



# **SEWER SYSTEM MANAGEMENT PLAN**

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**Tesoro Viejo Master Mutual Water Company  
(TVMWWC)**

Prepared by

**California Water Service Company  
(CalWater)**

and

**Water Works Engineers, LLC**

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**WATERWORKS**  
E N G I N E E R S

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## List of Acronyms

ADWF	Average Dry Weather Flow
APWA	American Public Works Association
ASCE	American Society of Civil Engineers
BMP	Best Management Practice
CASA	California Association of Sanitation Agencies
CCTV	Closed-Circuit Television
CIP	Capital Improvement Program
CIWQS	California Integrated Water Quality System
CMMS	Computerized Maintenance Management System
CMOM	Capacity, Management, Operations, and Maintenance
CPC	California Plumbing Code
CWEA	California Water Environment Association
FOG	Fats, Oils, and Grease
FSE	Food Service Establishments
GIS	Geographic Information System
GRD	Grease Removal Device
I/I	Infiltration and Inflow
KPI	Key Performance Indicator
LRO	Legally Responsible Official
MGD	Million Gallons per Day
MOP	Manual of Practice
MS4	Municipal Separate Storm Sewer System
NACWA	National Association of Clean Water Agencies
NASSCO	National Association of Sewer Service Companies
NGO	Non-Government Organization
NOI	Notice of Intent
NOV	Notice of Violation
O&M	Operations & Maintenance

OERP	Overflow Emergency Response Plan
OES	Office of Emergency Services, State of California
PACP	Pipeline Assessment & Certification Program
PLSD	Private Lateral Sewer Discharge
PM	Preventive Maintenance
POTW	Publicly Owned Treatment Works
QA/QC	Quality Assurance/Quality Control
R&R	Rehabilitation or Repair/Replacement
RWQCB	Regional Water Quality Control Board
SECAP	System Evaluation and Capacity Assurance Plan
SOPs	Standard Operating Procedures
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SSS	Sanitary Sewer System
SSS WDR	Statewide General WDR for Sanitary Sewer Systems
SWRCB	State Water Resources Control Board
TVMMWC	Tesoro Viejo Master Mutual Water Company
USEPA	United States Environmental Protection Agency
WDR	Waste Discharge Requirements
WWC	Wastewater Collection
WWTP	Wastewater Treatment Plant

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## List of Terms

**Collection System** – Generic term for any system of pipes or sewer lines used to convey wastewater to a treatment facility.

**Enrollee** – A public entity that owns or operates a sanitary sewer system and has submitted a complete and approved application for coverage under the SSS WDR.

**Lateral (also called Service Lateral)** – A segment of pipe that connects a home or building to a sewer main, which may be located beneath a street or easement. The responsibility for maintaining a lateral can be solely that of the Enrollee or the private property owner; or it can be shared between the two parties. Local communities dictate lateral responsibility and the basis for a shared arrangement if it applies. Entire service laterals (upper and lower) within the TVMMWC jurisdiction are owned and maintained by the property owner.

**Lower Lateral** – That portion of a lateral from the property line or easement line to the sewer main.

**Miles of Gravity Sewer** – Length of gravity sewer lines/pipes in an Enrollee’s sanitary sewer system, expressed in miles.

**Miles of Publicly-Owned Laterals** – Length of laterals in an Enrollee’s sanitary sewer system that the Enrollee is responsible for maintaining, expressed in miles. This only applies at TVMMWC facilities.

**Miles of Pressure Sewer (Miles of Force Main)** – Length of pressurized sewer lines/pipes in an Enrollee’s sanitary sewer system, expressed in miles or portions thereof.

**Miles of Private Laterals** – Length of private laterals tributary to an Enrollee’s sanitary sewer system that private property owners are responsible for maintaining, expressed in miles or portions thereof.

**Percent Reaching Surface Water** – Volume of sewage discharged from a sanitary sewer system or private lateral or collection system estimated to have reached surface water divided by the total volume of sewage discharged.

**Percent Recovered** – Volume of sewage discharged that was captured and disposed of properly, divided by the total volume of sewage discharged.

**Private Lateral** – Privately owned sewer service lateral. TVMMWC/CalWater is not responsible for this portion of the lateral.

**Private Lateral Sewage Discharge (PLSD)** – Sewage discharges caused by blockages or other problems within privately owned laterals, collection systems or other private sewer assets that are tributary to the reporting Enrollee’s sanitary sewer system. Reports of these events may be submitted by Enrollees on a voluntary basis except in San Diego Region 9 but are not the Enrollee’s responsibility unless caused by issues in the main line or because of other Enrollee activity.

**Sanitary Sewer Overflow (SSO)** – Any overflow, spill, release, discharge, or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:

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- 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 caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

**Sanitary Sewer System** – Any system of pipes, pump stations, sewer lines, or other conveyances, upstream of a WWTP head works and which is comprised of more than one mile of pipes and sewer lines, used to collect, and convey wastewater to a publicly owned treatment facility.

**SSO Category 1** – All discharges of sewage resulting from a failure in an Enrollee’s sanitary sewer system that results in a discharge to a drainage channel and/or surface water.

**SSO Category 2** – All discharges of sewage resulting from a failure in an Enrollee’s sanitary sewer system of a volume equal to or greater than 1,000 gallons that did not reach surface water.

**SSO Category 3** – All discharges of sewage resulting from a failure in an Enrollee’s sanitary sewer system of a volume less than 1,000 gallons that did not reach surface water.

**SSO Database** – Online reporting system developed, hosted, and maintained by the SWRCB for compliance with the Monitoring and Reporting Program contained in SSS WDR.

**Storm Drain** – For the purposes of complying with the SSS WDR, any pipe that is part of a Municipal Separate Storm Sewer System used for collecting or conveying storm water.

**Total # of SSOs per 100 miles of Sewer per Year** – Broad metric used to compare the relative performance of Enrollees and their sanitary sewer systems. This metric expresses the number of SSOs for which the reporting Enrollee is responsible, for every 100 miles of pipe or sewer lines in an Enrollee’s sanitary sewer system. Due to the large variation in facility specific characteristics, this metric should only be viewed as a rough comparison of the operation and maintenance performance of Enrollees and their sanitary sewer systems. This metric is calculated as described below:

$$\text{Total \# of SSOs per year / 100 miles of pipe} = \frac{(\text{Total \# of SSOs} \times 100)}{(\text{Miles of Pressure Sewer} + \text{Miles of Gravity Sewer})}$$

**Total Volume of SSOs Reaching Surface Water per 100 miles of Sewer** – Broad metric used to compare the relative performance of Enrollees and their sanitary sewer systems. This metric expresses the volume of SSOs, for which the reporting Enrollee is responsible, that reached surface water for every 100 miles of pipe or sewer lines in an Enrollee’s sanitary sewer system. Because sewage discharges that reach surface water pose a greater threat to public health and the environment, this metric reflects some accounting of the threat posed by SSOs. Due to the large variation in facility specific characteristics, this metric should only be viewed as a rough comparison of the operation and maintenance performance of Enrollees and their sanitary sewer systems. This metric is calculated as described below:

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Total Annual Volume of SSOs Reaching Surface Waters / 100 miles of pipe =

$$\frac{(\text{Total volume of SSOs reaching Surface Waters} \times 100)}{(\text{Miles of Pressure Sewer} + \text{Miles of Gravity Sewer})}$$

**Total Volume Reaching Surface Water** – Amount of sewage discharged from a sanitary sewer system, private lateral, or collection system estimated to have reached surface water.

**Total Volume Recovered** – Amount of sewage discharged that was captured and disposed of properly.

**Upper Lateral** – Portion of a lateral usually from the building foundation to the property line or easement line where it connects to the Lower Lateral.

**WDID** – Waste Discharge Identification Number assigned as a unique identifier by the SWRCB to each Enrollee for regulatory recordkeeping and data management purposes.

## Introduction

On May 2, 2006, the California SWRCB adopted Statewide General Waste Discharge Requirements (WDR) Order No. 2006-003, for wastewater collection systems. The WDR requires all enrollees to develop a Sanitary Sewer Management Plan (SSMP) and make it available to the public, to the SWRCB, and the RWQCB. The SSMP must be audited at least every two (2) years and updated every five (5) years from the original adoption date by the Enrollee's governing board. The original SSMP must have been approved by the governing board of the enrollee at a public meeting and adopted. All federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems with piping greater than one mile in length are required to comply with the WDRs.

The Order includes eleven (11) mandatory elements that must be addressed in the SSMP. The SSMP elements describe the activities TVMMWC/CalWater will employ to manage, operate, and maintain the wastewater collection system effectively. **Table 1** briefly summarizes the WDR elements. The exact text of each WDR element is stated at the beginning of each subsequent SSMP element.

**Table 1 – SSS WDR D.13 Required Elements**

SSMP Element	Requirements
1. Goals	Develop goals for operation and maintenance of SSS
2. Organization	a) Identify the Legally Responsible Official (LRO) b) SSMP responsibility and staff organization chart c) Chain of communication for reporting SSOs
3. Legal Authority	a) Prevent illicit discharges into SSS b) Require proper design and construction of SSS components c) Ensure access to laterals owned/maintained by CCTV d) Limit the discharge of FOG or other debris that may cause blockages e) Enforce violations of sewer ordinance
4. Operations and Maintenance Program	a) Maintain up-to-date collection system maps b) Schedule, conduct, and document preventive O&M activities c) Condition assessment, rehabilitation, and replacement (R&R) plan d) Training for SSS O&M staff e) Maintain adequate equipment and critical replacement part inventory
5. Design and Performance Provisions	a) Maintain SSS design and construction specifications b) Procedures and standards for inspecting and testing new construction and R&R projects
6. Overflow Emergency Response Plan (OERP)	a) Proper notification procedures for SSOs b) Program for appropriate SSO response c) Procedure for prompt notification to regulatory agencies d) Appropriate staff and contractor training for OERP execution e) Procedures to address emergency operations during SSOs f) Procedures to ensure containment of SSOs to prevent discharge to surface waters including water quality monitoring when required
7. Fats, Oils, and Grease (FOG) Control Program	a) Public education plan to promote proper disposal of FOG b) FOG disposal plan c) Legal authority to prohibit discharge of FOG d) Requirements to install and maintain grease removal devices

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	<ul style="list-style-type: none"> <li>e) Authority to inspect and enforce FOG ordinance</li> <li>f) FOG characterization assessment and hot spot cleaning schedule</li> <li>g) FOG source control program measures</li> </ul>
8. System Evaluation and Capacity Assurance Plan ("SECAP")	<ul style="list-style-type: none"> <li>a) Develop SSS hydraulic model and identify capacity deficiencies</li> <li>b) Establish SSS hydraulic design criteria</li> <li>c) Establish short- and long-term CIP for capacity enhancement measures</li> <li>d) Develop schedule of completion dates for projects</li> </ul>
9. Monitoring, Measurement and Program Modifications	<ul style="list-style-type: none"> <li>a) Maintain records and information for SSMP activities</li> <li>b) Measure effectiveness of SSMP elements and programs</li> <li>c) Assess success of the preventative maintenance program</li> <li>d) Update SSMP program elements based on performance evaluations</li> <li>e) Identify and illustrate SSO trends</li> </ul>
10. SSMP Program Audits	Conduct periodic SSMP audits
11. Communications Program	Communicate on a regular basis with the public regarding SSMP development, implementation, and performance

## System Overview

Tesoro Viejo (TV) is a 1,600-acre developing community north of City of Fresno and east of City of Madera in Madera County. The community is planned to be developed in approximately eleven (11) phases by 2031, including up to 5,190 residential dwelling units, with 3 million square feet of commercial and light industrial development.

