



Sewer System Management Plan (SSMP)

Western Municipal Water District

Prepared Under the Supervision of:

Paul Rugge, Director of Operations

Chris Fike, Deputy Director – Maintenance

Lyndy Lewis, Principal Engineer

OCTOBER 2019

1 Certification

I certify that WMWD's 2019 Sewer System Management Plan including the SSMP Report, its attachments and appendices comply with the requirements set forth in the General Waste Discharge Requirements for Sanitary Sewer Systems, Order No. 2006-0003 DWQ and the amended Monitoring and Reporting Requirements set forth in Order No. WQO 2013-0058-EXEC. Together these documents constitute the "SSS WDR." I further certify that the documents were prepared under WMWD's direction and supervision to assure that qualified personnel provided input, evaluated the contents, and subsequently incorporated the information in this 2019 SSMP into the daily operation and maintenance of WMWD's Sanitary Sewer Systems; that the information included in this 2019 SSMP is, to the best of my knowledge, true, accurate, and complete, and that the 2019 SSMP has been duly presented to and approved by WMWD's Board of Directors at its November 20, 2019 public meeting.



Paul Ruge
Director of Operations

12/12/19

Date

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Acronyms

AC	Acre
BMP	Best Management Practices
CAO	Chief Administrative Officer
CCTV	Closed Circuit Television
CMMS	Computer Maintenance Management System
CIP	Capital Improvement Program
CIWQS	California Integrated Water Quality System
CPC	California Plumbing Code
CWA	Clean Water Act
CWEA	California Water Environment Association
EPA	Environmental Protection Agency
FOG	Fats, Oils, and Grease
FSE	Food Service Establishment
GIS	Geographic Information System
GPCD	Gallons per Capita per Day
GPD	Gallons per Day
HFMS	High Frequency Maintenance Sites
I/I	Inflow and Infiltration
LRO	Legally Responsible Official
MRP	Monitoring and Reporting Program
NASSCO	National Association of Sewer Service Companies
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and Maintenance
RCDEH	Riverside County Department of Environmental Health
RWQCB	Regional Water Quality Control Board
SPPWC	Standard Plans for Public Works Construction (Greenbook)
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SSOERP	Sanitary Sewer Overflow Emergency Response Plan

SWRCB	State Water Resources Control Board
WDR	Waste Discharge Requirements
WMWD	Western Municipal Water District

3 Introduction

This Sewer System Management Plan (SSMP) has been prepared in compliance with the requirements of the State Water Resources Control Board (SWRCB), Order 2006-0003, and as amended by Order No. WQ 2013-0058-EXEC Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems. The goal of the WDRs is to provide a consistent statewide approach for reducing Sanitary Sewer Overflows (SSO). This chapter includes a brief overview of the Western Municipal Water District's (WMWD or District) service area and sanitary sewer system, a summary of the regulations that serve as the impetus for the development of this SSMP, and the purpose and organization of this SSMP.

3.1 Service Area and Sewer System

Although this SSMP applies to all WMWD wastewater pipeline and lift station systems whether or not listed herein, the major systems currently governed by WMWD's Board of Directors include by way of example the following:

- WMWD's systems tributary to the WMWD Water Recycling Facility near March Air Reserve Base; for example, Woodcrest south of Van Buren Boulevard, Boulder Springs and Mission Ranch, generally known as WMWD's East Retail Area.
- WMWD systems tributary to the WRCRWA treatment facility; for example, WMWD's El Sobrante, Lake Hills and Victoria Grove areas tributary to WRCRWA, generally known as WMWD's West Retail Area. Also, WMWD's CRC Northern Lateral, and WMWD's Corona Diversion Structure and Pipeline, constructed to convey wastewater from Corona to WRCRWA.
- WMWD systems tributary to SAWPA's Inland Empire Brine Line (IEBL) system; for example, WMWD laterals tributary to the IEBL system.
- WMWD pipelines in and around the Inland Port at March Field tributary to the Eastern Municipal Water District system.
- WMWD pipelines within its Murrieta Division near the southern boundary of its 527 square-mile jurisdiction. Portions of the service area are tributary to a treatment plant owned and operated by the Santa Rosa Regional Resources Authority (SRRRA).

3.2 Waste Discharge Requirements

On May 2, 2006, the SWRCB adopted Order 2006-0003, the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, which requires all federal and state agencies, municipalities, counties, districts, and other public entities that own or operate a sanitary sewer system greater than one mile in length to comply with the elements of the WDRs. The WDRs serve to provide a unified statewide approach for reporting and tracking SSOs, establishing consistent and uniform requirements for SSMP development and implementation, establishing consistency in reporting, and facilitating consistent enforcement for violations.

On June 27, 2006, the Executive Director of the SWRCB executed a memorandum of agreement with the California Water Environment Association (CWEA), outlining a strategy and time schedule for CWEA to provide training on the

(1) adoption of the program, (2) SSO database electronic reporting, and (3) SSMP development. This agreement also extended the completion dates for most tasks by six (6) months from the dates shown in the adopted WDRs.

The WDRs include directives for owners and operators of sanitary sewer systems to demonstrate adequate and efficient management, operation, and maintenance of the sanitary sewer system. Generally, the WDRs require that:

- a. In the event of an SSO, all feasible steps are taken to control the released volume and prevent untreated wastewater from entering storm drains, creeks, etc.
- b. If an SSO occurs, it must be reported to the SWRCB using California Integrated Water Quality System (CIWQS), the online reporting system developed by the SWRCB. WMWD completed its enrollment into the program and the demographic questionnaire, and electronic reporting commenced in January 2007.
- c. An SSMP with all mandatory elements be developed and approved by the governing body that owns or is responsible for the operation of the sanitary sewer system. The SSMP must include provisions to provide proper and efficient management, operation, and maintenance of the sanitary sewer system.

This SSMP includes the various plans and programs that comprise a comprehensive SSMP. The completion dates for each mandatory element is determined according to the size of population served by the federal and state agencies, municipalities, counties, districts, and other public entities that own or operate a sanitary sewer system.

3.3 Purpose

WMWD recognizes the importance of preventing sewage spills for the mutual protection of our surface waters and the overall environment to safeguard public health and safety. Therefore, in a proactive approach to achieve WDR compliance, WMWD has prepared this comprehensive SSMP. This SSMP is designed to ensure continuous improvement of system performance, response, monitoring, data recording, and documentation for future system assessments. WMWD considers the completeness and practicality of the SSMP a critical component for its long range plans to comply with all applicable regional, State, and Federal requirements under the CWA, the Regional Water Quality Control Board (RWQCB) and the WDRs.

This SSMP provides a summary of the action plan implemented by WMWD to comply with the sanitary sewer system requirements imposed by the WDRs and other governing agencies. As well, it includes the specific details of the activities and procedures that personnel follow to implement the various programs encompassed in its overall efforts to efficiently manage, operate, and maintain its sanitary sewer system and facilitate the reduction and potential elimination of SSOs.

