4.5 FMFCD Inspection Activities and Tracking	CON4- Inspection and Follow-up (page 2-8)
<b>CON 5.0 - Enforcement</b>				
5.1 Review and update legal authority (as needed)	FMFCD has confirmed that current legislation, coupled with the Permittees' ordinances, provide sufficient legal authority to implement the new MS4 permit and the revised SWQMP. FMFCD submitted a Statement of Legal Authority to the RWQCB on November 24, 2014.	FMFCD will review its legal authority as part of the reissuance of its current MS4 permit in FY 2020-21.	N/A	CON5- Enforcement (page 2-9)
5.2 Implement progressive enforcement procedures as needed	The District implemented the Progressive Enforcement Response Plan (PERP) as necessary. The PERP procedures were used at eighteen (18) sites. No sites were issued a Notice of Violation.	Continue to implement the Progressive Enforcement Response Plan as described in the attachment.	CON 5.2 FMFCD Progressive Enforcement Response Plan	CON5- Enforcement (page 2-9)
5.3 Advise Central Valley Water Board of potential violations of Construction General Permit	In FY 2019-2020, no sites were referred to the Central Valley Water Board for potential violations of the State's Construction General Permit.	When applicable, FMFCD and its Co-Permittees will advise the Central Valley RWQCB of potential violations of the State's Construction General Permit.	N/A	CON5- Enforcement (page 2-9)
<b>CON 6.0 - Training</b>				
6.1 Conduct training for inspectors and plan check staff	FMFCD conducted construction training for the following agencies: County of Fresno Environmental Health Department on 1/9/2019. City of Fresno Sewer Maintenance Department on 12/12/2018, DARM Inspectors on 11/29/2018, Wastewater Department on 12/13/2018, Capital and Construction Management Departments on 12/13/2018, Facilities Managers on 12/4/2018, Solid Waste Department on 12/5/2018, and Graffiti Abatement Department on 12/6/2018. City of Clovis Engineering Department on 12/11/2018. In addition to construction topics the training includes discussion of the storm drain system, the MS4 permit requirements and the referral process.	FMFCD staff will conduct annual training once every two years or earlier if any procedural changes occur. Current efforts are being made to convert all trainings to a zoom or LMS format for added flexibility.	N/A	CON6- Training (page 2-10)
6.2 Provide outreach materials and training to developers	In FY 2019-20, the District fielded individual questions requests regarding SWPPP development and implementation and sent out rainy day alerts through the BIA, Association of General Contractors, and the Central Valley Builders Exchange. An erosion and sediment control informational lunch and learn, hosted by the District, was scheduled for Spring- however it was postponed indefinitely due to Covid-19.	The District will continue to field individual questions requests regarding SWPPP development and implementation and sent out rainy day alerts through the BIA, Association of General Contractors, and the Central Valley Builders Exchange.	N/A	CON6- Training (page 2-10)

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## Industrial and Commercial Program

The following table lists agency contacts for the Commercial and Industrial Evaluation of the Stormwater Quality Management Program.

Agency	Prepared by	Contact Person	Phone #	Manager
FMFCD	Gabriel Ledesma	Gabriel Ledesma	456-3292	Jared Shuman
City of Clovis	Paul Armendariz	Paul Armendariz	324-2649	Mike Harrison
City of Fresno	Rosa Lau-Staggs	Rosa Lau-Staggs	621-5130	Brian Spindor
County of Fresno	Mike Bains	Vince Mendes	445-3271	David Pomaville
CSU-Fresno	Lisa Kao	Lisa Kao	278-6910	Steve Martinez

### Introduction

Commercial and industrial facilities have the potential to release a number of pollutants from their facilities. Material and waste storage, handling, loading and processing areas, along with equipment maintenance, washing, and storage areas are potential sources of pollutants at these facilities. Other discharges can occur through spills, leaks, direct dumping into storm drains, and direct connections (e.g., floor drains) to the storm drain system.

In addition to requiring municipalities to track compliance of pollutant discharges from industrial facilities, federal stormwater regulations require specific industrial facilities, which discharge stormwater “associated with industrial activity”, to obtain an NPDES industrial stormwater discharge permit. The identified industries must comply with the General Industrial Activities Stormwater Permit (General Permit), which includes filing a Notice of Intent (NOI), preparing and implementing a Stormwater Pollution Prevention Plan (SWPPP), conducting visual inspections of the facility, and monitoring discharges from the permitted facility.

### Highlights of the efforts conducted in FY 2019-20 are:

- FMFCD created an inventory of RGOs, restaurants and automotive repair facilities in the Fresno/Clovis metropolitan area. The County of Fresno, Environmental Health provided inventories for restaurants, and automotive facilities, while the City of Fresno Environmental Services provided an additional inventory for restaurants.
- The County of Fresno along with the City of Fresno keeps track of their inspections in a database.

- In FY 2019-20, the County of Fresno Environmental Health Department inspected all restaurants 4 times a year, while the City of Fresno inspected all restaurants once. The County of Fresno (CUPA) and the City of Fresno Wastewater Division conducted inspections at industrial facilities.

FMFCD conducted follow up inspections and enforcement actions when necessary as set forth in its Progressive Enforcement Response Plan (PERP) to ensure compliance. All inspected industrial and commercial sites and those sites referred as complaints, returned to compliance after follow-up inspections.

## MS4 Agency Responsible for Stormwater Control Measures – Industrial Commercial 2019/2020

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
<b>IC 1.0 - Industrial Commercial Inventory</b>				
1.1 Develop inventory procedures	FMFCD developed an industrial-commercial site inventory procedures that extract data from the SWRCB SMARTS system and the County of Fresno Environmental Health Central Unified Program Agency (CUPA) industrial and commercial inventory.	FMFCD will continue to routinely evaluate industrial-commercial site inventory procedures.	N/A	IC1- Industrial/ Commercial Inventory (page 3-3)
1.2 Maintain inventory of industrial sites	FMFCD updated the initial industrial-commercial site inventory as described in IC 1.1. See supporting document IC 1.2 FMFCD Environmental Inspection Log, an inventory of all industrial sites in the District's boundaries. Sites covered by the Industrial General Permit are denoted by a Water Discharge ID (WDID) issued by the California State Water Board. Industrial sites without a WDID do not have industrial permit coverage and either do not need coverage or are non-filers.	FMFCD will update the industrial-commercial site inventory by annually reviewing the SMARTS system for new filings and by adding to the inventory any sites discovered in the course of responding to complaints.	IC 1.2 Environmental Inspection Log	IC1- Industrial/ Commercial Inventory (page 3-4)
1.3 Maintain inventory of required commercial facilities (restaurants, automotive service, RGOs)	FMFCD created an inventory of industrial facilities including RGOs, restaurants and automotive repair facilities in the Fresno/Clovis metropolitan area. The County of Fresno Environmental Health Department provided inventories for restaurants, and automotive facilities, while the City of Fresno Environmental Services provided an additional inventory for restaurants. Refer to supporting document IC 1.2 Environmental Inspection Log for the long list of industrial facilities inspected by FMFCD.	FMFCD will update its commercial inventory from updates provided by the County of Fresno and the City of Fresno along with ground verifications, and public and agency complaint referrals.	IC 1.3 Co-Permittee Inspections	IC1- Industrial/ Commercial Inventory (page 3-4)
<b>IC 2.0 - Threat to Water Quality Prioritization</b>				
2.1 Develop prioritization procedures according to threat to water quality	FMFCD used the threat to water quality criteria developed in FY 2013-14 to structure the FY 2019-20 industrial inspection program.	The receiving water proximity/connectivity threat to water quality criteria developed in FY 2013-14 will be used to structure industrial inspections in FY 2020-21.	IC 2.1 Industrial Sites Prioritization Method	IC2- Threat to Water Quality Prioritization (page3-5)
2.2 Prioritize sites for inspection	The assignment of industrial/commercial sites to their respective drainage areas, combined with the threat to water quality criteria, yield an inspection priority for each site, wherein higher threat sites are inspected more frequently. See IC 1.2 inventory list for a sites inspection priority.	Industrial/commercial sites will be assigned to their respective drainage area which, in combination with the threat to water quality criteria yields an inspection priority for each site, the priority of a site corresponding to the inspection frequency.	See CON 2.1 Receiving Water Proximity By Drainage Area	IC2- Threat to Water Quality Prioritization (page3-5)
<b>IC 3.0 - Best Management Practices</b>				
3.1 Develop Model Pollution Prevention Plans, as needed	In the 2017-2018 fiscal year, FMFCD staff updated and distributed through the FMFCD website its model Facility Pollution Prevention Plans for retail gasoline outlets, automotive service facilities, and restaurants.	In July 2014, FMFCD developed model Facility Pollution Prevention Plans for retail gasoline outlets, restaurants and automotive service facilities. These templates are available to industrial and commercial dischargers operating under the umbrella of FMFCD's MS4 permit. The District will, as it determines facilities or operations that pose a threat to water quality, update its model facility pollution prevention plans as necessary.	IC 3.1 Model Facility Pollution Prevention Plan	IC3- Minimum Best Management Practices (page 3-7)
<b>IC 4.0 - Inspection and Follow-up</b>				
4.1 Develop and distribute outreach materials	The Industrial Fact Sheet developed by FMFCD in 2014, and revised in 2018, was updated with new information and graphics, and posted to the District website.	FMFCD will continue to assist and update local business owners with permit information, and plans to make the factsheet available in print to distribute as needed.	IC 4.1 Revised Industrial Fact Sheet	IC4- Inspection and Follow-up (page 3-8)
4.2 Update inspection procedures as needed	FMFCD implemented its inspection frequency procedures that are based on each facilities threat to water quality based on the specific drainage area's proximity to receiving waters.	FMFCD will continue to prioritize its inspection frequencies for industrial and commercial inspections based on their proximity to receiving waters and update there inspection checklist to evaluate pollution controls.	IC 4.2 Updated RGO and Automotive Repair Checklist	IC4- Inspection and Follow- up (page 3-8)
4.3 Inspect sites as needed	In FY 2019 – 2020, FMFCD inspected high priority Retail Gasoline Outlets, while the County of Fresno inspected Automotive Repair Facilities. The County of Fresno Environmental Health Department inspected all restaurants 4 times a year while the City of Fresno inspected all restaurants once. The County of Fresno (CUPA) and the City of Fresno Wastewater Division conducted inspections at industrial facilities. See supporting document IC 1.3 Co-Permittee Inspections for a full list of inspections.	FMFCD and Co-Permittees will continue inspections at industrial facilities covered under the IGP that were not inspected within the past three years. FMFCD will also develop an inspection SOP for the targeted commercial sites along with inspecting the targeted commercial facilities according to the frequencies listed in the prioritization strategy.	N/A	IC4- Inspection and Follow- up (page 3-8)
4.4 Conduct follow-up inspections as needed	To bring non-compliant sites into compliance with all IGP and stormwater ordinance requirements, Co-Permittees conducted follow-up inspections when necessary. Follow-up inspections focus on facilities found to have significant deficiencies to ensure corrective actions. The County of Fresno completed follow-up inspections for all restaurants while the County and FMFCD conduct follow-up inspections when necessary. See supporting document IC 1.2 Environmental Inspection Log for follow-up inspections conducted by FMFCD. See supporting document IC 1.3 Co-Permittee Inspections for follow-up inspections at restaurants.	Permittees will continue to conduct follow up inspections as necessary to ensure compliance with stormwater ordinance and PERP.	N/A	IC4- Inspection and Follow- up (page 3-9)

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## MS4 Agency Responsible for Stormwater Control Measures – Industrial Commercial 2019/2020

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
4.5 Maintain a tracking system for the site inspections and follow up	The County of Fresno along with the City of Fresno tracks of their inspections on a database. In FY 2018-2019, FMFCD developed a database to track targeted industrial and commercial facilities. See supporting document IC 1.2 Environmental Inspection Log for an example of our inventory-tracking tool.	During FY 2020-21, FMFCD will refine its SQL database that tracks commercial and industrial inspections.	N/A	IC4- Inspection and Follow- up (page 3-9)
<b>IC 5.0 - Enforcement</b>				
5.1 Review and update legal authority as needed	FMFCD has confirmed that current legislation, coupled with the Permittees' ordinances, provide sufficient legal authority to implement the new MS4 permit and the revised SWQMP. FMFCD submitted a Statement of Legal Authority to the RWQCB on November 24, 2014.	MFCD will review its legal authority during the update of the Stormwater Quality Management Plan as part of the re-issuance of its MS4 permit. The SWQMP is scheduled to be finalized by the RWQCB in May 22, 2021. As stated in the permit, the SWMP shall describe the applicable approaches and options to enforce its legal authority, as necessary, to achieve compliance with the requirements of the order.	N/A	IC5- Enforcement (page 3-10)
5.2 Implement progressive enforcement procedures as needed	FMFCD conducted follow up inspections and enforcement actions when necessary as set forth in its Progressive Enforcement Response Plan (PERP) to ensure compliance. All inspected industrial and commercial sites and those sites referred as complaints, returned to compliance after follow-up inspections.	Permittees will implement progressive enforcement procedures when necessary.	See CON 5.2 for Progressive Enforcement and Response Plan	IC5- Enforcement (page 3-10)
5.3 Coordinate with Central Valley Water Board regarding potential violations of the Industrial General Permit	FMFCD did not referred any sites to the CVRWQCB regarding IGP non-filer status.	Permittees will continue to Coordinate with the CV RWQCB regarding violations of the Industrial General Permit including referring non-filers and requesting joint inspections.	N/A	IC5- Enforcement (page 3-10)
<b>IC 6.0 - Training</b>				
6.1 Conduct training for inspectors	FMFCD provided training during FY 2019-2020. See supporting document PM 1.6 Master Training List and Schedule detailing when trainings occurred and the co-permittee departments that were trained.	FMFCD staff will conduct annual training once every two years or earlier if any procedural changes occur.	N/A	IC6- Training (page 3-11)
6.2 Conduct/provide external training information to targeted industrial and commercial businesses (see PIE7)	FMFCD did not conduct industrial/commercial training in FY 2019-20. FMFCD training and assistance was provided in response to phone calls, emails and onsite visits.	FMFCD will continue to provide assistance to businesses working with the new Industrial General Permit. FMFCD and its Co-Permittees will explore the development of additional training outreach material to be distributed at IGP workshops along with distributing existing commercial outreach materials to targeted commercial facilities including restaurants, RGOs, Automotive repair facilities and new commercial facilities covered under the updated IGP.	N/A	IC6- Training (page 3-11)

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## Municipal Operations Program

The following table lists agency contacts for the Operations and Maintenance Evaluation of the Stormwater Quality Management Program.

Agency	Prepared by	Contact Person	Phone #	Manager
FMFCD	Jared Shuman	Jared Shuman	456-3292	Berta Mims
City of Clovis	Paul Armendariz	Paul Armendariz	324-2649	Paul Armendariz
City of Fresno	Brian Russell	Brian Russell	621-1325	Scott Mozier
County of Fresno	Daniel Vang	Daniel Vang	600-3198	John Thompson
CSU-Fresno	Lisa Kao	Lisa Kao	278-6910	Steve Martinez

### Introduction

Federal stormwater regulations require municipalities to develop and implement stormwater pollution control measures to reduce the discharge of pollutants in runoff from municipal facilities' operations. Municipal facilities include, but are not limited to; corporation yards, parking lots, parks and open spaces, golf courses, public facilities, landfills, waste transfer stations and the storm drainage system. Activities at these facilities that could be sources of stormwater pollution include maintenance of vehicles, equipment and facilities; operating practices; landscape practices; chemical use, application and storage practices; waste management practices; shipping and receiving practices; and material handling and storage practices. Pollutants associated with these activities are petroleum hydrocarbons, pesticides, fertilizers, toxic chemicals, trash and debris, sediment and oxygen-demanding substances. BMPs and associated measurable goals contained in this section have been selected to control and prevent the discharge of these pollutants.

