



**North San Mateo County
Sanitation District**
a subsidiary of the City of Daly City

Sewer System Management Plan

WDDID # 2SSO10161

December 2019

Important Dates and Revisions

August 2006 - SSMP Completed
August 31, 2007 – District Staff Additions – CJR – all sections
September 27, 2007 – RMC – Section 6 and 8
August 31, 2008 – District Staff Audit – KM/CJR
February 19, 2009 - District Staff Updates – Overflow Emergency Response Plan
April 10, 2009 – District Staff Updates – CJR – minor on all sections
March 10, 2010 – District Staff Audit – KM/CJR
May 13, 2010 – Overflow Emergency Response Plan: Tab A - Beach Posting - KM
April 8, 2010 – District Staff Updates – CJR/RMC – Section 8
January 25, 2011 – Overflow Emergency Response Plan: Tab H – Emergency Contractors - KM
March 1, 2011 – District Staff Audit – KM/CJR
September 20, 2011 – Overflow Emergency Response Plan: Tab B.1 – Sampling Protocol, Field Testing – KM
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August 9, 2012 – Attachment O: Prioritized Near Term CIP's
September 4, 2012 – Overflow Emergency Response Plan: Tab I – Restoration Contractors – KM
December 3, 2012 – Overflow Emergency Response Plan: Tab L – Spill Containment – KM
January 29, 2013 – District Staff Updates – KM – minor all sections
February 12, 2013 – District Staff Updates – KM – Overflow Emergency Response Plan
March 8, 2013 – District Staff Updates – CJR – minor all sections
March 26, 2014 – Section VI – Data Management and Section XII – SSMP Program Certification - CJR
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April 3, 2014 – Section III – Overflow emergency response plan – Impact Mitigation-Para.4 reporting – KM
April 3, 2014 – Section VI – Measures & Activities / O & M Program – Training – minor – KM
April 3, 2014 – Section VII – Design & Construction Standards / Performance Provisions – minor – KM
April 3, 2014 – Attachment O – Add completed project information. – KM
April 25, 2014 – Table of Contents – Added new attachments – CJR
August 2019 – 5 year review and update of contents
December 2019 -- 5 Year Revision

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and Educational Info on Daly City Website	
<u>Element 8 (System Evaluation and Capacity Management) Supporting Documents:</u>	
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<u>Element 9 (Monitoring, Measurement, & Program Modifications) Supporting Documents:</u>	
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List of Abbreviations and Acronyms

BACWA	Bay Area Clean Water Agencies
BAPPG	Bay Area Pollution Prevention Group
BMP	Best Management Practices
CIWQS	California Integrated Water Quality System
City	City of Daly City
CCTV	Closed Circuit Television
County	San Mateo County
FOG	Fats, oils, and grease
FSE	Food Service Establishment
GRD	Grease Removal Device
LRO	Legally Responsible Official
MRP	Monitoring and Reporting Program
NASSCO	National Association of Sewer Service Companies
NSMCSD	North San Mateo County Sanitation District
OERP	Overflow Emergency Response Plan
OES	Office of Emergency Services
PACP	Pipeline Assessment Certification Program (NASSCO)
RWQCB	Regional Water Quality Control Board, San Francisco Region
RWQCP	Regional Water Quality Control Plant
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SSS	Sanitary Sewer System
SWRCB	State Water Resources Control Board
WDID	Waste Discharge Identification number
WDR	Waste Discharge Requirements

This introductory section provides background information on the purpose and organization of this Sewer System Management Plan (SSMP) and provides a brief overview of the District's service area and sewer system.

SSMP Requirement Background

This SSMP was initially prepared for compliance with requirements of the San Francisco Bay Regional Water Quality Control Board (RWQCB) pursuant to Section 13267 of the California Water Code. The RWQCB mandated that the District prepare an SSMP following the guidelines in the SSMP Development Guide prepared by the RWQCB in cooperation with the Bay Area Clean Water Agencies (BACWA).

Subsequently, the State Water Resources Control Board (SWRCB) passed Order No. 2006-003-DWQ at its meeting on May 2, 2006, which requires all public wastewater collection system agencies in California with greater than one mile of sewers to be regulated under general Waste Discharge Requirements (WDR). The SWRCB action also mandates the development of an SSMP and the reporting of SSOs using an electronic reporting system maintained by the SWRCB. SSMP reporting requirements were updated through SWRCB Order No. WQ 2013-0058-EXEC, which is reflected in the updated Overflow Emergency Response Plan (OERP) appended to this SSMP. In general, the SWRCB SSMP requirements are similar to the RWQCB requirements, but differ in organization and in some details and superseded the RWQCB requirements. The District's waste discharge identification number (WDID) in the California Integrated Water Quality System (CIWQS) is 2SSO10161.