3.4 SSMP Elements and Organization

This SSMP includes detailed information demonstrating WMWD's efforts to comply with each of the mandatory and applicable elements required for its SSMP. The organization of this document is consistent with the SWRCB guidelines and includes the following eleven (11) mandatory WDR elements:

- i. Goals
- ii. Organization

- iii. Legal Authority
- iv. Operations & Maintenance Program
- v. Design and Performance Provisions
- vi. Overflow Emergency Response Plan
- vii. Fats, Oils, and Grease Control Program
- viii. System Evaluation and Capacity Assurance Plan
- ix. Monitoring, Measurement and Plan Modifications
- x. SSMP Program Audits
- xi. Communication Program

Supporting information for an element is included in an appendix associated with the chapter, as applicable. Generally, information expected to require relatively frequent updates that can be modified without formal action is included in appendices.

In accordance with Section D.14 of the State Order, the SSMP shall be updated every five (5) years, and must include any significant program changes. Re-certification by WMWD’s Board of Directors is required in accordance with Section D.14 of the State Order when significant updates to the SSMP are made. To keep its files current, WMWD staff will take the five-year SSMP update to WMWD’s Board of Directors for re-certification whether or not there have been significant program changes. To complete the re-certification process every five years, WMWD staff will enter the date in the State Water Board Online SSO Database and mail the form to the State Water Board as described in Section D.14 of the State Order.

Appendix 1 contains the change log for this SSMP document and tracks any changes to the information presented herein. The change log is updated as needed, but at a minimum at least once annually.

3.5 Definitions

The following provides definitions for key aspects of this SSMP.

1. **Sanitary sewer overflow (SSO)** - Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:
 - (i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;
 - (ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and
 - (iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.
2. **Sanitary sewer system** – Any system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to

the publicly owned treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, etc.) are considered part of the sanitary sewer system, and discharges into these temporary storage facilities are not considered SSOs.

For purposes of this Order, sanitary sewer systems include only those systems owned by public agencies that are comprised of more than one mile of pipe or sewer lines.

3. **Enrollee** - A federal or state agency, municipality, county, City, and other public entity that owns or operates a sanitary sewer system, as defined in the general WDRs, and that has submitted a complete and approved application for coverage under this Order. WMWD is the Enrollee.
4. **SSO Reporting System** – Online spill reporting system that is hosted, controlled, and maintained by the State Water Board. The web address for this site is <http://ciwqs.waterboards.ca.gov>. This online database is maintained on a secure site and is controlled by unique usernames and passwords.
5. **Untreated or partially treated wastewater** – Any volume of waste discharged from the sanitary sewer system upstream of a wastewater treatment plant headworks.
6. **Satellite collection system** – The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility to which the sanitary sewer system is tributary.
7. **Nuisance** - California Water Code section 13050, subdivision (m), defines nuisance as anything that meets all of the following requirements:
 - a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
 - b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
 - c. Occurs during, or as a result of, the treatment or disposal of wastes.
8. **WDR** – State Water Resources Control Board (SWRCB) Order No. 2006.0003-DWQ, known as the WASTE DISCHARGE REQUIREMENTS (WDR), which was adopted May 2, 2006.
9. **MRP** – State Water Resources Control Board (SWRCB) Order No. WQ 2013-0058-EXEC, known as the MONITORING AND REPORTING PROGRAM (MRP), which was adopted September 9, 2013.

4 Goals

State Order Paragraph D.13.i

The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce and prevent SSOs, as well as mitigate any SSOs that do occur.

4.1 Discussion on Goals

WMWD's Board of Directors hereby adopts with its approval, certification and ongoing recertification of this SSMP the following goals:

1. To provide a plan and schedule to properly and efficiently manage, operate, and maintain WMWD's sanitary sewer systems, while taking into consideration risk management and cost benefit analysis. WMWD's SSMP shall contain a spill response plan that establishes standard procedures for immediate response to an SSO in a manner designed to minimize water quality impacts and potential nuisance conditions.
2. To provide adequate capacity to convey peak flows, to provide notifications and reports to all required regulatory agencies in a timely manner, to minimize the frequencies of SSOs throughout WMWD's collection system, to effectively mitigate the effects of any SSO that may occur, and to provide public education to increase awareness of FOG issues and how they can impact the collection system.

In addition to the general goals stated above, WMWD has implemented the following goals specific to the SSMP elements to better evaluate the performance of WMWD's SSMP and ensure efficient and effective sewer system management:

1. Conduct annual SSMP training on all sections of the SSMP;
2. Conduct annual SSO Emergency Response training;
3. Conduct a system-wide video inspection (CCTV) of all gravity main sewer lines once every five to seven years;
4. Meet assigned cleaning frequencies for all gravity mains;
5. Meet designated cleaning and maintenance frequencies for a sewer liftstations;
6. Reduce I/I within the sewer system;
7. Meet all SSO reporting requirements;

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5 Organization

State Order Paragraph D.13.ii

The SSMP must identify:

- (a) The name of the responsible or authorized representative as described in Section J of this Order.*

Section J of the State Order: Report Declaration

All applications, reports, or information shall be signed and certified as follows:

- (i) All reports required by this Order and other information required by the State or Regional Water Board shall be signed and certified by a person designated, for a municipality, state, federal or other public agency, as either a principal executive officer or ranking elected official, or by a duly authorized representative of that person, as described in paragraph (ii) of this provision. (For purposes of electronic reporting, an electronic signature and accompanying certification, which is in compliance with the Online SSO database procedures, meet this certification requirement.)*
- (ii) An individual is a duly authorized representative only if:*
 - a. The authorization is made in writing by a person described in paragraph*
 - i. of this provision; and*
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity.*
- (b) The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and*
- (c) The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).*

5.1 Discussion on Organizational Structure

WMWD's organizational structure for the Operations staff, who is responsible for implementing and overseeing the SSMP program, is described in the following sections. Additionally, the general responsibilities of the personnel and chain of communication is included.

Lines of authority are identified in the organizational chart within **Appendix 2** and a narrative description for each position follows:

General Manager- Establishes policy and plans WMWD's work activities. Reports and advises the Board of Directors, of various engineering and work matters, including those related to the District's collection system. Also delegates responsibilities to lower staff through the Deputy General Manager.

Deputy General Manager - Receives general administrative direction from the General Manager. Exercises direct supervision over management, supervisory, professional, technical and clerical staff. Assists the General Manager in the development Plans strategy, leads staff, allocates resources, delegates responsibilities, and authorizes outside contractors to perform services.

Assistant General Manager/Chief Financial Officer - Under general direction, leads, plans, organizes, directs, and oversees the activities of the Finance and Administrative Department functions.

Director of Engineering - Under general policy direction, plans, organizes, directs and implements WMWD's engineering activities and operations. Prepares wastewater collection system planning documents, manages capital improvement delivery system, documents new and rehabilitated assets and assists in coordinating the development and implementation of the SSMP.

Director of Operations - Under general policy direction, plans organizes, directs and implements comprehensive strategies and programs for the operation of a large potable water distribution and wastewater collection and treatment system. Manages and coordinates all aspects of WMWD's Operations and assists in coordinating the development and implementation of the SSMP.

Deputy Director of Operations (System Operations) - Under the general direction of the Director of Operations, plans, organizes, directs and administers the operations of WMWD's wastewater treatment plant.

Deputy Director of Operations (Maintenance) - Under the general direction of the Director of Operations, plans, organizes, directs and administers the maintenance of WMWD's wastewater and Preventive Maintenance functions. The Deputy Director of Operations also coordinates the development and implementation of the SSMP.

