



SOUTH PLACER MUNICIPAL UTILITY DISTRICT

Sewer System Management Plan

Date: October 2021

Prepared by: Eric Nielsen, P.E.
Carie Huff, P.E.

Table of Contents

- Introduction..... 3
 - Background..... 3
 - Purpose..... 3
 - Sewer System Overview 3
 - SSMP Organization 4
 - SSMP Certification and Re-Certification Schedule 4
 - Abbreviations..... 4
- i Goals 6
 - i. Goals 6
- ii Organization 7
 - ii-a. Authorized Representative 7
 - ii-b. Organizational Chart..... 8
 - ii-c. SSO Reporting Chain of Communication 10
- iii Legal Authority 12
 - iii-a. Authority to Prevent Illicit Discharges 12
 - iii-b. Authority to Properly Design and Construct Sewers 13
 - iii-c. Authority to Ensure Access 14
 - iii-d. Authority to Limit FOG..... 15
 - iii-e. Authority to Enforce Any Violation..... 16
- iv Operation and Maintenance Program 17
 - iv-a. Maintain an Up-To-Date System Map 17
 - iv-b. Routine Preventative O&M Activities..... 19
 - iv-c. Prioritization Program 25
 - iv-d. Training 27
 - iv-e. Identify Equipment and Critical Replacement Parts..... 28
- v Design and Performance Provisions..... 29
 - v-a. Design and Construction Standards and Specifications 29
 - v-b. Procedures and Standards for Inspecting and Testing 30
- vi Overflow Emergency Response Plan 31
 - vi-a. Proper Notification Procedures 31
 - vi-b. Appropriate Response 33
 - vi-c. Prompt Notification and Reporting..... 34
 - vi-d. OERP Distribution and Training 35
 - vi-e. Emergency Operations 36
 - vi-f. Containment/Prevention and/or Minimization/Correction of Spills 37



vii	FOG Control Program	38
	vii-a. FOG Public Outreach Program	38
	vii-b. FOG Disposal	39
	vii-c. Legal Authority	40
	vii-d. Grease Removal Devices	41
	vii-e. Inspection	42
	vii-f. Identification of Potential FOG Blockages	43
	vii-g. Source Control Measures	44
viii	System Evaluation and Capacity Assurance Plan	45
	viii-a. Identify Hydraulic Deficiencies	45
	viii-b. Establish Appropriate Design Criteria	46
	viii-c. Capacity Enhancement Measures	47
	viii-d. Schedule for Planned Enhancements	48
ix	Monitoring, Measurement and Program Modifications	49
	ix-a. Maintain Relevant Information	49
	ix-b. Measure Effectiveness	50
	ix-c. Assess Preventative Maintenance Program	51
	ix-d. Update SSMP	52
	ix-e. SSO Trends	53
x	SSMP Program Audits	54
	x-a. SSMP Program Audits	54
xi	Communication Program	55
	xi-a. Plan of Communication with the Public	55
	xi-b. Plan of Communication with Satellite Collection Systems	56



Introduction

Background

To provide a consistent, statewide regulatory approach to address SSOs, the State Water Resources Control Board (State Water Board) adopted Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems, Water Quality Order No. 2006-0003 (Sanitary Sewer Systems WDR or SSS WDR) on May 2, 2006. The SSS WDR requires public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all SSOs to the State Water Board's online SSO database. On September 9, 2013, Attachment A, SWRCB Order No. WQO 2013-0058-EXEC, amending the Monitoring and Reporting Program (MRP) for the SSS WDRs. Information about the SWRCB Sanitary Sewer Overflow Reduction Program can be found [here](#).

All public agencies that own or operate a sanitary sewer system that is comprised of more than one mile of pipes or sewer lines which conveys wastewater to a publicly owned treatment facility must apply for coverage under the Sanitary Sewer Systems WDR. The South Placer Municipal Utility District (District) submitted a Notice of Intent (NOI) for coverage under the Order and received the Waste Discharge Identification (WDID) 5SSO11054. A significant requirement outlined in the Order is the completion and implementation of a Sewer System Management Plan (SSMP).

Purpose

The unpermitted discharge of wastewater from a sanitary sewer collection system (i.e., sanitary sewer overflow (SSO)) constitutes a violation of the Federal Clean Water Act and the California Water Code and is subject to enforcement action. The SWRCB will take into consideration the adequacy of the actions taken by the utility in response to any spill as prescribed by the utility's SSMP when determining enforcement actions.

The purpose of this document is to ensure that the District is taking all feasible steps to reduce or eliminate SSOs to protect public health and the environment. This is accomplished by implementing a management plan for the proper funding, operation, maintenance, expansion, and renewal of the District's sewer collection system.

Sewer System Overview

South Placer Municipal Utility District (SPMUD) was founded by local community leaders from the City of Rocklin and Town of Loomis (Placer County) through a grassroots effort in the 1950's to create a customer-owned, regional sanitary sewer system for their communities. On September 24, 1956, the Rocklin-Loomis Municipal Utility District (R-L MUD) was established under the Municipal Utility District Act of the State of California (MUD Act). At its inception, the District covered an area of approximately 4,200 acres and had 452 connections. The District bonded for and constructed the original sewer infrastructure between 1958 and 1962, installing over 41 miles of sewer mains.

Initially, the District provided sewer collection and treatment via its own sewer treatment lagoon systems at various sites within the service area. These lagoons were decommissioned in 1974, when, under the Federal Clean Water Act, the District constructed a sewer pipeline to convey the sewage to the City of Roseville Dry Creek



Wastewater Treatment Plant located in the southern end of Roseville. In October 2000, SPMUD partnered with the City of Roseville and Placer County to finance the construction of a second regional treatment plant called the Pleasant Grove Wastewater Treatment Plant located west of the City of Roseville and was completed in 2005.

Over the years, the District has grown from 7 to 31 square miles as the City of Rocklin and Town of Loomis expanded their boundaries, and by annexing several unincorporated areas (Penryn and Newcastle to the north and Rogersdale in the Granite Bay area). In 1988, the District changed its name to South Placer Municipal Utility District (SPMUD) to reflect its larger service area. As of 2020, SPMUD provides sewer collection services to about 24,700 connections, serving an equivalent population of approximately 77,000. SPMUD's customer base has tripled over the last twenty-five years from 10,000 Equivalent Dwelling Units (EDUs) to almost 34,000 EDUs. Thus, the District has had to adjust management of the system as it has evolved from a small- to medium-sized system.

The District operates a satellite sanitary sewer collection system made up of approximately 287 miles of sanitary sewer pipe with 6,800 mainlines, 6,800 manholes, 13 sewer lift stations, 7 miles of sewer force main, and 11 flow recording stations. The District owns the portion of the building sewer within the public right-of-way, extending from the property line to the public sewer (i.e., lower lateral) and as such, operates 240 miles of sewer service laterals. The District does not own or allow for the construction of siphons. The collection system is a separate sewer collection system (i.e., no stormwater is collected or diverted into the sewer system), which discharges to the City of Roseville's Pleasant Grove and Dry Creek wastewater treatment plants. A public-facing webmap of the District boundary and sewer facilities is available for viewing on the [District website](#).

The District uses multiple software and data management systems to assist in the operation and management of its facilities.

SSMP Organization

This SSMP is organized into the elements and requirements that are outlined in the SSS WDRs and summarized in the Table of Contents. Each of the sections of the SSMP reviews the requirement of the SSS WDRs, identifies the responsible person for that SSMP element, provides a discussion of the plan to meet the intent of the requirement, lists related documents, provides a plan and schedule when appropriate, and lists potential performance indicators for measuring the effectiveness of the District's efforts related to that SSMP element.

SSMP Certification and Re-Certification Schedule

The District SSMP was originally certified on August 6, 2009. The SSMP is required to be updated every five (5) years and re-certified by the District's governing board (i.e., District Board of Directors) when significant updates to the SSMP are made.

Abbreviations

ASM	Administrative Services Manager
BMP	Best Management Practices
CCTV	Closed Circuit Television
CIP	Capital Improvement Program
CIPP	Cured in Place Pipe
CMMS	Computerized Maintenance Management System



DE	District Engineer
EPA	Environmental Protection Agency
FOG	Fats, Oils and Grease
FSE	Food Service Establishment
GCD	Grease Control Device
GIS	Geographic Information System
GPS	Global Positioning System
GM	General Manager
WDR	General Wastewater Discharge Requirements
HCFLS	High Cleaning Frequency Line Segments
I & I	Inflow and Infiltration
LRO	Legally Responsible Official
MGals	Million Gallons
MRP	Monitoring and Reporting Program
NPDES	National Pollutant Discharge Elimination System
OERP	Overflow Emergency Response Plan
PLCO	Property Line Clean Out
RWQCB	Regional Water Quality Control Board
SCADA	Supervisory Control and Data Acquisition
SOP	Standard Operating Procedure
SPWA	South Placer Wastewater Authority
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SSO-ERP	Sanitary Sewer Overflow – Emergency Response Plan
SSS WDR	Sanitary Sewer Systems General Wastewater Discharge Requirements
SUP	Superintendent
SWRCB	State Water Resources Control Board



i Goals

i. Goals

Requirement	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 sanitary sewer overflows (SSOs), as well as mitigate any SSOs that do occur.
Responsible	General Manager
Discussion	<p><u>Mission</u> Protect public health and water environment. Provide efficient and effective sanitary sewer service. Prepare for the future.</p> <p><u>Vision</u> To be the most reliable, innovative, operations and maintenance organization that preserves and prolongs the life of our assets, resulting in sustainable, efficient, cost-effective customer service.</p> <p>The District’s goal is to minimize preventable SSOs. This is accomplished by implementing the measures outlined in the District’s SSMP.</p>
Related Documents	<ul style="list-style-type: none"> • South Placer Municipal Utility District Strategic Plan • District Fiscal Year Budget Reports
Plan & Schedule	None



ii Organization

Implementation of the District’s Sewer System Management Plan (SSMP) requires the efforts of many individuals serving in a multitude of roles. This section describes the organization of the South Placer Municipal Utility District.