The Tesoro Viejo Master Mutual Water Company (TVMMWC) serves the water needs of the community by building and owning the utilities. California Water Company (CalWater) is responsible for operation and maintenance of the Tesoro Viejo's water, wastewater, and recycled water systems on behalf of the TVMMWC. CalWater also oversees installation of Capital Improvement Plans (CIP) for expansion of the utility systems at Tesoro Viejo.

TVMMWC sewer system flows by gravity to the Tesoro Viejo Wastewater Treatment Plant (TVWWTP), which is designed to be expanded in six phases, with an ultimate Average Daily Flow (ADF) of 2.6 Million Gallons per Day (MGD). CalWater operates and maintains a total of 8.0 miles of collection system gravity main piping, as well as the TVWWTP. The table below summarizes the distribution of gravity main sizes throughout the collection system as of 2020.

**Table 2 – Collection System Gravity Main Size Distribution**

Pipe Size (inch)	Total Length (LF)
< 6	0
6	561
8	33852
10	1965
12	1100
14	0
15	5
16	0
18	300
21	625
24	3610
30	420
33	0
36	0
Other	0
(Lineal Feet)	42438
(Miles)	8.0

An overview map of the TV's Sewer Collection System master plan can be found in **Appendix 4.1 – Sewer Maps**.

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## 1.0. Goals

D.13.(i) Goals: 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.

TVMMWC/CalWater recognizes that the sewer collection system is a key component of the sewer utility and is committed to providing responsible and reliable service to Tesoro Viejo through a comprehensive operation and maintenance program. CalWater has therefore implemented a sewer collection system maintenance program, which is intended to accomplish the following:

- Properly manage, operate, and maintain the wastewater collection system to minimize SSOs.
- Monitor and assess the hydraulic capacity of the wastewater collection system and oversees the Capital Improvement Programs to ensure adequate capacity is provided.
- Prevent and minimize the frequency and the volume of SSOs.
- Identify sources of I/I and effectively minimize them.
- Identify non-compliant dischargers to the sewer system and take appropriate corrective action.
- Educate the public to avoid misuse of the wastewater system.
- Identify areas of the collection system that need increased maintenance, repair, or replacement through a comprehensive CCTV inspection program.
- Identify defective gravity sewer lines located within one hundred fifty (150) feet of surface waters, including storm drainage channels and creeks, and give them higher priority for repair and/or replacement.

## 2.0. Organization

D.13.(ii) Organization: The SSMP must identify:

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

(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 (Cal OES)).

### 2.1. Legally Responsible Official (LRO)

The Legally Responsible Officials (LROs) for the Tesoro Viejo collection system are authorized to electronically sign and certify SSO reports in CIWQS. TVMMWC's LROs are:

- Cal Water Manager of Wastewater Systems
- TVMMWC Representative

Following containment and documentation of an SSO event by the on-call sewer maintenance contractor (Responder), the event will be documented, and the pertinent information will be forwarded on to the Direct Operator in Charge. After communication and review of the documentation between the Responder and the Direct Operator in Charge, information will be reported to Cal Water Manager of Wastewater Systems who will enter data into CIWQS. The Cal Water Manager of Wastewater Systems may contact the on-call sewer Maintenance Contractor (Responder) for more information.

### 2.2. Organization Chart

**Appendix 2.1 – SSMP Element Responsible Personnel** defines the responsible party for each SSMP element, including names and telephone numbers. **Figure 1** shows the SSMP responsibility and organization chart of TVMMWC and CalWater.

The Maintenance Contractor or CalWater (positions highlighted in green) are responsible for operation and maintenance of the sewer collection system and treatment. Other responsibilities include maintaining and updating of TVMMWC mapping system and asset management in collaboration with the District Engineer authorized representative.

The District Engineer or Morton & Pitalo (M&P), (positions highlighted in blue) consists of engineers, inspectors, and administrative specialists. Responsibilities include design and develop of the system, implementing Capital Improvement Program (CIP) and interacting on behalf of TVMMWC with outside

agencies and reviewing land development projects. Other responsibilities include maintaining and updating TVMMWC's standard plans and specifications; inspections; issuance and administration of permits, licenses, and agreements; surveying; and property development and public right-of-way issues.

### **SSMP Positions and Responsibilities**

#### ***Manager of Wastewater Systems***

- Responsible for planning and resource allocation for the sewer collection system cleaning and inspection programs. Responsible for overseeing execution of the TVMMWC's Overflow Emergency Response Plan and conducting the training program for all operators and crews.
- Review, submit, sign, and certify SSO Reports in CIWQS
- Overall responsibility for facility operation and for planning and execution of the sewer collection system cleaning and CCTV inspection programs.
- This position also acts as the Chief Plant Operator as a SWRCB Certified Wastewater Treatment Operator, Grade III or higher.

#### ***Direct Operator in Charge (DOIC)***

- SWRCB Certified Wastewater Treatment Operator, Grade II or higher.
- Responsible for day-to-day facility operation, reporting to the Manager of Wastewater Systems.
- Assists in the planning and execution of the sewer collection system cleaning and CCTV inspection programs.
- Responds to afterhours call outs (alternating with the Plant Operator), respond to SSO event, and coordinate with Sewer Maintenance Contractor (SMC) to address SSO events, review and provide SSO reports to the Manager of Wastewater Systems for CIWQS entry.

#### ***Plant Operators***

- Plant Operators will be SWRCB Certified Wastewater Treatment Operators, Grade I or higher. Responds to afterhours call outs (alternating with DOIC), respond to SSO event, and coordinate with Sewer Maintenance Contractor (SMC) to address SSO events, review and provide SSO reports to the Manager of Wastewater Systems for CIWQS entry.

#### ***On-call Maintenance Contractor (Responder)***

- Coordinate with the DOIC or Plant Operator to responds to SSO events and resolves problem causing the SSO. Performs cleaning, containment, documentation and reporting of the SSO to DOIC.
- Under direction of the Manager of Wastewater Systems will carry out collection system cleaning and CCTV inspection programs.

#### ***Engineering Manger***

- Responsibilities include implementing Capital Improvement Program (CIP), coordination with the District Engineer, and supervises engineering systems related to maintenance of the collection system. Also ensures that sewer collection system defects identified through the CCTV inspection program are adequately addressed in the CIPs.

#### ***Engineering Asset Management***

- Supports work directed by the Engineering Manager related to performing asset management and developing CIPs.
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**Engineering Mapping/GIS**

- Supports work directed by Engineering Manager related to the collection system mapping and GIS updates.

**Principal Engineer**

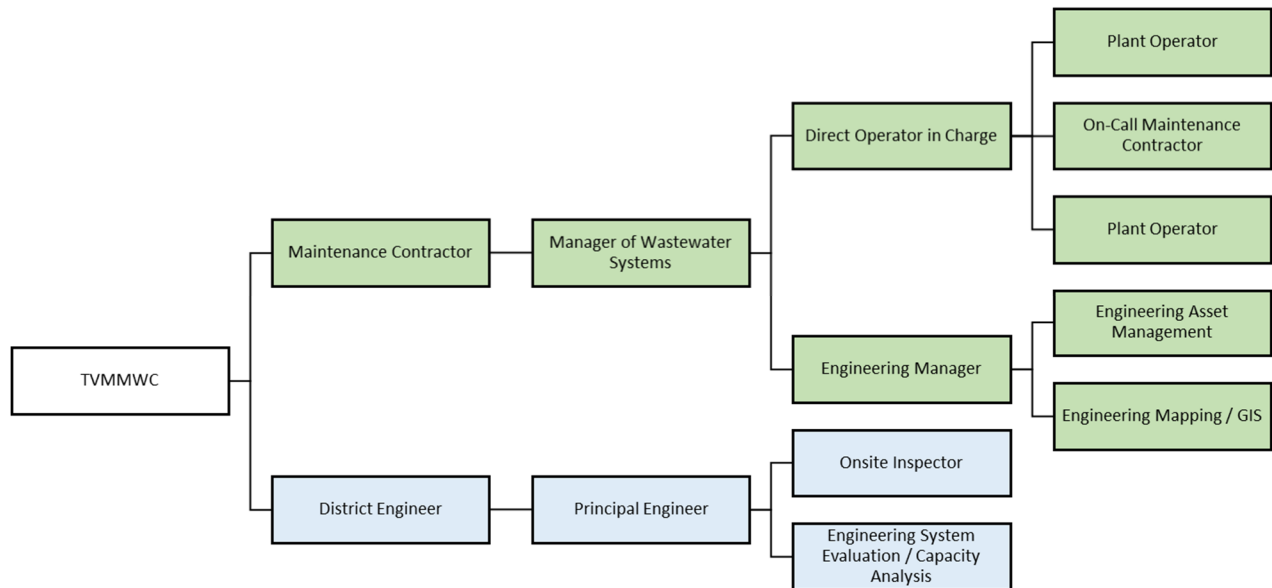
- Supervises development projects and systems; reviews and approves plans for new construction and ensures adherence to the TVMMWC’s design and construction standards.