### Highlights of the efforts conducted in FY 2019-20 are:

- Fresno County Household Hazardous Waste (HHW) permanent facility received 140,784 pounds of HHW, plus 14.7 tons of triple rinse containers.
- FMFCD removed sediment deposits from its stormwater basins and maintained those stormwater basins according to the District's Standard Operating Procedures (SOP) for Monitoring, Maintenance and Disposal of Stormwater Basin Sediments. Fourteen (14) basins were maintained in FY 2019-20.

- FMFCD inspected 262 system components in FY 2019-20 which resulted in 183 system components cleaned during the FY. System components ranged from pump stations and siphons to outfall structures and pipelines.
- The Permittees recorded 164,434 miles of streets swept within FMFCD's NPDES permit boundary in FY 2019-20. This included 105,000 miles in the City of Fresno. All City of Fresno sweepers are PM10 compliant. They use an interactive sweeping map for residential education on sweeping and schedules. The City of Clovis swept 59,413 miles. 21 miles on CSUF campus owned areas.
- The City of Fresno and Clovis implemented Separate Sewer Management Plans to minimize the discharge of sanitary overflows to the stormwater conveyance system. The City of Fresno reported 13 SSO locations with none of the spills reaching a receiving water. The City of Clovis reported 2 SSOs locations with none of the spills reaching a receiving water.



**MS4 Agency Responsible for Stormwater Control Measures – Municipal Operations  
2019/2020**

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
<b>M 1.0 - Storm Drain System Maintenance</b>				
1.1 Update and maintain GIS based storm drain conveyance inventory	FMFCD kept the FMFCD GIS-based storm sewer conveyance system map up to date. Access to our GIS-based storm sewer conveyance system is available on FMFCD's website.	FMFCD will keep the FMFCD GIS-based storm sewer conveyance system map up to date.	See PLD 1.2 for the FMFCD Storm Drainage and Flood Control Master Plan	MUN1- Storm Drain System Maintenance (page 4-4)
1.2 Install, inspect and maintain basin inlet markings as necessary	To date the District has 171 drainage area with approximately 11,239 storm drain inlets. In FY 2019 – 2020, FMFCD began an inventory effort to estimate the number of storm drains that need storm drain markers. Approximately 85 drainage areas have received storm drain markers, approximately 4,630 markers have been installed. FMFCD will continue to inventory and install markers within the remaining drainage areas.	In FY 2020-21, FMFCD will install storm drain markers (vinyl decals) on storm drain inlets, completing one drainage area per month. FMFCD and Co-Permittees will partner with the Fresno Economic Opportunities Commission (Fresno EOC) in the marking of the storm drains with the message "No Dumping – Protect Your Water."	MUN 1.2 Install Inspect and Maintain Basin Inlet Markings	MUN1- Storm Drain System Maintenance (page 4-4)
1.3 Prioritize pump stations and siphons for cleaning.	In FY 1994-95 FMFCD completed a prioritization of potential pollutant accumulation sites. Pump stations, which are manually cleaned by FMFCD on a routine basis, were identified as high-priority sites. Most of the system is designed to be self-cleaning during storm events.	FMFCD will continue to monitor its regional stormwater management basin system and update the pump station prioritization when necessary.	See MUN 2.2 for a list of system components cleaned in FY 2019-2020	MUN1- Storm Drain System Maintenance (page 4-4)
1.4 Inspect and maintain basin inlets as necessary	FMFCD and its Co-Permittees inspect catch basin inlets for blockage throughout the year and from complaints during storm events. Most of the system is designed to be self-cleaning during storm events (i.e., debris are flushed through the system to retention basins or other discharge points).	FMFCD and its Co-Permittees will continue to inspect and maintain basin inlets when necessary.	N/A	MUN1- Storm Drain System Maintenance (page 4-4)
<b>M 2.0 - Stormwater Basin Construction and Maintenance</b>				
2.1 Inspect and maintain stormwater basins to maximize infiltration rates (see also PLD2)	FMFCD removed sediment deposits from its stormwater basins and maintained those stormwater basins according to the District’s Standard Operating Procedures (SOP) for Monitoring, Maintenance and Disposal of Stormwater Basin Sediments. Fourteen (14) basins were maintained in 2019.	FMFCD will remove sediment deposits from its stormwater basins and maintain those stormwater basins according to the District’s Standard Operating Procedures (SOP) for Monitoring, Maintenance and Disposal of Stormwater Basin Sediments. FMFCD will review and update the SOP as necessary to revise cleaning and monitoring procedures according to sediment buildup and pollutant accumulation. An SOP update is in progress to improve the QA/QC. The SOP update is slated to be finished and implemented by 2021.	MUN 2.1 2019 Basin Sediment Maintenance Assessment Annual Report	MUN2- Stormwater Basin Construction and Maintenance (page 4-5)
2.2 Inspect and maintain stormwater pump stations	FMFCD inspected 262 system components in FY 2019-2020 which resulted in 183 system components cleaned during the FY. System components ranged from pump stations and siphons to outfall structures and pipelines. See the support documents for a breakdown of component cleanings.	FMFCD will continue to inspect, clean and maintain its system components, including pump stations and siphons.	MUN 2.2 Summary of system components cleaned in FY 2019 -2020	MUN 2 Stormwater Basin Construction and Maintenance (page 4-5)
2.3 Plan, design, and build regional stormwater basins	FMFCD continues to plan, design and build stormwater management basins to control stormwater runoff to prevent flooding, manage stormwater runoff and remove pollutants. Basins are built to specific FMFCD design criteria that exceed Statewide Standard Urban Storm Water Mitigation Plans (SUSMP) standards. During the reporting year FMFCD completed 16 capital projects related to the regional stormwater management basin system. The State Board has found that the provisions in the Statewide SUSMP constitute controlling the discharge of pollutants into the storm drainage system to the maximum extent practicable (MEP).	FMFCD will continue to build stormwater management basins to the design standard to capture the storage volume of runoff generated from approximately six inches of rainfall or 60% of the average annual rainfall at 11.34 inches.	MUN 2.3 List of Capital projects completed in FY 2019-20	MUN2- Stormwater Basin Construction and Maintenance
<b>M 3.0 - Municipal Facilities Pollution Prevention</b>				
3.1 Develop template Facility Pollution Prevention Plan	In the 2016-2017 FY, FMFCD developed a Facility Pollution Prevention Plan (FPPP) for the County of Fresno Hamilton Corporation Yard based on the City of Fresno MSC FPPP, ensuring that the facility complies with the regulations for the new NPDES permit. The City of Fresno Municipal Service Center, Fresno County Hamilton Corporation yard, and FMFCD facilities all have up to date FPPPs and are thoroughly inspected annually.	FMFCD will continue to inspect the City of Fresno MSC, County of Fresno main corporation yard (Hamilton), and FMFCD facilities in FY 2020-21 to make sure the facilities are compliant with NPDES permit regulations.	N/A	MUN3- Municipal Facilities Pollution Prevention (page 4-7)
3.2 Develop and implement procedures to address emergency events	Basic emergency procedures to address the protection of receiving waters during emergency events are already in place. The District and its Co-Permittees met before the wet season to review complaint response procedures. In addition, County of Fresno Environmental Health First Responders are trained on the storm drain system and the referral process. District staff trains City of Fresno, City of Clovis, and County of Fresno municipal staff regarding complaint response procedures.	The Permittees will continue review their current emergency response procedures for adequacy, develop any additional required procedures, present any proposed changes to their respective jurisdictions/first-responders for consideration and possible adoption. Interagency procedures, if amended, will be memorialized in a guidance/reference document useful to each Permittee.	N/A	MUN3- Municipal Facilities Pollution Prevention (page 4-7)
3.3 Assess facilities to determine if they require coverage under the Industrial General Permit	The Permittees have assessed their municipal facilities and have determined that two corporation yards, City of Fresno FAX and the City of Clovis Corporation Yard, are required coverage under the Industrial General Permit. The City of Fresno FAX facility has coverage under the State's IGP while the City of Clovis has filed a no exposure certification for its corporation yard. As stated in section M 3.1, FMFCD will coordinate with the County of Fresno to evaluate its main corporation yard and develop a FPPP for the site.	As necessary, FMFCD and the Permittees will evaluate municipal facilities for coverage under the State's IGP.	N/A	MUN3- Municipal Facilities Pollution Prevention (page 4-8)

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MS4 Agency Responsible for Stormwater Control Measures – Municipal Operations  
2019/2020

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
<b>M 4.0 - Municipal Activities Pollution Prevention</b>				
4.1 Develop and implement BMPs to address public industrial activities with the potential impact urban runoff and stormwater (i.e. road maintenance, equipment washing, well development, etc)	This task started in FY 2013-14 and continues to develop. Protocols and procedures are already in place. See supporting document PM 1.6 Master Training List and Schedule detailing when trainings occurred and the co-permittee departments that were trained.	FMFCD and Co-Permittees will continue to develop and implement BMPs to address public industrial activities with the potential impact urban runoff and stormwater (e.g., road maintenance, equipment washing, and well development). FMFCD will review and distribute guidance materials to Co-Permittees’ streets and roads agencies that cover the proper management of concrete and other road maintenance materials, concrete washout, the proper disposal of saw cutting wastes, equipment use, maintenance and washing, sediment and stockpile management, and overall good housekeeping practices for site management and cleanup. FMFCD and Co-Permittees will implement the guidance during their respective streets and road maintenance activities.	N/A	MUN4- Municipal Activities Pollution Prevention (page 4-10)
4.2 Implement protocols and BMPs for storage, usage, and disposal of pesticides, herbicides, and fertilizers for Permittee owned property and right-of-way	Permittee Agencies presently have procedures in place for storage, use and disposal of pesticides, herbicides, and fertilizers. FMFCD developed a pesticide disposal and use checklist, completed by Co-Permittee agencies that store pesticides.	Co-Permittees will continue to evaluate and update pesticide storage using the checklist developed by the FMFCD.	4.2 Checklist of Storage Use and Disposal of Pesticides Herbicides Fertilizers	MUN4- Municipal Activities Pollution Prevention (page 4-10)
4.3 Promote integrated pest management practices	FMFCD includes Integrated Pest Management Practices in its trainings to Co-Permittee parks and streets maintenance personnel. See PM 1.6 for those agencies receiving IPM training.	FMFCD will review and update IPM messages in its training materials including power point presentations and municipal stormwater videos.	N/A	MUN4- Municipal Activities Pollution Prevention (page 4-10)
4.4 Develop and implement BMPs for non-emergency firefighting flows	FMFCD has incorporated the non-emergency firefighting flow BMPs from the attached fact sheet into the Permittees Fire Department trainings.	Continue to implement the BMPs for non-emergency firefighting flows.	MUN 4.4 Non-Emergency Fire Fighting Flows Fact Sheet	MUN4- Municipal Activities Pollution Prevention (page 4-10)
4.5 Coordinate with household hazardous waste programs	Members of the Partners for a Clean Community NPDES public outreach group include the Fresno County Resources Department, which owns and operates our area’s permanent Household Hazardous Waste (HHW) Facility, and the City of Fresno, which performs city-wide coordination of used motor oil and filter recycling.  The County and Cities continued their efforts, detailed in the attachment.	The County of Fresno and City of Fresno will continue their wide ranging, broad reaching, and continuous activities, as outlined in this section’s attachment.	MUN 4.5 County and City of Fresno activities reports	MUN4- Municipal Activities Pollution Prevention (page 4-10)
<b>M 5.0 - Street and Parking Area Maintenance</b>				
5.1 Conduct street sweeping activities	All City of Fresno sweepers were PM10 compliant. A total of 105,000 miles were swept. An interactive sweeping map is used for residential education on sweeping and schedules.			
5.1 Conduct street sweeping activities	CSUF swept campus owned areas for a total of 21 miles.			
5.1 Conduct street sweeping activities	The City of Clovis has ten Street Sweepers which are PM10 compliant. The City of Clovis Swept a total of 59,413 miles in 2019-2020.			
5.1 Conduct street sweeping activities	The Permittees recorded 164,434 miles of streets swept within FMFCD’s NPDES permit boundary in FY 2019-20.	The Permittees will continue to conduct street sweeping in FY 2019-20 at the same rate as they did in the previous fiscal year.	N/A	MUN5- Street and Parkway Area Maintenance (page 4 -11)
5.2 Inventory municipal parking facilities	Permittees inventoried their Municipal Parking Facilities which included their size and location and ensured that all are maintained as necessary.	The Permittees will continue to inventory and maintain the Municipal Parking Facilities.	MUN 5.2 Municipal Parking Facilities Inventory and Maintenance Records FY 2018-19	MUN5- Street and Parkway Area Maintenance (page 4 -11)
5.3 Clean and maintain parking facilities	The Permittees have periodically cleaned and maintained the parking facilities under their jurisdiction. See MUN 5.2 for a the inventory of municipal parking facilities and their schedule of maintenance.	The Permittees will continue to periodically clean and maintain the parking facilities under their jurisdiction.		MUN5- Street and Parkway Area Maintenance (page 4 -11)
<b>M 6.0 - Sanitary Sewer Management Plan (SSMP)</b>				
6.1 Prevent and respond to sanitary sewer overflows pursuant to the SSMP	The City of Fresno and Clovis implemented Separate Sewer Management Plans to minimize the discharge of sanitary overflows to the stormwater conveyance system. The City of Fresno reported 13 SSO locations with none of the spills reaching a receiving water. The City of Clovis reported 2 SSOs locations with none of the spills reaching a receiving water.	The City of Fresno and Clovis will continue to implement a Separate Sewer Management Plan to minimize the discharge of sanitary overflows to the stormwater conveyance system.	MUN 6.1 SSO Public Report Summary City of Fresno and Clovis	MUN6- Sanitary Sewer Management Plan (page 4-12)

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MS4 Agency Responsible for Stormwater Control Measures – Municipal Operations  
2019/2020

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
M 7.0 - Municipal Construction				
7.1 Review CIP specifications to ensure all MS4 Permit requirements are included	Permittees have been trained on the stormwater requirements concerning their Capital Improvement Projects including compliance with FMFCD's Storm Drainage and Flood Control Master Plan, FMFCD's Post Development Standards Technical Manual and the State's Construction General permit.	FMFCD and its Co-Permittees will continue to review and revise if necessary their CIP Plan Specifications to ensure specification notes meet the MS4 permit requirements.	N/A	MUN7- Municipal Construction (page 4-13)
7.2 Ensure conformance with land development requirements in Section 7.	FMFCD met with Co-Permittees and discussed the MS4's permit Planning and Land Development section including the New Development standards that were completed in June 2014. Permittees did not report any CIP projects that were not covered under FMFCD's Master Plan.	FMFCD will include in its training CIP conformance with the Planning and Land Development section of the SWQMP and also meet internally with FMFCD and its Co-Permittees to review the processes to ensure CIP projects are in compliance with the MS4 permit.	N/A	MUN7- Municipal Construction (page 4-13)
7.3 Ensure conformance with construction requirements in Section 2, including coverage under the Construction General Permit, where applicable.	The Permittees have complied with conformance to the construction requirements, including coverage under the Construction General Permit.	The Permittees will continue to comply with conformance to the construction requirements, including acquiring coverage under the Construction General Permit for capital improvement projects.	MUN 7.3 - Permittee Projects with Coverage Under Const General Permit	MUN7- Municipal Construction (page 4-13)
M 8.0 - Training				
8.1 Conduct training for staff	See supporting document PM 1.6 Master Training List and Schedule detailing when trainings occurred and the co-permittee departments that were trained.	FMFCD staff will conduct annual training once every two years or earlier if any procedural changes occur.	N/A	MUN8- Training (page 4- 14)

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## Illicit Connection and Discharge Control Program

The following table lists agency contacts for the Illicit Discharges Elimination component of the Stormwater Quality Management Program.