ii-a. Authorized Representative

Requirement	The SSMP must identify the name of the responsible or authorized representative as described in Section J of the SSS WDRs. Section J of the SSS WDRs requires all applications, reports, or information to be signed and certified by a person designated as a principal executive officer or ranking elected official, or a duly authorized representative of that person.
Responsible	General Manager
Discussion	The District’s principal executive officer is the General Manager. The Superintendent is designated as the District’s Legally Responsible Official (LRO) who is fully authorized by the General Manager to sign and certify applications, reports, or information submitted to the SWRCB. The Field Supervisor are authorized Data Submitters. The District Engineer serves as the LRO in the Superintendent’s absence.
Related Documents	None
Plan & Schedule	None



ii-b. Organizational Chart

Requirement	Identify 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.
Responsible	General Manager
Discussion	<p>All District employees listed below can be reached by calling (916) 786-8555.</p> <p><u>General Manager (GM)</u> <i>Position Filled by: Herb Niederberger</i> <i>Responsible for SSMP Elements: ...i, ii-a,b iii-a,b,c,d,e</i> The General Manager is the principal executive officer of the South Placer Municipal Utility District. The General Manager acts as the Chief Executive Officer and provides the day-to-day management of the operations of the District.</p> <p><u>Superintendent (SUP)</u> <i>Position Filled by: Eric Nielsen</i> <i>Responsible for SSMP Elements: ...ii-c iv-b,c,d,e vi-a,b,c,d,e,f ix-a,b,c,d,e x-a</i> The Superintendent manages and supervises the work performed in the Field Services Department. The Field Services Department is responsible for the operation and maintenance of the District's infrastructure which consists of 287 miles of mainline sanitary sewer collection piping; 6,791 manholes; 24,733 connections and 15 sewer lift stations.</p> <p><u>District Engineer (DE)</u> <i>Position Filled by: Carie Huff</i> <i>Responsible for SSMP Elements: ...iv-a,c v-a,b vii-a,b,c,d,e,f viii-a,b,c,d xi-a,b</i> The District Engineer manages and supervises the work performed in the Technical Services Department. The Technical Services Department is responsible for engineering, inspection, contracting and Information Technology services and works in support of Operations and Maintenance activities. Engineering services includes plan check for new development projects and (commercial) Tenant Improvements and responding to Will Serves and requests for development related inquires.</p> <p><u>Administrative Services Manager (ASM)</u> <i>Position Filled by: Emilie Costan</i> <i>Responsible for SSMP Elements: ...</i> The Administrative Services Manager manages and supervises the work performed in the Administrative Services Department. The Administrative Services Department provides a wide range of services including customer service for new accounts, billing & payment processing, and reporting of service-related issues. The Department is also responsible for financials of the District, human resources, accounts payables and receivable.</p>



Related
Documents

- [District Staff Webpage with Organization Chart](#)

Plan &
Schedule

None



ii-c. SSO Reporting Chain of Communication

Requirement Identify 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)).

Responsible Superintendent

Discussion Receipt of complaint

Customers served by the District are directed to call the District headquarters (24-hour emergency) phone number to report any disruption of sewer service. During normal business hours, this phone number is monitored continuously by Administrative Services staff. Any reported disruption of service is reported to the designated on-call supervisor (default position is Field Supervisor) who, in turn, notifies the appropriate on-call responder to attend to the emergency.

After normal business hours, the District always has two individuals on-call to respond to disruptions of service. The positions designated and trained as On-Call Supervisors and On-Call Responders are listed in **Table 1** below.

Table 1. On-Call Responders

Positions Designated and Trained as On-Call Supervisors	Positions Designated and Trained as On-Call First Responders
Field Supervisor Lead Worker Maintenance Worker/Inspector	Maintenance Worker I/II

After business hours and on weekends/holidays, calls made to the District headquarters (24-hour emergency) phone number are transferred to an automated phone system that directs the caller to leave pertinent information. Upon completion of the call, the automated system begins a sequence of call outs (texts and e-mails) to a pager and cell phone that is carried at all times by both the On-Call person and to the designated On-Call Supervisor.

All Lift Stations are equipped with an auto-dialer alarm system that make (redundant) call outs to designated phone numbers, including the on-call numbers and the emergency phone numbers described above, until the alarm has been acknowledged. The recipient of the call dials the auto-dialer and retrieves the alarm message and the appropriate personnel are notified to respond to the emergency. Operating concurrently with the auto-dialer alarms is a SCADA system and related alarms that contact emergency response personnel in essentially the same manner.



Notification of Supervisor

District emergency response procedures require that, upon discovery/determination of any SSO, the On-Call First Responder shall immediately notify the designated On-Call Supervisor. If the SSO is a Category 1 SSO, if it is potentially a Category 1 SSO, or if the On-Call First Responder is uncertain it is a Category 1 SSO, the On-Call Supervisor shall respond to the site.

In the event of a Category 1 or Category 2 SSO, or any SSO event that the supervisor attends, the On-Call Supervisor leads and coordinates the efforts to remove the blockage, mitigate the spill, document the event. The On-Call Supervisor is also responsible for notifying regulatory agencies, utility owners, and the public in accordance with the District’s SSO - Emergency Response Plan (SSO-ERP). The SSO-ERP is available for review at the District’s Headquarters located at 5807 Springview Drive, Rocklin, CA 95677.

CIWQS Reporting

The Superintendent is the designated LRO and is responsible for CIWQS reporting. The position of District Engineer is authorized to act as the LRO in the Superintendent’s absence. The Position of Field Supervisor is designated a Data Submitter.

Related Documents

- SSO Emergency Response Plan

Plan & Schedule

Task	Responsible Party	Scheduled Date
Review the SSO OERP and update as necessary.	SUP	Every 5 years Last Review June 2018

Performance Indicators

- Performance against Response Time Goals



iii Legal Authority

Agencies must have the proper legal authority to conduct its critical functions, prohibit actions detrimental to the performance of the system, and to enforce any and all violations of its laws. This section describes the District’s legal authority in the various required areas outlined in the SSS WDRs.

iii-a. Authority to Prevent Illicit Discharges

Requirement	Possess the necessary legal authority to prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.)								
Responsible	General Manager								
Discussion	<p>Chapter 2 of the District Sewer Code governs the use of public and private sewers and establishes the rules and regulations for service and services rendered by the District.</p> <p>Section 2.02.001 of the Sewer Code pertains to the public sewer and requires an individual/entity to obtain permission from the District and pay all established fees and charges prior to uncovering, making any connections with or opening into, using, altering or disturbing any public sewer.</p> <p>Section 2.02.005 prohibits persons from discharging or causing to be discharged a list of waters/wastewaters to any public sewer including, stormwater, surface water, ground water, roof run off, subsurface drainage, cooling water, swimming pool drainage, industrial process waters, waters that contain various chemicals, and waters that contain various types of debris or garbage. This section also governs the discharge of wastewater from any nonresidential type uses.</p> <p>Section 2.02.006 governs the preliminary treatment of wastewater before discharge to the public sewer.</p>								
Related Documents	<ul style="list-style-type: none"> South Placer Municipal Utility District – Sewer Code 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the Sewer Code and update as necessary.</td> <td>GM</td> <td>Every 5 years Last Review June 2018</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the Sewer Code and update as necessary.	GM	Every 5 years Last Review June 2018
Task	Responsible Party	Scheduled Date							
Review the Sewer Code and update as necessary.	GM	Every 5 years Last Review June 2018							



iii-b. Authority to Properly Design and Construct Sewers

Requirement	Possess the necessary legal authority to require that sewers and connections be properly designed and constructed.								
Responsible	General Manager								
Discussion	<p>Chapter 2 of the District Sewer Code governs the use of public and private sewers and establishes the rules and regulations for service and services rendered by the District.</p> <p>Section 2.05 requires the design and construction of building sewers, private sewers, and public sewers be in conformance with the Sewer Code and the District Specifications.</p>								
Related Documents	<ul style="list-style-type: none"> • South Placer Municipal Utility District – Sewer Code • South Placer Municipal Utility District – Standard Specifications and Improvement Standards for Sanitary Sewers 								
Plan & Schedule	<table border="1"> <thead> <tr> <th style="background-color: #d9e1f2;">Task</th> <th style="background-color: #d9e1f2;">Responsible Party</th> <th style="background-color: #d9e1f2;">Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the Sewer Code and update as necessary.</td> <td>GM</td> <td>Every 5 years Last Review June 2018</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the Sewer Code and update as necessary.	GM	Every 5 years Last Review June 2018
Task	Responsible Party	Scheduled Date							
Review the Sewer Code and update as necessary.	GM	Every 5 years Last Review June 2018							



iii-c. Authority to Ensure Access

Requirement	Possess the necessary legal authority to ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency.								
Responsible	General Manager								
Discussion	<p>The District owns the portion of the building sewer within the public right-of-way, extending from the property line to the public sewer (i.e., lower lateral).</p> <p>Section 2.02.003 of the Sewer Code states that it is the customer’s responsibility to ensure the Property Line Clean Out (PLCO) is readily accessible at all times. When a PLCO cannot be accessed by the District, the customer will be notified and shall correct the condition(s). If the issue is not rectified within 30 days after notification, District staff will make the correction(s) and the customer will be responsible for actual costs incurred.</p>								
Related Documents	<ul style="list-style-type: none"> • South Placer Municipal Utility District – Sewer Code 								
Plan & Schedule	<table border="1"> <thead> <tr> <th style="background-color: #d9e1f2;">Task</th> <th style="background-color: #d9e1f2;">Responsible Party</th> <th style="background-color: #d9e1f2;">Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the Sewer Code and update as necessary.</td> <td>GM</td> <td>Every 5 years Last Review June 2018</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the Sewer Code and update as necessary.	GM	Every 5 years Last Review June 2018
Task	Responsible Party	Scheduled Date							
Review the Sewer Code and update as necessary.	GM	Every 5 years Last Review June 2018							