Legally Responsible Officer (LRO) – Designated by the Director of Operations as the person responsible for certifying spill reports to CIWQS online SSO database as well as any other reports or information required by the State or Regional Water Boards.

Operations Field Manager - Wastewater Collections - Assists in coordinating the development and implementation of WMWD's SSMP. Manages field operations and maintenance activities, provides relevant information to agency management, prepares and implements contingency plans, leads emergency responses, investigates and reports SSOs and trains field crews. Supervises the operation, maintenance, and cleaning of lift stations domestic sewer systems and contract wastewater systems.

Operations Field Manager - Preventive Maintenance - Assists in coordinating the development and implementation of WMWD's SSMP. Develop, implements, monitors, and reviews a predictive and preventive maintenance and asset management programs. This position supervises, the operation and maintenance of WMWD's pumping plants, sewer lift stations, treatment facilities, vehicles and equipment.

Operations Technicians I/II/III/IV Staff - Performs a wide variety of preventive maintenance activities, mobilizes and responds to notification of stoppages and SSOs (mobilize sewer cleaning equipment, by-pass pumping equipment, and portable generators). Assists with sewer line cleaning, inspects, repairs sewer lift stations and performs required maintenance.

Principal Engineer Under general direction from WMWD's Engineering Manager, plans, organizes, directs and implements assigned engineering activities and operations and assists in coordinating the development and implementation of SSMP.

Construction Management Administrator- Performs professional and technical contract administration and engineering inspection activities for WMWD's construction projects; assigns, supervises and participates in the work of staff performing inspections of WMWD's facilities; and assists in coordinating the development and implementation of SSMP.

Construction Inspector (Contractors)- Ensures that new and rehabilitated assets meet WMWD's standards, works with field crews to handle emergencies when contractors are involved, and provides verbal reports to Principal Engineer.

Source Control Program Staff that manages and assists in administering WMWD's approved Source Control Program; manages and implements WMWD's FOG Control Program; assists WMWD in complying with Federal, State and local environmental laws and regulations; develops and prepares as needed applicable permits, conducts inspections at industrial user facilities and provides support to all Elements of WMWD's SSMP.

Sanitary Sewer Overflows

When anyone (member of the general public, law enforcement, regulatory agency, etc.) discovers a possible SSO they can call WMWD's 24-hour emergency telephone hot line at (951) 789-5109 any day of the year and speak to a knowledgeable individual. The emergency number is listed on WMWD's Web site under the "Report An Emergency" tab and in the local telephone directory.

The call will either be handled by WMWD's administrative staff or rolled over to WMWD's answering service. In either event, the information along with the caller's phone number will be forwarded immediately to WMWD's Call Team member assigned for the day.

The Call Team member receiving the information will either drive to the site or request a member of another Call Team to drive to the site depending on fastest response time, to determine if a SSO is eminent or occurring.

If the SSO is affirmed, the Call Team member at the site will mobilize a first responder team to control the SSO and mitigate its effects. The Call Team member will then contact one or more of the following to obtain additional resources if needed and report status of the SSO:

- Fred Ochoa, Senior Technician for Wastewater Collections, Office: (951) 789-5145, Cell: (951) 326-5839
- Alex Chang, Operations Field Manager - Wastewater Collections and LRO, Office: (951) 789-5117, Cell: (951) 712-3070
- Chris Fike - Deputy Director of Maintenance Operations, Office: (951) 789-5133, Cell: (949) 468-8463

If for any reason, Fred Ochoa, Alex Chang, or Chris Fike are unavailable the Call Team member will contact Paul Ruge, Director of Operations, Office: (951) 789-5155, Cell (951) 751-3522.

All wastewater collection O&M Team members are trained in SSO response, control techniques and documentation. All reporting information will be forwarded to Alex Chang, WMWD's Authorized Representative (LRO) named above for purposes of reporting SSOs to the State and Regional Water Board and other agencies, as applicable (such as County Health Officer, County Environmental Health Agency, and/or State Office of Emergency Services (OES)).

6 Legal Authority

State Order Paragraph D.13.iii

Each Enrollee must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

- (a) Prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.);*
- (b) Require that sewers and connections be properly designed and constructed;*
- (c) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;*
- (d) Limit the discharge of fats, oils, and grease and other debris that may cause blockages, and*
- (e) Enforce any violation of its sewer ordinances.*

6.1 Discussion on Legal Authority

WMWD's Board of Directors adopted Ordinance 382 in November 2013, hereafter referred to as WMWD's Wastewater Ordinance or the Wastewater Ordinance. This document is included in **Appendix 3**. The Wastewater Ordinance supersedes WMWD's previous Ordinance No. 380. The enforcement section of the Wastewater Ordinance has been reproduced as WMWD's Enforcement Response Plan (ERP), a stand-alone document that can be handed out for purposes of staff training and public education. The following information (Scope, Applicability and Authority) is as stated in the Wastewater Ordinance.

WMWD is regulated by several agencies of the United States government and State of California pursuant to the provisions of State and Federal Law. The Wastewater Ordinance provides the required legal authority to meet the intent, purposes, and policies set forth herein. WMWD is granted the authority to adopt the Wastewater Ordinance pursuant to the authorization of Municipal Water District Law of 1911, California Water Code Sections 71000, et seq., California Government Code, Sections 54739-54740, et seq., the California State Water Resources Control Board Order 2006-0003 as may be amended from time to time, the Clean Water Act (33 USC §§ et seq.) and the General Pretreatment Regulations (40 CFR 403).

The following table specifies the District's ordinances for each requirement of the WDR, with the full ordinance language presented in the following subsections.

Legal Authority Order Requirements	Applicable Sections of Wastewater Ordinance
a) Prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.)	Sections 3.1.1 and 3.2.1
b) Require that sewers and connections be properly designed and constructed	Sections 4.3(A), 4.3(C), 4.5 (A1 & A4), and 4.9(A)
c) Ensure access for maintenance, inspection, or repairs for collection system owned or maintained by the Public Agency	Section 4.12(B)
c) Limit the discharge of fats, oils, and grease and other debris that may cause blockages	Sections 4.4(A), 4.4(B.3), 4.4(E.1)
e) Enforce any violation of its sewer ordinances	Sections 6.1(A-E), 6.3(A), 6.11(A-C), 6.12(A), 6.14 and 6.17

6.1.1 Illicit Discharges

Section 3.1.1 of the Wastewater Ordinance: No Person shall introduce or cause to be introduced into the District's Sanitary Sewer System or receiving POTW any material (liquid or solid) or any Pollutant, including oxygen-demanding pollutants (BOD, etc.) or wastewater which, alone or in conjunction with other substances, causes "Pass Through" or "Interference". These general prohibitions apply to all Persons whether or not they are a User, Discharger, Permittee, or Person subject to categorical Pretreatment Standards or any other National, State, or local Pretreatment Requirements.

Section 3.2.1 (A) of the Wastewater Ordinance: The Categorical Pretreatment Standards found at 40 CFR Chapter I, Subchapter N, Parts 405-471, as amended, are hereby incorporated into this Ordinance by reference.

6.1.2 Proper Design and Construction

WMWD publishes the Board of Director's approved Developer's Handbook, Standard Specifications and Standard Drawings for Water and Sewer Facilities to require that facilities be properly designed and constructed and that adequate right of way be provided.