Agency	Prepared by	Contact Person	Phone #	Manager
FMFCD	Gabriel Ledesma	Gabriel Ledesma	456-3292	Jared Shuman
City of Clovis	Paul Armendariz	Paul Armendariz	324-2649	Paul Armendariz
City of Fresno	Tom Adams	Rosa Lau-Staggs	621-5130	Brian Spindor
Fresno County	Mike Bains	Vince Mendez	445-3271	David Pomaville
CSU Fresno	Lisa Kao	Lisa Kao	278-6910	Steve Martinez

### Introduction

Federal stormwater regulations require municipal programs to effectively prohibit non-stormwater discharges to the storm drain conveyance system. Any non-stormwater flow that is not allowed in the regulations must be prohibited regardless of its source or quality. The Illicit Discharge Program was developed to comply with these requirements. FMFCD studied the flows specified in the federal regulations and developed a policy for non-stormwater discharges that are permissible or conditionally allowable. All other non-stormwater discharges are prohibited. FMFCD and Co-Permittees are authorized to control non-stormwater discharges through their stormwater quality control ordinances.

Illicit discharges enter the storm drain system through illicit connections and illegal dumping. An illicit connection is a physical connection to a storm drain that has not been approved by an agency or conveys a prohibited non-stormwater discharge. Illegal dumping is the intentional dumping of materials into the conveyance system, streets, inlets or basins. Illegal dumping can also include improper disposal of material on land that is then transported into the storm drain system when it rains. The following section describes the activities FMFCD and Co-Permittees conducted to decrease stormwater pollutants discharged through illegal disposal. FMFCD eliminated one illicit connection in FY 2019-20.

**Highlights of the efforts conducted in FY 2018-19 are:**

- FMFCD conducts Co-Permittee trainings that cover illicit discharges including identifying and reporting illicit connections. FMFCD eliminated one illicit connection in FY 2019-20. Co-Permittees have referred 28 complaints for investigation to FMFCD in FY 2019-20.
- FMFCD responded to 69 complaint referrals from citizens or Co-Permittees in FY 2019-20, of those, all 69 complaints were verified as illegal discharges.
- Of the complaints, the pollutants with the highest contribution to storm water pollution were 'Other' (29%), 'Vehicle Fuel/Automotive Fluids' (21%), 'Residential Oil Spills' (14%) and 'Paint' (9%).
- All illicit connections and discharge response were resolved by initiating FMFCDs Progressive Enforcement Response Plan.



## MS4 Agency Responsible for Stormwater Control Measures – Illicit Connections and Discharges 2019/2020

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
<b>ID 1.0 - Detection and Identification of Illicit Discharges</b>				
1.1 Implement field activities to detect illicit discharges and illicit connections	FMFCD conducts Co-Permittee trainings that cover illicit discharges including identifying and reporting illicit connections. FMFCD eliminated one illicit connection in FY 2019 – 2020. Co-Permittees have referred 28 complaints for investigation to FMFCD in FY 2019 – 2020.	FMFCD will continue to include illicit connection, discharge identification and referrals and response procedures response in its Co-Permittee trainings and investigate complaints reported by residents and Co-Permittees.	N/A	ID1- Detection and Identification of Illicit Discharges and Illicit Connections (page 5-3)
1.2 Maintain and advertise stormwater hotline (see also PIE6)	FMFCD has a 24 hour phone line that has a live attendant from 8:00 a.m. to 5:00 p.m. and a recorded message from 5:00 p.m. to 8:00 a.m. The hotline is advertised in all of FMFCD's outreach material. Furthermore, the City of Fresno promotes its One Call Center that refers stormwater complaints to FMFCD for investigation.	FMFCD and the City of Fresno will continue to operate the stormwater hotlines in FY 2020-21.	N/A	ID1- Detection and Identification of Illicit Discharges and Illicit Connections (page 5-3)
1.3 Coordinate with Co-Permittees to ensure that the District is notified when illicit connections are detected	FMFCD conducted two Pollution Prevention & Enforcement Committee with the Co-Permittees to discuss coordination and collaboration of illegal dumping investigations to avoid duplication of effort.	FMFCD will host at least annual meetings with Co-Permittees to discuss pollution prevention and enforcement.	ID 1.3 2019-2020 PPEC Meeting Agendas	ID1- Detection and Identification of Illicit Discharges and Illicit Connections (page 5-3)
<b>ID 2.0 - Investigation, Inspection, Follow-up, and Eliminate</b>				
2.1 Update (as needed) procedures for the investigation of illicit connections and discharges, including follow-up protocols	In past fiscal years, permittees updated investigation procedures which were included in the updated MOUs between FMFCD and its Co-Permittees. FMFCD reviewed its Progressive Enforcement Response Plan that enforces the stormwater ordinance while the Co-Permittees rely on their stormwater ordinances and other supporting rules and regulations as follow-up protocols.	Permittees will review and update if necessary their procedures for investigating illicit connections and discharges.	N/A	ID2- Investigation, Inspection, Follow- up and Elimination (page 5-5)
2.2 Implement procedures for the investigation of illicit connections and discharges, including follow-up protocols	FMFCD responded to 69 complaint referrals from citizens or Co-Permittees in FY 2018-2019.	FMFCD and County Health will continue to investigate reported illegal discharges.	ID 2.2 Implement Procedures for the Investigation of Illicit Connections and Discharges	ID2- Investigation, Inspection, Follow- up and Elimination (page 5-5)
2.3 Record and report illicit connections and illicit discharges	FMFCD tracks its illegal discharge investigations in a separate access database, while the County tracks its hazardous waste responses in their own in-house database.	FMFCD and County of Fresno Environmental Health Department will continue to record and report its illegal discharges and illicit connections in their respective databases.	ID 2.3 FMFCD Illegal Discharge Complaint Investigation	ID2- Investigation, Inspection, Follow- up and Elimination (page 5-6)
<b>ID 3.0 - Enforcement</b>				
3.1 Review and update legal authority (as needed)	FMFCD has confirmed that current legislation, coupled with the Permittees' ordinances, provide sufficient legal authority to implement the new MS4 permit and the revised SWQMP. FMFCD submitted a Statement of Legal Authority to the RWQCB on November 24, 2014.	FMFCD will review its legal authority during the update of the Stormwater Quality Management Plan as part of the re-issuance of its MS4 permit. The SWQMP is scheduled to be finalized by the RWQCB in May 22, 2021. As stated in the permit, the SWMP shall describe the applicable approaches and options to enforce its legal authority, as necessary, to achieve compliance with the requirements of the order.	See PM 2.2 for a copy of the stormwater ordinance	ID3- Enforcement (page 5-8)
3.2 Update and implement progressive enforcement response procedures (as needed)	All illicit connections and discharge response were resolved by initiating FMFCDs Progressive Enforcement Response Plan.	FMFCD will update its PERP when necessary and continue to implement the PERP to mitigate prohibited discharges.	N/A	ICD3 - Enforcement (5-9)
3.3 Track enforcement actions	FMFCD tracks its illegal discharges investigations in a separate Access database, while the County tracks its hazardous waste responses in their own in-house database.	FMFCD and Co-Permittees will continue to implement, review and revise if necessary, response and enforcement procedures as outlined in the Memorandum of Understanding (MOU) between FMFCD and its Co-Permittees. FMFCD is developing an updated database using GIS.	N/A	ID3- Enforcement (page 5-9)
<b>ID 4.0 - Training</b>				
4.1 Conduct training of first responders, inspectors and relevant field staff	FMFCD provided training during FY 2019-2020. See supporting document PM 1.6 Master Training List and Schedule detailing when trainings occurred and the co-permittee departments that were trained.	FMFCD staff will conduct annual training once every two years or earlier if any procedural changes occur.	N/A	ID4- Training (page 5- 10)

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## Public Involvement and Education

The following table lists agency contacts for the Public Involvement and Education component of the Stormwater Quality Management Program.

Agency	Prepared by	Contact Person	Phone #	Manager
FMFCD	Paige Moretto	Paige Moretto	456-3292	Jared Shuman
City of Clovis	Paul Armendariz	Paul Armendariz	324-2649	Paul Armendariz
City of Fresno	Donna Leslie	Donna Leslie	621-1884	Jerry Schuber
County of Fresno	Jared Weeks	Jared Weeks	600-4259	John Thompson
CSU Fresno	Lisa Kao	Lisa Kao	278-6910	Steve Martinez

### Introduction

Public Involvement and Education (PIE) is an inter-agency effort that uses the technical expertise and the collective resources of all Co-Permittees. The approach to managing stormwater pollution taken by the Co-Permittees focuses on preventing pollutants from reaching the storm drain system to the maximum extent practicable. Such source control includes encouraging behavioral change, educating the public about sources and the effects of stormwater pollution and fostering participation in pollution control.

The Best Management Practices and associated measurable goals evaluated in this section educate the public about the impacts and control of urban runoff pollution. Messages conveyed are proper management, disposal, and pollution prevention practices required to reduce, control and prevent the discharge of pollutants.

### Highlights of the efforts conducted in 2019-20 are:

- Staff interacted with approximately 1,912 residents, and provided 1,930 brochures (English/Spanish/Hmong) to the public. Staff provided information about the various Countywide-recycling programs (Waste prevention, used oil/filer recycling, household hazardous waste (HHW) program (HHW Facility and Network program), organics, paint, sharps, etc. The focus of the messages to resident emphasized the proper disposal of vehicle fluids, (e.g., used oil, brake, transmission, etc.), and the proper management and disposal of household hazardous waste (HHW). The information was provided to the residents throughout Fresno County at the following events: Biola Tire Amnesty, Sanger Blossom Festival, Auberry Community Meeting, Kerman Earth Day, Clovis Car Show, Earth Day

Fresno, Selma Raisin Festival, Caruthers Tire Amnesty, Reedley Street Faire, Kingsburg Swedish Festival, Fresno Library Summer Kickoff, Kerman Farmers Market, Clovis Night Out, Clovis Classic Car Show, Kerman Ag Expo, Fresno Hmong New Year Celebration. Additionally, staff distributed over 16,200 Household Hazardous Waste Brochures to the 15 incorporated cities for distribution to their residents.

- The City of Fresno Solid Waste Management Division collected 11,780 gallons of used motor oil and 18,600 (18,000 metal and 600 paper) used oil filters through the Residential Curbside Collection Program.
- The City of Clovis actively encourages water conservation by patrolling for water wasting during the irrigation season. During FY 2019-20, 308 water waste citations were issued for non-conformance with the City's water conservation program. The City also promotes water conservation by providing information regarding the water conservation program on the City website, in the Community Cleanup flyers, in the annual Consumer Confidence Report, by distributing information at public events, and by providing water audits and assistance for customers with setting their sprinkler controllers. The City of Clovis Public Utilities Department mails out semi-annually to all customers which describe the community cleanup, recycling and litter control programs. New customers are given a package of information regarding recycling and refuse. The information includes rules and regulations, details on what can be recycled, refrigerator magnets and stickers that promote recycling.
- Fresno State operates its own vehicle maintenance program; used oil is collected and disposed of. During CY2019, approximately 2800 gallons of used oil were safely collected and disposed.
- The Partners for a Clean Community Committee is a work group made up of representatives from the five co-permittee agencies. The group formally met once during the last year regarding collaborative projects, and interacted in different collaborative contexts throughout the year. As shown in the attached meeting minutes, topics discussed include introduction of the largely new Environmental Resources team, anticipated changes in the NPDES permit trash rules, completion of the updated Public Awareness Survey, a new outreach project, and current and coming activities in participating agencies' programs.
- In FY 2019-2020 the District attended and conducted outreach at 7 community events. The community received information on FMFCD's Regional Storm Water Mitigation System and stormwater pollution prevention. Outreach materials included a general brochure, IPM specific pamphlets and tote bags with pollution prevention messages and a stormwater pollution reporting hotline number. Extensive effort was made in early 2019 to increase the number and variety of community events that the District participated, to that effect, an exciting new calendar of events was anticipated. However, due to the Covid-19 pandemic, a significant number of events were canceled. Furthermore, all school presentations were cancelled due to the aforementioned issue. See attachment for complete list of outreach events attended.

- In FY 2019-20 the District translated the 'Clean Stormwater Activity Booklet' to Spanish. A multi-media public outreach campaign was ran, which includes a Spanish language television PSA, Hmong and Punjabi radio PSAs, Spanish digital advertisements, and Spanish utility bill inserts. A general program brochure in English, Spanish and Hmong is distributed at public events and is available on the District's website. The Next Generation Science Standard-compatible classroom materials are available in Spanish, and are available to all schools within the District's service area, at no charge. Spanish classroom materials had been requested by many teachers, and the District is pleased to offer them. See support document PIE 5.2 Classroom Infographics and Posters. Spanish language IPM materials are produced by both Our Water, Our World (OWOW) and the UCCE Master Gardeners, and are distributed at outreach events, and available online at <http://ourwaterourworld.org/Fact-Sheets> and <http://ipm.ucanr.edu/QT/qtindexsp.html>.

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**MS4 Agency Responsible for Stormwater Control Measures – Public Involvement and Education  
2019/2020**

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
<b>PIE 1.0 - Update PIE Strategic Plan</b>				
1.1 Update the PIE Strategic Plan	FMFCD's PIE 5-year Strategic Plan was slated to be updated in FY 2019/2020. However, due to delays in the reissuance of a new NPDES permit, the Strategic Plan updated has also been delayed. The Public Awareness Survey (see PIE 4.6) was updated in FY 2018/2019, and will be used to inform the content and recommendations of the updated Strategic Plan. Strategic planning for the PIE program will be guided by the PIE requirements of the 5-year NPDES permit adopted in May of 2013. Existing program elements will be reviewed and updated, and co-permittees and other local partner agencies will be consulted to allow for collaborative planning where possible.	The February 2014 PIE Strategic Plan has served as the guide for FMFCD's NPDES public education efforts, and will be used until the next plan update anticipated to be started in FY 2020-21.	PIE 1.1 Public Involvement and Education 5 Year Strategic Implementation Plan, February 2014	PIE1 Update Public Involvement and Education Strategic Plan.
<b>PIE 2.0 - Program Coordination</b>				
2.1 Coordinate with the PIE advisory committee (Partners for a Clean Community)	Fresno State operates its own vehicle maintenance program. Used oil is collected and disposed of. During CY2019, approximately 2800 gallons of used oil were safely collected and disposed.			
2.1 Coordinate with the PIE advisory committee (Partners for a Clean Community)	The City of Fresno operates an extensive recycling and Used Motor Oil (UMO) outreach and education program. This program includes UMO collection, filter exchange events, radio, television, and printed ads, a school education and presentation element, and over 35 outreach events.	The City of Fresno will continue to operate their extensive recycling and Used Motor Oil (UMO) outreach and education program.	PIE 2.1 City of Fresno Attachment	
2.1 Coordinate with the PIE advisory committee (Partners for a Clean Community)	The County of Fresno through their Public Works and Planning - Resources Division operates an extensive recycling, waste prevention, household hazardous waste, and oil/filter recycling program. They distribute information to students, residents, employers and employees through a myriad of activities. See County of Fresno attachment.	The County of Fresno will continue to operate their extensive recycling, waste prevention, household hazardous waste, and oil/filter recycling program.	PIE 2.1 County of Fresno Attachment	
2.1 Coordinate with the PIE advisory committee (Partners for a Clean Community)	The Partners for a Clean Community Committee is a work group made up of representatives from the five co-permittee agencies. The group formally met once during the last year regarding collaborative projects, and interacted in different collaborative contexts throughout the year. As shown in the attached meeting minutes, topics discussed include introduction of the largely new Environmental Resources team, anticipated changes in the NPDES permit trash rules, completion of the updated Public Awareness Survey, a new outreach project, and current and coming activities in participating agencies' programs.	Continue to organize and host meetings of Partners for a Clean Community to maintain communication among participating agencies, and explore opportunities for collaboration. Continue to share information on members' outreach activities, data collection methods, and types of data collected.	PIE 2.1 Partners for a Clean Community Committee Minutes 8.22.2019	PIE2- Program Coordination (page 6-5)

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## MS4 Agency Responsible for Stormwater Control Measures – Public Involvement and Education 2019/2020