Current SWRCB requirements are discussed in each SSMP section, or "element".

Document Organization

This SSMP is intended to meet the requirements of the Statewide WDR and the organization of this document is consistent with the SWRCB guidelines. The SSMP includes eleven elements, as listed below. Each of these elements forms a section of this document.

1. Goals
2. Organization
3. Legal Authority
4. Operation and Maintenance Program
5. Design and Performance Provisions
6. Overflow Emergency Response Plan
7. Fats, Oils and Grease (FOG) Control Program
8. System Evaluation and Capacity Management
9. Monitoring, Measurement, and Program Modifications
10. SSMP Program Audits
11. Communication Program

Each element section is organized into subsections, as follows:

1. Description of the SWRCB requirement for that element.
2. Identification of any associated appendix and list of supporting information included in the appendix.
3. Discussion of element. The discussion may be split into multiple sub-sections depending on length and complexity.

Supporting information for each element is included in an appendix associated with that section, as applicable. In general, information expected to require relatively frequent updates (such as names and phone numbers of staff) are included in appendices, as well as other supporting information, such as forms or schedules.

District Service Area and Sewer System

The North San Mateo County Sanitation District (District) is located in San Mateo County and is a subsidiary of the city of Daly City. As of 2019, the District had a population of approximately 107,864 based on an estimate using United States Census Bureau data.

The District's sewer system consists of approximately 177 miles of pipe, ranging from 6 inches to 42 inches in diameter, 3,835 manholes, 3.8 miles of force mains, and 8 pump stations. Almost half of the system, about 46%, was installed in the 1940s and 1950s. The District provides sewer service to businesses and residents within the District as well as unincorporated areas of San Mateo County (County) that lie within the District's sphere of influence, a total of 22,995 service connections. Collected sewage is conveyed to the North San Mateo Water Quality Control Plant (RWQCP) for treatment.

Element 1: GOALS

This SSMP element identifies goals the District has set for the management, operation and maintenance of the sewer system and discusses the role of the SSMP in supporting these goals. These goals provide focus for District staff to continue high-quality work and to implement improvements in the management of the District’s wastewater collection system. This section fulfills the Goals requirement of the SWRCB (Element 1) SSMP requirements.

1.1 Regulatory Requirements for Goals Element

The requirements for the Goals element of the SSMP are as follows:

SWRCB 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 SSOs, as well as mitigate any SSOs that do occur.

1.2 Goals Discussion

The City Council of the City of Daly City has adopted six long-term goals for the community. Its Goal #2 states: Fulfill all State and Federal mandates as efficiently and effectively as possible. In keeping with that goal, and recognizing the importance of protecting ocean/bay water quality by preventing sewer spills, the North San Mateo County Sanitation District (NSMCSD), a subsidiary of the City of Daly City, is revising its existing sewer system management program in conformance with the state WDR as specified in the WDR as follows:

a) Goal 1 – To Properly Manage, Operate, and Maintain all Parts of the Wastewater Collection System

The NSMCSD will meet this goal by implementing the following objectives:

- Maintain spare parts for all critical equipment.
- Continue to systematically inspect sanitary sewer mains and lines.
- Continue to make timely repairs necessary to keep the sanitary sewer system in good working condition.
- Continue to identify and complete future sanitary sewer infrastructure improvements in the Capital Improvement Plan.
- Coordinate replacement of aging/substandard sewer lines associated with redevelopment or street reconstruction project.
- Continue to take measures to prevent and remove any infiltration/inflow into the sanitary sewer system.
- Prepare and implement a sanitary sewer emergency response plan.

b) Goal 2 – Provide Adequate Capacity to Convey Peak Flows

The NSMCSD will meet this goal by implementing the following objectives:

- Conduct a System Evaluation and Develop a Capacity Assurance Plan.