Section 4.3 (A) of the Wastewater Ordinance: The connection to WMWD's Sanitary Sewer System shall conform to the requirements of applicable building and plumbing codes and current WMWD rules and regulations. All such connections shall be gas and watertight, and shall be tested as described in WMWD's Developer Handbook & Standard Drawings for Water and Sewer Facilities. Any deviation from such codes and/or WMWD rules and regulations must be approved, in writing, by the WMWD prior to the installation of the connection.

Section 4.3 (C) of the Wastewater Ordinance: Whenever, in the opinion of WMWD, there exists the possibility of sewage from WMWD’s Public Sewer Main flooding through the connection into the connected structure as a result of hydraulic characteristics in WMWD’s Sanitary Sewer System, a backwater overflow prevention device, approved by WMWD, shall be installed in the Discharger’s lateral at WMWD’s expense.

Section 4.5(A1 & A.4) of the Wastewater Ordinance: Provide Pretreatment, as required, to comply with this Ordinance. Provide detailed plans showing the treatment equipment, systems, devices, and operating procedures. Said plans shall be submitted to WMWD for review and approval prior to beginning construction or installation of any Pretreatment equipment. The review of such plans and operating procedures will in no way relieve the Industrial User of the responsibility for treating wastewater to a level acceptable to WMWD under provisions of this Ordinance.

Section 4.9(A) of the Wastewater Ordinance: Industrial Users shall provide, as requested by WMWD, drawings, schematics, or process and instrumentation diagrams during the initial sewer connection or whenever a site modification occurs.

6.1.3 Ensured Access and Maintained Right of Way

WMWD has the means and authority to ensure access for maintenance, inspection and repair of its entire system including those portions of laterals maintained by WMWD using public right-of-way, exclusive easements or fee title ownership. Rights of access are generally obtained at the time the property applies for sewerage service but may be acquired in advance through developer agreements. Access is a condition of sewer service.

Section 4.12(B) of the Wastewater Ordinance: As a condition of sewer service, a WMWD easement or right-of-way may be required for the installation, protection, maintenance, or replacement of WMWD facilities on private property. Persons and property owners shall be responsible for compliance with the terms of the easements. At no time shall any material, debris, obstacles, vehicles or other obstructions be placed (temporarily or permanently) in a manner that prevents immediate access to WMWD facilities. Costs incurred by WMWD as a result of any Person or property owner’s failure to comply, may be billed to the said Person or property owner. The Person is responsible for maintenance of the Private Lateral and the easement or right of way it is in to the point of connection with the WMWD Sanitary Sewer System.

6.1.4 Limit Fats, Oils and Grease

WMWD requires that any Person discharging wastewater containing fats, oils and grease or solids at excessive levels, as solely determined by WMWD, be required to install and maintain a gravity separation interceptor (Interceptor). Adequate Interceptor maintenance is the responsibility of the Person, User, or Discharger to protect the operation of WMWD’s Sanitary Sewer System facilities, its POTWs and/or downstream POTWs owned by other Public Agencies. The following is stated in the Wastewater Ordinance.

Section 4.4(A) of the Wastewater Ordinance: Any Person, that discharges wastewater containing fats, oils and grease or solids at excessive levels, as solely determined by the District, shall be required to install and maintain a gravity separation interceptor (Interceptor). Sanitary wastewater shall not be allowed to pass through the Interceptor. The Interceptor shall conform to WMWD standards and the operational fluid capacity shall be determined by WMWD. The interceptor shall have a minimum operational fluid capacity of 750 gallons.

Section 4.4(B.3) of the Wastewater Ordinance: If WMWD finds, either by engineering knowledge or by observation that an existing Interceptor is incapable of adequately eliminating Prohibited Discharges (Article 3.1), is structurally inadequate, or is undersized for the intended use, WMWD shall condemn such Interceptor and declare that the Interceptor does not meet WMWD requirements. The User shall be required to install, at the User's expense, an Interceptor which is acceptable to WMWD.

Section 4.4(E.1) of the Wastewater Ordinance: The Interceptor shall be cleaned by a licensed and permitted Waste Hauler on a periodic basis which assures that the Interceptor will operate as designed at all times. An Interceptor is not considered adequately maintained, if for any reason the Interceptor is not in good working condition (i.e. missing or broken internal plumbing) or if the operational fluid capacity has been reduced by more than 25%.

6.1.5 Enforcement

Article 6, Section 6.1 of the Wastewater Ordinance addresses enforcement.

Section 6.1(A-E) of the Wastewater Ordinance: WMWD is mandated by State Water Resources Control Board Order No. 2006-0003 and its amendments to enforce requirements promulgated by Regulatory Agencies. WMWD shall take enforcement action as necessary against any Person, User or Discharger to:

- Prevent illicit discharges into the Sanitary Sewer System (examples may include infiltration, stormwater, chemical dumping, unauthorized debris, cut roots, unauthorized liquids or solids, compounds, objects, material and elements).
- Require that sewers, sewer laterals, connections and other Sanitary Sewer System components be properly designed and constructed.
- Ensure access for maintenance, inspection, sampling and repairs for the Sanitary Sewer System and portions of the lateral owned and/or maintained by WMWD.
- Limit the Discharge of fats, oils and grease and other substances, debris and material that may cause blockages.
- Enforce this Ordinance.

Section 6.3(A) of the Wastewater Ordinance: WMWD Management, upon finding a violation by any Person, may employ any of the remedies set forth in this article, subject to due consideration of the following:

1. The magnitude of the violation;
2. The duration of the violation;
3. The effect of the violation on WMWD's Sanitary Sewer System and receiving POTW;
4. The significance of the violation as compared with Regulatory Agency requirements;
5. The violation history of the Person;
6. The good faith efforts of the Person to remedy the violation.
7. In the case of a violation by a User, the magnitude of the violation when compared with the User's Waste Discharge Permit.

Section 6.11(A-C) of the Wastewater Ordinance: WMWD Management may immediately suspend a User’s discharge permit, and issue a Cease and Desist Order to the User, whenever such action is necessary to stop an actual or threatened discharge which reasonably appears to present or cause an imminent or substantial endangerment to the health or welfare of individuals or the environment.

Section 6.12(A) of the Wastewater Ordinance: Any User found by WMWD Management to have violated any terms of this Ordinance shall be subject to Discharge Termination.

Section 6.14 of the Wastewater Ordinance: In certain circumstances, judicial enforcement may be appropriate. Such remedies may include, but are not limited to, injunctive relief, civil penalties, and criminal prosecution.

Section 6.17 of the Wastewater Ordinance: A Person who willfully or negligently violates any provision of this Ordinance, a permit, or order issued hereunder, or any other pretreatment standard or requirement shall, upon conviction, be punishable by a fine or imprisonment or both. Each violation and each day in which a violation occurs may constitute a new and separate violation of this Ordinance and shall be subject to the penalties contained herein.

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7 Operations & Maintenance

State Order D.13.iv

The SSMP must include the following elements if appropriate and applicable to the Enrollee's Sanitary Sewer System:

- (a) up to date map of the sewer system that shows all pipe reaches, manholes, siphons, valves, and pumps if any,
- (b) routine preventative maintenance program and operations program,
- (c) rehabilitation and replacement program,
- (d) operations and maintenance training program, and
- (e) part inventory program including identification of critical replacement parts.