**Onsite Inspectors**

- Conduct review and inspection of new construction to ensure compliance with the TVMMWC’s design and construction standards and approved plans.

**Civil Engineers**

- Support work directed by the Principal Engineer, including engineering system evaluation and capacity analysis.



**Figure 1 – Organization Chart**

**2.3. Chain of Communication for Reporting SSOs**

The On-Call Maintenance Contractor (Responder) performs SSO response and document each incident as indicated in the OERP (**Appendix 6.1 – Spill Emergency Response Plan (SERP)**). Upon completion of the chain of custody, the report is delivered to the Direct Operator in Charge to be reviewed and forwarded to the Manager of Wastewater. The Manager of Wastewater Operation or designee reviews the SSO report/checklist and contacts the Direct Operator in Charge for additional information if necessary. Any issue, such as SSO backup into a home or a business, that requires support and follow up will be directed to CalWater. The Manager of Wastewater Systems completes the appropriate internal documentation, enters SSO data into CIWQS, and will complete the chain of custody.



## Related Appendices

**Appendix 2.1 – SSMP Element Responsible Personnel**

**Appendix 6.1 – Spill Emergency Response Plan (SERP)**

### 3.0. Legal Authority

D.13.(iii) Legal Authority: 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 infiltration and inflow (I/I), storm water, 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.

TVMMWC developed and adopted rules and regulations, which include authority to control use of the sewer collection system and authorizes enforcement actions for all rules and regulations, as well as any applicable state laws and regulations, and contains provisions for escalating levels of enforcement actions. These rules and regulations serve as TWMMWC's "sewer ordinances".

A list of all applicable regulations and standards related to TVMMWC's SSMP is listed in **Table 3**.

Rules and Regulations – RR

Design Standards – DR

Standard Specifications – SS

Standard Plans – SP

**Table 3 – Municipal Sewer System Codes**

Legal Authority	Section	Number	Section Title	Description
Prevent illicit discharges into the wastewater collection system (D.13.iii.a)	RR-2	020	Prohibited substances	Prohibits the discharge of any substance that causes TVMMWC to violate any State or Federal regulation for sewage discharge, any substance that cannot be treated in the sewage system, any substance which would harm or adversely affect the sewer system.
	RR-2	030	Abatement of nonconforming wastewater discharge	Prohibits waste discharges from adversely affecting the sewer system, the operation of the treatment plants, the quality of effluent from the treatment plant or the quality of the receiving water.

Legal Authority	Section	Number	Section Title	Description
	RR-2	080	Separation of storm drainage and sewage	Specifically requires separation of sewer and storm drain discharges and prohibits discharge of storm drainage to the sewer system, and vice-versa.
	RR-2	380	Industrial wastewater discharge permits	Requires permits for all non-domestic sewage discharges to the sewer system.
	RR-2	440	Prohibited wastes	Comprehensive list of prohibited discharges, including numeric limits on various toxic substances.
	RR-2	510	Damage caused by prohibited wastewater discharge	Holds any dischargers liable to TVMMWC for all damage caused by illegal discharges.
Require proper design and construction of new and rehabilitated sewers and connections (D.13.iii.b)	RR-2 SS-1	170 1-24	Connection to sewer mains "Lateral Permits"	Requires a permit for connecting to the sewer main.
	RR-2	180	Public sewer construction permits	Requires a permit for using, construction, extending, or connecting to the public sewer.
	RR-2	190	Plans, profiles, and specifications required	Requires compliant plans, profiles, and specifications for a permit application.
	RR-2	180	Public sewer construction Permits	Requires developers to obtain a written permit, pay all fees and comply with all TVMMWC Standards for sewer infrastructure.
	RR-2	250	Design and construction standards	Requires minimum standards for the design and construction of sewers and in accordance with the design standards of TVMMWC, as adopted by resolution of TVMMWC Board.
	RR-2	260	Compliance with local regulations	Requires permits and compliance with all State, County, or TVMMWC regulations pertaining to any construction within a street.
	RR-2	310	As-built drawings	Requires "As-built" drawings to be filed showing the actual location of all mains, structures, "Teens" and laterals before final acceptance of public sewers.
	RR-2	320	Completion of sewer required	Requires testing of new public sewer lines for compliance with all TVMMWC Standards before any acceptance by TVMMWC.

Legal Authority	Section	Number	Section Title	Description
	RR-2	330	All work to be inspected	Requires inspection of all lateral and main sewer construction work to ensure compliance.
	DS-9/SP	Section 9/SS-4	Sanitary Sewer Design/Sewer Service	Establishes design requirements for private sewer laterals.
Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Mutual Water Company (D.13.iii.c)	RR-2	270	Easements or rights-of-way	Requires easements or right-of-way for the extension of the public sewers sufficient to allow the laying, maintenance, and replacement of the sewer, with widths to be determined by CalWater/TVMMWC Engineer.
	RR-2 SP	465 SS-4 and SS-5	Responsibilities for private sewer mains and private sewer laterals	Requires accessible cleanouts for maintenance, repair, or replacement. The owner shall be responsible for all aspects of maintenance, repair, or replacement of the private sewer lateral to its connection to the public main.
	RR-2	500	Right of entry	Grants right of entry for TVMMWC/CalWater's employee to enter all properties served by TVMMWC for inspection, sampling, and testing.
Limit the discharge of fats, oils, and grease and other debris that may cause blockages (D.13.iii.d)	DS-9 RR-2 SP	9-10.G 450 SS-9	Grease Interceptor	GRD required for any business with potential FOG per CPC.
	DS-9 RR-2	9-10.H/I 450	Oil/Sand Interceptor	Requires pretreatment oil/sand interceptor for business with potential oil and sand waste per CPC.
Enforce any violation of its sewer rules and regulations (D.13.iii.e)	RR-2	540	Enforcement of Rules and Regulations	Authorizes enforcement actions for all TVMMWC rules and regulations.
	RR-2	030	Abatement of nonconforming wastewater discharge	Authorizes TVMMWC to disconnect a user if necessary.
	RR-2	400	Suspension of permit for industrial wastewater discharge	Authorize TVMMWC engineer to suspend an industrial waste discharge permit, for a period not to exceed 45 days when necessary.
	RR-2	410	Revocation of permit for industrial wastewater discharge	Authorize TVMMWC Board to revoke industrial wastewater discharge upon violation of the regulations.

Legal Authority	Section	Number	Section Title	Description
	RR-2	420	Notice	Describes the procedure to notify any person found to be in violation of the regulations.
Enforce any violation of its sewer rules and regulations (D.13.iii.e)	RR-2	040	General	Holds any applicant responsible for any damage caused to the public sewer upon connection of a new service.
	RR-2	465	Responsibilities for private sewer mains and private sewer laterals	Holds property owners responsible for compliance of a private sewer lateral.
	RR-2	490	Accidental discharges	Requires the discharger to furnish TVMMWC engineer within 15 days from the day of an accidental discharge a detailed written statement describing the causes of the accidental discharge and the measures being taken to prevent future occurrence.
	RR-2	510	Damage caused by prohibited wastewater discharge	Holds any industrial discharger liable for discharging prohibited wastewater that causes damage to TV facilities.

These rules and regulations will be available on TVMMWC website upon adoption.

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## 4.0. Operation and Maintenance Program

D.13.(iv) Operation and Maintenance Program. The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee's system:

(a) Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable storm water conveyance facilities;

(b) Describe routine preventive operation and maintenance activities by staff and contractors; including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;

(c) Develop rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and CCTV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short and long term plans plus a schedule for developing the funds needed for the capital improvement plan;

(d) Provide training on a regular basis for staff in sanitary sewer system operations, maintenance, and require contractors to be appropriately trained; and

(e) Provide equipment and replacement part inventories, including identification of critical replacement parts.

CalWater is responsible for execution of the collection system operation and maintenance programs for the gravity sewer system, as well as the TVWWTP. A list of the sewer collection system O&M programs implemented by CalWater is summarized in **Figure 2**.