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
2.2 Coordinate with other water resources public outreach groups	<p>FMFCD maintains coordination and partnership relationships with a range of local organizations, including co-permittees: County of Fresno, City of Fresno, City of Clovis, and California State University, Fresno. Program coordination with co-permittee agencies involves promotion of public messages and services that prevent stormwater pollution: used motor oil recycling drop-off and pick-up, household hazardous waste disposal, integrated pest management, and water conservation. In addition, FMFCD pays for annual mailer inserts to be sent to City of Clovis and City of Fresno utilities customers which promote stormwater pollution prevention actions.</p> <p>FMFCD uses Facebook and Instagram to reach people within the Fresno/Clovis area. Posts cover why stormwater pollution prevention is important, and activities of co-permittee agencies and other community partners are routinely shared.</p> <p>Central Valley Water Awareness Committee: FMFCD, City of Fresno and City of Clovis are active members of this multi-organization group formed in 1987, and contribute money and time to outreach activities. Water supply, conservation, conveyance, and quality are topics of focus. Due to COVID-19 public event restrictions, CVWAC's largest annual sponsored public event was canceled for 2020. The Water Wise Plant Exchange is typically held in May at California State University, Fresno, and is organized by City of Fresno Water Conservation. Water conservation and integrated pest management principles are main messages.</p> <p>The City of Clovis actively encourages water conservation by patrolling for water wasting during the irrigation season. During FY 2019-20, 308 water waste citations were issued for non-conformance with the City's water conservation program. The City also promotes water conservation by providing information regarding the water conservation program on the City website, in the Community Cleanup flyers, in the annual Consumer Confidence Report, by distributing information at public events, and by providing water audits and assistance for customers with setting their sprinkler controllers.</p> <p>Fresno State houses the California Water Institute, which focuses on water issues throughout the Valley and California (<a href="http://www.californiawater.org/">http://www.californiawater.org/</a>). In order to reduce waste and divert more waste from the landfills, Fresno State has placed additional waste bins throughout campus, as well as sharing information regarding how to properly sort waste (see attached). Fresno State has installed 21 cold water bottle filling stations to encourage reuse of water bottles and reduce plastic waste.</p>	If COVID-19 restrictions are eased in the coming year, we will participate in public events to perform in-person public outreach on stormwater pollution prevention. The year-long schedule developed for 2020 could not be followed due to COVID-19 disruptions. A new schedule will be developed as public health conditions allow.	PIE 2.2 Fresno State Recycling Poster	PIE2- Program Coordination (page 6-5)
<b>PIE 3.0 - Public Participation</b>				
3.1 Publicize and recruit volunteers to conduct storm drain stenciling and participate in other events	FMFCD and Co-Permittees did not receive any requests to partner with school students or community groups to install markers in FY 2019-2020.	FMFCD and Co-Permittees will continue to partner with school students and community groups, when requested, in the marking of the storm drains with the message "No Dumping – Protect Your Water." Furthermore, FMFCD will begin promoting this community service opportunity to schools and community groups in order to garner more requests in the future.	N/A	PIE3- Public Participation (page 6-10)
3.2 Maintain Clean Stormwater Grant Program	The 2020 Clean Stormwater Grants awarded funded nine field trips to the San Joaquin River, a school rain garden project, and a river cleanup, totaling \$15,000. Due to Covid-19 only one of the nine field trips has yet occurred, however the river cleanups continue to take place. Discussions are in progress regarding how to handle the impacted grant recipients that have been unable to use their grant funding and may be unable to do so in the typical allotted grant window of 18 months.	Clean Stormwater Grant applications will be solicited through the typical channels, such as email blasts to teachers and through community outreach events. Further solicitation will be made to those groups and organizations which have successfully been awarded grants in the past, but not in recent years. \$25,000 has been made available in grant funding for 2020, up \$10,000 from the year before, in order to anticipate meeting the demand in funding from eligible applications received (based on application received the year before.)	PIE 3.2 2020 Awarded Clean Stormwater Grants	PIE3- Public Participation (page 6-10)

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## MS4 Agency Responsible for Stormwater Control Measures – Public Involvement and Education 2019/2020

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
<b>PIE 4.0 - Public Outreach</b>				
4.1 Develop, update and distribute materials on stormwater pollution prevention	The District's Clean Stormwater Program brochure uses information gathered during the 2013 public awareness survey to address the fact that less than a quarter of the people in our service area know where stormwater goes. Without that understanding, it is nearly impossible to encourage changes in behavior that cause stormwater pollution. There is not a clear connection between behavior and negative environmental consequences. The brochure focuses simply on where stormwater goes, and that it picks up pollutants on the way to stormwater basins. It is available in English, Spanish, and Hmong, which are the three most widely spoken languages within the District's service area. A large-scale utility bill insert mailing was done for the third consecutive year in partnership with City of Fresno and City of Clovis Public Utilities. Brochures are also distributed at all public events participated in by the District, and they are available in the office lobbies. A Next Generation Science Standards-aligned suite of classroom materials developed in 2015-16 is distributed to schools in the Fresno/Clovis area. Three sets of infographics, posters, and PowerPoint presentations were developed in close coordination with the Fresno County Office of Education's Next Generation Science Standards Specialist, and local teachers. These materials won a 2016 Excellence in Communications award from the National Association of Flood and Stormwater Management Agencies. A large grocery-style tote bag with the District's logo and stormwater pollution prevention was developed and regularly distributed at public events by the District, by co-permittees, and other community partners.	The District uses information gathered by its most recent 2019 public awareness survey to determine content of its general public informational materials, including TV and radio commercials, digital advertising, bus advertisements, fact sheets, brochures, and content of its Clean Stormwater Program web pages. The basics of where stormwater goes, that it is not treated, that it replenishes the groundwater supply, and that human actions impact the quality of that stormwater, are consistent messages. The 2019 public awareness survey shows that public awareness of these things has improved over time, but still needs further improvement. They will continue to be the basis of our outreach messages, across all communications methods/platforms.	PIE 4.1 Updated Brochures and Fact Sheets	PIE4- Public Outreach
4.2 Participate in community outreach events	In FY 2019-2020 the District attended and conducted outreach at 7 community events. The community received information on FMFCD's Regional Storm Water Mitigation System and stormwater pollution prevention. Outreach materials included a general brochure, IPM specific pamphlets and tote bags with pollution prevention messages and a stormwater pollution reporting hotline number. Extensive effort was made in early 2019 to increase the number and variety of community events that the District participated, to that effect, an exciting new calendar of events was anticipated. However, due to the Covid-19 pandemic, a significant number of events were canceled. Furthermore, all school presentations were cancelled due to the aforementioned issue. See attachment for complete list of outreach events attended.	FMFCD will continue to participate in community outreach events in FY 2020-21.	PIE 4.2 Public Outreach Events	PIE4- Public Outreach (page 6- 12)
4.3 Enhance multi-cultural outreach	In 2019/20 the District translated the 'Clean Stormwater Activity Booklet' to Spanish. A multi-media public outreach campaign was ran, which includes a Spanish language television PSA, Hmong and Punjabi radio PSAs, Spanish digital advertisements, and Spanish utility bill inserts. A general program brochure in English, Spanish and Hmong is distributed at public events and is available on the District's website. The Next Generation Science Standard-compatible classroom materials are available in Spanish, and are available to all schools within the District's service area, at no charge. Spanish classroom materials had been requested by many teachers, and the District is pleased to offer them. See support document PIE 5.2 Classroom Infographics and Posters. Spanish language IPM materials are produced by both Our Water, Our World (OWOW) and the UCCE Master Gardeners, and are distributed at outreach events, and available online at <a href="http://ourwaterourworld.org/Fact-Sheets">http://ourwaterourworld.org/Fact-Sheets</a> and <a href="http://ipm.ucanr.edu/QT/qtindexsp.html">http://ipm.ucanr.edu/QT/qtindexsp.html</a> .	We will continue the outreach methods detailed above, and explore any new opportunities that arise. If consultation with the Fresno County Superintendent of Schools, which helped create the NGSS school curriculum we currently offer, advises a curriculum update in FY 2020-21, all new/updated materials will be planned for availability in Spanish as well as English.	PIE 4.3 MEDIA SUMMARY 2020	PIE4- Public Outreach (page 6- 12)
4.4 Conduct mixed media campaigns	FMFCD ran a multi-media television, radio, transit, social media, and digital media campaign, starting the week of January 1, 2020 and running through March 31, 2020.	FMFCD will run an annual television and radio PSA, targeted Facebook and digital advertising, and transit advertisements campaign of an estimated 12 weeks in length at some point in January through April 2021. As with each media buy, the mix of media will be chosen to reach the greatest number of people within FMFCD's service area.		PIE4- Public Outreach (page 6- 12)

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## MS4 Agency Responsible for Stormwater Control Measures – Public Involvement and Education 2019/2020

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
4.5 Maintain and enhance the Integrated Pest Management outreach program	The District continued its partnership, now in its 21st year, with the University of California Cooperative Extension (UCCE) Master Gardeners of Fresno County on Integrated Pest Management (IPM) training and public outreach, wherein the relationship between pesticide use and storm water quality is emphasized. Up until Covid-19 restrictions were mandated, Master Gardeners held seminars for the public, offered weekend workshops at the demonstration garden, Garden of the Sun, conducted plant clinics at two local farmer's markets and made IPM presentations and shared information at the Fresno County Spring Home and Garden Show. Cancellation of the Master Gardeners' Spring Garden Tour and Kids' Gardening Day event further impacted the Master Gardeners' opportunities to extend outreach to the public. Visitations to community gardens were also discontinued, as were services to residents of the California Veterans' Home. IPM is one of the program's seven guiding principles of UCANR Master Gardener Program, and is promoted on via the UCANR IPM website Quick Tip cards promoting less-toxic pest management were provided by UC Statewide IPM Program, and supplies were monitored and replenished by Master Gardeners prior to impose restrictions. A full list of Quick Tip cards is available in English and in Spanish. The University of California Agriculture and Natural Resources (UCANR) Program continued to update information and introduce new topics. UCANR Central Valley Friendly Landscaping IPM is also promoted through involvement and sponsorship of the Central Valley Friendly Landscaping residential and commercial landscape award program. UCANR Fresno Master Gardener website, UCANR MG Gardening Helpline is open to answer the home gardeners questions and provides service remotely Monday to Friday. The helpline has answered over 500 inquiries per year. The Fresno Home and Garden show 2020 provided 3 days of Master Gardener seminars and workshops and reached over 1,000.00 contacts. Master Gardener workshops were also offered in Spanish this year! Due to Covid 19 efforts are underway to offer online education classes.	The District has reached out to Suzanne Bontempo of Plant Harmony to employ her services in bringing IPM education and outreach to local Home Depot stores. A contract is underway that will be taken to the Board of Directors for approval in the Fall of 2020, to implement the new program in Spring of 2021. The new program will consist of labeling and calling out IPM friendly products in Home Depot stores, training Home Depot staff on said products, and stocking said stores with OWOW informational brochures.		PIE4- Public Outreach (page 6- 12)
4.6 Update and implement public awareness survey	A new public awareness survey is typically conducted every four years. The most recent survey was done in May - June of 2019. A random sample phone survey of 400 residents of FMFCD's service area (Fresno and Clovis) was taken. The sample size of 400 had a confidence interval of 5% and a confidence level of 95%. A stratified random sample was chosen using the most current U.S. Census Bureau data to closely approximate the true population of the Fresno/Clovis area in terms of socioeconomic status, ethnicity, geography, and language. Survey results were also compared to previous surveys.	In 2020/21, FMFCD will continue to work with its public outreach consultant to use the findings of the survey to shape the content of advertisements, informational materials, website and social media content, etc., to focus on program areas where public awareness is low. Analysis of the results gives us a good idea of what messages need more focus, and who needs to be reached, according to geographic area, income level, languages spoken, and whether they are home owners or renters.	PIE 4.6 2019 Public Awareness Survey	PIE4- Public Outreach (page 6- 12)
<b>PIE 5.0 - Outreach to School Age Children</b>				
5.1 Maintain and promote water resources outreach materials, classroom presentations, and river field trips	In FY 2019-20, FMFCD continued to offer three school curriculum suites, which include infographics, posters and power points. These suites are suited for 6th, 7th and 8th grade classrooms. The topics cover water conservation, pollution prevention, and recycling from a stormwater perspective. We also offer two activity books for elementary school children, a water cycle poster and videos, and a non age-specific Clean Stormwater Activity Book, pencils, and tote bags. Additionally, we offer educational short videos and all curriculum as free downloads. Classroom presentations on stormwater are also provided to any school upon request.	The District will continue to provide educational materials, field trips and classroom presentations through both the Clean Stormwater Grant program and general outreach.	N/A	PIE5- Outreach to School- Age Children (page 6-15)

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## MS4 Agency Responsible for Stormwater Control Measures – Public Involvement and Education 2019/2020

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
5.2 Evaluate ability to interface and coordinate with school education curriculum	Substantial changes have happened in the State of California Department of Education and in local school districts with regard to science standards at all levels of public education. FMFCD staff has kept pace with these changes by staying in close contact with the Next Generation Science Standards experts at the Fresno County Office of Education (FCOE) and the California Regional Environmental Education Community (CREEC). The uncertainty among teachers about how to restructure their classroom curricula and where to get classroom materials that comply with Next Generation Science Standards (NGSS) provided a unique opportunity for the District. Teachers’ opinions and feedback on draft materials were gathered by FCOE’s Science Coordinator and led to creation of a suite of new classroom tools that was finalized and distributed starting in FY 2015-16, and translated into Spanish in FY 2015-16 at teachers request. The Clean Storm Water Activity Book, geared toward grades 1-3, was updated in 2018, and distribution began in hard copy and in PDF available for free download. Translation of the Clean Stormwater activity book to Spanish was completed in FY 2019-20. The From the Mountains to the Valley – the Story of Our Water activity book’s content was reviewed and updated by the District, the co-permittees and Caltrans in 2017/2018. All are available for online ordering at <a href="http://www.fresnofloodcontrol.org/educational-materials/">http://www.fresnofloodcontrol.org/educational-materials/</a> .	In FY 2020-21, the District and its public outreach consultant will evaluate the materials created to date and determine if updating of current material, and/or expansion of curriculum is necessary. Furthermore, improved strategies for distribution of classroom materials to schools will be explored.	PIE 5.2 Clean Storm Water Activity Book (Spanish)	PIE5- Outreach to School- Age Children (page 6)
5.3 Make classroom presentations	In FY 2019-20, due to Covis-19, the District did not give any school presentations. Most school presentations have historically occurred in the late spring. Schools who receive presentations, either due to being grant recipients or by request, are given a basic, age appropriate, stormwater system introduction and stormwater pollution prevention presentation.	FMFCD and Co-Permittees will continue to offer and provide school presentations, if and when schools reopen. Efforts are underway to convert NPDES required municipal stormwater trainings to a digital format, which may be the direction school presentation will head, given that the trainings are able to be converted well.		PIE5- Outreach to School- Age Children (page 6-16)
5.4 Support existing regional water education program activities	The District works in cooperation with the Fresno County Superintendent of Schools’ Scout Island Outdoor Education Center to distribute classroom educational materials to students. Throughout the year, Scout Island hosts educational camps and field trips for local students within the District’s service area, and hosts institutes on environmental education for local teachers. Upon request, the District delivers materials to Scout Island so they are on hand when needed to give attending students, or to provide class sets for teachers to take back to their classrooms.	Coordination with Scout Island will continue in 2019/2020 to provide free classroom educational materials to students and teachers visiting for field trips, day camps, and teacher institutes.	N/A	PIE5- Outreach to School- Age Children (page 6-16)
5.4 Support existing regional water education program activities	The District works in cooperation with the Fresno County Superintendent of Schools’ Scout Island Outdoor Education Center. Throughout the year, Scout Island hosts educational camps and field trips for local students (some of which are funded through the Clean Stormwater Grant Program) within the District’s service area, and hosts institutes on environmental education for local teachers. Upon request, the District delivers materials to Scout Island so they are on hand when needed to give attending students, or to provide class sets for teachers to take back to their classrooms.	Coordination with Scout Island will continue in 2020-21 to provide free classroom educational materials to students and teachers visiting for field trips, day camps, and teacher institutes.	N/A	PIE5- Outreach to School- Age Children (page 6-16)
<b>PIE 6.0 - Hotline</b>				
6.1 Promote/publicize the 24-hour hotline number in outreach materials	FMFCD has a 24 hour phone line that has a live attendant from 8:00 a.m. to 5:00 p.m. and a recorded message from 5:00 p.m. to 8:00 a.m. After hours, the message instructs callers to an on-call personnel for emergencies- including illegal dumping complaints. The hotline is advertised in all of FMFCD’s outreach material. Furthermore, the City of Fresno promotes its One-Call-Center that refers stormwater complaints to FMFCD for investigation.	FMFCD and the City of Fresno will continue to operate stormwater hotlines in FY 2020-21.	N/A	PIE6- Hotline (page 6-17)
<b>PIE 7.0 - Business Outreach (also see IC6)</b>				
7.1 Conduct workshops for targeted businesses	In 2015-16, FMFCD provided individual training to business owners who were submitting industrial general permit applications for the first time. Training was provided through phone calls, emails and onsite assistance. FMFCD has continued to provide assistance to businesses through materials offered on our website, as well as through phonecalls.	FMFCD will continue to assist local businesses as needed.	N/A	PIE7- Business Outreach (page 6-18)
7.2 Develop and distribute outreach materials	The District sends out letters with corresponding information on the new and updated NPDES permit information to the regulated community. The District has an Industrial General Permit factsheet brochure, which was updated in 2019 and posted to the District website for access by the public.	FMFCD will continue to assist and update local business owners with permit information.	Industrial General Permit Factsheet Brochure	

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## Planning and Land Development Program

The following table lists agency contacts for the Planning and Land Development Program component of the Stormwater Quality Management Program.