7.1 Collection System Mapping

The locations of WMWD maintained wastewater system pipes and associated appurtenances were originally documented based on as-built drawings. The hard copy maps can be found in the El Sobrante Operations Center map room, a room dedicated to hard copy maps as well as a room with monitors and computer systems to access maps electronically. The Engineering Division also maintains hard copy maps at the Meridian Office including sewer blueprints and detailed cut sheets showing vertical location of sewers. Adequate mapping detail is provided in both electronic form and hard copy to meet or exceed the requirements of the State Order.

These as-built drawings were used to develop a Geographic Information System (GIS) database of the facilities that facilitates management of O&M activities and expedites data management and retrieval for reporting purposes. Field crews have access to the GIS mapping system in the field. WMWD is also in the process of implementing a mobile INFOR application based CMMS system to view the GIS based maps, complete and track work orders, and have the ability to access sewer system notes and historical issues via tablets rather than relying on printed maps and work orders. GIS-based maps of the WMWD collection systems are included in **Appendix 4**.

Necessary revisions and/or updates to the GIS information are typically identified by the Operations crews while performing routine operation and maintenance activities. Discrepancies between field conditions and GIS are submitted to the Engineering Division to ensure corrections are implemented into the mapping system.

The locations of storm water conveyance facilities are available on the Riverside County Water Conservation & Flood Control District's website at <http://rcflood.org/NPDES/> under the tab "Stormwater and Water Conservation Tracking Tool" for field crews to review, if needed. While not responsible for the O&M of the storm drain system, WMWD O&M staff is trained to understand the storm drainage network to supplement SSO response actions.

7.2 Preventative Operation and Maintenance

WMWD has historically cleaned the majority of the sewer system on a two-year cleaning cycle. The system is divided into two separate areas the East System tributary to the WMWD WRF and the West System tributary to the WRCRWA treatment plant. Each area is cleaned every other year. WMWD has two active Vector jetting trucks with two-man crews to manage cleaning activities and other maintenance related activities within the service area.

The Standard Operating Procedure (SOP) for Collection System Maintenance and Line Cleaning contains details to effectively maintain the sewer collections system (Appendix 4). The SOP describes hydraulic cleaning, CCTV inspection, manholes inspections, flume inspections, force main inspections, air valve inspections, lift station maintenance and inspection activities, GIS mapping accuracy and record keeping activities. Manholes inspection is a part of the line-cleaning program. All manholes and vaults within the sanitary sewer systems are being inspected and noted on the Daily Line Cleaning Report along with findings during the cleaning of the adjacent sewers.

Inspection of sewers, manholes and vaults is part of the sewer cleaning program and condition reports are a part of the Daily Line Cleaning Report filled out by the field team members. Report of problems on the Daily Line Cleaning Report triggers more frequent cleaning and/or CCTV work in compliance with the State Order.

At the beginning of each day, the collection crew is given a packet of work orders. Each time a section of the sewer is cleaned, the collection crew(s) completes a cleaning record of that section of sewer including:

- Date and time of the cleaning
- Method of cleaning
- Identity of the cleaning personnel
- Cause of any potential stoppages or stoppages
- Location of stoppage or routine cleaning activity
- Any further actions that are necessary or taken

When the job has been completed, the collection crew records their findings on the work order and all the completed work orders are returned at the end of the day with the statistics for the day, e.g. sewer line footage that was cleaned, CCTV footage, etc. The implementation of the Sedaru based system will allow the field crews to complete the work orders on field computers that will be sync'd to a centralized database at the end of each day.

WMWD has identified areas of the collection system that require more frequent cleaning – known as enhanced maintenance areas – which are cleaned on a quarterly interval. Enhanced maintenance areas include, but are not limited to, siphons, some force mains that are subject to accumulation, and areas of structural defects such as sags or debris and FOG accumulation.

7.3 Rehabilitation and Replacement Plan

WMWD is committed to performing CCTV inspection of their entire system, including manholes, every five to seven years. In addition to routine CCTV inspection, WMWD currently utilizes in house staff to conduct as-needed CCTV

inspections. As-needed CCTV inspections are typically triggered based on cleaning crew observations, but can also be triggered by a sewer system blockage or SSO.

Rehabilitation and replacement is based on structural issues identified during routine sewer system maintenance activities or as a follow-up to an SSO. Once an issue is identified, the cause of the structural issue is confirmed through the use of CCTV.

When the problem is not easily remedied through more frequent cleaning, it is added as a repair/replacement project into WMWD's Database. This master work schedule includes costs for labor and maintenance. The numerous entries are summarized with major activities and anticipated costs for the upcoming fiscal year with priorities identified. With an iterative approach, the work and costs are revised based on current estimates and priorities, then when the draft is final, the requests are submitted to WMWD management for consideration by WMWD's Board of Directors for the upcoming fiscal year budget. WMWD's procedure for rehabilitation and replacement of the Sanitary Sewer System meets or exceeds the requirement of the State Order.

7.4 Training

WMWD provides training to the O&M team on a regular basis and requires team members to be certified by a professional organization such as the California Water Environment Association, signifying the degree of knowledge retained and the years of experience on the job applying this knowledge. Additionally, all O&M team members are evaluated at least once per year to determine level of proficiency and performance for the purpose of determining compensation. WMWD's training program includes classroom settings, simulated activities at the El Sobrante Operations Center and on-the-job training in the field. Formal classroom and El Sobrante Operations Center sessions are documented on the "Operations Department Training Documentation Form", containing trainee's name, date, type and description of training. Training programs include, but are not limited to, simulated spill response and containment, bypass pumping, traffic control, spill estimation, sampling, confined space, and any other trainings deemed necessary by WMWD for well trained staff.

The O&M Team also receives training to deal with customer requests. These requests could be related to a private lateral, foul odors, or problems with a sewer. Additionally, the O&M Team receives training in first aid techniques and general health and safety.

WMWD requires contractors used for emergency infrastructure repairs to be adequately trained in emergency response, consistent with the District's SSOERP. WMWD requires contractors to submit proof of training annually.

7.5 Contingency Equipment and Replacement Inventories

The O&M Team maintains an equipment parts inventory for the equipment used to service various components of the Sanitary Sewer System as well as equipment and material that make up the Sanitary Sewer System, including pipe for sewers, components for lift stations and manhole rings and appurtenances for manholes. Service equipment includes for example WMWD's Vactor trucks, the Emergency Response trailer, hose reel trailer for bypass pumping, portable compressors, portable pumps, portable generators and hand tools. The Sanitary Sewer

System parts inventory list maintained by WMWD is included in Appendix 4. In general, critical parts including pipe sections for sewers of various diameter and concrete manholes bases, rings and tops that are staged at the El Sobrante Operations Center or remote storage facility. Repair material and equipment are a part of the warehouse inventory. The warehouse system is operated with a computerized minimum and maximum inventory system that can be tailored as needed based on past and current history of usage.

8 Design and Performance Standards

State Order D.13.v

The Enrollee shall have:

- (a) *Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems, and*
- (b) *Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.*

8.1 Design and Construction Standards

Copies of WMWD's Technical Provisions of its standard specifications and General Provisions of its standard specifications for construction of new facilities are provided in **Appendix 5**. Technical Provisions of the specifications address technical construction details and requirements during construction for new and replacement facilities. General Provisions of the specifications address legal detail, requirements and procedures. Both provisions are made a part of every contract. Technical Provisions and Standard Drawings are available on the WMWD website.