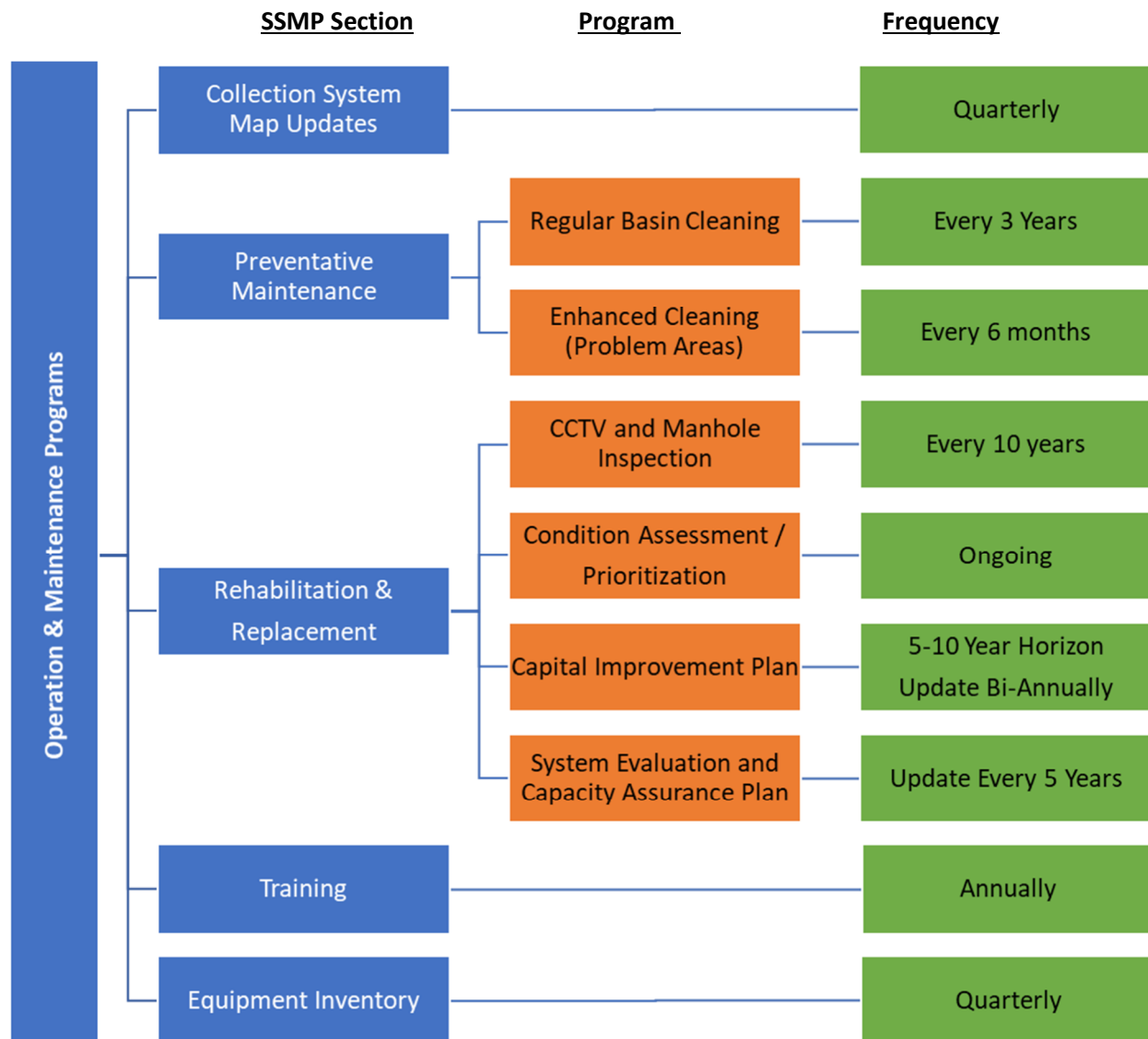


Figure 2 – O&M Program Overview

**Map Updates:** The District Engineer (M&P) provides CalWater GIS mappings for the existing and planned infrastructure. CalWater coordinates with M&P every 3 months for mapping updates, these records are tracked in a log sheet.

**Preventative Maintenance:** PM programs are performed using the On-Call Contractor. CalWater is planning to perform overall pressure cleaning of the system every 3 years (Regular Cleaning), with problem areas as needed to prevent stoppages (Enhanced Cleaning), which typically happens every 6 months.

**Rehabilitation and Replacement**

- **CCTV and Manhole inspection:** the CCTV and manhole inspections are performed on a 10-year cycle basis.
- **Condition Assessment:** Condition assessment is being developed as new assets are put into service.
- **Capital Improvement Plan:** The District Engineer develops Capital Improvement Plans every 5 to 10 years. Since TVMMWC is a new system, there is no current CIP being developed.
- **System Evaluation and Capacity Assurance Plan:** The collection system is sized based on the 2015 masterplan. The District Engineer will perform SECAP analysis and updates every 5 years when entire system is developed and is in operation.
- **Training:** Annual and additional training programs are held to ensure all staff and contractors are trained and up to date with the latest requirements of the SSSMP.
- **Equipment Inventory:** CalWater maintains an inventory of its O&M equipment. In addition, the On-Call Contractor provides CalWater its O&M inventory, which is updated on a quarterly basis.

#### 4.1. Collection System Mapping

The District Engineer (M&P) maintains all system maps in a CAD format. These maps include planned and existing assets and are continuously updated as TV's collection system develops. Currently these CAD files are sent to CalWater and are used for maintenance of the system. These maps are available electronically and on hard copy map books to be used in field by maintenance crew. An overview of the TV's sewer collection system master plan as of August 2020 can be found in **Appendix 4.1**.

CalWater is in the process of converting the CAD files into a GIS mapping system with designated asset numbers to all assets, which will be used for operation and maintenance of the system. The GIS mapping system is planned to be in place by June 2021 and get updated annually. Map updates are logged using an excel spreadsheet. Upon completion of the GIS mapping, electronic and hard copy maps of the sewer collection system showing all gravity, manholes, and cleanouts will be utilized.

In addition, to assist field personnel in the event of a sewer overflow, the mapping system will include storm drain and waterway locations. CalWater is planning to include the information listed in **Table 4** into the GIS system.

**Table 4 – The Sewer System Map Information**

Asset Type	Map Information
Manholes, Cleanouts	<ul style="list-style-type: none"> <li>• Feature ID</li> <li>• Rim elevation</li> <li>• Location</li> <li>• Year installed</li> <li>• Notes</li> </ul>
Gravity Mains (lines)	<ul style="list-style-type: none"> <li>• Feature ID</li> <li>• Diameter</li> <li>• Year lined (if applicable)</li> <li>• Upstream and downstream manhole ID</li> <li>• Upstream and downstream invert elevation</li> </ul>



Asset Type	Map Information
	<ul style="list-style-type: none"> <li>• Pipe type</li> <li>• Year installed</li> <li>• Length</li> <li>• Reference drawing set</li> <li>• Staff comments</li> <li>• Last cleaning date</li> <li>• Last CCTV date</li> </ul>

The sewer system mapping will be available to all personnel in a variety of formats. The intent is that the GIS can be accessed from any CalWater or TVMMWC computer workstation, or by ESRI Explorer application on their field devices. Field staff are also provided with hard copy indexed map books.

Updates to the sewer collection system mapping come from one of two sources:

1. New asset construction or rehabilitation/replacement of existing assets:
  - (a) The District Engineer maintains all existing and future records, these drawings are forwarded to Engineering division of CalWater when come online and typically once a year.
2. Updates/corrections to existing mapping from field staff:
  - (a) Field staff record markups on hard copy map books carried in their vehicles whenever they see something in the field that does not match what is shown on the system maps. Field staff take photos of the markups and transmit to the Mapping Engineer of CalWater for updates of the GIS mapping.

To keep the system maps up to date, the CalWater Mapping Engineer maintains a spreadsheet log of all map updates received from either M&P or field staff. On an annual basis, CalWater's Mapping Engineer coordinates with the M&P engineering division to review most current changes and make necessary changes to GIS database.

## 4.2. Preventive Operations and Maintenance Programs

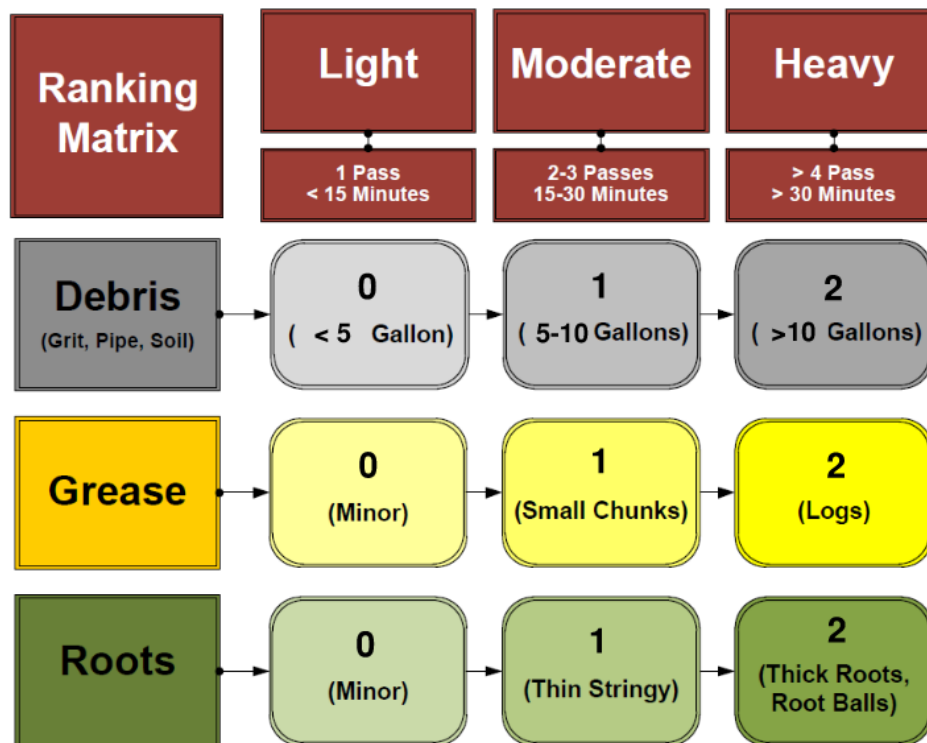
### **Regular Preventative Basin Cleaning Program**

CalWater is contracting with an On-Call Collection System Maintenance Contractor (On-Call Contractor) to perform basin cleaning of the collection system. CalWater will rely primarily on jetting for line cleaning.

- **Jetting:** This is the most commonly utilized form of cleaning. Uses multiple jets of extremely high-pressure water directed against pipe walls. This technique is highly effective at removing debris and grease build-up, clearing blockages, and cutting roots within small diameter pipes.

The regular preventative basin cleaning program, planned by the Manager of Wastewater Systems and executed by the On-Call Contractor, is an ongoing program that is designed to systematically clean all gravity sewer lines every 3 years. CalWater maintains a spreadsheet lists of all gravity sewer pipes that are located within the sewer system.

When performing High Pressure cleaning the On-Call Contractor will attempt to capture as much debris as possible and prevent the material from simply being pushed downstream. The On-Call Contractor is required to observe both the number of passes and difficulty of cleaning the line, in combination with the type and amount of debris removed from the downstream manhole after the cleaning is completed to determine the a “Condition” rating for that line. A condition rating of 0-2 is assigned per **Figure 3** below.



**Figure 3 – Sewer Debris Condition Rating Matrix**

- Condition 0: No follow-up action required.
- Condition 1: Results/observations noted to assist with future analysis.
- Condition 2: Triggers automatic CCTV inspection of the line and further analysis of cause for excessive debris accumulation (identify bellies, protruding taps, FOG, roots, etc.)

The On-Call Contractor reports results of all cleaning work to the Manager of Wastewater Systems or designee based on the basin cleaning tracking spreadsheets, including the footage cleaned, date cleaned, the debris condition ratings, and any comments. At that time, the Manager of Wastewater Systems or designee will schedule follow-up CCTV inspection of any lines with a reported Condition Rating of 2, and subsequent to the CCTV inspection update the 180-day enhanced cleaning schedule as required based on the results.

TVMMWC and CalWater are potentially considering implementation of a Computerized Maintenance Management System (CMMS) in the future when the system is completely developed and running.

CMMS will be used to generate work orders and document work by sewer asset. The CMMS will eventually replace use of basin cleaning documentation spreadsheets which will allow for automatic report generation on work completed and visualization via GIS which will make the regular SSMP audit process more streamlined.

See **Appendix 4.2** for an example of a current Basin Cleaning schedule spreadsheet.