iii-d. Authority to Limit FOG

Requirement	Possess the necessary legal authority to limit the discharge of fats, oils, and grease and other debris that may cause blockages.								
Responsible	General Manager								
Discussion	Chapter 3 of the District Sewer Code governs the use of public and private sewers and establishes the rules and regulations for the prevention of blockages of the sewer lines resulting from discharges of fats, oils, and grease (FOG) into the public sewer, and to specify appropriate FOG discharge requirements for food service establishments (FSEs).								
Related Documents	<ul style="list-style-type: none"> • South Placer Municipal Utility District – Sewer Code 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the Sewer Code and update as necessary.</td> <td>GM</td> <td>Every 5 years Last Review June 2018</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the Sewer Code and update as necessary.	GM	Every 5 years Last Review June 2018
Task	Responsible Party	Scheduled Date							
Review the Sewer Code and update as necessary.	GM	Every 5 years Last Review June 2018							



iii-e. Authority to Enforce Any Violation

Requirement	Possess the necessary legal authority to enforce any violation of its sewer ordinances.								
Responsible	General Manager								
Discussion	<p>Chapter 2 of the District Sewer Code governs the use of public and private sewers and establishes the rules and regulations for service and services rendered by the District.</p> <p>Section 2.06.001 defines a violation of the Sewer Code as a public nuisance and informs that violations may be abated by legal action.</p> <p>Section 2.06.002 states that violations of the Sewer Code must be corrected by the owner of record of the real property.</p> <p>Section 2.06.004 states that any person violating the provisions of the Sewer Code shall be subject to any and all existing criminal and civil penalties provided for under the laws of the State of California, and in addition thereto, shall be responsible to the District for any and all damages caused to the District by such violations.</p>								
Related Documents	<ul style="list-style-type: none"> • South Placer Municipal Utility District – Sewer Code 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the Sewer Code and update as necessary</td> <td>GM</td> <td>Every 5 years Last Review June 2018</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the Sewer Code and update as necessary	GM	Every 5 years Last Review June 2018
Task	Responsible Party	Scheduled Date							
Review the Sewer Code and update as necessary	GM	Every 5 years Last Review June 2018							



iv Operation and Maintenance Program

An effective operation and maintenance program is central to a high-performing sewer collection system and the reduction of SSOs. This section outlines the planned components of the District’s operation and maintenance programs.

iv-a. Maintain an Up-To-Date System Map

Requirement	Maintain an up-to-date map of the sanitary sewer system showing all gravity segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities.																																								
Responsible	District Engineer																																								
Discussion	<p>The District operates and maintains a Geographic Information System (GIS) mapping system that includes information for its wastewater collection system assets. The GIS mapping and associated attribute information is available to all staff through web maps available on desktops and tablets. These web maps are available to District staff in the office and in the field. These web maps are connected to District databases and as additions and corrections are made to an asset’s location or information, it is immediately viewable by staff using the maps. A pdf map book, which is updated monthly, is uploaded to all of the tablets taken into the field so that in the rare case of a loss of connectivity to the District’s network, users still have access to the District’s mapping while working or responding to an emergency. The District also maintains a limited number of hard copy map books in the rare case that web maps are not available.</p> <p>The assets and features that are available through the GIS mapping system include the following:</p> <table border="1"> <thead> <tr> <th>Sewer</th> <th>Facilities</th> <th>Boundaries</th> </tr> </thead> <tbody> <tr> <td>Control Valves</td> <td>Sewer Easements</td> <td>District Boundary</td> </tr> <tr> <td>FOG Extractors</td> <td>Sewer Access Easements</td> <td>Projects in District</td> </tr> <tr> <td>FOG Facilities</td> <td>PUEs</td> <td>Gated Access Points</td> </tr> <tr> <td>Gravity Lines</td> <td>Easement Roads</td> <td>Maintenance Zones</td> </tr> <tr> <td>Force Main Lines</td> <td>Lift Station Sites</td> <td>Map Grid</td> </tr> <tr> <td>Flow Recorder Locations</td> <td>Flow Recorder Sites</td> <td>Record Drawing Areas</td> </tr> <tr> <td>Lift Station Locations</td> <td></td> <td>Ward Boundaries</td> </tr> <tr> <td>Service Laterals</td> <td>Placer County Data</td> <td>Refund Boundaries</td> </tr> <tr> <td>Service Connections (PLCO)</td> <td>Address Points</td> <td>Sphere of Influence</td> </tr> <tr> <td>Manholes</td> <td>Parcels</td> <td>City/Town Limits</td> </tr> <tr> <td>Flushing Branches</td> <td>Roads</td> <td></td> </tr> <tr> <td>Stub/Caps</td> <td></td> <td></td> </tr> </tbody> </table>		Sewer	Facilities	Boundaries	Control Valves	Sewer Easements	District Boundary	FOG Extractors	Sewer Access Easements	Projects in District	FOG Facilities	PUEs	Gated Access Points	Gravity Lines	Easement Roads	Maintenance Zones	Force Main Lines	Lift Station Sites	Map Grid	Flow Recorder Locations	Flow Recorder Sites	Record Drawing Areas	Lift Station Locations		Ward Boundaries	Service Laterals	Placer County Data	Refund Boundaries	Service Connections (PLCO)	Address Points	Sphere of Influence	Manholes	Parcels	City/Town Limits	Flushing Branches	Roads		Stub/Caps		
Sewer	Facilities	Boundaries																																							
Control Valves	Sewer Easements	District Boundary																																							
FOG Extractors	Sewer Access Easements	Projects in District																																							
FOG Facilities	PUEs	Gated Access Points																																							
Gravity Lines	Easement Roads	Maintenance Zones																																							
Force Main Lines	Lift Station Sites	Map Grid																																							
Flow Recorder Locations	Flow Recorder Sites	Record Drawing Areas																																							
Lift Station Locations		Ward Boundaries																																							
Service Laterals	Placer County Data	Refund Boundaries																																							
Service Connections (PLCO)	Address Points	Sphere of Influence																																							
Manholes	Parcels	City/Town Limits																																							
Flushing Branches	Roads																																								
Stub/Caps																																									



Map corrections are noted by field crews, in accordance with established SOP, and submitted to the Engineering Technician for corrections to the GIS. Updates to the mapping system are immediately available to users who utilize the web maps. Updates are made to the hard copy grid maps once a month.

Mapping of the facilities that make up the District sewer collection system plays a critical role in the effective management of the system. The District's service area is divided into 43 maintenance zones. The maintenance zones break the sewer facilities up into basins (i.e., areas where sewer from all the facilities within that area drain to a common point). Many of the planned, routine maintenance activities are organized by maintenance zone. This approach facilitates a methodical and prioritized way of scheduling and completing work.

Related Documents

- [Link to Public-Facing Webmap](#)
- SOP for Map Updates

Plan & Schedule

None

Performance Indicators

- Timeliness of Map Updates



iv-b. Routine Preventative O&M Activities

Requirement	<p>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.</p>
Responsible	Superintendent
Discussion	<p><u>Computerized Maintenance Management System (CMMS)</u> The District uses the Central Square (formerly Lucity) enterprise asset and maintenance management system to plan and document the results of all work completed on District assets. Work orders are created, tracked, and completed for the tasks generated by each of the work programs described below. Detailed standard operating procedures (SOPs) related to the work programs are kept at the District offices and available upon request.</p> <p><u>Mainline CCTV Program</u> The objective of the mainline CCTV program is to inspect with CCTV every gravity mainline once every four (4) years to assess conditions and prevent SSOs. Specialized vehicles outfitted with specialized CCTV camera systems and software systems to inspect gravity mainlines. As a rule, CCTV inspections are performed before the line segments are cleaned to observe the undisturbed condition of the pipe. The observed conditions are categorized and recorded using the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment Certification Program (PACP). The District uses the CCTV software platform ITpipes to collect and analyze observations from CCTV inspections. The findings from CCTV inspections are available to all District employees for review and analysis through ITpipes software. The results of the routine CCTV inspection program drive many of the other work programs (e.g., inspection-driven cleaning, condition assessment, rehabilitation, FOG control). The District requires that all mainline deeded to the District by means of a bill of sale (e.g., new development), be inspected with CCTV prior to the expiration of the one-year warranty period. This work is typically accomplished by District forces. Although not considered part of the routine CCTV inspection program, these inspections are critical to ensure that sewer assets were installed correctly and to establish a baseline against which future CCTV inspections will be compared.</p> <p><u>Mainline High Velocity Vacuum Cleaning Program</u> The objective of the mainline high velocity vacuum cleaning program is to clean only the line segments that need to be cleaned to prevent blockages and SSOs. The District’s mainline cleaning program is driven by CCTV inspection results (i.e., CCTV-driven or Inspection-driven Cleaning). As described above, the District has a goal to inspect every gravity mainline with CCTV once every four (4) years. On the first of every month, the results of each CCTV inspection from the previous month are reviewed by two staff members. They collaborate and determine which gravity mainline segments need to be cleaned. Using two staff members ensures nothing is overlooking. A work order is created, and those lines are cleaned during the month. This helps ensure that the District is not cleaning “clean” lines. This</p>



allows the District to work effectively, allocate resources to other critical tasks, and lessens the amount of water used to achieve the objectives of the cleaning program to reduce SSOs and provide a high level of service to its customers.

Some gravity mainline segments require more frequent cleaning than once every four years based on the District's experience and history operating the collection system. These problem lines are often referred to as "hot spots". The District refers to gravity mainline segments that require more frequent cleaning as High Frequency Line Segments (HFLS). HFLS are cleaned on intervals that range from every month to every 48 months. At the beginning of every month, work orders are generated by the preventative maintenance scheduler in the CMMS for each HFLS that needs to be cleaned based on the frequency and the last clean date of each gravity mainline segment. This helps keep problematic gravity mainline segments from becoming a problem that results in an SSO.

Although the District strives to maintain a preventative or proactive approach to its maintenance programs, there are times when cleaning occurs as a reactive measure (i.e., SSO/blockage/odor cleaning, and pre-chemical root treatment cleaning).

Lift Station Maintenance Program

The objective of the lift station maintenance program is to maintain the reliability of the lift stations to effectively convey wastewater and prevent SSOs.