A copy of WMWD's design criteria is also provided in Appendix 5 and made available on the WMWD website (within the Developer's Handbook) to establish planning and design requirements for Sanitary Sewer Systems with such parameters as depth of water to diameter of pipe (d/D) ratios, minimum pipe size, system loading in gallons, and other data needed to properly design sewers, lift stations, manholes and other components.

8.2 Procedures for Inspection and Testing

Copies of WMWD's requirements for establishing and implementing procedures and standards for inspecting and testing the installation of new facilities prior to acceptance are attached within Appendix 5.

General and Technical provisions of WMWD Construction Specifications provide detailed information about WMWD's requirements for inspection with instructions to the contractor for everything from notification to begin work to acceptance of the facility.

Wastewater personnel are routinely involved in the sewer design review process by being able to provide historical and current use information for Engineering personnel. This information is valuable in the design of sewer lines and appurtenances to insure that the project will meet expectations.

As stated previously in Section 2, WMWD staff includes a Construction Management Administrator and a team of Construction Inspectors to manage, inspect, and test newly constructed or rehabilitated facilities.

For example:

The new manholes that are installed are visually tested to determine if there are any conditions of inflow or infiltration. This activity is particularly important in areas with traditionally shallow groundwater tables.

All new sewer projects are CCTV inspected after completion. This includes all private sewer systems in commercial projects. The video inspection and inclinometer testing is useful to determine if the private sewer systems were built according to design and that all construction debris has been removed from the new facilities.

9 Sanitary Sewer Overflow Emergency Response Plan

State Order D.13.vi

The Enrollee shall have a Sanitary Sewer Overflow Emergency Response Plan that includes:

- (a) *Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner,*
- (b) *A program to ensure proper response to all overflows,*
- (c) *Procedures to ensure prompt notification to appropriate regulatory agencies and other affected entities (e.g. health agencies, Regional Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Monitoring and Reporting Plan (MRP). All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Board Waste Discharge Requirements (WDRs) or National Pollution Discharge Elimination System (NPDES) permit requirements. The SSMP should identify the officials, who will receive immediate notification,*
- (d) *Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the OERP and are appropriately trained,*
- (e) *Procedures to address emergency operations, such as traffic control and crowd control and other necessary response activities, and*
- (f) *A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.*

9.1 SSO Emergency Response Plan

WMWD has outlined specific measures to protect public health and the environment in its Sanitary Sewer Overflow Emergency Response Plan (SSOERP) (**Appendix 6**). These procedures contain a plan for responding and reporting to SSOs that includes, but is not limited to, the following:

1. WMWD's SSOERP outlines the proper SSO notification procedures, thereby ensuring that primary responders and regulatory agencies are informed of all SSOs in a timely manner.
2. WMWD policy is to respond to all spills within the service area whether on public or private property and to take all steps possible to prevent the spills from reaching the storm drains, flood control channels, or waters

of the State, all in accordance with the waste discharge requirements. WMWD's SSOERP contains a program to ensure an appropriate response to all types overflows;

3. WMWD's SSOERP outlines the procedures that ensure prompt notification to appropriate regulatory agencies and other potentially affected entities of all SSOs that potentially affect public health or reach the waters of the State in accordance with the 2013 Monitoring and Reporting Program (MRP). In addition, agencies to be notified include the Riverside County Department of Environmental Health (RCDEH), and the California State Office of Emergency Services (OES), if necessary. These procedures also identify the officials who will receive immediate notification;
4. WMWD conducts internal training sessions to ensure familiarity with these procedures and prepare staff for an SSO event, from initial notification to SSO report documentation, including any necessary emergency activities, such as traffic control. In addition, WMWD staff attend SSO simulation training whenever they are conducted by WMWD;
5. WMWD sewer maintenance staff is trained in the placement of traffic control and can respond to all but the most extreme emergencies. If a spill necessitates extensive traffic and or crowd control, WMWD's Police Department is contacted. Officers are trained in traffic and crowd control during emergency situations. These procedures are also addressed in WMWD's SSOERP; and
6. WMWD's SSOERP ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs.
7. WMWD is in the process of developing procedures for conducting water quality sampling and preparing a SSO Technical Report for any Category 1 SSO in which 50,000 gallons or greater are spill to surface waters.

10 FOG Control Program

State Order D.13.vii

The Enrollee shall evaluate its service area to determine whether a FOG control program is needed. If an Enrollee determines that a FOG program is not needed, the Enrollee must provide justification for why it is not needed. If FOG is found to be a problem, the Enrollee must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the Sanitary Sewer System. This plan shall include the following as appropriate:

- (a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG,*
- (b) A plan and schedule for the disposal of FOG generated within the service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a Sanitary Sewer System service area,*
- (c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG,*
- (d) Requirements to install FOG removal devices (such as traps or interceptors) design standards for the removal devices, maintenance requirements, owner BMP requirements, record keeping requirements and reporting requirements,*
- (e) Authority to inspect grease producing facilities, enforcement authorities, and sufficient staff to inspect and enforce the FOG ordinance,*
- (f) An identification of Sanitary Sewer System sections or pipe reaches subject to FOG blockages and establishment of a cleaning maintenance schedule for each section or pipe reach, and*
- (g) Development and implementation of source control measures for all sources of FOG discharged to the Sanitary Sewer System for each section (pipe reach) identified in (f) above.*

10.1 Discussion on FOG Control Program

The following subsections address each element of the State Order for this element of the SSMP.

10.1.1 Public Education for Proper Disposal of FOG

WMWD uses the Source Control inspectors as the principle education and outreach method to contact the restaurant community, food service establishments (FSEs) and residents. Occasionally the Source Control inspectors will participate in outreach efforts sponsored by other agencies. During an inspection of a restaurant or food service facility, the inspector will use the opportunity to inform and educate the owner or manager about the various laws and regulations that affect their business. The inspectors also provide useful information related to

interceptor design, maintenance, and businesses that can assist the restaurants and food service facilities in maintaining pretreatment equipment.

Educational procedures are outlined in WMWD's Fats, Oils and Grease (FOG) Program and in **Appendix 7**.

10.1.2 FOG Disposal Plan, Schedule and Facilities

FOG disposal information is provided in a stand-alone document entitled WMWD's Fats, Oils and Grease (FOG) Program and within this SSMP in Appendix 7.

10.1.3 Legal Authority to Prohibit FOG Discharges

Legal authority is outlined in WMWD's Fats, Oils and Grease (FOG) Program made a part of Appendix 7, published as a stand-alone document with the same name and found in WMWD's Wastewater Ordinance. WMWD's Wastewater Ordinance provides WMWD the legal authority to prohibit FOG discharges to the system in compliance with the State Order. The Wastewater Ordinance is sanctioned by State and Federal law and by General Pretreatment Regulations (40 CFR 403) as referenced in Section 3 herein. The Wastewater Ordinance is available on WMWD's website and in Appendix 3 of this SSMP.