### **Enhanced Cleaning Program**

The enhanced cleaning program, performed by the On-Call Contractor, involves cleaning of mainlines or laterals (lower lateral) at a higher frequency as necessary to prevent a sewer line stoppage. This program targets individual assets, unlike the regular basin cleaning program that includes all assets within a basin. Pipeline assets are added to the enhanced cleaning program based on one of the following criteria:

1. Asset experiences an SSO due to blockage and a post SSO investigation identifies necessary corrective action
2. Asset is a known problem area for FOG or debris accumulation based on O&M history
3. CCTV inspection shows defects that are known to cause heavy debris accumulation indicating high risk of future blockage/SSO

When an asset is cleaned, the debris load is noted similar to the regular preventative basin cleaning program. An asset may be removed from the enhanced cleaning program list at the discretion of the Manager of Wastewater Systems if it is cleaned 4 or more consecutive times and receives a “0” debris rating, and if the source/cause of the previously noted heavy debris load is known to have been eliminated.

Like the regular preventative basin cleaning program, this program is tracked using a spreadsheet, which is continuously assessed and revised based on the field reports. There are separate spreadsheets to track gravity mains and laterals. Assets that remain in the enhanced cleaning program for long periods of time will typically be targeted for rehabilitation or replacement if the reason for debris accumulation is related to the structural integrity of the line such as bellies, offset joints, protruding taps, and root intrusion.

See **Appendix 4.2** for an example of the Enhanced Cleaning schedule.

## **4.3. Rehabilitation and Replacement (R&R) Program**

### **CCTV Inspection Program**

TV's collection system CCTV inspection program is planned to be performed by the On-Call Contractor. The CCTV condition assessment is conducted using the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment Certification Program (PACP) coding standard. The NASSCO PACP method provides quantitative standardized inspection results that allow for straight-forward prioritization of system deficiencies.

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The On-Call Contractor will utilize Pipe Inspection Management Software on the CCTV truck computers to create CCTV inspection records for each pipe utilizing NASSCO PACP standardized defect coding. The results of all CCTV inspections are entered into a PACP standard database, and the CCTV video inspection records are available using applicable software.

The TV's collection system is new, and all assets are televised after construction. CalWater is planning to develop a 5-year cycle CCTV program, to be implemented five years after the adoption of this SSMP.

Sewer manholes are inspected visually during sewer cleaning and/or CCTV, and any significant leaks or defects are documented and transmitted to the Manager of Wastewater Systems. Manholes with significant defects may be scheduled for near-term repairs by the On-Call Contractor or be placed into the R&R program.

### **Condition Assessment Methodology**

CCTV inspections conducted using the NASSCO PACP coding interface result in the creation of a standardized report that documents the locations within the pipe at which observations were made. A still picture of each observation is taken, and a live video for the entire inspection is also provided. Every observation made using a PACP code is classified as either a structural defect (i.e., cracks, offsets, corrosion, etc.), maintenance defect (i.e., debris, grease, roots, etc.), or a miscellaneous observation (i.e., tap, manhole, end of survey, etc.). Appendix D of the PACP Manual includes a condition grading system that rates the severity of each defined structural and maintenance defect on a scale from 1-5. Standard NASSCO PACP reports can be configured to automatically record the associated "maintenance grade" and "structural grade" for each observation made during an inspection. As a general guideline, defect severity levels 1-5 may cause failure of the asset on a timeline as described below:

- Severity 5 – asset has failed or will likely fail within next 5 years (asset requires immediate attention, very poor condition)
- Severity 4 – asset will probably fail in 5 to 10 years (asset is in poor condition)
- Severity 3 – asset may fail in 10 to 20 years (asset is in fair condition)
- Severity 2 – asset unlikely to fail for at least 20 years (asset is in good condition)
- Severity 1 – asset failure unlikely in the foreseeable future (asset is in excellent condition)

NASSCO has developed an overall asset condition rating system, known as the PACP "Quick Rating". The Quick Rating is a four-digit code, with the following characteristics:

1. First digit is the highest severity observation noted (1-5)
2. Second digit is the number of observations of the highest severity
  - If there are 10-14 observations of this severity, the letter A is used
  - If there are 15-19 observations of this severity, the letter B is used
  - If there are 20-24 observations of this severity, the letter C is used
3. Third digit is the second highest severity observation noted
4. Fourth digit is the number of observations of the second highest severity
  - If there are 10-14 observations of this severity, the letter A is used

- If there are 15-19 observations of this severity, the letter B is used
- If there are 20-24 observations of this severity, the letter C is used

The Quick Rating provides a quantitative assessment of asset condition. A quick rating can be generated for either structural observations only, maintenance observations only, or for both types of observations combined. The quick rating system prioritizes assets first by the highest severity observation (the first digit), and second by the quantity of defects. It only takes one severity 5 defect, which may indicate that the asset has already failed or is near to failing, to cause an SSO. A single severity 5 defect is considered more serious than several severity 4 defects.

### **Rehabilitation and Replacement (R&R) Prioritization**

TVMMWC and CalWater are planning to repair, rehabilitate, or replace all Severity 5 Structural defects as soon as possible, but no longer than 5 years from the date of discovery via CCTV and no longer than 2 years if the defect is within 150' of a waterway. Severity 5 Maintenance defects that require a physical repair to alleviate the defect will also be addressed in the same manner. Severity 5 Maintenance defects that do not require physical repair but can be managed through targeted enhanced O&M techniques will be added to the enhanced cleaning program.

TVMMWC's policy regarding Severity 4 Structural defects is to also include the necessary repairs in the overall Capital Improvement Plan. The repair of Severity 4 Structural defects is prioritized and scheduled based on a Risk of Failure analysis as further described below.

*Risk of Failure = Probability of Failure x Consequences of Failure*

*Probability of Failure = PACP Structural Quick Rating/1000 + PACP Maintenance Quick Rating/1000 + X*

Where X = 2 for pipes on the enhanced cleaning schedule due to roots, and X = 1 for other pipes on the enhanced cleaning schedule.

*Criticality of Failure = Capacity Rating + Location Rating*

The Capacity Rating is based on the pipe diameter and is related to the potential spill volume according to **Table 7** below.

**Table 5 – Capacity Ratings**

Pipe Diameter	Capacity Rating
8" or less	1
10"-12"	2
14"-18"	3
Greater than 18"	4

All assets are given Location Ratings on a 1-6 scale, with 1 being the lowest rating and 6 being the highest rating. The following routine is executed to assign ratings to each asset. Assignments are

planned to be made in GIS by making buffering selections and overwriting ratings within the attribute tables throughout the routine to ensure the highest applicable rating is assigned to each asset.

1. Assign an initial rating of 1 to all assets.
2. Assign a rating of 2 to all assets further than 250' from a roadway.
3. Assign a rating of 4 to all assets within 500' of a waterway of the US.
4. Assign a rating of 3 to all assets further than 500' from a roadway, or are otherwise considered extremely difficult to access by TVMMWC Staff.
5. Assign a rating of 5 to all assets with 250' of a waterway of the U.S.
6. Assign a rating of 6 to all assets with 150' of a waterway of the U.S.

The risk of failure score is the product of the overall criticality of failure and probability of failure scores. The highest possible risk of failure score is approximately 100. An example of a risk of failure calculation is provided below:

Given

- PACP structural quick rating = 4833
- PACP maintenance quick rating = 4131
- Asset is on the enhanced cleaning schedule for grit accumulation
- Asset is within 150' of a waterway
- Pipe Diameter = 12"

*Probability of Failure* =  $4833/1000 + 4131/1000 + 1 = 9.96$

*Consequence of Failure* =  $2 + 6 = 8$

*Risk of Failure* =  $9.96 \times 8 = 79.7$

**Table 8** below provides guidance for initial capital improvement project prioritization based on results from the asset risk analysis:

**Table 6 – CIP Prioritization Guidance for Severity 4 Defects**

Risk of Failure Score	Recommended Action
0-50	Described in Capital Improvement Plan but may not yet be scheduled
50-75	Consider for rehabilitation or replacement within next 10+ years
75-90	Consider for rehabilitation or replacement within next 5-10 years
90-100	Consider for rehabilitation or replacement within next 5 years

CalWater and TVMMWC retain sole discretion regarding the prioritization and scheduling of repair for Severity 4 defects. The recommendations shown in **Table 6** are to be considered as guidelines only. All Severity 4 defects shall be at minimum listed within the CIP including their Risk of Failure score, however the repair of these defects is likely to be driven by coordination with other maintenance projects such as

water line repair and street paving, which would require further coordination. Prioritizing and scheduling the repair of Severity 4 defects will also take into consideration budgeting constraints and risk analysis, compared to Severity 5 defects which trigger an automatic requirement to repair or replace the asset within 5 years. A general flowchart depicting collection system R&R programs in conjunction with the preventative O&M programs, is shown in **Figure 4**.

TVMMWC/CalWater Staff initially review condition assessment data when new data is available from CCTV field work. Licensed Staff or contracted consultants will review CCTV inspection videos and reports for assets with Severity 4 and 5 defects and provide preliminary R/R method recommendation reports including cost estimates. The Risk of Failure analysis is then conducted to aid in prioritizing and scheduling future capital improvement projects on a 10-year horizon.

### **Short-Term Actions**

CalWater has the ability to trigger emergency manhole and pipeline repairs in the case of SSOs caused by asset failures, or severe defects identified during CCTV inspections that pose in imminent risk of causing an SSO which cannot wait for engineering design and public bidding to contractors. These repairs would be done by the On-Call Contractor.

### **Capital Improvement Program Development**

TVMMWC will group sanitary sewer collection system asset R/R activities into capital improvement project bid packages that are competitively bid for construction. Projects may be bundled by risk, for example the highest risk assets may be bundled into the first year of the capital improvement plan (CIP). Projects may also be bundled by geographic proximity, construction methodology, or ease of coordination with other TV public works projects such as water and streets projects. TVMMWC may also develop an on-call list for typical sanitary sewer collection system R/R work (i.e., cured-in-place-pipe lining, manhole sealing, etc.) that can be used to complete work which does not require civil engineering design. Small R/R projects may also be completed by the On-Call Contractor.

Since TV's collection system is new and has not fully developed, there is no active CIP in place yet. However, TVMMWC and CalWater are working on implementation of the CIP as more assets are placed in service.