The District operates thirteen (13) sewer lift stations throughout the District. Twelve (12) have wet wells with submersible pumps and one is pneumatic. All are equipped with telephone auto-dialers for alarm notification and eleven (11) are equipped with SCADA. All have either a bypass manifold or it has been determined that the flows are such that the station can be maintained using the District's Hydro-Vac equipment to dewater in the event of emergency or scheduled repair. Five (5) stations have on-site generators to provide emergency electricity. Eight (8) stations have a receptacle and manual transfer switch for use with the District's portable generators. One station is pneumatic and can be operated with a portable generator or using a portable air compressor in the event of an emergency or scheduled maintenance/repair.

Weekly inspections are performed. During these routine inspections, the stations are checked for proper function and cleanliness. Any maintenance issues are either resolved during the inspection or are scheduled through the work order system. Elapsed time meter readings are logged and generators are inspected, as applicable.

Monthly maintenance on each lift station includes a high-pressure washdown of the wet well, cleaning of the floats, exercising all system valves, checking generator battery and fluids, and checking the SCADA backup battery.

Pumps are serviced by a professional service when needed.

Stations with excessive grease are equipped with peristaltic pumps that discharge chemical enzymes that live on the grease mat. This reduces the amount of grease build up, keeps it from solidifying and helps reduce odors.

Lower Lateral Assessment Program

The objective of the lower lateral assessment program is to assess the condition of lower laterals to prevent blockages and SSOs.

Lower laterals are inspected with CCTV push cameras from the property line cleanout to the mainline. If no defects are found, the inspection is documented in the CMMS and the lateral



will be assessed again in approximately ten (10) years. If defects that may cause a blockage are observed, the crew will rod the lateral with the goal of providing at least 30 days of service. Another inspection with CCTV is performed after rodding the lateral. If the operator does not believe the 30-day standard can be achieved, a work request is sent to the supervisor who assumes responsibility for maintaining service without an SSO.

Lower Lateral High Velocity Cleaning Program

The objective of the lower lateral high velocity cleaning program is to clean the lower laterals that need to be cleaned to prevent blockages and SSOs.

If the lower lateral assessment program discovers defects such as roots, grease, or debris in a lateral, the lateral is flagged to be cleaned with a high velocity jetter machine (i.e., jet rodded). Each month a work order is generated, and all the laterals flagged during the prior month are cleaned. The lower lateral cleaning program is inspection-driven like the mainline cleaning program. The operators assigned that work order are provided defect information for each lateral so the proper nozzle can be selected.

Chemical Root Treatment Program

The objective of the chemical root treatment program is to mitigate the risk of blockages and SSOs caused by roots until a more permanent solution can be applied.

Mainline stretches and service laterals that have been identified as having significant root intrusion and are not scheduled to be repaired/rehabilitated in the immediate future are chemically treated to temporarily control the roots and prevent blockages and related SSO's. This is a mitigation measure and is employed to buy time until a more permanent repair/rehabilitation method can be applied.

Root intrusion defects are typically identified via the District's CCTV inspection programs. The District has a Root Control Program for service laterals and mainline segments. These defects, their severity ratings, and their exact locations within the collection system are maintained in the CMMS. Mainline segments and service laterals are prioritized and scheduled for treatment. The treatment of mainline segments is typically contracted to outside services. It is generally accepted that the chemical root treatment will be applied on each pipe every two years. District forces cut the roots from the pipes in January/February and the chemical root treatment is applied in April/May of each year.

The treatment of service laterals is typically conducted by a District crew with District equipment. Service laterals requiring chemical root treatment are scheduled in the CMMS and completed throughout the year.

The District maintains a supply of smaller-dose chemical root treatment that can be applied into a service through a clean out by District employees. On a case-by-case basis, this will be employed if deemed necessary to maintain flows until either the pipe is repaired/rehabilitated or until it can be treated chemically by contracted forces or a District crew.

Property Line Cleanout (PLCO) Program

The objective of the property line cleanout program is to ensure access to the District-owned lower lateral for maintenance to provide a high level of service to our customers and prevent failures that result in blockages and SSOs.

The District assumed ownership of the lower lateral on March 1, 2017. The PLCO is an important appurtenance, as its the primary means of access to the District-owned lower lateral.



As of July 2017, the District identified 421 connections that did not have a PLCO. The District's goal is all lower laterals will have a PLCO by 2025.

Another component of the PLCO program is the continuous task of locating/raising/repairing PLCO's. They are constantly being damaged or covered up under landscaping. The District's two CCTV crews are primarily responsible for identifying PLCO's that need to be made accessible. For each mainline segment CCTV inspected, crews inspect each parcel that is connected to determine if the PLCO is readily accessible. If it requires minor effort to rectify, the PLCO is raised immediately. If more extensive effort is required, the parcel will be tagged, and a work order will be created to resolve the issue.

Pipe Repair Program

The objective of the pipe repair program is to address issues that could potentially cause blockages and/or SSOs in a timely manner.

The District runs a crew whose primary responsibility is to perform repairs of pipe and other collection system assets. CCTV inspections are performed on a continuous basis with the intent of assessing the condition of the pipes and identifying defects. Defects are rated, a method of repair is determined, and the repair/rehabilitation of the most critical problems is performed first.

Excavation Repairs – The District owns the necessary equipment to perform excavation repairs up to approximately 15 feet in depth, which allows this method to be utilized throughout a majority of the system.

For repairs where depths exceed the capabilities of the District's equipment, the District will opt to either rent the necessary equipment or use contracted forces to perform the work.

Typical defects that can be repaired by this method are Cracked Pipe, Offset Joints, Sags, Protruding Taps, and Root Intrusion.

CIPP Point Repairs – The District owns the equipment necessary and maintenance workers are trained to perform CIPP point repairs in 4-inch through 10-inch pipes. Labor and equipment to perform this work is programmed in accordance with established goals.

CIPP Liners – The District utilizes contracted forces to install CIPP liners when defects (roots, cracks, and infiltration) are continuous throughout the pipe. These liners can be installed in pipes ranging from 4" to 54" in diameter. When installed in mainline pipes with lateral connections, a lateral connection seal is also installed.

Easement Maintenance Program

The objective of the easement maintenance program is to maintain year-round access to all sewer facilities contained within an easement for maintenance, repair, and emergency access.

During the fall, site inspections serve the purpose of evaluating the integrity of the easement access roads prior to the rainy season to ensure no change in condition (e.g., fallen trees, illegal dumping, and beaver activity with its related flooding) that might hinder access.

Typically, inspection, maintenance, and repair of easement access roads are performed in the spring and may include the following tasks: trimming trees and brush to ensure access for vehicles and equipment, mowing weeds; grading AB surfaces; placing additional AB; inspecting all manholes, removing debris that might obstruct access, cleaning culverts, and placing additional rock at culverts to control erosion.



The District has developed a pre-emergent and weed abatement program to decrease the maintenance time required for current operations. The District has personnel trained and certified as qualified applicator of pesticides and owns a truck-mounted weed spraying system. Some easement access roads are paved. These typically require less maintenance. However, the condition of these roads are also assessed and inspected to ensure free and clear access.

Manhole Inspection Program

The objective of the manhole inspection program is to maintain the integrity of the access points to the collection system so preventative maintenance and emergency response procedures can occur to prevent blockages and SSOs.

Manhole inspections are performed visually by the CCTV crew as they perform CCTV inspections of the gravity mainlines. The upstream manhole of all gravity mainlines are inspected as CCTV inspections occur. The observations from manhole inspections are entered into the CMMS and available for review by all District employees. Urgent issues discovered during manhole inspections are escalated to supervisors for proper resolution.

Flow Monitoring Program

The objective of the flow monitoring program is to ensure adequate sewer capacity.

The District owns and operates multiple permanent/fixed flow recorders, portable flow monitors, and level-sensing devices (i.e., SmartCovers and iTrackers). These devices are used to collect data about the amount of wastewater being conveyed through the collection system. Fixed flow recorders are located on major trunk lines. Three are located on the borders of the District and are used to measure flows for billing/treatment costs. All serve to monitor inflow and infiltration and provide data for the District's hydraulic model. Dry weather flows are gathered during the months of June, July, August, and September and are used as a benchmark to determine wet weather peaking factors.

All fixed flow recorders are equipped with sensors and communications equipment to connect them to the District's SCADA system. Actual live data and flow conditions can be monitored in real-time and alarm set points are created to alert staff of pending emergencies. The SCADA system is monitored from computer workstations at the office and from tablets and phones in the field. These devices are all utilized to monitor flow conditions during significant rain events. These fixed recorders are interrogated regularly, and the data is maintained in a spreadsheet for the purpose of analysis. "Billing" recorder data is summarized and forwarded to SPWA for billing purposes.

Portable flow monitors are typically installed on collector sewer lines to measure flow from smaller sewer basins. These devices are installed on a temporary basis (e.g., 2-3 weeks). They are used to establish average dry weather diurnal curves and to investigate the sources of inflow and infiltration.

Level-sensing devices are strategically placed in manholes to monitor the depth of flow. Some of the level-sensing units have the ability to alarm the District of pending emergencies (e.g., blockages, surcharging) so that the District can respond before a SSO occurs. Level-sensing devices are also used to monitor selected high-frequency line segments (i.e., hot spots) to verify or, when warranted, adjust cleaning frequencies.

Related Documents

- SOPs associated with each work programs are available on the District intranet.