Agency	Prepared by	Contact Person	Phone #	Manager
FMFCD	Paige Moretto	Jared Shuman	456-3292	Alan Hofmann
City of Clovis	Paul Armendariz	Paul Armendariz	324-2649	Paul Armendariz
City of Fresno	Charles Clark	Charles Clark	621-8094	Jennifer Clark
County of Fresno	Augie Ramirez	Augie Ramirez	600-4266	William Kettler
CSU Fresno	Lisa Kao	Lisa Kao	278-6910	Steve Martinez

### Introduction

FMFCD's stormwater drainage program provides controlled and safe disposal of stormwater runoff generated by residential and commercial development. The metropolitan portion of FMFCD is divided into local drainage areas of approximately one to two square miles. These drainage areas are identified and established through the on-going revision of the Storm Drainage and Flood Control Master Plan. Within the drainage areas, FMFCD operates and maintains a complex system of surface conveyances, storm drains, pump stations and stormwater basins that capture and recharge stormwater to the groundwater aquifer.

Under the previous MS4 Permit, a Standard Urban Stormwater Mitigation Plan (SUSMP) was not required due to the nature of the MS4 drainage system. The MS4 is composed of regional, stormwater management basins (structural controls), which capture stormwater runoff, providing a substantially broader coverage than that created by the SUSMPs. Structural controls are treatment devices designed to remove stormwater pollutants after they have entered runoff. Typically, structural controls remove pollutants by filtration, settling, and/or nutrient uptake.

The Permittees updated their Planning and Land Development Program to comply with the new permit requirements. This was accomplished through updates to the Storm Drainage and Flood Control Master Plan and subsequent implementation of the Plan, including the revised post-development standards for those drainage areas that do not discharge to an existing or planned stormwater basin.

Planning and implementation of the local drainage program involves continuing coordination with land developer and land use planning authorities. FMFCD evaluates the drainage impacts of all development

proposals and establishes conditions of approval to be imposed by the Cities and County through the development entitlement procedures.

**Highlights of the efforts conducted in 2019-20 are:**

- FMFCD owns and operates a Regional Stormwater Management Basin system that captures 90% of the average annual rainfall. FMFCD updated its basin capacity criteria and design standards in June 1982. The basin capacity criteria are the storage volume of runoff generated from approximately six inches of rainfall, or 60% of the average annual rainfall of 11.34 inches. Under optimal conditions, stormwater is not discharged from detention basins and the majority of the stormwater percolates to groundwater. In June 2014, FMFCD developed a Post-Development Standards Technical Manual for drainage areas that do not drain to an existing or planned stormwater management basin. The manual was submitted to the RWQCB in its FY 2013-14 Annual Progress Report.
- The Permittees have received the stormwater checklist shown in the stormwater permit to use during their CEQA process. The Permittees will analyze the effects of projects by reviewing CEQA documents to address stormwater quality issues during the comment period.

**MS4 Agency Responsible for Stormwater Control Measures – Planning and Land Development  
2019/2020**

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
<b>PLD 1.0 - Update of the FMFCD Storm Drainage and Flood Contr</b>				
1.1 Update the FMFCD Master Plan: 1. • Development standards for drainage areas discharging to a retention/detention basin. 2. • Development standards for drainage areas not discharging to a retention/detention basin. 3. • Drainage areas	FMFCD owns and operates a Regional Stormwater Management Basin system that captures 90% of the average annual rainfall. FMFCD updated its basin capacity criteria and design standards in June 1982. The basin capacity criteria are the storage volume of runoff generated from approximately six inches of rainfall, or 60% of the average annual rainfall of 11.34 inches. Under optimal conditions, stormwater is not discharged from detention basins and the majority of the stormwater percolates to groundwater. In June 2014, FMFCD developed a Post-Development Standards Technical Manual for drainage areas that do not drain to an existing or planned stormwater management basin. The manual was submitted to the RWQCB in its FY 2013-14 Annual Progress Report.	FMFCD will continue to update the Fresno Metropolitan Flood Control District Storm Drainage and Flood Control Master Plan.	PLD 1.1 Post-Development Standards Technical Manual	PLD1- Update FMFCD Storm Drainage and Flood Control Master Plan (page 7-7)
1.2 Provide FMFCD draft update to Regional Board	FMFCD has included as an attachment to this report a PDF of the updated Fresno Metropolitan Flood Control District Storm Drainage and Flood Control Master Plan.	FMFCD will continue to provide to the RWQCB annual updates of the Fresno Metropolitan Flood Control District Storm Drainage and Flood Control Master Plan.	PLD 1.2 FMFCD Master Plan Wall Map	PLD1- Update FMFCD Storm Drainage and Flood Control Master Plan (page 7-7)
1.3 Update Hydraulic and Hydrology Studies and incorporate into FMFCD Master Plan	FMFCD completed an updated draft of its 1995 "Basin Hydrology Study" in FY 2015-16.	FMFCD will update and finalize the 2016 "Draft - Basin Hydrology Study".	PLD 1.3 Basin Hydrology Study - Draft - January 2016	PLD1- Update FMFCD Storm Drainage and Flood Control Master Plan (page 7-7)
1.4 Perform Stormwater Basin Design Study and incorporate into FMFCD Master Plan	Scheduled for FY 2020-21	FMFCD anticipates completing a "Basin Design Study" and incorporating the findings into the FMFCD Master Plan. FMFCD basins are designed to store 6 inches of rain with an average 20% supplemental storage. A better use of a design study would be to identify basins that can be renovated or re-designed to provide additional storage.	N/A	PLD1- Update FMFCD Storm Drainage and Flood Control Master Plan (page 7-7)
<b>PLD 2.0 - Implementation of the FMFCD Storm Drainage and Flo</b>				
2.1 Inspect and Maintain stormwater basins to maximize infiltration rates (see M2)	FMFCD inspects its stormwater management basins twice a month and conducts periodic maintenance activities including sediment removal to maximize infiltration rates.	FMFCD will continue to inspect and maintain its stormwater management basins to maximize infiltration.	N/A	PLD2- Implementation of the FMFCD Storm Drainage and Flood Control Master Plan (page 7-9)
2.2 Develop plan check procedures and checklists to assist staff in implementing and reviewing projects for compliance with the development standards	FMFCD and the Cities of Fresno and Clovis continued to implement the Master Plan through land use policies and drainage ordinances. FMFCD directs and sets the standards for all construction of master plan and other storm drain facilities to be operated and maintained by FMFCD. Such construction occurs through direct FMFCD contract, developer contracts pursuant to local ordinances, and contracts with other municipal agencies in coordination with FMFCD. Per the requirements of the MS4 Permit, FMFCD developed a Post-Development Standards Technical Manual for drainage areas that do not drain to an existing or planned stormwater management basins and distributed the manual to Co-Permittees. See PLD 1.1 Post-Development Standards Technical Manual.	The Permittees will review and update plan check procedures and checklists to assist staff in implementing and reviewing projects for compliance with the development standards.		PLD2- Implementation of the FMFCD Storm Drainage and Flood Control Master Plan (page 7-9)
2.3 Ensure that all priority development projects comply with development standards in FMFCD Master Plan	FMFCD and the Cities of Fresno and Clovis continued to implement the Master Plan through land use policies and drainage ordinances, including entitlement processes, FMFCD's Code of Requirements and fee structure. FMFCD directs and sets the standards for all construction of master plan and other storm drain facilities to be operated and maintained by FMFCD. Such construction occurs through direct District contract, developer contracts pursuant to local ordinances, and contracts with other municipal agencies in coordination with FMFCD. All high priority projects are reviewed by FMFCD before approval. In FY 2019-20 the District evaluated 25 projects occurring in drainage areas subject to the Post-Development Standards. 11 out of 25 projects met the requirements as to be a priority development project.	FMFCD and its Co-Permittees will continue to review and approve high priority projects through entitlement processes including drainage plan review drainage fees review and grading plan approval. FMFCD has also trained their own staff to identify high priority land uses within drainage areas without drainage basins that are required to implement parcel-sized mitigation.	PLD 2.3 Projects Evaluated for Post-Development Standards	PLD2- Implementation of the FMFCD Storm Drainage and Flood Control Master Plan (page 7-9)
2.4 Develop maintenance agreement template for use with all priority development projects that do not discharge to a stormwater basin	FMFCD included in its Post-Development Standards Technical Manual a section on Stormwater Quality Best Management Practices Maintenance which includes criteria for a maintenance plan and a maintenance agreement.	FMFCD will use the attached agreement to ensure continual upkeep of post-development projects.	PLD 2.4 Post-Development Agreement Template	PLD2- Implementation of the FMFCD Storm Drainage and Flood Control Master Plan (page 7-9)
2.5 Develop and implement a system to track projects with post construction BMPs	FMFCD has began transitioning old projects to a new and improved system to track post construction BMPs. All new projects have been entered into the new system.	FMFCD will perform post construction inspections for all priority development projects during FY 2020-21 to verify that post construction BMPs have been implemented and maintained as required.		PLD2- Implementation of the FMFCD Storm Drainage and Flood Control Master Plan (page 7-9)
2.6 Perform post construction inspections for all priority development projects	FMFCD conducted post-construction inspections for structural controls installed at targeted commercial facilities in high priority drainage areas. Post construction BMPs are inspected before the wet season to ensure proper maintenance of BMPs to prevent flooding.	During FY 2020-2021, FMFCD will continue to perform post construction BMP inspections at priority commercial facilities to verify that post construction BMPs have been implemented as required.	N/A	PLD2- Implementation of the FMFCD Storm Drainage and Flood Control Master Plan (page 7-9)

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**MS4 Agency Responsible for Stormwater Control Measures – Planning and Land Development  
2019/2020**

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
<b>PLD 3.0 - Update to CEQA Process</b>				
3.1 Develop a checklist to consider potential for stormwater impacts and provide for appropriate mitigation	Planning and implementation of the local drainage program involves continuing coordination with land developer and land use planning authorities. FMFCD evaluates the drainage impacts of all development proposals by reviewing and commenting on CEQA documents for projects within the NPDES boundaries. FMFCD also establishes conditions of approval to be imposed by the Cities and County through the development entitlement procedures. The Permittees have updated their Planning and Land Development Program to comply with the permit requirements. This was accomplished through updates to the Storm Drainage and Flood Control Master Plan and subsequent implementation of the Plan, including the revised development standards. The SWMP incorporates the use of management questions and goals to help determine the purpose of the data collection as well as to guide the implementation of the program. During the 2019-2020 year, FMFCD updated its CEQA checklist and distributed it to Permittees.	Continue to distributed guidance document and checklist to the Permittees, interested local agencies and consultants as needed.	PLD 3.1 CEQA Review Guidance	PLD3- Update to CEQA Process (page 7-10)
3.2 Utilize stormwater checklist during CEQA process	The Permittees have received the stormwater checklist shown in the stormwater permit to use during their CEQA process. The Permittees will analyze the effects of projects by reviewing CEQA documents to address stormwater quality issues during the comment period.	Continue to use the guidance document with the stormwater checklist during the CEQA process.		PLD3- Update to CEQA Process (page 7-11)
<b>PLD 4.0 - Training</b>				
4.1 Conduct internal staff training as needed	FMFCD conducted construction and development training for the County of Fresno's Development Services Department on June 6, 2018 with 25 people attending and for the City of Fresno's Capital Management and Construction Management Departments on January 25, 2018 with 33 people attending. In addition to construction and development topics the training includes discussion of the storm drain system, the MS4 permit requirements and the referral process.	FMFCD staff will conduct annual training once every two years or earlier if any procedural changes occur.	N/A	PLD4- Training (page 7- 12)
4.1 Conduct internal staff training as needed	FMFCD did not conduct any internal trainings for construction/development staff FY 2019-20 due to scheduling issues and COVID-19.	Trainings are to be conducted every 2 years. Trainings will be conducted remotely in FY 2020-21.		
4.2 Development/dissemination of information for development community	In FY 2019-2019 staff updated the Post Development Standards Technical Manual factsheet. It is available to the public on the District website.	FMFCD will continue to make available, and distribute, the Post Development Standards Technical Manual through trade Associations, Co-Permittee Training and individual requests.	PLD 4.2 Fact Sheet FMFCD Post development standards 6-10-14	PLD4- Training (page 7- 12)

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## Monitoring Program

The following table lists agency contacts for the Source Identification and Monitoring Program of the Stormwater Quality Management Program.

Agency	Prepared by	Contact Person	Phone #	Manager
FMFCD	Joseph Draper	Joseph Draper	456-3292	Jared Shuman

On September 16, 1994, the Central Valley Regional Water Quality Control Board (Regional Water Board) issued the first municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System (NPDES) permit No. CA0083500 to the Fresno Metropolitan Flood Control District (District) and four other Co-Permittees. The Regional Water Board renewed the permit on May 31, 2013 (Order No. R5-2013-0080).<sup>1</sup> This permit was subsequently amended on June 5, 2015 to allow participation in the Delta Regional Monitoring Program.

On November 27, 2017, the District and other Co-Permittees submitted a Notice of Intent (NOI) for coverage under the NPDES General Permit for Discharges from MS4s (MS4 General Permit, Order No. R5-2016-0040)<sup>2</sup>. Coverage under the MS4 General Permit was granted by the Regional Water Board according to the Notice of Applicability<sup>3</sup> (NOA) dated May 17, 2018. The District and other Co-Permittees are currently covered under the MS4 General Permit, which extends the permit monitoring requirements from the previous (amended 2015) permit. The previous permit was in effect for the entirety of the 2018-2019 monitoring season and requires the District to implement receiving water monitoring of the San Joaquin River. The District completed a required four-year special canal study during the 2016-2017 monitoring year.