- Prepare and implement a capital improvement plan that will provide requisite hydraulic capacity of key sewer system elements under peak flow conditions.
- Require developers to conduct flow studies as part of project review and upgrade sanitary sewers as necessary.

c) Goal 3 – To Minimize the Frequency of SSOs

The NSMCSD will meet this goal by implementing the following objectives:

- Identify and correct problem areas in the system
- Continue an effective sewer cleaning/flushing program, especially in known problem areas
- Make all feasible repairs
- Continue implementation of a FOG program
- Provide a free residential grease disposal station
- Publish public information and conduct public education

d) Goal 4 – Mitigate the Impact of SSOs

The NSMCSD will meet this goal by implementing the following objectives:

- Respond to all SSOs within 60 minutes of notification, 95% of the time
- Contain and pump SSOs, as practicable, back into collection system prior to reaching waters of the U.S.
- Flush and clean areas that came into contact with the SSO
- Maintain and annually update list of outside licensed and bonded contractors for inside cleaning and/or emergency repairs

Element 2: ORGANIZATION

This section of the SSMP identifies District staff that are responsible for implementing this SSMP, responding to Sanitary Sewer Overflow (SSO) events, and meeting the SSO reporting requirements. This section also includes the designation of the Authorized Representative or Legally Responsible Official (LRO) to meet SWRCB requirements for completing and certifying SSO reports. This section fulfills the Organization requirement of the SWRCB (Element 2) SSMP requirements.

2.1 Regulatory Requirements for Organization Element

The requirements for the Organization element of the SSMP are as follows:

SWRCB Requirement:

The SSMP must identify:

1. The name of the responsible or authorized representative;
2. The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. Include lines of authority as shown in an organization chart or similar document with a narrative explanation; and
3. 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)).

2.2 Organization Discussion

This section discusses the organization and roles of sewer staff, the authorized representative to the SWRCB, and key staff responsible for implementing and maintaining the SSMP.

Department Organization

The organization chart for the management, operation, and maintenance of the District's wastewater collection system is shown on Figure 2-1. The names and phone numbers of staff filling these positions are included in Table 2-1.

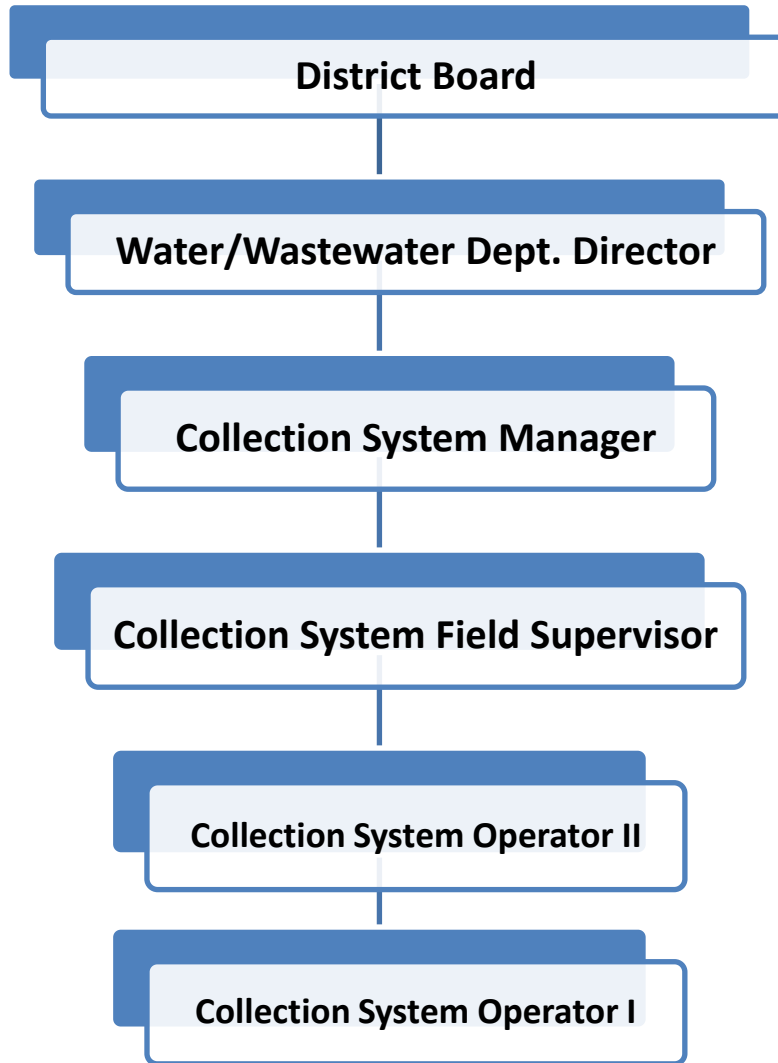


Figure 2-1. Organization Chart of District Collection System Staff

Description of General Responsibilities

Key Staff responsible for implementing and maintaining the SSMP:

Department Of Water/Wastewater Resources Director.