Plan &
Schedule

Task	Responsible Party	Scheduled Date
Mainline CCTV Program		
Inspect every gravity mainline.	SUP	Every 4 years
Review CCTV observations to generate inspection-driven cleaning work orders and to appropriately adjust the frequency of maintenance activities based.	SUP	Monthly
Mainline High Velocity Vacuum Cleaning Program		
Clean all scheduled High Frequency Line Segments (HFLS).	SUP	Monthly
Clean all mainlines identified through CCTV inspection.	SUP	Monthly
Lift Station Maintenance Program		
Inspect all lift stations.	SUP	Weekly
Clean all lift stations.	SUP	Monthly
Lower Lateral Assessment Program		
Assess 1600 laterals.	SUP	Annually
Lower Lateral High Velocity Cleaning Program		
Clean all laterals identified through assessments.	SUP	Monthly
Chemical Root Treatment Program		
Chemically treat 600 laterals.	SUP	Annually
Property Line Cleanout (PLCO) Program		
Have a PLCO on every lower lateral.	SUP	By 2025
Install 85 PLCOs.	SUP	Annually
Pipe Repair Program		
Complete 30 pipe repairs.	SUP	Annually
Easement Maintenance Program		
Assess easements and access roads.	SUP	Biannually
Manhole Inspection Program		
Inspect 1750 manholes.	SUP	Annually
Flow Monitoring Program		
Inspect calibration of fixed flow recorders.	SUP	Quarterly



iv-c. Prioritization Program

Requirement	<p>Develop a 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 TV 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.</p>
Responsible	District Engineer and Superintendent
Discussion	<p><u>Inspection and Condition Assessment</u></p> <p>The District regularly inspects its manholes, sewer pipes, and lift stations and has a system for ranking defects and performing condition assessment (as described above in <i>iv-b. Routine Preventative O&M Activities</i>). All observations collected through CCTV inspections are reviewed each month and inspection-driven action plans are generated based on the results of that review.</p> <p><u>Capital Improvement Program (CIP)</u></p> <p>The District plans yearly projects for rehabilitation and replacement. Condition assessment is a continuous process as is the development of future rehabilitation and replacement (R&R) projects. Typical R&R projects include CIPP liner installation, CIPP pipe patch installation, manhole liner application, and complete pipe replacement. These repairs are completed based on priority and are performed by District and contracted forces.</p> <p>Every five (5) years the District evaluates the capacity of its sewer collection system. This effort serves two purposes. First, it helps assure that capacity exists for its current customers and for planned growth in the communities it serves. Second, this effort meets the District’s obligation under the Mitigation Fee Act to evaluate the participation (e.g., connection) fee for new connections. The most recent evaluation was completed, and the District’s System Evaluation and Capacity Assurance Plan (SECAP) was finalized in January 2020. The SECAP identifies the location, pipe diameter, length, and associated costs of needed future improvements. The timing of these future improvements is mostly driven by development.</p> <p>Many of the capital improvement projects identified in the District’s SECAP assume the replacement of an existing facility to provide the needed additional capacity. The District manages different funds for different activities. One fund (i.e., Fund 300) is used for the extension or expansion of sewer facilities for new users and is paid for through participation (i.e., connection) fees collected from new development. Another fund (i.e., Fund 400) is used to pay for the eventual replacement and/or rehabilitation of assets when they reach the end</p>



of their useful service life and is paid for through existing customer service charges. The costs of SECAP projects are divided based on project specifics to align with the designated functions of these two funds.

Related Documents

- [District Webpage – System Evaluation and Capacity Assurance Plan](#)

Plan & Schedule

Task	Responsible Party	Scheduled Date
Review CCTV observations to generate inspection-driven rehabilitation work orders and action plans (e.g., repairs).	SUP	Monthly
Review the SECAP and update/republish as necessary.	DE	Every 5 years Last Review Jan 2020



iv-d. Training

Requirement	Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained.								
Responsible	Superintendent								
Discussion	<p>The District requires all field staff, and Technical Services positions to maintain California Water Environment Association Collection Systems certification relevant to their job classification. All field staff are certified at or above the District-required level.</p> <p>The District cross-trains all of the field staff to become proficient at both maintenance and construction work processes for collection system operations. Field personnel periodically rotate between maintenance and repair crews, which allows for on-the-job training on a consistent basis. Based on the size of our system, and the ratio of dedicated field positions, cross-trained staff is imperative to achieve consistent success on the maintenance programs listed in section <i>iv-b. Routine Preventative O&M Activities</i>.</p> <p>The District conducts annual emergency by-pass pump and emergency generator training for lift station failures. Emergency response training, in accordance with the District’s Overflow Emergency Response Plan (OERP) is conducted on an annual basis.</p> <p>Training for new equipment or for newly established procedures is provided prior to the equipment being put into service and/or procedures being implemented. Additionally, each time crew changes occur, all maintenance workers first review the standard operating procedures (SOPs) associated with the crew they are assigned.</p> <p>The internal District training program is outlined and tracked by the District Regulatory Compliance position. All training is documented by employee in a training software platform (i.e., Vector Solutions) so that reports can be produced to demonstrate a history of compliance.</p> <p>All contracted labor is required to provide evidence of competent person training, shoring training, traffic control and other safety training appropriate to the work being performed. District inspectors oversee all contracted labor to ensure compliance.</p>								
Related Documents	<ul style="list-style-type: none"> • Training schedule • SOPs used in training are available on the District intranet 								
Plan & Schedule	<table border="1"> <thead> <tr> <th style="background-color: #d9e1f2;">Task</th> <th style="background-color: #d9e1f2;">Responsible Party</th> <th style="background-color: #d9e1f2;">Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Conduct trainings</td> <td>SUP</td> <td>Per schedule</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Conduct trainings	SUP	Per schedule
Task	Responsible Party	Scheduled Date							
Conduct trainings	SUP	Per schedule							



iv-e. Identify Equipment and Critical Replacement Parts

Requirement	Provide equipment and replacement part inventories, including identification of critical replacement parts.								
Responsible	Superintendent								
Discussion	<p>The District maintains critical replacement parts for all of its lift stations. Included, but not limited to, items such as replacement pumps; force main pipe and mechanical repair couplings for each size/type of pipe; control floats and transducers; relays; and fuses. All are clearly labeled for the appropriate application. Audits of critical parts are periodically performed.</p> <p>All lift stations are equipped with either a standby generator with automatic transfer switch or a receptacle (with manual transfer switch) for the District’s three (3) portable generators. In addition, larger volume stations are equipped with a bypass manifold, which allows for de-watering of the wet well, using portable pumps, in the event the pumps and/or controls are inoperable. Low volume stations can be de-watered using one of the District’s two (2) combination hydro-vacuum units.</p> <p>The District contracts with Aqua Sierra Controls Inc, of Auburn, CA to provide 24-hour service for lift station control and electrical problems that District staff cannot immediately resolve.</p>								
Related Documents	<ul style="list-style-type: none"> • Critical spare parts inventories 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review critical spare parts inventories</td> <td>SUP</td> <td>Annually</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review critical spare parts inventories	SUP	Annually
Task	Responsible Party	Scheduled Date							
Review critical spare parts inventories	SUP	Annually							



v Design and Performance Provisions

The design and construction phase of the lifecycle of sewer facilities is critical to achieve a high level of service. If portions of the sewer system are designed and/or constructed incorrectly, they likely will not function properly regardless of the operation and maintenance program efforts. This element of the SSMP is crucial reducing and preventing SSOs.

v-a. Design and Construction Standards and Specifications

Requirement	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.								
Responsible	District Engineer								
Discussion	<p>The District’s Standard Specifications and Improvement Standards for Sanitary Sewers (Standards) provide design and construction standards for the installation of new sewers facilities and for the repair/rehabilitation of existing sewer facilities. The Standards are organized into sections covering general requirements, materials, design, pump stations, installation, easements, building sewers, and standard details.</p> <p><u>Plan Review Process</u></p> <p>The plans and specifications for any public or private sewer facilities within the District must be approved in writing by the District prior to any commencement of any construction activities. The Technical Services Department coordinates the review and approval of all planned sewer construction by developers and residents. The plan review process is outlined on the District’s website. This process helps ensure that sewer facilities are planned and designed in accordance with District Standards so those facilities effectively convey sewer and do not increase the likelihood of SSOs.</p>								
Related Documents	<ul style="list-style-type: none"> • South Placer Municipal Utility District – Standard Specifications and Improvement Standards for Sanitary Sewers • New Development Plan Check Process 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the Standards and update as necessary</td> <td>DE</td> <td>Every 5 years Last Update May 2021</td> </tr> </tbody> </table>	Task	Responsible Party	Scheduled Date	Review the Standards and update as necessary	DE	Every 5 years Last Update May 2021		
Task	Responsible Party	Scheduled Date							
Review the Standards and update as necessary	DE	Every 5 years Last Update May 2021							
Performance Indicators	<ul style="list-style-type: none"> • Timeliness of Plan Review 								



v-b. Procedures and Standards for Inspecting and Testing

Requirement	Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.								
Responsible	District Engineer								
Discussion	<p>The District takes a “cradle to grave” approach when it comes to managing its sewer facilities. Assets (i.e., pipes, manholes, laterals, lift stations) approved for construction through the plan review process are entered into the District CMMS and are given a status indicating that they are not owned by the District yet. This way, work orders and inspection results can be documented, tracked, and stored from the time that the assets are first placed in the ground. Should failures occur that cause a SSO, information about the asset can be reviewed all the way back to construction.</p> <p>Section 5 of the District Standard Specifications and Improvement Standards for Sanitary Sewers outlines the requirements for construction of sewer as well as the inspection and testing requirements prior to District acceptance of new or rehabilitated sewer facilities.</p> <p><u>Acceptance Process</u> District Inspectors from the Technical Services Department follow the testing procedures and process outline in the District Standards to help ensure that sewer facilities are constructed in accordance with approved plans and specifications. This step is equally as critical as the design process in ensuring that the District sewer collection system and the private systems that connect to it are constructed free of defects that would increase the likelihood of SSOs.</p> <p><u>Warranty CCTV Inspection</u> The District requires a one-year warranty on all construction projects. Prior to the expiration of the warranty, all of the sewer facilities are inspected with CCTV. This process is tracked through the District’s CMMS. All observed defects are brought to the attention of the contractor/developer and addressed.</p>								
Related Documents	<ul style="list-style-type: none"> • South Placer Municipal Utility District – Standard Specifications and Improvement Standards for Sanitary Sewers 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the Standards and update as necessary</td> <td>DE</td> <td>Every 5 years Last Update May 2021</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the Standards and update as necessary	DE	Every 5 years Last Update May 2021
Task	Responsible Party	Scheduled Date							
Review the Standards and update as necessary	DE	Every 5 years Last Update May 2021							
Performance Indicators	<ul style="list-style-type: none"> • The number of structural defects observed during warranty CCTV 								



vi Overflow Emergency Response Plan

Sanitary Sewer Overflows (SSOs) can have serious public health and environmental consequences and can cause significant and costly property damage. It is necessary to develop and implement a SSO Emergency Response Plan (SSO ERP) that identifies measures to protect public health and the environment, reduce SSOs, limit liability, and limit the severity of damage/impact.