During the 2019-20 monitoring season, the Krazan & Associates (Krazan) field team, with technical oversight by Larry Walker Associates (LWA) staff, collected water quality samples and requested laboratory analyses for one dry weather monitoring event (in the fall of 2019) and two wet weather monitoring events (during storms in the wet season) for three monitoring stations located on the San

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<sup>1</sup>Central Valley Regional Water Quality Control Board. Resolution No. R5-2015-0046. *Approval of the Storm Water Quality Management Program for Fresno Metropolitan Flood Control District, City of Fresno, City of Clovis, County of Fresno, and California State University Fresno for Storm Water Discharges from the Fresno-Clovis Urbanized Area Municipal Separate Storm Sewer System*. Adopted April 17, 2015.

<sup>2</sup>Central Valley Regional Water Quality Control Board. Order No. R5-2016-0040. NPDES No. CAS0085324. *National Pollutant Discharge Elimination System Permit and Waste Discharge Requirements General Permit for Discharges from Municipal Separate Storm Sewer Systems*. Adopted June 23, 2016.

<sup>3</sup>Pamela Creedon, Central Valley Regional Water Quality Control Board. Notice of Applicability; General Permit for Discharges from Municipal Separate Storm Sewer Systems, Order No. R5-2016-0040. May 17, 2018.

Joaquin River. Since 1996, 75 ambient river monitoring events (24 dry weather and 51 wet weather) have been conducted at the three San Joaquin River monitoring stations.

## Conclusions

To assess program effectiveness, the Fresno Metropolitan Flood Control District (District) developed the following three “Management Questions” that are supported directly by the Monitoring Program Element of the Fresno-Clovis Storm Water Quality Management Program:<sup>4</sup>

1. Are receiving waters (i.e., the San Joaquin River) meeting water quality objectives and supporting beneficial uses? [L6]
2. Do the regional stormwater basins effectively remove the constituent(s) causing or contributing to the impairment? [L5]
3. Are urban stormwater discharges a significant source of constituent loads causing impairments to the San Joaquin River and other direct receiving waters? Are there other sources that are major contributors to the receiving water load? [L4]

The District operates a regional basin system that serves 90% of the urban area and allows infiltration and evaporation of 70-80% of the typical annual rainfall. The basins are highly effective at removing sediment and sediment bound pollutants. This system has successfully reduced the impact of urban runoff by attenuating peak flows and removing pollutants. Because of the infrequent discharge of urban runoff, any exceedance should be considered in light of the much reduced exceedance period, and may not constitute an impairment of a beneficial use.

In light of these management questions, conclusions drawn to date from the river monitoring data include the following:

- The water quality of the San Joaquin River, which has been monitored at locations both upstream and downstream of the Fresno-Clovis metropolitan area, is of high quality. This conclusion is based on the low or undetectable concentrations of dissolved metals, pathogen indicators, total suspended solids (TSS), pesticides, and nutrients that have been observed during monitoring. Furthermore, the frequency of exceedance of the Water Quality Objectives (WQO)s is low. [L6]
- Increases in dissolved copper and lead concentrations between the upstream and downstream river monitoring locations are statistically significant based on historical monitoring (for data collected between 1996 and 2020). However, the magnitude of concentration differences is small relative to data variability. For example, the median dissolved copper concentrations at Station 1 and Station 3 are 0.46 µg/L and 0.56 µg/L (absolute difference of 0.10 µg/L), respectively, and standard deviations are 0.41 µg/L and 0.54 µg/L, respectively. [L6, L4]
- Increases for naphthalene, one of the most detected Polycyclic Aromatic Hydrocarbons (PAH)s (>20%), between the upstream and downstream river monitoring locations are statistically

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<sup>4</sup> Fresno-Clovis Storm Water Quality Management Program. Long Term Effectiveness Assessment Strategy. November 2013.



significant based on the historical monitoring (1996-2020). No exceedances of PAH water quality objectives were observed this year. [L6]

- Pathogen indicators exhibited variability between Stations 1, 2, and 3 during the 2019-20 monitoring events typical of previous years. Nine downstream pathogen indicator samples were collected and 33% of the results were equal to or lower than those from the upstream sites. Except for three of the samples for which the downstream count was higher, the difference was smaller than typical microbiological variability (one order of magnitude). [L6]
- During the 2019-20 monitoring year, there were no events where an exceedance of the United States Environmental Protection Agency (USEPA) single sample *E. coli* WQO was observed at the Station 3 downstream monitoring location. [L6, L5]

## Recommendations

The 2020-21 river monitoring efforts are anticipated to remain essentially the same as programs implemented during 2019-20.

Based on a review of the Monitoring Program, the following modifications are recommended for river monitoring in 2020-21:

- Continue to conduct river sampling for three wet weather events, if weather and basin outflow conditions permit, and one dry weather event.
- Sampling protocols for total and dissolved organic carbon will be changed to a direct fill grab sample from a pumped composite. Organic carbon contamination was a significant issue in the 2019-20 monitoring year and a potential source could be the tubing and/or composite bottles.
- Continue to monitor the source(s) of the higher metals dissolved fraction (comparison of dissolved and total metals concentrations) and occasional field blank metals contamination. The frequency of this contamination has been decreasing, but it is still a persistent issue. In the 2020-21 monitoring year, sampling protocols will be reviewed and the field crew will follow “clean sampling protocols” while sampling and handling the total and dissolved metals samples.
- Implement the baseline monitoring for pyrethroid pesticides requested by the Regional Water Board. The District will submit the quality assurance project plan (QAPP) to the Regional Water Board for sample collection starting in 2020 and expected to be complete in 2021.

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**MS4 Agency Responsible for Stormwater Control Measures – Monitoring  
2019/2020**

Control Measures and Performance Standards	Annual Report Progress	Annual Work Plan	Support Documents	SWQMP Reference
<b>MON 1.0 - Monitoring Plans</b>				
1.1 Annual Work Plans: Monitoring Efforts	FMFCD completed its 2019-2020 "Receiving Water Monitoring Plan and Standard Operating Procedures: River Monitoring " (SOP). The SOP is considered the annual work plan as outlined in the Permittees MS4 permit.	The SOP is considered the annual work plan as outlined in the Permittees' MS4 permit page and will be updated every year by September 15th.	MON 1.1 Receiving Water Monitoring Plan and Standard Operating Procedures: River Monitoring	MON1- Monitoring Planning (page 8-3)
1.2 Update Standard Operating Procedures	FMFCD updated the SOPs for the Standard Operating Procedures: River Monitoring.	FMFCD will update the Receiving Water Monitoring Plan and Standard Operating Procedures: River Monitoring by September 15th of each year and will include the recommendations listed in the annual monitoring reports.	See Supporting Document MON 1.1 Receiving Water Monitoring Plan and Standard Operating Procedures: River Monitoring	MON1- Monitoring Planning (page 8-3)
<b>MON 2.0 - San Joaquin Monitoring</b>				
2.1 San Joaquin River Monitoring – 1 Dry Weather and 3 Wet Weather Events	During the 2019-2020 monitoring season, the Krazan & Associates (Krazan) field team, with technical oversight by Larry Walker Associates (LWA) staff, collected samples and requested laboratory analysis for one dry weather monitoring event in the fall of 2019 and two wet weather monitoring events during storms in the wet season for three monitoring stations located on the San Joaquin River. Since 1996, 75 ambient river monitoring events (24 dry weather and 51 wet weather) have been conducted at the three San Joaquin River monitoring stations.	<p>The 2020-21 river monitoring efforts are anticipated to remain similar to the programs implemented during 2019-2020. Based on a review of the Monitoring Program, the following changes are recommended for river monitoring in 2020-2021. Continue to conduct river sampling for three wet weather events, as long as weather permits, and one dry weather event during the 2020-2021 monitoring year.</p> <p>Continue to monitor the source of the higher dissolved fraction and occasional field blank contamination for some of the metals results. The frequency of this contamination has been decreasing, but the program should continue to implement clean sampling techniques and ensure that proper equipment protocols are being followed by the field crew.</p>	MON 2.1 2019-2020 Annual Monitoring Report	MON2- San Joaquin River Monitoring (page 8-4)
2.2 Update Monitoring Database	As part of the Permittees Annual Report submitted to the RWQCB, FMFCD included an electronic copy of the water quality monitoring data within an Excel spreadsheet. The electronic file covers water quality data collected in FY 2019-2020.	FMFCD will continue to submit an electronic copy of the water quality data to the RWQCB as part of the Annual Report submittal due October 1st of each year.	MON 2.2 Fresno River Data 1996-2020	MON2- San Joaquin River Monitoring (page 8-4)
<b>MON 3.0 - Special Study Monitoring</b>				
3.1 Canal Monitoring – 2 Wet Weather Events	The 2016-2017 monitoring year was the last of the four required canal monitoring years by the Permit. While some constituents increased from upstream to downstream, statistical trends were not strong and flows in Herndon Canal were not known to reach the San Joaquin River during the study period. An evaluation of the exceedances observed at the two canal sites did show that there was a greater presence of PAHs at the downstream monitoring site, which is an indicator of the influence of urban or roadway runoff. Moreover, characterizing background “ambient” concentrations is complex because of the influence of multiple upstream tributaries.	The Canal Special Study is complete and no additional monitoring is necessary in FY 2020-21.	See Mon 2.1 2019-2020 Annual Monitoring Report	MON3- Special Study Monitoring (page 8-5)
<b>MON 4.0 - Monitoring Reporting</b>				
4.1 Report(s) of Water Quality Exceedance	During the 2019-2020 monitoring year, there were no events where an exceedance of the United States Environmental Protection Agency (USEPA) single sample E. coli WQO was observed at the Station 3 downstream monitoring location. No Report of Water Quality Exceedances is necessary for FY 2019-2020.	FMFCD will continue to review and evaluate the receiving water monitoring data annually to determine if the Permittees should submit Reports of Water Quality Exceedance.	See Mon 2.1 2019-20 Annual Monitoring Report	MON4- Monitoring Reporting (page 8- 6)
4.2 Annual Report: Monitoring Data Assessment	To assess program effectiveness, FMFCD developed three “Management Questions” that are supported directly by the Monitoring Program Element. (See the annual monitoring program annual report page ES-1 or the LTEA section in the Program Annual Report.) Overall, the assessment found that FMFCD operates a Regional Storm Water Mitigation system that serves 92% of the urban area and allows infiltration of 70-80% of the average annual rainfall. The basins are highly effective at removing sediment and sediment bound pollutants. This system has successfully reduced the impact of urban runoff by attenuating peak flows and removing pollutants. Because of the infrequent discharge of urban runoff, any exceedance should be considered in light of the much reduced exceedance period, and may not constitute an impairment of a beneficial use.	FMFCD will continue to evaluate receiving water data to assess the effectiveness of FMFCD’s Regional Storm Water Basin Mitigation System.	See the Long Term Effectiveness Assessment in the Annual Report page	MON4- Monitoring Reporting (page 8- 6)

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## Long Term Effectiveness Assessment

The following table lists agency contacts for the Long Term Effectiveness Assessment (LTEA).

Agency	Prepared by	Contact Person	Phone #	Manager
FMFCD	Paige Moretto	Jared Shuman	456-3292	Jared Shuman

### Introduction

The Long Term Effectiveness Assessment Strategy (LTEA Strategy) was developed pursuant to the municipal NPDES stormwater permit (MS4 Permit) issued on May 31, 2013. The LTEA Strategy supplements the Fresno-Clovis Storm Water Quality Management Program (SWQMP) and outlines the approach for assessing the effectiveness of the stormwater program year to year.

This report shows the results of the effectiveness for the stormwater program during FY 2019-20. This is the seventh year with the LTEA Strategy in place and seven years of data is available in most cases.

### LTEA PERMIT REQUIREMENTS

The MS4 Permit has specific requirements identifying what should be included in the LTEA.

Program Effectiveness Assessment and Reporting Program – the Permittees shall submit a proposed Long Term Effectiveness (LTEA) strategy, which shall build on the results of the Permittees’ Annual Reports and the initial program effectiveness assessments. The LTEA shall identify how the Permittees will conduct a more comprehensive effectiveness assessment of the stormwater program as part of the SWQMP. The strategy shall identify key goals for the program and address the stormwater program in terms of achieving both programmatic goals (raising awareness, changing behavior) and environmental goals (reducing pollutant discharges, improving environmental conditions).

- a. The Permittees shall report program assessment results in the Annual Reports. The program assessments shall identify the direct and indirect measurements that the Permittees use to track the effectiveness of their programs as well as the outcome levels at which the assessment is occurring consistent with this Order. Direct and indirect measurements shall include, but not be limited to, conformance with established performance standards, quantitative monitoring to assess the effectiveness of control measures, measurements or estimates of pollutant load reductions or increases from identified sources, raising awareness of the public, and/or detailed accounting/documentation of SWQMP accomplishments.
- b. The Permittees shall track the long-term progress of their SWQMP towards achieving improvements in receiving water quality.

- c. The Permittees shall use the information gained from the program effectiveness assessment to improve their SWQMPs and identify new BMPs, or modification of existing BMPs.

The Monitoring and Reporting Requirements (MRP) (Provision B.7.) includes the following requirements:

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? (L1)
- b. Level 2 Outcome: Did the Program Element raise the target audience's awareness of an issue? (L2)
- c. Level 3 Outcome: Did the Program Element change a target audience's behavior, resulting in the implementation of recommended BMPs?(L3)
- d. Level 4 Outcome: Did the Program Element reduce the load of pollutants from the sources to the storm drain system? (L4)
- e. Level 5 Outcome: Did the Program Element enhance or change the urban runoff and discharge quality? (L5)
- f. Level 6 Outcome: Did the Program Element enhance or change receiving water quality?(L6)

The LTEA Strategy incorporates the above MS4 Permit requirements and fulfills the requirements of Provisions D.21 and B.7 of the Monitoring and Reporting Program.

#### **Long Term Effectiveness Assessment Strategy**

The Permittees' LTEA Strategy addresses the stormwater program in terms of achieving both programmatic goals (i.e., raising awareness, changing behavior) and environmental goals (i.e., reducing pollutant discharges, improving environmental conditions). The LTEA Strategy was developed to build on the results of the Permittees' Annual Reports and initial Program Effectiveness Assessment (PEA) efforts.

## LTEA STRATEGY GOALS

The LTEA presents the LTEA Strategy goals, the associated program component (i.e., monitoring or programmatic) that will be assessed, and the expected assessment frequency (i.e., annual or long-term).

**Table 1. LTEA Goals, Associated Components, and Assessment Frequency**

Goal	Component		Assessment Frequency	
	Monitoring	Programmatic	Annual	Long-Term
1. Ensure that construction, industrial/commercial, and municipal sites are in compliance with local codes and ordinances to minimize their impacts on water quality.		X	X	
2. Maintain all stormwater basins to ensure that the basins continue to function as designed.		X	X	X
3. Train municipal staff regularly to promote the identification and reporting of illicit discharges and connections observed during their routine activities.		X	X	X
4. Evaluate illicit discharge data to determine the predominant pollutants detected and utilize this information to guide elements of the PIE program.		X	X	X
5. Engage and educate the general public regarding urban runoff and stormwater issues.		X	X	X
6. Ensure that the impacts of new development and redevelopment on water quality are minimized through the implementation of LID practices where sites are not served by regional stormwater basins.		X	X	
7. Assessment of watershed health and identification of water quality issues and concerns.	X			X
8. Assessment of changes in receiving water quality.	X			X

## Program Management - Assessment Frequency and Data

### Management Questions:

1. What are the annual expenditures for the stormwater program for each fiscal year? [PM3][L1]

The Permittees jointly prepared an annual fiscal analysis identifying the expenditures made during the Annual Report reporting period and projected the planned future expenditures for FY 2019-20. The analysis includes a summary that identifies the stormwater budget for both the previous year and estimated expenditures for the upcoming year using estimated budget figures for each program element. The Permittees have secured the resources necessary to meet the requirements of this Order.

The report includes the categories outlined in Section D.1 (d) (i-v.) of CVWQCB order R5-2013-008. Funding for the Performance and Evaluations element and the Training Programs are funded under the Program Management category. The Structural Controls program (Regional Stormwater Mitigation basins) funding is included under the Municipal Operations Program element. See section MUN 2.3 of the annual report for a description of the program.