10.1.4 FOG Interceptor Requirement

As described above, FOG Interceptor requirements are outlined in WMWD's Fats, Oils and Grease (FOG) Program made a part of Appendix 7, published as a stand-alone document, and found within WMWD's Wastewater Ordinance. WMWD's Wastewater Ordinance requires designated food processing facilities, including restaurants to install an approved gravity grease interceptor. The interceptor is required to meet all installation and maintenance requirements of WMWD's Wastewater Ordinance. The interceptor shall be sized to be the larger of the design criteria specified in the current version of the Uniform Plumbing Code or the design criteria specified by WMWD. The interceptor shall contain a minimum of two chambers, with a manhole cover over each chamber and internal plumbing fixtures (tees), and shall include a sample box. The sample box is used to collect wastewater samples to verify the wastewater is in compliance with required discharge limits. WMWD's Wastewater Ordinance requires all dischargers, including permitted FSEs, to meet specific discharge limits designed to protect the sewer collection and treatment system. An approved interceptor design has been included in Appendix 5.

10.1.5 Authority and Staffing to Inspect FOG Facilities

Inspection authority is provided in WMWD's Fats, Oils and Grease (FOG) Program made a part of Appendix 7, published as a stand-alone document and found within WMWD's Wastewater Ordinance. WMWD has the authority to inspect FOG producing sites as a result of State and Federal Codes and WMWD's Wastewater Ordinance. As stated in the Wastewater Ordinance, WMWD shall be granted permission to enter any properties from which Wastewaters are being, or are capable of being discharged into the Sanitary Sewer System for purposes of inspecting, observing, measuring, sampling, and testing the Discharge. WMWD shall have access at reasonable times to all parts of the person's wastewater generating and disposal facilities for the purposes of inspection and sampling. WMWD shall have the right to set up on the person's property such devices as are necessary to conduct sampling or metering operations. Where a person has security measures in force, the person shall make necessary

arrangements so that authorized personnel from Western will be permitted to enter without delay for the purpose of performing their specific responsibilities.

WMWD has a competent staff and therefore has the necessary staffing to inspect sites and enforce all regulations including those relating to FOG. WMWD staff members are knowledgeable in all aspects of the Wastewater Ordinance.

10.1.6 Identification of Sewers Subject to FOG

Due to the limited number of Food Service Facilities in the WMWD service area, there few areas of the sewer system subject to excessive FOG accumulation. WMWD has identified all areas subject to FOG accumulation and have established cleaning schedules to address these locations. Maps with locations of all enhanced maintenance area locations slated for quarterly cleaning, including areas with FOG accumulation, are included in Appendix 4.

10.1.7 Source Control Measures for All Sources of FOG

Control measures are implemented with WMWD's Source Control Program and are applied as needed to remedy potential FOG issues as well as other discharge issues. The Source Control Program consultant meets with FSE owners during inspections, and as needed, to discuss the WMWD's FOG Control Program including proper grease control device maintenance. WMWD has developed formal literature to be disseminated during these meetings. WMWD also distributed FOG educational materials to residential communities associated with high levels of FOG discharge. Sample FOG educational materials are included in Appendix 7.

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11 System Evaluation and Capacity Assurance Plan

State Order D.13.viii

The enrollee shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key Sanitary Sewer System elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum the plan must include:

- (a) Evaluation: Actions needed to evaluate those portions of the system that are experiencing or contributing to a SSO discharge due to hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events,*
- (b) Design Criteria: Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria,*
- (c) Capacity Enhancement Measures: The steps needed to establish a short term and long term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding, and*
- (d) Schedule: WMWD shall develop a schedule of completion dates for all portions of the CIP developed in 8(a) - 8(c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D. 14.*

11.1 Discussion on System Evaluation and Capacity Assurance Plan

The following subsections address each element of the State Order for this element of the SSMP.

11.1.1 Evaluation

WMWD evaluates the hydraulic capability of its Sanitary Sewer System using computer simulation modeling and field verification. WMWD's most recent Sewer Master Plan, dated June 2014, addressed two systems within WMWD's jurisdiction, the East System tributary to the WMWD WRF and the West System tributary to the WRCRWA treatment plant. WMWD also has an August 2014 Sewer Master Plan for the Murrieta Retail Service Area. Both master plans are included in **Appendix 8**. All future anticipated hydraulic deficiencies, if any, will most likely be the

result of growth but can be anticipated and addressed prior to realization as a result of the computer modeling work and master planning reports that feed into the CIP.

The exceptions to this are the sewers constructed during World War II to service the Air Force at March Field, now known as the March Air Reserve Base (MARB). Recently WMWD replaced aging depredated sewer lines at MARB to ensure sufficient capacity on and around the base.

WMWD's system tributary to the IEBL consists generally of single pipe reaches known as laterals between the customer's discharge pipeline and the SAWPA meter structure upstream from the IEBL. WMWD's CRC Lateral is WMWD's most significant lateral and is approximately three miles in length.

Staff members calculate capacity manually and track existing flow with its SCADA system and visually. A listing of WMWD's IEBL laterals has been included herein Appendix 8 with customer name, pipe size, maximum historical flow and hand calculations to determine approximate capacity.

Currently WMWD is in the process of conducting CCTV of the sewer system and will be conducting extensive evaluations of the sewer system. Once the CCTV is completed, WMWD will update the Master Plan to address any hydraulic or structural deficiencies identified. Updated sewer master plans, including hydraulic modeling, are anticipated to be completed in 2020.

11.1.2 Design Criteria

As reported within Chapter 8 of this SSMP, WMWD maintains the appropriate design criteria that generally exceed the requirements of the State Order. Design criteria are published on WMWD's website, reported with the Sewer Master Plan and included herein Appendix 5. Design criteria are conservative and therefore more than adequate to support the needs of WMWD's Sanitary Sewer System.

11.1.3 Capacity Enhancement Measures

WMWD's five year CIP establishes project priorities and provides short term and long-term CIP goals, together with the implementation schedule required by the State Order for major projects such as new facility construction to meet growth needs and replacement facility construction to remedy aging problems. Projects such as storm water and drainage inflow and infiltration (I/I) reduction are made a part of the maintenance budget each year as I/I sources are identified. The District's current CIP is included in Appendix 8.

11.1.4 Schedule

As discussed above, WMWD provides annual updates to its CIP and exceeds the requirements of the State Order. WMWD's annual CIP budget is presented to its Board of Directors prior to the beginning of each fiscal year with cash flow planned five years into the future and funding distributed according to action such as planning, design and construction. The CIP therefore provides project identification, funding source and schedule as shown by example herein Appendix 8.

12 Monitoring, Measurement, and Program Modifications

State Order D.13.ix

The Enrollee shall:

- (a) maintain relevant information that can be used to establish and prioritize appropriate SSMP activities,*
- (b) monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP,*
- (c) assess the success of the preventative maintenance program,*
- (d) update program elements, as appropriate, based on monitoring or performance evaluations, and*
- (e) identify and illustrate SSO trends, including frequency, location and volume.*

12.1 Discussion on Monitoring, Measurement, and Program Modifications

The following subsections address each element of the State Order for this element of the SSMP.

12.1.1 Maintain Relevant Information

WMWD uses the SSMP as the central document in the array of numerous documents used to establish and prioritize SSMP activities. A key document used to form the culture of responsiveness is WMWD's Mission Statement. Documents describing WMWD's organization are used to identify individual responsibility and proper channels of communications. Legal documents such as WMWD's Wastewater Ordinance are used to enforce SSMP activities especially when SSMP activities can be significantly impacted by those outside WMWD's organization.