vi-a. Proper Notification Procedures

Requirement	The SSO ERP must include proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner.
Responsible	Superintendent
Discussion	<p>Section 1 of the District’s Sanitary Sewer Overflow Emergency Response Plan (SSO ERP) contains notification procedures from contact of on-call/first responder personnel to proper and timely notification of regulatory agencies, other utility owners and the public.</p> <p>The District is notified of a potential SSO in three ways.</p> <ul style="list-style-type: none"> • During business hours, customers are directed to call the District office. This number is monitored by administrative personnel continuously during business hours. The information is routed to the Field Supervisor or assigned SSO Supervisor. The responding supervisor dispatches a crew and makes a return call to the notifying party. • During non-business hours, customers are directed to the 24-hour phone number and routed through an automated system that directs the caller to leave pertinent information. Upon completion of the call, the automated system forwards the voicemail to the First Responder. The First Responder retrieves the information and responds in accordance with District procedures. • All District lift stations are equipped with telephone auto-dialers and SCADA (i.e., alarm telemetry). When an alarm occurs at a lift station the telemetry sends the alarm to the on-call pager and the on-call cell phone until it receives a response. The First Responder dials back, retrieves the alarm information, and responds in accordance with District procedures. <p>The District’s First Responder personnel are responsible to contact a SSO Supervisor immediately upon discovery of any SSO. SSO Supervisors assist the First Responder in appropriately responding to a SSO, documenting the SSO, and following notification requirements. SSO Supervisors are responsible to notify the other District staff monitoring the sewer emergency line that they have received and are responding to the complaint or alarm.</p>
Related Documents	<ul style="list-style-type: none"> • Sanitary Sewer Overflow Emergency Response Plan



Plan & Schedule	Task	Responsible Party	Scheduled Date
		Review the SSO ERP and update as necessary	SUP



vi-b. Appropriate Response

Requirement	The SSO ERP must include a program to ensure an appropriate response to all overflows.								
Responsible	Superintendent								
Discussion	Section 2 of the District’s Sanitary Sewer Overflow Emergency Response Plan (SSO ERP) provides procedures explaining actions to be taken for appropriate response to sewage overflows. It sets expectations regarding the timeliness of the response by outlining the requirements for response times during business hours and during non-business hours. It outlines the process for communicating with the caller/notifying party. It outlines the priorities for potential response activities. It describes the procedures for initial assessment and investigation referring to the “SSO Field Report” which is to be completed during a SSO event.								
Related Documents	<ul style="list-style-type: none"> Sanitary Sewer Overflow Emergency Response Plan 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the SSO ERP and update as necessary</td> <td>SUP</td> <td>Every 5 years Last Update Sep 2017</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the SSO ERP and update as necessary	SUP	Every 5 years Last Update Sep 2017
Task	Responsible Party	Scheduled Date							
Review the SSO ERP and update as necessary	SUP	Every 5 years Last Update Sep 2017							



vi-c. Prompt Notification and Reporting

Requirement	The SSO ERP must include procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with the MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDRs or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification.								
Responsible	Superintendent								
Discussion	Section 7 of the District’s Sanitary Sewer Overflow Emergency Response Plan (SSO ERP) contains measures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g., California Office of Emergency Services, Regional Water Boards, health agencies, water suppliers, general public, etc.) of all SSOs that that potentially affect public health or reach the Waters of the State and Waters of the U.S. and identify persons responsible for notification. Reporting requirements outlined in the Monitoring and Reporting Program (MRP) of the SSS WDRs are incorporated into the District’s SSO ERP and procedures.								
Related Documents	<ul style="list-style-type: none"> Sanitary Sewer Overflow Emergency Response Plan 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the SSO ERP and update as necessary</td> <td>SUP</td> <td>Every 5 years Last Update Sep 2017</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the SSO ERP and update as necessary	SUP	Every 5 years Last Update Sep 2017
Task	Responsible Party	Scheduled Date							
Review the SSO ERP and update as necessary	SUP	Every 5 years Last Update Sep 2017							



vi-d. OERP Distribution and Training

Requirement	The SSO ERP must include procedures to ensure that appropriate staff and contractor personnel are made aware of proper procedures and are appropriately trained.											
Responsible	Superintendent											
Discussion	The District conducts annual training for all relevant staff on emergency response procedures as outlined in the District’s Sanitary Sewer Overflow Emergency Response Plan. All field personnel are required to demonstrate their ability to perform emergency response duties responsibly and effectively prior to being designated as First Responders and being placed into the On-Call rotation. Additionally, all contractors performing work on the sewer collection system are trained on how to provide prompt notification to the District in the event of a sewer emergency and the steps they can take to assist with an initial SSO response (typically containment measures).											
Related Documents	<ul style="list-style-type: none"> Sanitary Sewer Overflow Emergency Response Plan 											
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Provide SSO ERP training annual to staff</td> <td>SUP</td> <td>Annually</td> </tr> <tr> <td>Provide training to contract employees</td> <td>SUP</td> <td>By project</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Provide SSO ERP training annual to staff	SUP	Annually	Provide training to contract employees	SUP	By project
Task	Responsible Party	Scheduled Date										
Provide SSO ERP training annual to staff	SUP	Annually										
Provide training to contract employees	SUP	By project										



vi-e. Emergency Operations

Requirement	The SSO ERP must include procedures to address emergency operations, such as traffic and crowd control and other necessary response activities.								
Responsible	Superintendent								
Discussion	<p>A portion of Section 3 of the District’s Sanitary Sewer Overflow Emergency Response Plan (SSO ERP) provides procedures to address emergency operations when a SSO has entered a private structure/residence.</p> <p>Section 5 of the District’s SSO ERP contains information and procedures for addressing hazardous spills. This includes SSOs that may contain hazardous materials. This section outlines who to contact in the event that additional resources are needed in an emergency operation. This section also provides direction when traffic control and crowd control are necessary to respond to a SSO.</p>								
Related Documents	<ul style="list-style-type: none"> Sanitary Sewer Overflow Emergency Response Plan 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the SSO ERP and update as necessary</td> <td>SUP</td> <td>Every 5 years Last Update Sep 2017</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the SSO ERP and update as necessary	SUP	Every 5 years Last Update Sep 2017
Task	Responsible Party	Scheduled Date							
Review the SSO ERP and update as necessary	SUP	Every 5 years Last Update Sep 2017							



vi-f. Containment/Prevention and/or Minimization/Correction of Spills

Requirement	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.								
Responsible	Superintendent								
Discussion	<p>Section 3 of the District’s Sanitary Sewer Overflow Emergency Response Plan provides containment and mitigation procedures, to prevent or minimize the impact of an SSO on the environment. The SSO ERP outlines who is responsible to implement the procedures, what methods to use depending on the type of sewer facility and the nature of the SSO, and what equipment can be used. The procedures of this section outline options for responding to a SSO that has entered a separate storm drain system.</p> <p>Spill containment kits are maintained in designated District vehicles and at the corporation yard so that they are readily available.</p>								
Related Documents	<ul style="list-style-type: none"> Sanitary Sewer Overflow Emergency Response Plan 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the SSO ERP and update as necessary</td> <td>SUP</td> <td>Every 5 years Last Update Sep 2017</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the SSO ERP and update as necessary	SUP	Every 5 years Last Update Sep 2017
Task	Responsible Party	Scheduled Date							
Review the SSO ERP and update as necessary	SUP	Every 5 years Last Update Sep 2017							



vii FOG Control Program

The District has determined that a FOG Control Program is necessary to appropriately and effectively mitigate the discharge of FOG to the system that could cause blockages and SSOs. This section describes the District’s efforts to control FOG to reduce the impacts of SSOs.

vii-a. FOG Public Outreach Program

Requirement	The FOG program shall have an implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG.								
Responsible	District Engineer								
Discussion	<p>The District has a public education outreach program directed at residential customers. The District regularly includes messaging about the proper disposal of FOG in its quarterly newsletter to customers and on its website. This FOG-related messaging is typically included in the fall newsletter in advance of holiday cooking/baking. In addition, messaging related to the proper disposal of FOG is on stickers/wraps on District vehicles that circulate throughout the District all year. The District has purchased equipment and materials to promote the residential FOG program during community events and educational outreach to schools.</p> <p>The District also makes significant efforts to reach out to and educate individuals working in the food services industry during inspections of food service establishments (FSEs) and their associate grease control devices. The District has produced and provides outreach and educational materials during those visits. The messaging includes best practices in kitchens, how to properly dispose of FOG, and how to properly maintain grease control devices.</p> <p>The District is also a member of the “Live Sewer Smart” group, which is a group of agencies within southwestern Placer County that own and operate sewer collection systems. The “Live Sewer Smart” group promotes proper use of the sewer collection system (i.e., proper disposal of FOG, avoiding flushing wipes, proper disposal of medications). The group’s outreach efforts include the website, email distribution lists, and commercials in local movie theaters.</p>								
Related Documents	<ul style="list-style-type: none"> • District Webpage – FOG Program • Live Sewer Smart Website 								
Plan & Schedule	<table border="1"> <thead> <tr> <th style="background-color: #d9e1f2;">Task</th> <th style="background-color: #d9e1f2;">Responsible Party</th> <th style="background-color: #d9e1f2;">Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Attend at least one community outreach event</td> <td>DE</td> <td>Annually</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Attend at least one community outreach event	DE	Annually
Task	Responsible Party	Scheduled Date							
Attend at least one community outreach event	DE	Annually							