The financing program of the Fresno Metropolitan Flood Control District includes five major categories of revenues. These include (1) general property tax; (2) assessments; (3) bonds; (4) fees and service charges; and (5) grants and contributions. The general authority to receive or collect such revenues is set forth in the District's enabling legislation, other state legislation under which the District is an eligible participant, and through joint powers relationships in which the District participates. Table 1 lists the fiscal analysis for FMFCD, and the Cities of Clovis and Fresno. Prepaid Drainage Assessment fees are not included as part of the overall FMFCD budget because they are restricted for use within the specific drainage area in which they were collected.

## **Construction Program - Assessment Frequency and Data**

### Management Questions:

1. Are the construction sites that are subject to routine inspections being managed so that they are in compliance with the local codes and ordinances and preventing sediment and other pollutants from leaving the site? [CON4, CON5][L1,L2,L3]

### Effectiveness Measurements:

- 1) See Table CON 4.3 – Inspect sites at designated frequencies and require BMPs and Table CON 5.2 – Implement progressive enforcement procedures as needed. Detailed inspection information can be found as attachment CON 4.3 in the SWQMP Annual Report.
- 2) See CON 5.3 – Advise Regional Board of potential violations of the Construction General Permit.

The District implemented the Progressive Enforcement Response Plan (PERP) as necessary, with all illicit connections and discharge responses resolved by initiating FMFCDs Progressive Enforcement Response Plan.

### Effectiveness Outcomes – (Level 1-3)

Outcome Level 1 - Construction inspections were conducted at the inspection frequency goals listed in the Construction Inspection Strategy. (LTEA - CON 4.3 and APR Section CON 4.3 ).

Outcome Level 2 & 3 - Construction site deficiencies were usually corrected after the initial inspections or within 2 inspection cycles.



## **Industrial and Commercial Program - Assessment Frequency and Data**

### Management Questions:

1. Are the industrial and commercial sites subject to inspection being managed so that they are in compliance with the local codes and ordinances and preventing pollutants from leaving the site? [IC4, IC5][L1,L2,L3]

### Effectiveness Measurement

See Table IC 4.3 – Inspect sites as needed, Table IC 4.4 – Conduct follow-up inspections as needed and Table IC 5.2 – Implement progressive enforcement procedures as needed & coordination with Regional Board regarding potential violations of the Industrial General Permit.

Industrial inspections were conducted at the inspection frequency goals listed in the Industrial/Commercial Inspection Strategy. (LTEA – IC 4.3 and APR Section IC 4.3). No sites were chronically out-of-compliance. No facilities or referred to RWQCB per the Permittees Progressive Enforcement Response Plans (see IC 4.3 above).

### Effectiveness Outcomes – (Level 3)

Industrial/Commercial facility's deficiencies were usually corrected after the initial inspections.

## **Municipal Operations Program - Assessment Frequency and Data**

### Management Questions:

1. How many stormwater basins are inspected and cleaned each year? How much total material is removed? [MUN2][L1,L4]

### Effectiveness measures

See Table MUN 2.1 – Inspect and maintain stormwater basins to maximize infiltration rates.

### Effectiveness Outcome – (Level 3)

Stormwater basins are cleaned every 5-8 years, with a recent (last five years) average annual yield of 7,933 cubic yards of sediment and pollutants removed.

Management Question (MUN2):

2. How many pump stations are inspected and cleaned each year? [MUN2][L1]

Effectiveness measures

See Table MUN 2.2 – Inspect and maintain stormwater pump stations.

Effectiveness Outcomes – (Level 3)

The volume of cleaned material is not recorded, the pumps are cleaned to prevent blockades and minimize pump damage. Environmental benefits include maintaining operational efficiencies to preserve design storage capacity of stormwater management basins.

Management Question (MUN 4.5):

3. How much Household Hazardous Waste (HHW) is collected each fiscal year? [MUN4][L1,L4]

Effectiveness measure:

See Table MUN 4.5 – Coordinate with household hazardous waste programs.

Effective Outcomes: (Level 4)

Since the County of Fresno opened a permanent collection center they have seen a steady increase in hazardous waste collected from FY 2013-14 to FY 2017-18, with a dip in FY 2018-19, and a further dip in FY 2019-20, likely due to COVID-19 and decreased drop-offs due to stay-at-home orders. Fresno County Household Hazardous Waste (HHW) permanent facility received 140,784 pounds of HHW in FY 2019-20, as compared to 160,646 pounds in FY 2018-19.

Management Question (MUN 5.1):

4. How many curb miles and parking lots are swept annually? [MUN5][L1]

Effectiveness measures:

See Table MUN 5.1 – Conduct street sweeping activities, Table MUN 5.2 – Inventory municipal parking facilities, and Table MUN 5.3 – Clean and maintain parking facilities.

Effective Outcomes: (Level 1)

Street cleaning has followed roughly the same frequency as in years past. Permittees follow the street sweeping frequencies outlined in the SWQMP.

Management Question (MUN 8):

5. Have the field crews been trained to accurately identify and report illicit discharges (IDs) while conducting routine maintenance activities in the field? [ICD1, ICD4, MUN8][L1, L2, L3]

Effectiveness Measurement

See Table MUN 8.1 – Conduct training for staff.

Effectiveness Outcomes – (Level 1)

The Storm Water Quality Management Plan requires that FMFCD staff and Co-Permittee staff undergo periodic refresher training on stormwater pollution prevention; including but not limited to discussion of spill prevention and clean up, how to identify and respond to illicit discharges, reporting procedures, and management of public facilities to prevent contamination of storm water. The training is designed to ensure that the staffs of Co-Permittee agencies are able to understand, prevent, identify and respond to events and circumstances that impact the quality of stormwater discharges in the region.

## **Illicit Connection and Discharge Control Program - Assessment Frequency and Data**

Management Questions:

1. Have the field crews been trained to accurately identify and report illicit discharges (IDs) while conducting routine maintenance activities in the field? [ICD1, ICD4, MUN8][L1, L2, L3]

See MUN 8.1 above

2. Of the water pollution investigations that occur, what are the primary pollutants of concern that are the focus of the investigations? [ICD2][L4]

Effectiveness Measurement

See APR attachment ID 2.2

Effectiveness Outcomes – (Level 3)

- Used motor oil and leaking vehicles are prevalent sources of illicit discharges. Of the 69 complaint referrals from citizens or Co-Permittees, all complaints were verified as illegal discharges. Of the 69 verified complaints, the pollutants with the highest contribution to storm water pollution were 'Other' (29%), 'Vehicle Fuel/Automotive Fluids' (21%), 'Residential Oil Spills' (14%) and 'Paint' (9%).

Management Questions:

2. Of the water pollution investigations that occur, what are the primary pollutants of concern that are the focus of the investigations? [ICD2][L4]

Effectiveness Measurement

See APR attachment ID 2.2

Effectiveness Outcomes – (Level 3)

Figure 2.2 in Attachment ID 2.2 shows several discharge types that appear to show a general change in incidence during the last ten fiscal years. Confirmed reports of leaky private vehicles and abandoned bulk oil have declined over the last ten years. However, residential oil spills continue to increase. Also see, See ID 2.2 Implement Procedures for the Investigation of Illicit Connections and Discharges.

ICD 4.1 – Conduct training of first responders, inspectors and relevant field staff.

See MUN 8.1 above.

Effectiveness Outcomes – (Level 3)

Illicit Discharge types will continue to be monitored and trends identified. Permittees have a robust used motor oil outreach effort for oil collection centers and curbside collection. Previous evaluations have shown an overall increase in the proper disposal of used motor. Permittee liaisons report that approximately 25% of the collections do not consistently report the annual quantities of collected used motor oil.

## **Public Involvement and Education Program Assessment Frequency and Data**

Management Questions: (PIE 3)

1. For the public participation opportunities (e.g., storm drain stenciling, cleanup events), how many volunteers assist at how many sites? What are the results of the activities (e.g., how many storm drain inlets are stenciled, how much trash is collected)? [PIE3][L1, L2, L4]

Effectiveness Measurement:

See Table PIE 3.1 – Publicize and recruit volunteers to conduct storm drain stenciling and participate in other events.

Effectiveness Outcome (Level 1):

In FY 2014-15, FMFCD hired a contractor to install storm drain markers. Public participation declined in FY 2017-18. The contractor and staff has installed approximately 6,000 storm drain markers in five years. FMFCD did not receive any requests to partner with school students or community groups to install markers in FY 2019-20. FMFCD goal is to install the rest of the storm drain markers during the next few fiscal years, potentially through a partnership with the Fresno Economic Opportunities Commission, as well as through the Clean Stormwater Grant Program, as has been done in the past.

Management Questions: (PIE 3)

2. Is the general public aware that stormwater runoff drains to stormwater basins untreated and the majority of the runoff infiltrates into the ground water aquifer? [PIE4][L1,L2,L3]

Effectiveness Measurement:

See Table PIE 4.6 – Update and implement public awareness survey.

Effectiveness Outcome (Level 1):

Results and recommendations from the public awareness survey are reported in the FY 2019-20 Annual Progress Report.

Management Questions: (PIE 3)

3. Is the general public aware of the water pollution hotlines that have been established by the Permittees? [PIE6][L1,L2]

Effectiveness Measurement:

See Table PIE 6.1 – Promote/publicize the 24-hour hotline number in outreach materials.

Effectiveness Outcomes – (Level 3)

Results and recommendations from the public awareness survey are reported in the FY 2019-20 Annual Progress Report.

## **Planning and Land Development Program Assessment Frequency and Data**

Management Questions:

1. What percentage of the new development is served by regional stormwater basins? [PLD2][L1,L2,L3]?

100% of all new development within the FMFCD Storm Drainage and Flood Control Master Plan is served by regional stormwater mitigation basins or equivalency.

Effectiveness Outcomes – (Level 5) See monitoring LTEA

Management Questions:

2. Number of high priority projects (development) within the NPDES permit boundaries in drainage areas that do not discharge to existing or planned regional basins were approved by the County of Fresno or FMFCD and designed to County or FMFCD standards?

In FY 2019-20 the District evaluated 25 projects occurring in drainage areas subject to the Post-Development Standards. 11 out of 25 projects met the requirements as to be a priority development project.

Effectiveness Measurement

See Table PLD 2.2 – Ensure that all priority development projects comply with development standards in FMFCD Master Plan and Table PLD 2.5 – Perform post construction inspections for all priority development projects.

Effectiveness Outcomes – (Level 3-5)

One hundred percent of all new development discharged to a regional stormwater mitigation basin with a capacity of at least 6 inches of rainfall. On average, 70-85% of the captured rainfall infiltrated into the local groundwater aquifer.

## **Monitoring Supported Assessment**

Management Questions:

The Monitoring Program Element (Section 8 of the SWQMP) effectiveness assessment is based on completion of requirements and planned or requested monitoring assessments. Section 8 of the SWQMP describes the assessment activities and the associated sampling and analysis plans describe the goals and methods of the field investigations. Data collected through the Monitoring Program Element are used as an overall Program Effectiveness Assessment for the stormwater program as a whole. The Monitoring Program Element also tracks year-to-year trends in monitoring data. The following is an excerpt from the FY 2019-20 monitoring report addressing the management questions:

To assess program effectiveness, the District developed the following three “Management Questions” that are supported directly by the Monitoring Program Element of the Fresno-Clovis Storm Water Quality Management Program:

1. Are receiving waters (i.e., the San Joaquin River) meeting water quality objectives and supporting beneficial uses? [L6]

2. Do the regional stormwater basins effectively remove the constituent(s) causing or contributing to the impairment? [L5]
3. Are urban stormwater discharges a significant source of constituent loads causing impairments to the San Joaquin River and other direct receiving waters? Are there other sources that are major contributors to the receiving water load? [L4]

The District operates a regional basin system that serves 90% of the urban area and allows infiltration and evaporation of 70-80% of the typical annual rainfall. The basins are highly effective at removing sediment and sediment bound pollutants. This system has successfully reduced the impact of urban runoff by attenuating peak flows and removing pollutants. Because of the infrequent discharge of urban runoff, any exceedance should be considered in light of the much reduced exceedance period, and may not constitute an impairment of a beneficial use.

In light of these management questions, conclusions drawn to date from the river monitoring data include the following:

- The water quality of the San Joaquin River, which has been monitored at locations both upstream and downstream of the Fresno-Clovis metropolitan area, is of high quality. This conclusion is based on the low or undetectable concentrations of dissolved metals, pathogen indicators, total suspended solids (TSS), pesticides, and nutrients that have been observed during monitoring. Furthermore, the frequency of exceedance of the Water Quality Objectives (WQO)s is low. [L6]
- Increases in dissolved copper and lead concentrations between the upstream and downstream river monitoring locations are statistically significant based on historical monitoring (for data collected between 1996 and 2020). However, the magnitude of concentration differences is small relative to data variability. For example, the median dissolved copper concentrations at Station 1 and Station 3 are 0.46 µg/L and 0.56 µg/L (absolute difference of 0.10 µg/L), respectively, and standard deviations are 0.41 µg/L and 0.54 µg/L, respectively. [L6, L4]
- Increases for naphthalene, one of the most detected Polycyclic Aromatic Hydrocarbons (PAH)s (>20%), between the upstream and downstream river monitoring locations are statistically significant based on the historical monitoring (1996-2020). No exceedances of PAH water quality objectives were observed this year. [L6]
- Pathogen indicators exhibited variability between Stations 1, 2, and 3 during the 2019-2020 monitoring events typical of previous years. Nine downstream pathogen indicator samples were collected and 33% of the results were equal to or lower than those from the upstream sites. Except for three of the samples for which the downstream count was higher, the difference was smaller than typical microbiological variability (one order of magnitude). [L6]
- During the 2019-2020 monitoring year, there were no events where an exceedance of the United States Environmental Protection Agency (USEPA) single sample *E. coli* WQO was observed at the Station 3 downstream monitoring location. [L6, L5]



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Fresno/Clovis Stormwater Quality Management Program  
Long Term Effectiveness Assessment Frequency and Data  
Industrial and Commercial Program

IC 4.3 – Inspect sites as needed

Assessment Data	Permittee	Automotive Repair Facilities (ARFs)						Retail Gasoline Outlets (RGOs)						Restaurants						Industrial General Permit (IGP)					
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Number of Industrial and Commercial Facilities Requiring Inspection	RMFCD	6	98	6	0	0	7	7	7	7	8	8	9	1,314	1,521	4,443	4,707	1,689	4,148	37	4	/	/	12	10
Number of Inspections Conducted	County of Fresno	4	/	6	1	0	0	8	8	7	2	1	1	N/A	N/A	N/A	N/A	N/A	N/A	6	0	/	0	0	0
	City of Fresno	2	59	/	/	/	/	/	/	/	6	/	/	1,314	5,372	4,443	4,707	5,282	3,963	21	7	/	0	12	/
Number, % and types of Inspected Industrial and Commercial Facilities in compliance with Local Codes and Ordinances		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/	/	/	/	/	185	11	9	13	10	/	10
		100%	100%	100%	/	/	0%	100%	100%	100%	100%	/	11%	100%	100%	100%	/	100%	100%	100%	100%	/	/	/	100%

IC 4.4 – Conduct follow-up inspections as needed

Assessment Data	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Number of Follow-up Inspections	1,243	1,239	1,204	1,481	1,016	747	491

IC 5.2 – Implement progressive enforcement procedures as needed & coordination with Regional Board regarding potential violations of the Industrial General Permit.