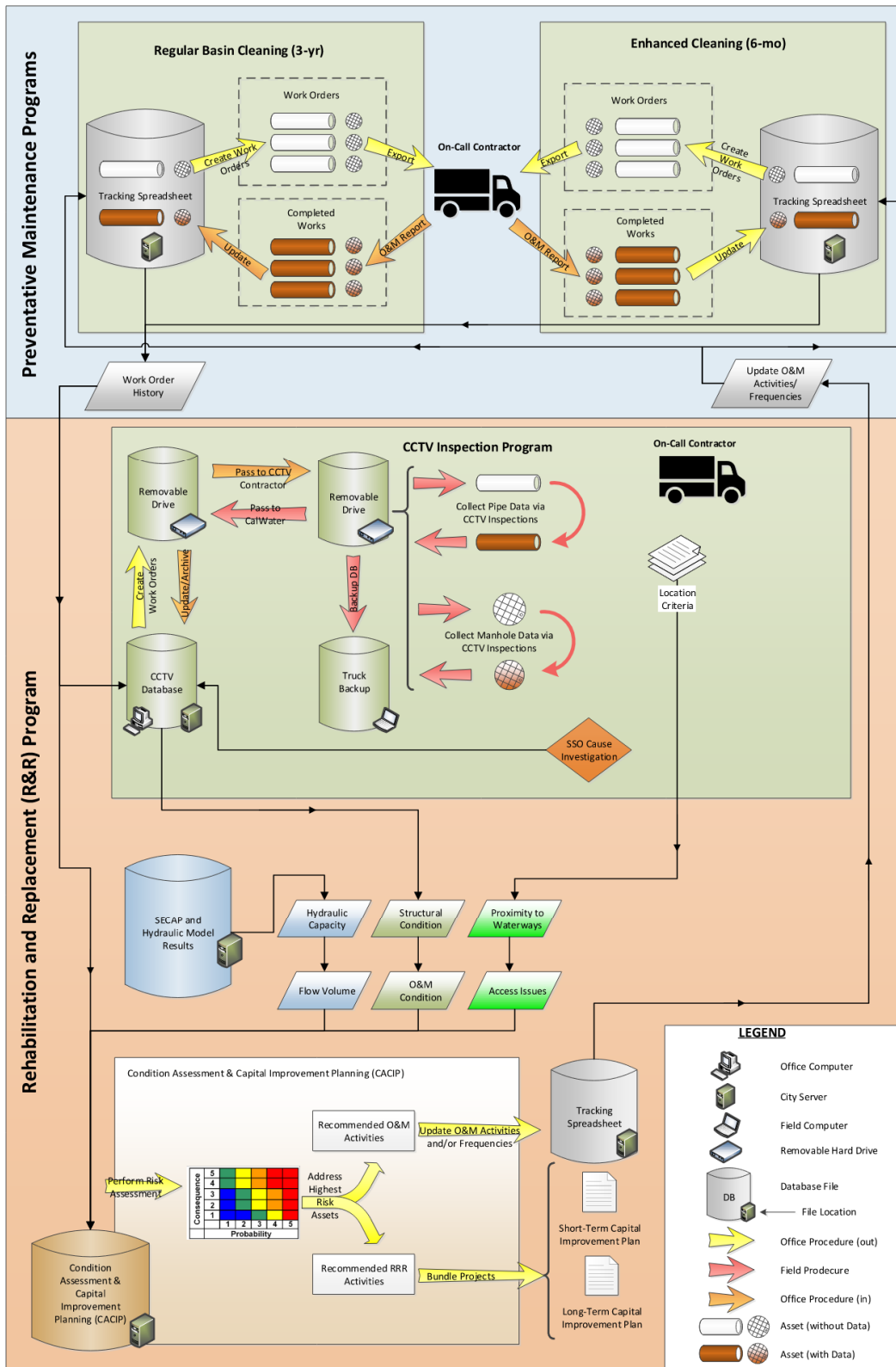


Figure 4 – Collection System O&M and R&R Flowchart



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## **Capital Improvement Budgeting**

The collection system is operated as an enterprise fund, meaning that its operations are financed in a manner similar to private business enterprises, where the costs (expenses, including capital depreciation) of providing sewer service are financed primarily through user charges. Using a valuation of all its sewer facilities and an estimate of design life, the annual depreciation amounts in the sewer system is identified. In the sewer collection system, depreciation amounts are estimated for gravity sewers, manholes, and the public portions of sewer laterals and cleanouts.

The goal of the Capital Improvement Program (CIP) is to fully fund this annual depreciation amount, primarily by setting sewer service rates at a level which generates revenue in excess of operating expenses, with the additional revenue directed to projects that replace aging and fully depreciated sewer infrastructure. Where portions of a specific replacement project are attributable to new development, funding derived from service charge revenue may be augmented by revenue from sewer capacity (development) fees.

Periodic utility rate studies may be utilized to evaluate revenues versus expenditures to determine if changes to the rates are necessary to provide adequate levels of funding for operations, maintenance, capital replacement projects, and debt service. Typically, the sewer collection system GIS is used to determine the length and diameter of all sewer lines, and number of manholes. A value per foot of pipe for various pipe diameters was assigned, as well as a value per manhole and per sewer lateral. The total value of the collection system is calculated, and the remaining useful life of the various assets estimated to determine annual depreciation value. This annual depreciation value is then used to estimate the annual capital replacement expenditures that are expected to maintain the system's condition over the long-term.

Within rate studies, the wastewater funding and reserve structure is comprised of:

- **Operating Fund:** The primary fund of operating each utility. Most of revenues, including rates, flow into the operating fund and all the operating and maintenance costs, including debt service payments are paid out of this fund.
- **Capital Replacement Reserve:** Serves as a mechanism for funding rehabilitation, replacement, and upgrade projects contained in the CIP. The reserve is funded with annual transfers of rate revenue from the Operating Fund. Funds are then transferred from the reserve to the Capital Projects Fund, where actual CIP expenditures occur.  
Uniform transfers from the Operating Fund (which should closely match the annual system depreciation value) enables TVMMWC to fund capital projects that facilitates rate stability and/or modest annual rate adjustment. This also helps establish and maintain steady funding of the ongoing replacement and rehabilitation efforts.
- **Capital Projects Fund:** Used to account for revenues and debt proceeds available for capital project expenditures. All capital projects are funded with this fund. Funds are moved into the Capital Projects Fund when the funds are encumbered for specific projects. Debt proceeds obtained to finance new projects are also placed in the Capital Projects Fund.

- **Capacity Fund:** Used to account for revenues from water and wastewater capacity fees from new development/connections. Capacity fees are one-time charges to new developments to pay for capacity in the wastewater utility. These revenues are used to help pay for development-driven CIPs.

#### 4.4. Training

CalWater conducts 10 to 15 minute bi-weekly tailgate meetings covering a range of topics. These tailgate safety meetings also are required by Cal/OSHA regulations in Title 8, Sections 8406 and 1509 of the California Code of Regulations. The CalWater O&M staff are trained annually on the critical topics outlined in **Table 7** below. The On-Call Contractor is required by contract to provide training certification documentations for topics included herein.

**Table 7 –TVMMWC Training Topics**

Training Category	Topics	Required for	Frequency
SSMP Review	Review latest updates to SSMP	TVMMWC/CalWater	Annual
O&M Training	Work order scheduling and documentation	CalWater	Annual
	Standard operating procedures for vactor/jetting truck	On-Call Contractor	Per Contract
	Standard operating procedures for auger equipment	On-Call Contractor	Per Contract
	Standard operating procedures for CCTV inspection	On-Call Contractor	Per Contract
	Sewer bypassing and point repair for gravity mains	On-Call Contractor	Per Contract
OERP Training	Review recent changes to the OERP	CalWater/On-Call Contractor	Annual
	SSO response procedures, containment, and chain of communication reporting	CalWater/On-Call Contractor	Annual
	SSO volume estimation techniques	CalWater/On-Call Contractor	Annual
	Impacted surface waters and response/notification procedures, water quality sampling	CalWater/On-Call Contractor	Annual
	Private lateral backups and customer service	CalWater/On-Call Contractor	Annual
Safety Training	Equipment use	On-Call Contractor	Per Contract
	Confined Space Entry Policy and gas detector use	On-Call Contractor	Per Contract

All contractors working on sewer collection system are required to review and maintain a hard copy of the OERP, and to develop a project specific OERP that includes specific details regarding the nature of the work and the worksite. Contractors are required to train their workers on the contents of the OERP and the project specific OERP as part of their pre-project safety training and preparation.

When sewer bypass pumping is required for project construction, the On-Call Contractor is required to develop a detailed bypass pumping plan that includes redundancy for all equipment as well as spill

detection and remote alarming equipment. Review of the sewer bypass pumping plan will be conducted by the Manager of Wastewater Systems.

#### **4.5. Equipment and Replacement Part Inventories**

CalWater maintains a limited supply of parts for gravity sewer and manholes repairs, which are located at the TVWWTP. Most parts and equipment for operation and maintenance of the system are expected to be supplied by the On-Call Contractors.

All On-Call contractors are required by contract to provide a list of vehicles, equipment, and parts necessary for operations and maintenance of the sewer collection system. The On-Call Contractor provides annual inventory updates to CalWater if they are to continue providing service. The On-Call Contractor is directly responsible for the following actions:

- Addressing maintenance work orders in a timely manner
- Managing spare parts inventory and stocking levels
- Setting up vendors and ordering parts for inventory and daily needs
- Creating estimates, repair orders, invoices, and reports

#### **Related Appendices**

**Appendix 4.1 – Sewer Maps**

**Appendix 4.2 – O&M Schedules**

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## 5.0. Design and Performance Provisions

### D.13.(v) Design and Performance Provisions:

- (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.

### 5.1. Standards for Installation, Rehabilitation and Repair

Design and performance provisions for work related to the TV's public sanitary sewer system are detailed in the Standard Specifications and Details of TVMMWC website. The current Standard Specifications and Details were approved in 2018, and are routinely updated to reflect new procedures, materials, and other improvements/changes within the industry. Bound versions of the TVMMWC Standard Specifications and Details are available in the TVMMWC office or can be downloaded from the website (<https://tvmmw.com/>).