vii-b. FOG Disposal

Requirement	The FOG control program shall include a plan and schedule for the disposal of FOG generated within the sanitary sewer system service area.
Responsible	District Engineer
Discussion	<p>FOG generated within the sanitary service area is currently removed by District crews during the course of routine maintenance of pipes and lift stations. Grease removed from the system is disposed of at either the Placer County Loomis Lift Station (formerly SMD 3 WWTP) located on Auburn Folsom Road near the intersection of Dick Cook Road or the City of Roseville Dry Creek WWTP located on Booth Road in Roseville CA.</p> <p>FOG generated by food service establishments (FSEs) is collected in grease control devices owned and maintained by the FSEs. The FOG that accumulates in the grease control devices is pumped out by contractors hired by the FSE at a frequency prescribed by the District. The District monitors the frequency of pump outs and the quantity of grease removed with each pump out using SwiftComply. SwiftComply is a web-based FOG compliance software built specifically to track the pump out and inspection of grease control devices. FSEs submit information regarding pump outs directly into SwiftComply for later review by the District. SwiftComply will automatically flag a FSE as non-compliant if they are late in submitting a scheduled pump out.</p>
Related Documents	<ul style="list-style-type: none">• Kitchen Best Management Practices Poster
Plan & Schedule	None



vii-c. Legal Authority

Requirement	The District shall have the legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG.								
Responsible	District Engineer								
Discussion	Chapter 3 of the District’s Sewer Code was established to facilitate the maximum beneficial use of the District’s sewer services and facilities while preventing blockages of sewer lines resulting from discharges of FOG into the public sewer. The Sewer Code and the MUD Act (Municipal Utility District Act of the State of California) provide the legal authority to prohibit discharges of FOG to the system. The District also has the legal authority to enact measures to help prevent blockages caused by FOG (e.g., installation and maintenance of properly designed grease control devices, inspection of FSEs and GRDs, require FOG wastewater discharge permits, require kitchen best management practices, levee fines, issue enforcement actions).								
Related Documents	<ul style="list-style-type: none"> • Chapter 3 of the District Sewer Code 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the Sewer Code and update as necessary</td> <td>GM</td> <td>Every 5 years Last Review June 2018</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the Sewer Code and update as necessary	GM	Every 5 years Last Review June 2018
Task	Responsible Party	Scheduled Date							
Review the Sewer Code and update as necessary	GM	Every 5 years Last Review June 2018							



vii-d. Grease Removal Devices

Requirement	The FOG program shall include 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.								
Responsible	District Engineer								
Discussion	<p>Chapter 3 of the District Sewer Code and the District’s Standard Specifications together require the installation of grease control devices (such as traps or interceptors), design standards for removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements.</p> <p>SwiftComply, a web-based FOG compliance software built specifically to track the compliance of establishments with grease control devices against maintenance requirements (e.g., pump outs, cleanings, inspections). SwiftComply stores records of pump outs, cleanings, inspections, and enforcement actions in a database for review and reporting at any time.</p>								
Related Documents	<ul style="list-style-type: none"> • South Placer Municipal Utility District – Standard Specifications and Improvement Standards for Sanitary Sewers (see sections 3.16 and 5.32) 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the Sewer Code and update as necessary</td> <td>GM</td> <td>Every 5 years Last Review June 2018</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the Sewer Code and update as necessary	GM	Every 5 years Last Review June 2018
Task	Responsible Party	Scheduled Date							
Review the Sewer Code and update as necessary	GM	Every 5 years Last Review June 2018							



vii-e. Inspection

Requirement	The District shall have the authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance.								
Responsible	District Engineer								
Discussion	Chapter 3 of the District’s Sewer Code provides the authority to inspect grease producing facilities and enforcement authorities.								
Related Documents	<p>Inspection and enforcement are provided by the Technical Services Department, with one full-time position dedicated specifically to inspection and enforcement of the FOG program.</p> <ul style="list-style-type: none"> • Chapter 3 of the District Sewer Code 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the Sewer Code and update as necessary</td> <td>GM</td> <td>Every 5 years Last Review June 2018</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the Sewer Code and update as necessary	GM	Every 5 years Last Review June 2018
Task	Responsible Party	Scheduled Date							
Review the Sewer Code and update as necessary	GM	Every 5 years Last Review June 2018							
Performance Indicators	<ul style="list-style-type: none"> • Percentage of FOG-producing facilities in compliance as recorded in SwiftComply 								



vii-f. Identification of Potential FOG Blockages

Requirement	The FOG control program shall include an identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section.								
Responsible	District Engineer / Superintendent								
Discussion	The District identifies specific portions of the collection system where excessive amounts of FOG accumulate through its CCTV Inspection Work Program. These line segments are added to the list of “High Frequency Cleaning Line Segments”. All of these “High Frequency Cleaning Line Segments” have been evaluated, prioritized, assigned a cleaning frequency, and are cleaned using high pressure hydro-vacuum units. This is currently the primary means to control grease accumulation within the collection system.								
Related Documents	None								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Clean HFLS at the prescribed frequency</td> <td>SUP</td> <td>As Needed</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Clean HFLS at the prescribed frequency	SUP	As Needed
Task	Responsible Party	Scheduled Date							
Clean HFLS at the prescribed frequency	SUP	As Needed							
Performance Indicators	<ul style="list-style-type: none"> Number of FOG-related SSOs 								



vii-g. Source Control Measures

Requirement	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.
Responsible	District Engineer
Discussion	The District's source control measures are directed primarily at Food Service Establishments (FSEs). FSEs are categorized broadly by the District and include any commercial establishment that is generating and discharging FOG. The District employs an inspector that is primarily tasked with inspecting, monitoring compliance, and educating FSEs related to FOG discharge. The FOG Inspector ensures that FSEs have grease control devices that are appropriately designed and maintained to control the discharge of FOG to the sewer.
Related Documents	None
Plan & Schedule	None



viii System Evaluation and Capacity Assurance Plan

viii-a. Identify Hydraulic Deficiencies

Requirement	Describe 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.								
Responsible	District Engineer								
Discussion	<p>The District regularly prepares a System Evaluation and Capacity Assurance Plan (SECAP). The effort includes the use of a computerized hydraulic model within a GIS environment to assess capacity and project future growth and its potential impact on sewer capacity. The specific objectives of the SECAP include:</p> <ul style="list-style-type: none"> Evaluate the capacity of the collection system under various scenarios (i.e., existing dry weather, existing wet weather, near-term wet weather, and long-term wet weather conditions) to identify potential capacity deficiencies and assign capital improvements projects to address any potential deficiencies for each scenario. Evaluate all collection system facilities six inches in diameter and larger. Estimate the costs of planned capital improvement projects that address capacity deficiencies. The estimated costs are used in the District’s Nexus Study to determine the participation fee for new connections to the sewer system. Comply with requirements of the SSS WDR. <p>This SECAP provides the District with updated information on the existing and future hydraulic capacity of the collection system. The SECAP describes the assumptions used, the process of model development, the model simulation results, and the resulting proposed capital improvement projects.</p>								
Related Documents	<ul style="list-style-type: none"> District Webpage – System Evaluation and Capacity Assurance Plan 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the SECAP and update/republish as necessary.</td> <td>DE</td> <td>Every 5 years Last Review Jan 2020</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the SECAP and update/republish as necessary.	DE	Every 5 years Last Review Jan 2020
Task	Responsible Party	Scheduled Date							
Review the SECAP and update/republish as necessary.	DE	Every 5 years Last Review Jan 2020							



viii-b. Establish Appropriate Design Criteria

Requirement	Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria.
Responsible	District Engineer
Discussion	<p>The 10-year, 6-hour storm event was established as the design storm for the District during the development of the 2009 master plan. The 10-year, 6-hour storm event continues to be used as the design storm for system evaluations and capacity assurance plans.</p> <p>The design storm for SECAP model simulations is developed using the EPA's Sanitary Sewer Overflow Analysis and Planning (SSOAP) Toolbox. The SSOAP Toolbox is a suite of computer software tools that allows one to utilize collected data for both sewer flows and rainfall to predict rainfall-dependent inflow and infiltration (RDI/I). RDI/I is defined by using the RTK method to generate synthetic unit hydrographs for each basin within the collection system. The unit hydrographs are used to develop the design storm hydrographs. The 10-yr, 6-hr storm event for the Rocklin area as defined by the National Oceanic and Atmospheric Administration (NOAA) Atlas 14, Volume 6, Version 2 data is applied to the synthetic unit hydrographs to produce the RDI/I hydrographs for each basin.</p>
Related Documents	<ul style="list-style-type: none"> • District Webpage – System Evaluation and Capacity Assurance Plan
Plan & Schedule	None
Performance Indicators	<ul style="list-style-type: none"> • Number of capacity-related SSOs



viii-c. Capacity Enhancement Measures

Requirement	Define the steps needed to establish a short- 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.								
Responsible	District Engineer								
Discussion	<p>The SECAP outlines planned capital improvement projects to address identified hydraulic deficiencies based on existing, near-term, and long-term growth scenarios. Generally, the planned improvements assume an increase in pipe size until further engineering can be performed. Opinions of probable construction costs are generated using the District’s adopted Schedule of Values or using estimates based on engineering design if it has been completed.</p> <p>The District manages different funds for different activities. One fund (i.e., Fund 300) is used for the extension or expansion of sewer facilities for new users. Another fund (i.e., Fund 400) is used to depreciate assets and pay for the eventual replacement and/or rehabilitation of assets when they reach the end of their useful service life. The District uses a method based on the ratio between the existing (Fund 400) and the proposed (Fund 300) cross-sectional areas of the trunk sewer to apportion the costs of the project. This method was selected because the cross-sectional area of a pipeline is related to the capacity of the pipeline to convey sewer.</p> <p>The funds are available for the needed capital improvement projects to help ensure sufficient capacity. The funds are either used by the District to initiate and manage the construction of projects or they can be used by developers that construct trunk sewers or major sewer facilities through credit and/or reimbursement agreements.</p>								
Related Documents	<ul style="list-style-type: none"> • District Webpage – System Evaluation and Capacity Assurance Plan • Resolution 18-12 – Schedule of Values • Chapter 4 of District Sewer Code – Credit and Reimbursement Agreements 								
Plan & Schedule	<table border="1"> <thead> <tr> <th style="background-color: #d9e1f2;">Task</th> <th style="background-color: #d9e1f2;">Responsible Party</th> <th style="background-color: #d9e1f2;">Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the SECAP and update/republish as necessary</td> <td>DE</td> <td>Every 5 years Last Review Jan 2020</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the SECAP and update/republish as necessary	DE	Every 5 years Last Review Jan 2020
Task	Responsible Party	Scheduled Date							
Review the SECAP and update/republish as necessary	DE	Every 5 years Last Review Jan 2020							