Assessment Data	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Number of Industrial/ Commercial Sites Issued a prep Notice of Correction	0	0	0	1	1	0	0
Number of Industrial/Commercial Sites Issued a prep Notice of Violation	0	0	0	0	0	0	0
Number of Industrial/Commercial Sites referred to the RWQCB for Enforcement	0	1	0	1	1	1	0

Fresno/Clovis Stormwater Quality Management Program  
Long Term Effectiveness Assessment Frequency and Data  
Program Management

PM 3.5 - Permittees Fiscal Analysis FY 2013-14, FY 2014-15, FY 2015-16, FY 2016-17, FY 2017-18, FY 2018-19, FY 2019-20

Co-Permittees	FMFCD								City of Clovis				City of Fresno				
	Actual	Actual	Actual	Actual	Budgeted	Budgeted	Budgeted	Budgeted	Actual	Actual	Actual	Actual	Budgeted	Actual	Actual	Budgeted	
Program Element	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2013-14	2014-15	2015-16
Program Management	\$184,707	\$183,864	\$177,456	\$224,390	\$275,661	\$300,206	\$225,805	\$246,807	\$3,000	\$4,000	\$3,500	\$3,800	\$3,800	\$6,315	\$3,789	\$3,914	
Construction	\$1,880,163	\$1,915,170	\$1,930,923	\$2,441,613	\$2,999,506	\$3,266,584	\$2,457,021	\$80,007	\$73,500	\$73,500	\$73,500	\$73,500	\$73,500	\$58,468	\$59,099	\$60,873	
Industrial Commercial	\$87,353	\$80,105	\$121,558	\$153,708	\$188,829	\$217,313	\$163,456	\$43,604	N/A	N/A	N/A	N/A	N/A	\$111,688	\$113,740	\$117,111	
Municipal Operations	\$17,129,155	\$12,635,832	\$20,962,406	\$26,506,538	\$32,563,107	\$35,465,441	\$26,675,981	\$998,830	\$1,222,900	\$1,334,600	\$1,789,200	\$1,503,000	\$1,593,200	\$3,916,797	\$4,173,520	\$4,163,775	
Illicit Connections and Discharges	\$54,056	\$53,094	\$64,653	\$81,752	\$100,432	\$130,388	\$98,074	\$80,007	\$44,200	\$44,200	\$46,400	\$47,700	\$49,200	\$533,100	\$5,680,900	\$5,851,327	
Public Involvement and Education	\$302,544	\$324,261	\$381,672	\$482,617	\$592,891	\$651,938	\$490,367	\$237,504	\$102,600	\$104,100	\$104,200	\$104,700	\$121,900	\$41,900	\$41,900	\$43,157	
Planning and Land Development	\$1,901,926	\$1,876,653	\$1,894,011	\$2,394,939	\$2,942,166	\$3,216,229	\$2,419,146	\$164,835	\$4,500	\$4,500	\$4,500	\$4,500	\$4,500	\$12,856	\$12,856	\$13,287	
Monitoring	\$128,919	\$162,286	\$158,637	\$200,593	\$246,438	\$260,775	\$196,147	\$190,704	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Total	\$21,668,823	\$17,231,265	\$25,691,316	\$32,486,149	\$39,909,020	\$43,508,874	\$32,725,997	\$2,042,298	\$1,450,700	\$1,564,900	\$2,021,300	\$1,737,200	\$1,846,100	\$4,681,124	\$10,085,804	\$10,253,444	\$0

Fresno/Clavis Stormwater Quality Management Program  
Long Term Effectiveness Assessment Assessment Frequency and Data  
Construction Program

CON 4.3 – Inspect sites at designated frequencies and require BMPs.

Assessment Data		2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Construction Sites Inspected During Reporting Year		61	105	68	57	71	116	138
Threat to Water Quality Prioritization of these sites:	High Medium Low	12 40 9	17 83 3	14 53 1	8 168 138	6 79 17	11 89 118	12 118 118
Typical Frequency of Inspections		Annually or Monthly Depending on Site Prioritization. Additional inspections may take place depending on weather conditions (predicted or occurring precipitation).	Annually or Monthly Depending on Site Prioritization. Additional inspections may take place depending on weather conditions (predicted or occurring precipitation).	Annually or Monthly Depending on Site Prioritization. Additional inspections may take place depending on weather conditions (predicted or occurring precipitation).	Annually or Monthly Depending on Site Prioritization. Additional inspections may take place depending on weather conditions (predicted or occurring precipitation).	Annually or Monthly Depending on Site Prioritization. Additional inspections may take place depending on weather conditions (predicted or occurring precipitation).	Annually or Monthly Depending on Site Prioritization. Additional inspections may take place depending on weather conditions (predicted or occurring precipitation).	Annually or Monthly Depending on Site Prioritization. Additional inspections may take place depending on weather conditions (predicted or occurring precipitation).
Active Construction Sites Adequately Implementing BMPs at First Inspection		Active construction sites - 49	71	25	3	9	30	21
Number of Active Construction Sites Requiring Follow Up Inspections		Active sites passure their initial inspection - 41	51	19	City of Fresno	City of Fresno	34	
		8	20	6	8	7	11	22
Number of Active Construction Sites Adequately Implementing BMPs After Follow-up Inspection		6	13	4	8	7	8	18

**Fresno/Clovis Stormwater Quality Management Program  
Long Term Effectiveness Assessment Assessment Frequency and Data  
Construction Program**

CON 5.2 – Implement progressive enforcement procedures as needed.

Assessment Data	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Number of Construction Sites Issued a PERP Notice of Correction	0	0	0	0	0	3	2
Number of Construction Sites Issued a PERP Notice of Violation	0	0	0	0	0	2	0
Number of Construction Sites referred to the RWQCB for Enforcement	0	0	0	0	0	4	0

Fresno/Clovis Stormwater Quality Management Program  
Long Term Effectiveness Assessment Assessment Frequency and Data  
Municipal Operations Program

MUN 2.1 – Inspect and maintain stormwater basins to maximize infiltration rates.

Assessment Data	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Inspection and Maintenance Frequency for Each Basin</b>	Basins are Inspected twice a month, Basins are cleaned every 4-6 years	Basins are Inspected twice a month, Basins are cleaned every 4-6 years	Basins are Inspected twice a month, Basins are cleaned every 4-6 years	Basins are Inspected twice a month, Basins are cleaned every 4-6 years	Basins are Inspected twice a month, Basins are cleaned every 4-6 years	Basins are Inspected twice a month, Basins are cleaned every 4-6 years	Basins are Inspected twice a month, Basins are cleaned every 4-6 years
<b>Amount of Material Removed</b>	8,848 cubic yards	9,176 cubic yards	5,704 cubic yards	7,616 cubic yards	6,970 cubic yards	7,912 cubic yards	8,864 cubic yards

MUN 2.2 – Inspect and maintain stormwater pump stations

Conveyance component and procedure	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Pump Stations Inspected and Cleaned	10	17	18	13	8	23	8
Pump Stations Cleaned of Floating Debris Only	252 <sup>(1)</sup>	240	233	148	69	68	70
Pump Stations Inspected for Floating Debris, but not Cleaned	464 <sup>(2)</sup>	232	177	124	70	65	72
Pipeline Siphons Inspected but not Needing Cleaning	14	0	0	0	0	48	0
Pipeline Siphons Inspected and Cleaned	37	0	0	0	0	5	2
Outfall Structures Inspected but not Needing Cleaning	13	11	5	4	8	4	7
Outfall Structures Inspected and Cleaned	7	8	8	10	30	55	41
Pipelines Cleaned	7	7	18	11	9	21	62

(1) Represents monthly cleanings for four consecutive months during the wet weather season.

(2) Represents monthly inspections for eight consecutive months.

**Fresno/Clovis Stormwater Quality Management Program**  
**Long Term Effectiveness Assessment Assessment Frequency and Data**  
**Municipal Operations Program**

MUN 4.5 – Coordinate with household hazardous waste programs.

Assessment Data		2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Amount and Types of Materials Collected</b>	<b>Used Motor Oil (Gal.)</b>	41,135	37,757	,	79,090	41,618	61,662	11,780
	<b>Oil Filters</b>	29,750	13,875	29,167	38,360	28,087	38,175	18,600
	<b>Household Hazardous Waste (Lbs.)</b>	30,242	37,720	102,476	131,072	191,497 (+3.2 tons of triple rinse pesticide containers)	160,646 + 8.5 tons triple rinse containers	140,784 + 14.7 tons of triple rinse containers

MUN 5.1 – Conduct street sweeping activities

Assessment Data		Permittee	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Number of Curb Miles Swept</b>		City of Fresno	105,000	105,000	105,000	105,000	105,000	105,000	105,000
		City of Clovis	58,046	61,436	68,969	65,964	67,460	/	59,413
		CSUF	21	21	21	21	21	21	21
		County of Fresno	475	475	475	475	475	300	/
	<b>Total</b>		<b>163,542</b>	<b>166,932</b>	<b>174,465</b>	<b>171,460</b>	<b>172,956</b>	<b>105,321</b>	<b>164,434</b>

MUN 5.2 – Inventory municipal parking facilities

Assessment Data		2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Number of Municipal Parking Facilities</b>		31	31	31	30	30	13	56

**Fresno/Clovis Stormwater Quality Management Program  
Long Term Effectiveness Assessment Assessment Frequency and Data  
Municipal Operations Program**

### MUN 5.3 – Clean and maintain parking facilities

[illegible]



Fresno/Clovis Stormwater Quality Management Program  
Long Term Effectiveness Assessment Assessment Frequency and Data  
Municipal Operations Program

MUN 8.1 – Conduct training for staff

Department		Topic		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20	
				Date	No. Trained	Date	No. Trained	Date	No. Trained	Date	No. Trained	Date	No. Trained	Date	No. Trained		
County of Fresno																	
Environmental Health	Storm Drain System, MS4 Permit, Referral Process, IC&D & Industrial	6/4/14	51	6/3/15	40			12/6/16	12	12/6/17	51	1/9/19	15				
Development Services	Storm Drain System, MS4 Permit, Referral Process, Construction & Development					12/16/15	5			6/6/18	25						
Maint & Operations	Storm Drain System, MS4 Permit, Referral Process, IPM, Industrial & Municipal					6/16/16	19			12/20/17	20				3/10/20	17	
City of Fresno																	
Fire	Storm Drain System, MS4 Permit, Referral Process & Municipal									1/16/18	?						
Street Maintenance	Storm Drain System, MS4 Permit, Referral Process & Municipal			6/18/15	40			11/10/16	97						12/12/19	79	
Building & Safety - Building Inspection	Storm Drain System, MS4 Permit, Referral Process, Construction & Development					1/12/16	4			6/20/18	5	11/29/18	92				
Sewer Maintenance	Storm Drain System, MS4 Permit, Referral Process, IC&D, Industrial & Municipal			6/18/15	35			11/29/16	47			12/12/18	31				
Wastewater	Storm Drain System, MS4 Permit, Referral Process, IC&D & Industrial	5/15/14	6			11/5/15	11			12/14/17	7	12/13/18	4				
Water Division	Storm Drain System, MS4 Permit, Referral Process, Industrial & Municipal					11/17/15	96			6/21-22/18	108						
Capital Management - Construction Management	Storm Drain System, MS4 Permit, Referral Process, Construction & Development					11/20/15	20			1/25/18	33	12/13/18	22				
Landscape Division	Storm Drain System, MS4 Permit, Referral Process & IPM			6/16/15	20			12/7/16	97								
Solid Waste	Storm Drain System, MS4 Permit, Referral Process & Municipal									1/22/18	10	12/5/18	1				
Graffiti Abatement	Storm Drain System, MS4 Permit, Referral Process & Municipal									2/2/18	12	12/6/18	1				
Facilities Management	Storm Drain System, MS4 Permit, Referral Process & Municipal	2013-14	10							12/21/17	2	12/14/18	3				
City of Clovis																	
Clovis Fire	Storm Drain System, MS4 Permit, Referral Process, Industrial & Municipal									6/20/18	?						
Development Engineering	Storm Drain System, MS4 Permit, Referral Process, Construction & Development			5/21/15	21			11/15/16	24			12/11/18	18				
Parks - Solid Waste	Storm Drain System, MS4 Permit, Referral Process, Municipal & IPM	4/15/14	35			12/30/15	40			2/14/18	60				1/29/20	35	
Utilities - Wastewater	Storm Drain System, MS4 Permit, Referral Process, IC&D & Municipal			4/29/15	37			1/18/17	35						9/17/19	32	
Utilities - Water Production	Storm Drain System, MS4 Permit, Referral Process, IC&D & Municipal														10/2/19	9	
Public Works - Corp Yards & Streets	Storm Drain System, MS4 Permit, Referral Process, Industrial & Municipal	4/15/14	62			12/30/15	100			2/14/18	30				1/29/20	35	
Fresno Metropolitan Flood Control District																	
Development & Engineering	Storm Drain System, MS4 Permit, Referral Process, Construction, Development, Industrial & Municipal			7/2/14	8			6/19/17	10								
				6/10/15	18												
Operations	Storm Drain System, MS4 Permit, Referral Process, Industrial & Municipal			5/11/15	11	11/9/15	12			6/4/18	12				5/12/2019	13	
California State University Fresno																	
Environmental Health & Safety - Facilities Management	Storm Drain System, MS4 Permit, Referral Process, Industrial & Municipal																
Total Departments Trained			5		8		9		7		15		9		7		
Total Number of People Trained			164		230		307		322		375		187		220		

**Fresno/Clovis Stormwater Quality Management Program**  
**Long Term Effectiveness Assessment Assessment Frequency and Data**  
**Public Information and Education Program**

PIE 3.1 – Publicize and recruit volunteers to conduct storm drain stenciling and participate in other events

Assessment Data	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Number of Events and Volunteers Participating,	1	48	0	0	0	0	7 Events / 24 staff volunteers
Number of Storm Drains Stenciled by Volunteers	118	1266	0	0	0	0	0
Amount of Trash Collected at Clean-up Events, By Event	30 lbs	0	0	0	0	0	0

PIE 4.6 – Update and implement public awareness survey

Assessment Data	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
% Change in Survey Target Audience Response to Questions Related to Water Quality Issues	Next Public Survey  FY 2016-17	Next Public Survey  FY 2016-17	Next Public Survey  FY 2016-17	Completed in June 2017, Evaluation during permit renewal	Next Public Survey  FY 2019-2020	Next Public Survey  FY 2019-2020	6% drop in 2019 (from 2017) in respondents who perceived stormwater pollution t be a serious problem.
% Change in Survey Target Audience Response to Questions Related to Behavior	Next Public Survey  FY 2016-17	Next Public Survey  FY 2016-17	Next Public Survey  FY 2016-17	Completed in June 2017, Evaluation during permit renewal	Next Public Survey  FY 2019-2020	Next Public Survey  FY 2019-2020	6% increase in 2019 (over 2017) Question: "Considered the use of less toxic pesticides." Answer: "Yes, but have not used."

PIE 6.1 – Promote/publicize the 24-hour hotline number in outreach materials

Assessment Data	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Number of Calls and Types of Problems/Requests	52 See IC above	55	50	71	79	62	69
Number of Calls Verified (i.e., Water Quality Issues)	46	48	41	59	64	62	69

Fresno/Clovis Stormwater Quality Management Program  
Long Term Effectiveness Assessment Assessment Frequency and Data  
Planning and Land Development Program

PLD 2.3 – Ensure that all priority development projects comply with development standards in FMFCD Master Plan

Assessment Data	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Number of Priority Development Projects Approved	0	0	0	0	1	0	0
Number of Acres Covered by Approved Priority Development Projects	0	0	0	0	5.50 Acres	0	0
Number and Type of Post-Construction BMPs Approved for Priority Development Projects	0	0	0	0	1 Infiltration Basins and 1 Bio Clean Grate Inlet Filter.	0	0
Number and Type of Proprietary Control Measures Approved for Priority Development Projects	0	0	0	0	1 Bio Clean Grate Inlet Filter.	0	0

PLD 2.6 – Perform post construction inspections for all priority development projects

Assessment Data	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Number of Priority Development Projects Approved	0	0	0	0	1	0	0
Number of Inspections Conducted	0	0	0	0	0		0
Number and Type of Post-Construction BMPs Implemented and Maintained by Priority Development Projects	0	0	0	0	0	Grassy swales	0
Number and Type of Proprietary Control Measures Implemented and Maintained by Priority Development Projects	0	0	0	0	0	Screen inserts	0