Mapping documents; maintenance records; annual budgets for rehabilitation and replacement of system components; five year Capital Improvement Programs; and, system master plans are used to prioritize SSMP activities and establish funding commitments in support of the SSMP.

Sanitary sewer system planning criteria; design requirements; construction standards and specifications; and, inspection protocols are means and methods to assure all new construction and rehabilitation are consistent with the SSMP intent.

12.1.2 Monitor the Implementation of the SSMP

The SSMP elements are discussed periodically throughout the year during regular staff meetings with the Director of Operations and the division supervisors. Additional meetings to assess the effectiveness of individual elements are held, as needed. Major studies, such as the Sewer Master Plan update and 2019 MARB and Non-Cantonment Area Groundwater Infiltration Study and Sewer System Rehabilitation Plan, as well as the biennial audits, are also used to measure the effectiveness of the SSMP and make revisions as appropriate.

WMWD tracks the location and cause of all SSOs, blockages, and gravity main hot spots into a database system. WMWD maintains a log of all cleaning activity, which details the size, material and location of each pipe cleaned, as well as the equipment utilized, and any relevant remarks observed during the cleaning. Sewer main (CCTV) and manhole inspection data, staff training and spare parts inventory is also tracked to confirm SSMP goals and requirements are met.

12.1.3 Assess the Preventative Maintenance Program

WMWD Field Staff observe all gravity mains and manholes during routine cleaning, and request localized video inspections when their observations warrant further investigation. Additionally, WMWD conducts system-wide video inspections and each pipe is given a score based on the National Association of Sewer Service Companies' (NASSCO) pipeline rating system. These ratings, as well as the observed condition of each pipeline, allow WMWD to identify gravity mains that are at risk of collapse or prone to more frequent blockages due to pipe defects.

The preventative maintenance program is structured enough to support training and individual learning curves yet flexible enough to account for variable conditions. Finally, in the event of an SSO the maintenance team can respond quickly with the necessary material and equipment in part because it has assembled a SSO response trailer that contains first responder equipment and can be towed immediately to the site of the SSO.

The success of the preventative maintenance program overall is assessed by the reduction (or lack thereof) of SSOs over time. Using SSO trend data, further described in Section 12.1.5 below, the District assesses their preventative maintenance program and makes modifications, as necessary, to reduce SSOs in the system.

12.1.4 Update SSMP Program Elements

WMWD's SSMP program elements are updated in accordance with the results of the monitoring described within this chapter, the internal SSMP audits that are conducted once every two years, and once every 5 years as required by the Order. Program elements are updated, as necessary, based on regular review to improve the implementation of the SSMP and achieve the overall goals of a reduction of the frequency and volume of SSOs over time.

12.1.5 Identify SSO Trends

In order to monitor the implementation and measure the effectiveness of the SSMP, WMWD tracks several SSO related performance indicators for the past 10 years, including:

- Number of SSOs

- Number of SSOs by category
- Number of SSOs by cause
- Number of SSOs in enhanced maintenance areas
- Volume of SSOs in gallons.

This SSO tracking data is included in **Appendix 9**. While SSOs within the WMWD service area are rare, WMWD analyzes areas of potential SSOs and high-risk for SSOs. WMWD identifies these locations and implements the necessary corrective actions to mitigate to potential for and SSO in these locations.

13 SSMP Program Audits

State Order D.13.x

As a part of the SSMP, the Enrollee shall conduct periodic audits appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP, and the Enrollee's compliance with the SSMP requirements identified in this subsection D.13, including identification of any deficiencies in the SSMP and steps to correct them.

13.1 Discussion on SSMP Program Audits

As a part of the SSMP, WMWD conducts periodic audits. At a minimum, WMWD audits its SSMP every two years and prepares a report that is reviewed by management. If conditions change that warrant increased audit frequency, the District will adjust its audit cycle accordingly.

Audits will review WMWD's SSMP activities from the time of the last audit and will summarize the data accumulated through its monitoring, measuring, and program modification efforts. Particular attention will be paid to each program's effectiveness in meeting its goals, objectives, and priorities while ultimately being tied into the budgetary process.

The audit process will include the review of additions or improvements made to the collection system during the current audit period and describe planned additions and improvements for the upcoming audit period. Supporting documents will be reviewed to ensure they are up to date and the most recent documents are available and referenced. This process will also ensure that historical documents are kept for future reference.

The results of the audit, including identification of any deficiencies and the steps taken or planned to correct them, will be included in the audit report. The audit report will be used in the District's budgeting process when planning future CIP projects.

Employee training will be reviewed to ensure programs and mechanisms are in place to provide necessary training, and that all staff is up to date with required training. Training includes on the job requirements, safety, required licenses and/or certificates, and professional development.

Completed audits are retained on file by the District. The public can obtain information about WMWD's SSMP Audits by calling WMWD's offices at (951) 571 7100.

The District will audit its SSMP on a two-year cycle from the date of initial Board approval of the SSMP. If conditions change that warrant increased audit frequency, the District will adjust its audit cycle accordingly.

14 Communication Program

State Order D.13.xi

The Enrollee shall communicate with the public on the development, implementation and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented. The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's Sanitary Sewer System.

14.1 Discussion on Communication Program

14.1.1 Communication with the Public

State Order requirements are complex with eleven major categories, over three-dozen subcategories and the numerous elements of its monitoring and reporting program. The WMWD SSMP has increased complexity with various WMWD systems tributary to different POTWs (WMWD WRF, Western Riverside County Regional Wastewater Authority, Orange County Sanitation District via SAWPA's IEBL system, Eastern Municipal Water District, and Santa Rosa Regional Reclamation Authority). Because of the complexity and numerous POTWs, WMWD staff members provide thorough notification when developing or updating the SSMP.

Prior to its adoption by the Board of Directors, the updated draft SSMP will be submitted to staff members for review and comment. The Board of Directors will publicly review the updated SSMP at a regularly scheduled meeting of the Board of Directors to receive comments from all interested parties prior to considering its adoption. The SSMP is available on the District's website for public review with a contact phone number listed to receive any questions or comments about the SSMP. For security reasons, the Appendices to the SSMP will not be posted to WMWD's website.

With the completion of each audit, the results will be shared with staff members responsible for various elements of the SSMP for information and education. Audit reports are kept on file at District offices.

WMWD created a call center to enable the residents of WMWD's service area to call one phone number, to report any problem with anything related to WMWD's services. This number is frequently used to ask questions about the Sanitary Sewer System and to report problems. The report generated from the call center service request order has a chronological events feature that allows dispatch to accurately report the information. This system creates a direct communication link with WMWD customers.

Additionally, the District's website contains information about their FOG Program, Wastewater Ordinance, design criteria and other information relative to the SSMP to keep the public informed. As discussed in Section 10, FOG educational materials are distributed regularly to FSEs.

14.1.2 Communication with Additional Agencies

WMWD staff members meet periodically with staff members from the other agencies surrounding WMWD and correspond via email routinely. Each has the other's cell phone numbers for day-to-day activities. Each time the SSMP is substantially updated the SSMP will be available for sharing with tributary and satellite agencies.

APPENDICES