The Standard Specifications and Details are composed of three elements:

- Engineering Design Standards - Provides detailed guidance for design of public sewer system improvements.
- Standard Specifications - Provides guidance to design professionals and construction contractors on the materials, installation and required testing methods for public sewer system improvements.
- Standard Plans - Provides details for the installation of the public sewer system improvements.

### 5.2. Standards for Inspection and Testing of New and Rehabilitated Sewer

All new construction, rehabilitation and repair projects affecting TVMMWC sanitary sewer system are reviewed and inspected by the District Engineer (Onsite Inspector) using Standard Specifications and Details. The District Engineer reviews testing records and oversees permitting and plan review for new development projects.

Inspection is required for all sewer improvements and other work within the public right-of-way, all public easements, and for any work for which an encroachment permit has been issued. TVMMWC inspects all phases of the work to ensure complete conformance with the requirements of the standard specifications. At a minimum, work is inspected/tested with the following procedures during the progress of sewer installation:

- Leakage test after compaction and priori to placement of aggregate
- Deflection test after backfilling and compaction and prior to aggregate placement
- CCTV inspection after leakage and deflection pass and prior to placement of aggregate

TVMMWC's Specific Provisions include specific testing procedures for public sewers that include:

- Leakage test
- Pipe deflection testing
- CCTV inspection

Sanitary Sewer Standard Details and Specifications and permitting link:

<https://tvmmwc.com/>

## 6.0. Spill Emergency Response Plan

### Order WQ 2022-0103-DWQ Attachment D SSMP – Required Elements:

#### 6 Spill Emergency Response Plan

The Plan must include an up to date Spill Emergency Response Plan to ensure prompt detection and response to Spills to reduce Spill volumes and collect information for prevention of future Spills. The Spill Emergency Response Plan must include procedures to:

- Notify primary responders, appropriate local officials, and appropriate regulatory agencies of a Spill in a timely manner;
- Notify other potentially affected entities (for example, health agencies, water suppliers, etc.) of Spills that potentially affect public health or reach waters of the State;
- Comply with the notification, monitoring and reporting requirements of this General Order, State law and regulations, and applicable Regional Water Board Orders;
- Ensure that appropriate staff and contractors implement the Spill Emergency Response Plan and are appropriately trained;
- Address emergency system operations, traffic control and other necessary response activities;
- Contain a Spill and prevent/minimize discharge to waters of the State or any drainage conveyance system;
- Minimize and remediate public health impacts and adverse impacts on beneficial uses of waters of the State;
- Remove sewage from the drainage conveyance system;
- Clean the Spill area and drainage conveyance system in a manner that does not inadvertently impact beneficial uses in the receiving waters;
- Implement technologies, practices, equipment, and interagency coordination to expedite Spill containment and recovery;
- Implement pre-planned coordination and collaboration with storm drain agencies and other utility agencies/departments prior, during, and after a Spill event;
- Conduct post-Spill assessments of Spill response activities;
- Document and report Spill events as required in this General Order; and
- Annually, review and assess effectiveness of the Spill Emergency Response Plan, and update the Plan as needed.

**Spill Response:** TVMMWC has a Spill Emergency Response Plan (see **Appendix 6.1 – Spill Emergency Response Plan (SERP)**) for handling service calls and sewer spills. The plan includes notification procedures for emergency response, spill recovery, overflow mitigation, cleanup, and restoration of damaged dwellings and buildings. It also includes provisions for public notification, testing for contamination, and notification to regulators.

The plan includes procedures for business hours and after-hours spill events. One CalWater employee is always available on an on-call basis; either the Chief Plant Operator, Direct Operator in Charge, or the On-Call Plant Operator for that day. These employees can be reached 24-hours per day on their CalWater cell phones.

**Spill Reporting Policy:** All spills are investigated to determine the cause and corrective actions needed to prevent future incidents. Category 1 Spills greater than or equal to 1,000 gallons are reported to the

State Office of Emergency Services (OES), within no later than 2 hours after TVMMWC/CalWater is notified of the spill. All spills are reported in the SWRCB's electronic reporting system (CIWQS). The plan also includes reporting requirements to other regulatory agencies as may be appropriate. The Chief Plant Operator is responsible for reviewing and completion of the spill reports and entering data into CIWQS.

## **Related Appendices**

### **Appendix 6.1 – Spill Emergency Response Plan (SERP)**

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## 7.0. FOG Control Program

D.13.(vii) Fats, Oils, and Grease (FOG) Control Program: Each 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 sanitary sewer system 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 grease removal devices (such as traps or interceptors) design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;
- (e) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has enough staff to inspect and enforce the FOG ordinance;
- (f) An identification of sanitary sewer system sections subject to FOG blockages and establish a cleaning maintenance schedule for each section; and
- (g) Development and implementation of source control measures, for all sources of FOG discharged to the sanitary sewer system, for each section identified in (f) above.

### 7.1. Public Education Program

TVMMWC's FOG Disposal Public Outreach Program includes the following main components:

1. Outreach to permitted Food Service Establishments (FSEs) as part of regular inspections
2. Distribution of informational flyers as utility service billing inserts or in FOG problem areas
3. School Outreach

TVMMWC is developing informational flyers to be distributed to the public and future FSEs. TVMMWC is also planning to provide school outreach programs in the future and visits local schools and provide letters and educational materials for the topics presented in the program.



## 7.2. FOG Disposal

The TVWWTP is currently not capable of handling FOG and does not have any FSEs in the system. Future FSEs within the collection system are required to provide a licensed grease hauler. If an FSE reports grease interceptor cleaning/hauling by a grease hauler that is not on TVMMWC's list of known providers, TVMMWC will contact the company to confirm they are appropriately licensed and are disposing of grease at an appropriately licensed acceptance facility.

## 7.3. Legal Authority

The Madera County ordinance 13.66.050 requires all FSEs to install grease, oil, sand, and grit interceptors for the proper handling of wastes containing grease or oil in excess of three hundred milligrams per liter of animal and vegetable origin and/or one hundred milligrams per liter of mineral or petroleum origin, or any flammable wastes, sand, grit and other harmful ingredients.

TVMMWC's Sanitary Sewer Design Section 9 requires installation of GRDs for any FSE and based on California Plumbing Code (CPC). TVMMWC permits and inspects FSEs as part of its FOG Program.

## 7.4. GRD Installation and Maintenance Requirements

In accordance with the TVMMWC Standard Design for Sanitary Sewer and to monitor and control grease in the collection system, any business having the potential of producing grease as specified in the Madera County Municipal Code is required to have a grease inspector.

### **GRD Installation and Design Requirements**

In accordance with Sewer Standard Design Section 9-10.G, any business having the potential of producing grease as specified in the Madera County Municipal Code is required to install a Grease Removal Device (GRD). Minimum size of the interceptors shall be 1,000 gallons and based on the latest California Plumbing Code (CPC) and the Madera County requirements for grease traps.

### **GRD Maintenance Requirements**

Grease traps required under this chapter will be inspected annually and accumulated wastes must be removed as needed. A record of such inspection and of all removals must be submitted to the TVMMWC engineer on a quarterly basis on a form prescribed by the TVMMWC engineer.

### **FSE Record Keeping Requirements**

TVMMWC requires all permittees to maintain records for a minimum of 2 years for all BMPS implemented and grease disposal activity. Each year, each permittee is required to submit both a BMP self-monitoring report and GRD Waste Hauling Report to TVMMWC. The required self-submittal of these reports ensures that the operator of each facility is complying with the record keeping requirements and helps TVMMWC to target enforcement actions when reports are not received.

## 7.5. FSE Inspections

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All FSE permittees will be scheduled for an annual inspection, and TVMMWC creates a schedule that distributes the inspections throughout the year. The inspection schedule will be developed once FSEs are added to the system and put in place. Some permittees may be inspected semi-annually, and this can be triggered by any of the following:

- Failure to submit the required self-monitoring reports
- Excessive FOG accumulation noted downstream of the facility
- Private lateral spill or backup
- Poor condition of GRD noted during previous inspection

When conducting the inspections, TVMMWC/CalWater will use a standard Inspection Report. An example is included in **Appendix 7.1 – FOG Control Program**.

A typical inspection includes the following items:

1. Review any changes to ownership, business operations, or wastewater/drain utilities.
2. Inspect each GRD for solids/grease accumulation and review grease hauling records/receipts. Determine if current GRD maintenance schedule appears adequate or if changes to the schedule and permit specifications are warranted.
3. Conduct a non-stormwater discharge inspection to verify that there are not any illicit discharges into the local storm drain system.
4. Determine if any liquid wastes (such as used cooking oil) are being stored on-site and if storage and spill prevention is adequate to prevent an illicit discharge to the storm drain system.

TVMMWC/CalWater maintains on file all previous Inspection Reports for each FSE and keeps a single running notes file for each permittee that provides an abbreviated summary of the results of each FSE inspection that is easier for the employee to review in order to gain an understanding of previous inspection results and enforcement actions that have occurred.

## 7.6. Enhanced Collection System Maintenance for FOG

Sewer lines that have been subject to increased or potential FOG accumulation are moved into the Enhanced 180-day Cleaning Program (see **Section 4.2**). Triggers for identifying lines subject to increase FOG accumulation include the following:

- The occurrence of SSOs that are due to FOG based on SSO investigatory CCTV inspection
- The occurrence of private lateral spills or backups due to FOG
- Observations from TVMMWC's regular CCTV inspection program that show a high level of FOG accumulation
- Observations of material removed from the line during TVMMWC's regular cleaning program

## 7.7. Source Control Measures

FOG problem areas that are included on the Enhanced 180-day Cleaning Program are typically due to one of the following sources:

1. Food Service Establishments
2. High Density Residential Areas

## **Related Appendices**

### **Appendix 7.1 – FOG Control Program**

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## 8.0. System Evaluation and Capacity Assurance Plan

D.13.(viii) System Evaluation and Capacity Assurance Plan: 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 sanitary sewer system that are experiencing or contributing to an SSO discharge caused by 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; and

(c) Capacity Enhancement Measures: The steps needed to establish a short- and long-term capital improvement plan (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.

(d) Schedule: The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a-c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D. 14.

### 8.1. Hydraulic Capacity Evaluation Process

TVMMWC collection system is currently being constructed in phases based on the 2015 collection system hydraulic model and master planning analysis (See **Appendix 8.1**). Since the collection system has not been entirely built during development of this SSMP, there is no additional hydraulic evaluation process done since the master plan.