viii-d. Schedule for Planned Enhancements

Requirement	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.								
Responsible	District Engineer								
Discussion	The District schedules completion dates/timeframes/triggers for capital improvement projects to address capacity deficiencies in the current SECAP. The SECAP is reviewed and updated or republished every five years, which is a similar schedule for the review and update of the SSMP.								
Related Documents	<ul style="list-style-type: none"> District Webpage – System Evaluation and Capacity Assurance Plan 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the SECAP and update/republish as necessary</td> <td>DE</td> <td>Every 5 years Last Review Jan 2020</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the SECAP and update/republish as necessary	DE	Every 5 years Last Review Jan 2020
Task	Responsible Party	Scheduled Date							
Review the SECAP and update/republish as necessary	DE	Every 5 years Last Review Jan 2020							



ix Monitoring, Measurement and Program Modifications

One of the District’s Values is “Quality: We will be dedicated to continuous improvement”. Staff try to demonstrate this value to continually monitoring productivity and progress and taking steps to make incremental improvements to provide a high level of service. A part of this high level of service is reducing the impact of SSOs.

ix-a. Maintain Relevant Information

Requirement	The Enrollee shall maintain relevant information that can be used to establish and prioritize appropriate SSMP activities.
Responsible	Superintendent
Discussion	<p>The District is focused on moving to paperless records keeping. Maintaining data electronically makes it easier to search, easier to access across District departments and staff, and easier to aggregate and analyze. The District stores and shares information through a number of databases. Some of those databases are described below.</p> <p>The District maintains accurate information on all components of the collection system (e.g., pipes, manholes, laterals, force mains, lift stations) in the CMMS database. The database contains information on the District’s collection system assets, related work-orders, inspections, maintenance, and repair histories. The CMMS has extensive reporting capabilities available in the field as well as the office.</p> <p>The District’s GIS database is linked to the CMMS database, providing a more comprehensive approach to maintaining pertinent data related to the maintenance and operation of the District’s collection system. The GIS allows District staff to understand the spatial relationships between relevant data.</p>
Related Documents	None
Plan & Schedule	None



ix-b. Measure Effectiveness

Requirement	The Enrollee shall monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP.
Responsible	Superintendent
Discussion	The District monitors and measures the effectiveness of each element of this SSMP, where appropriate, based on identified key performance indicators. Potential performance indicators are listed in various elements of the SSMP. Performance indicator forms are used by responsible persons during the SSMP Audit to assess the effectiveness of SSMP elements in reducing the impact of SSOs. Reporting tools such as Microsoft PowerBI and SAP Crystal Reports are used to analyze data and generate the values needed to assess performance indicators.
Related Documents	<ul style="list-style-type: none">• District Webpage – Performance Measures• Performance Indicators in SSMP Audits
Plan & Schedule	None



ix-c. Assess Preventative Maintenance Program

Requirement	The Enrollee shall assess the success of the preventative maintenance program.								
Responsible	Superintendent								
Discussion	<p>The District reviews the performance of the various preventative maintenance work programs and reports progress in these areas to the District Board of Directors monthly. These same performance measures are also shared with the public through the District website. Performance and productivity are measured against work plan goals. This allows supervisors responsible for scheduling work to determine the level of success and efficiency in meeting these goals. Depending on the observed performance, resources can be reallocated from one work program to another to most efficiently implement the District’s preventative maintenance program.</p>								
Related Documents	<ul style="list-style-type: none"> • District Webpage – Performance Measures 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the performance measures of the District’s work programs</td> <td>SUP</td> <td>Monthly</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the performance measures of the District’s work programs	SUP	Monthly
Task	Responsible Party	Scheduled Date							
Review the performance measures of the District’s work programs	SUP	Monthly							



ix-d. Update SSMP

Requirement	The Enrollee shall update program elements, as appropriate, based on monitoring or performance evaluations.								
Responsible	Superintendent								
Discussion	The District is continuously monitoring and evaluating its processes and related SSMP program elements using the performance measurements and performance indicators described above. The SSMP is typically reviewed annually and audited every two years. The SSMP is reviewed, updated, and certified by the District Board of Directors every five years.								
Related Documents	None								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Review the SSMP and update/recertify as necessary</td> <td>SUP</td> <td>Every 5 years Last Update Sep 2021</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Review the SSMP and update/recertify as necessary	SUP	Every 5 years Last Update Sep 2021
Task	Responsible Party	Scheduled Date							
Review the SSMP and update/recertify as necessary	SUP	Every 5 years Last Update Sep 2021							



ix-e. SSO Trends

Requirement	The Enrollee shall identify and illustrate SSO trends, including: frequency, location, and volume.								
Responsible	Superintendent								
Discussion	The District analyzes SSO trends at a minimum every two years during the SSMP Audit. The District looks at SSO trends in frequency, volume, location, category, material type, age of asset, cause of SSO, and variation in time by month and by season. These efforts are helpful in planning efforts with limited resources to reduce the impact of SSOs most effectively.								
Related Documents	<ul style="list-style-type: none"> • SSMP Audits 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Conduct regular SSMP Audits</td> <td>SUP</td> <td>Every 2 years Last Audit Aug 2021</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Conduct regular SSMP Audits	SUP	Every 2 years Last Audit Aug 2021
Task	Responsible Party	Scheduled Date							
Conduct regular SSMP Audits	SUP	Every 2 years Last Audit Aug 2021							



x SSMP Program Audits

x-a. SSMP Program Audits

Requirement	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 the audits must occur every two years and a report must be prepared and kept on file.								
Responsible	Superintendent								
Discussion	<p>Per SSS WDR Section D.13.x, the objective of SSMP audits is to focus on evaluating the effectiveness of the SSMP and the District’s compliance with the SSMP requirements identified in the SSS WDR Order.</p> <p>The review for “compliance” is a two-step process during a SSMP Audit. The first component of the review is to determine if the SSMP contains the required elements as outlined in the Order. The second component of the review is to determine if the District is implementing what is outlined in the SSMP.</p> <p>The review for “effectiveness” is a collaborative process. Performance indicators (PIs) are developed for each element of the SSMP, were appropriate, with goals set to help assess effectiveness of an element to reduce the impact of SSOs. The metrics in PIs are tabulated periodically during the audit period. During the SSMP Audit, PIs are assessed, the responsible person makes comments on the effectiveness of the SSMP element, and when necessary, makes recommendations for improvements.</p> <p>The results of the audit, including the identification of any deficiencies and corrective measures will be included in an Audit Report. The Audit Report will be presented to the District’s Board of Directors for review and made available to the public through the District website.</p>								
Related Documents	<ul style="list-style-type: none"> • SSMP Audits 								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Conduct regular SSMP Audits</td> <td>SUP</td> <td>Every 2 years Last Audit August 2021</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Conduct regular SSMP Audits	SUP	Every 2 years Last Audit August 2021
Task	Responsible Party	Scheduled Date							
Conduct regular SSMP Audits	SUP	Every 2 years Last Audit August 2021							



xi Communication Program

xi-a. Plan of Communication with the Public

Requirement	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.											
Responsible	District Engineer											
Discussion	<p>The District communicates with the public via its website, quarterly billing statements, message placards on vehicles and directly through the course of day-to-day operations.</p> <p>The website has a customer survey that offers customers the opportunity to provide feedback regarding their experience(s) with District service, or any comment they wish to make. In addition, the website will be used to educate the public about the nature of a collection system, what is involved in operating and maintaining it and how the public can help.</p> <p>District staff will present the findings of SSMP Audits to the District Board of Directors during a public meeting so that the public has opportunity to comment and provide input. Staff will also present the SSMP for certification every five years to the Board of Directors in a public meeting.</p>											
Related Documents	None											
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Conduct regular SSMP Audits</td> <td>SUP</td> <td>Every 2 years Last Audit August 2021</td> </tr> <tr> <td>Review the SSMP and update/recertify as necessary</td> <td>SUP</td> <td>Every 5 years Last Update Sep 2021</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Conduct regular SSMP Audits	SUP	Every 2 years Last Audit August 2021	Review the SSMP and update/recertify as necessary	SUP	Every 5 years Last Update Sep 2021
Task	Responsible Party	Scheduled Date										
Conduct regular SSMP Audits	SUP	Every 2 years Last Audit August 2021										
Review the SSMP and update/recertify as necessary	SUP	Every 5 years Last Update Sep 2021										



xi-b. Plan of Communication with Satellite Collection Systems

Requirement	The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee’s sanitary sewer system.								
Responsible	District Engineer								
Discussion	The District has one satellite agency that discharges into the District’s sewer collection system. That satellite agency is Placer County. The District and Placer County are two of the three partners in the joint power authority (i.e., South Placer Wastewater Authority) that shares ownership of the regional wastewater treatment plants. The collection system operators of the partner agencies meet three times per year								
Related Documents	None								
Plan & Schedule	<table border="1"> <thead> <tr> <th>Task</th> <th>Responsible Party</th> <th>Scheduled Date</th> </tr> </thead> <tbody> <tr> <td>Partners Meetings with collection system operators</td> <td>SUP</td> <td>Three times per year</td> </tr> </tbody> </table>			Task	Responsible Party	Scheduled Date	Partners Meetings with collection system operators	SUP	Three times per year
Task	Responsible Party	Scheduled Date							
Partners Meetings with collection system operators	SUP	Three times per year							