### 8.2. Hydraulic Capacity Design Criteria

TVMMWC’s Sanitary Sewer Design Section 9 provide requirements for new sanitary sewer collection system piping. The standards generally include the following:

- ADWF flow factors are provided for residential, commercial, and industrial developments
- 400 gpd/acre Infiltration and Inflow (I/I) is required to be added to ADWF, and an I/I rate is provided for both new and existing sewer lines
- Peaking sewer flow factors are provided for residential, commercial, and industrial developments

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- Manning's Equation is required to be used to determine pipe capacity, minimum Manning's "n" value of 0.011 shall be used
  - Minimum public sewer main size is 8" and cannot be designed to flow surcharged (6" residential)
  - Minimum slopes and flow capacities per pipe size
  - Maximum depth of flow at design conditions shall be 70 percent of pipe diameter
  - Minimum velocity of 2 feet per second at peak flow shall be maintained and maximum design velocity shall not exceed 10 feet per second.

TVMMWC's Standard Specifications do not include hydraulic design criteria specific to system-wide collection system hydraulic modeling and the identification of hydraulic capacity deficiencies for the purposes of capital improvement planning. TVMMWC will consider the additional criteria for future hydraulic model evaluations:

1. For Existing Conditions hydraulic model, sewer loads from currently developed parcels are based on the analysis of flow monitoring data, not based on application of TVMMWC's Standard flows.
2. For Existing Conditions hydraulic model, I/I loads from currently developed parcels are based on the analysis of flow monitoring data and the development of synthetic hydrographs for the Design Storm, not based on application of TVMMWC's Standard flows.
3. For Future Conditions hydraulic model, additional flows from new and infill development shall be determined based on TVMMWC's Standard flow factors.
4. Design Storm is the 10-year, 24-hour return period event of 3.6" per NOAA Atlas 14, Volume 6, Version 2. The temporal distribution of the storm is developed per the Soil Conservation Service (SCS) Type X standard distribution.
5. A hydraulic capacity deficiency for the gravity sewer system is defined as any location where the calculated hydraulic grade line at peak wet weather flow associated with the Design Storm is less than 3'-0" below the rim of a manhole.

### **8.3. Capacity Enhancement Measures**

The collection system is sized based on the Sewer System Master Plan (2015) and is currently under development. No capacity concerns have been identified in the collection system yet, since the system is new and not fully developed. TVMMWC will incorporate future hydraulic evaluations to identify hydraulic deficiencies (for Existing Conditions and Future Conditions) and will develop planning level capital improvement project descriptions and cost estimates to address each deficiency. Recommended completion date for capital improvement projects will be based on of the following factors:

- Severity of the deficiency and potential volume of an SSO caused by this deficiency
- Proximity of the deficiency to waterways
- Coordination with other TVMMWC's projects
- Anticipated pace of development for deficiencies triggered by future growth

### **Infiltration and Inflow Reduction**

Additional temporary flow monitoring may be employed at locations strategically selected to identify potential sources of increased infiltration and inflow, if needed. TVMMWC's will make efforts to monitor I/I occurring during storm events and take steps to identify sources of excess I/I that could potentially be eliminated to make additional collection system hydraulic capacity available. I/I reduction strategies that may be employed by TVMMWC/CalWater may include:

- Conducting CCTV, flow monitoring, or Focused Electrode Leak Location (FELL) during storm events in suspected problem areas to pinpoint I/I sources
- Conducting smoke testing to identify illicit storm drain connections to the SSS
- Performing replacement or lining of pipes identified through CCTV/FELL to have excessive I/I through cracks, offset joints, break-in lateral connections, etc.
- Lining of manholes with observed I/I leakage through joints

#### **8.4. Schedule**

TVMMWC is planning to update the system master plan every 5 years coincident with the required 5-year SSMP update and recertification. Whenever an update to the sewer master plan is completed, TVMMWC's 5-year overall capital improvement project will be updated to include projects identified in the master plan.

### **Related Appendices**

#### **Appendix 8.1 – SECAP**

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## 9.0. Monitoring, Measurement, and Program Modifications

D.13.(ix) Monitoring, Measurement, and Program Modifications: 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.

### 9.1. Maintain Relevant Information

Relevant and accurate data is important for the assessment of performance against goals established by the SSMP and for the formulation of program modifications when necessary. TVMMWC maintains a variety of documented information that is used to develop or modify SSMP activities. A summary of the documentation maintained for applicable SSMP elements is provided below:

- Section 4(a) – Mapping:
  - Map Update Log – to document and verify completion of map updates
- Section 4(b) – O&M Program:
  - Spreadsheet Based, Transitioning to CMMS - Documentation of all sewer cleaning activities by year and by pipe segment
  - Spreadsheet Based, Transitioning to CMMS - Continuous update of Enhanced 180-day sewer main cleaning schedule
- Section 4(c) – R&R Program:
  - CCTV inspection historical database
  - Spreadsheet Based, Transitioning to CMMS – tracking of sewer collection system replacement value and annual spending on rehabilitation and replacement projects
  - 5-year TV Capital Improvement Program – Updated with any new identified sanitary sewer collection system rehabilitation projects identified via CCTV
- Section 4(d) – Training Program:
  - Training Matrix
- Section 4(e) – Replacement Parts Inventory:
  - Spreadsheet Based – Spare Parts and Tool Inventory
  - Spreadsheet Based – Fleet Maintenance
- Section 5 – Design and Performance Provisions:
  - Plan Review and Public Works Inspection records for new construction

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- Section 6 – Overflow Emergency Response Plan
    - SSO Reports Submitted via CIWQS
    - Internal Sanitary Sewer Overflow Field Reports
  - Section 7 – FOG Control Program
    - Public outreach materials used or developed
    - List of known licensed grease haulers
    - FSE permit inspection schedule
    - FSE inspection reports
  - Section 8 – System Evaluation and Capacity Assurance
    - Rain gauge data
    - Temporary and permanent sewer flow monitoring data
    - GIS-based sewer collection system hydraulic model
    - Sewer master plan

## 9.2. Measure SSMP Element Effectiveness

TVMMWC/CalWater has established performance indicators relative to specific SSMP activities that can be quantitatively measured. Performance indicators are developed to provide a means by which to monitor its performance in effectively executing SSMP programs. Each key performance indicator (KPI) is tracked by a responsible person who documents specific statistics each year and ensures that adequate data is being collected to evaluate performance. The responsible person is an employee that is naturally involved with the collection or use of the data required to track the performance indicator to ensure effective and accurate data collection and tracking.

TVMMWC's KPI tracking summary is shown in **Appendix 9.1 – Key Performance Indicators (KPI)**.

Each responsible person will collect the necessary information and enter the calculated KPI value into the overall tracking sheet at the end of each fiscal year. Once every two years, the Key Performance Indicator Tracking Sheet will be collected by one of the LROs and reviewed to assist in the completion of the mandatory internal audit. SSMP activities will be evaluated during the audit and revisions to the SSMP will be made at that time.

## 9.3. PM Program Assessment

The success of the preventative maintenance program is based on the completion of established numerical goals for regular and enhanced (180-day) preventative sewer cleaning and CCTV inspection. If TVMMWC falls short of the established goals in any given year, TVMMWC will determine if additional staffing is required to ensure completion of the goals for the following year.

## 9.4. Update SSMP Program Elements

As part of the semi-annual Audit, all KPIs are reviewed, and specific recommendations are made by one of the LROs to address poor performance compared to established numerical goals. It is during the Auditing process that potential updates to program elements are identified and documented in the



Audit. Physical changes to the SSMP text will be made at a minimum of every 5 years which may include but are not limited to the following:

- Detailed efforts to increase funding or staffing
- Changes to the cleaning, CCTV inspection, or FOG programs (i.e., procedural changes, changes to work production levels, modifications to documentation methods, etc.)
- Updates to CIP prioritization and funding processes
- Changes to OERP protocols
- Additions or modifications to the Ordinance Code or Improvement Standards
- Changes in hydraulic modeling methods or priorities, etc.

Any major changes to SSMP elements or programs will be presented to the TVMMWC Board, and approval gained for budgetary or staffing impacts resulting from program modifications. TVMMWC also maintains a record of significant SSMP updates, found in **Appendix 9.2 – SSMP Change Log**.

### 9.5. SSO Analysis

As a required part of each semi-annual SSMP Audit, SSO events are analyzed in detail to identify key information such as frequency, location, cause, and volume. These trends are illustrated to determine causation that may be addressed through adjustment of the preventative maintenance program.

## Related Appendices

**Appendix 9.1 – Key Performance Indicators (KPI)**

**Appendix 9.2 – SSMP Change Log**

## 10.0. SSMP Program Audit

D.13.(x) SSMP Program Audits - As part of the SSMP, the Enrollee shall conduct periodic internal 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.

Evaluation of established key performance indicators (KPIs), described in SSMP Section 9, forms the basis for the audit process. The KPIs are used to determine if programs are being implemented as planned. The KPI tracking and evaluation process can be used to determine if the necessary resources are in place for successful execution of key programs and activities. The KPI tracking results are reviewed by LROs as described in SSMP Section 9. The results are intended to be used to guide decision making regarding modifications and updates to SSMP programs that are deemed necessary.

## 11.0. Communication Program

D.13.(xi) Communication Program. The Enrollee shall communicate on a regular basis 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.

### 11.1. Communication with the Public

TVMMWC maintains a copy of the SSMP in their web page for public access:

<https://tvmmwc.com/>

The SSMP webpage allows the public to download the entire contents of the most recent version of the SSSMP and includes an email link that can be used by the public to submit comments on the SSMP to TVMMWC.

Additionally, TVMMW and CalWater webpage include contact information for Utility Trouble Hotline which is used for the public to report SSOs which is available 24-hour, 7 days per week.

### 11.2. Communication with Tributary Systems

TVMMWC does not have any tributary or satellite systems to TVMMWC's main collection system.

**Appendix 2.1 – SSMP Element Responsible Personnel**

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**Appendix 4.1 – Sewer System Map**

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**Appendix 4.2 – O&M Schedules**

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## **Appendix 6.1 – Spill Emergency Response Plan (SERP)**

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**Appendix 7.1 – FOG Control Program**

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**Appendix 8.1 – SECAP**

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**Appendix 9.1 – Key Performance Indicators (KPI)**

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**Appendix 9.2 – SSMP Change Log**

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