Plans, organizes, directs, and supervises the public works activities of the District. Advises the City Council and Planning Commission on engineering and public works matters, including those related to the Collection System. Prepares and controls department budget. Reviews project plans and specifications for public works projects and performs technical engineering planning studies. Confers with engineering consultants and officials of other public works departments.

Collection System Manager.

Supervises all activities of the Collection System Maintenance Division, including wastewater collection and recycled water systems. Works to complete Department and Division goals and objectives. Reviews plans and specifications for sewer projects and makes recommendations regarding maintenance, construction, and operations aspects. Controls budget expenditures within the Collection Division.

Collection System Field Supervisor.

Supervises and personally assists in the cleaning and repair of sewer mains and sewer laterals. Supervises and performs the operation of a variety of light and heavy equipment, including a variety of trucks including dump trucks and backhoes. Schedules work for crews; trains crews in specific tasks; checks work of assigned crew to see that it was performed properly. Maintains work records; establishes and maintains cooperative working relationships with subordinates, fellow employees and the general public. Responds to service requests and determines the location of the blockage, cause of the blockage, then clears blockage. Does necessary reporting and documentation associated with mainline blockages and sanitary sewer overflows (SSOs). Operates and maintains sewer cleaning equipment including the combination flushing truck, rodding truck, closed circuit television (CCTV) inspection truck, and lateral flushing unit. Recognizes hazards and follows safe operating procedures while responding to emergency calls.

Collection System Operator II.

Works independently under general supervision exercising judgment and initiative. Duties will normally require the ability to operate the full range of tools and mechanical equipment related to Collection System operations and maintenance (O&M). Leads and directly supervises crews on specific tasks and activities. Investigates sewer-related complaints from the general public. Reports to Field Supervisors any problems observed in the course of performing infrastructure maintenance. Makes repairs to mainlines and manholes. Enters work orders\data into asset management system, providing accurate recordkeeping and work history.

Collection System Operator I.

Works as a member of a field maintenance crew. Cleans, unplugs, and repairs sewer lines and sewer laterals. Locates and raises manholes. Operates power equipment including combination flushing truck, regular flushing truck, lateral flusher, rodder, and CCTV equipment.

The Collection Division consists of two flushing crews performing cleaning of the sewer system. One CCTV crew visually inspects mainlines and provides condition assessment, and one service response crew handles citizens' requests. The response crew also checks the District's eight (8) lift stations which include three (3) stations in the Westborough District of South San Francisco. This crew also marks District utilities in response to Underground Service Alerts (USA) notifications.

Authorized Representative

The District's authorized representative in all wastewater collection system matters is the Collection Systems Manager, who is designated as a "legally responsible official" (LRO) in CIWQS, and consequently certifies SSO reports. The Department of Water / Wastewater Resources Director is also an LRO so the District has continuous, "on-site" LRO coverage and has someone present that is authorized to submit SSO reports.

The Department of Water/Wastewater Resources Director has designated the two (2) two Collection System Field Supervisors as "Data Submitters" only. The Collection System Field Supervisors are authorized to act in the absence of the Collection Systems Manager and can submit draft overflow reports only in CIWQS since they are both designated as a Data Submitter in the CIWQS system.

Responsibility for SSMP Implementation

Table 2-1 shows the positions responsible for implementing and maintaining SSMP elements.

Table 2-1: Positions Responsible for SSMP Implementation

SSMP Element/Measure	Responsible Position	Name	Phone Number	Email Address
I – Goals	Collection Systems Manager	Kevin McCarthy	(650) 991-8654	kmccarthy@dalycity.org
II – Organization	Collection Systems Manager	Kevin McCarthy	(650) 991-8654	kmccarthy@dalycity.org
III – Legal Authority	Water/Wastewater Resources Director	Tom Piccolotti	(650) 991-8201	tpiccolotti@dalycity.org
IV – O&M Program	Collection Systems Manager	Kevin McCarthy	(650) 991-8654	kmccarthy@dalycity.org
V – Design & Performance Provisions	Water/Wastewater Resources Director	Tom Piccolotti	(650) 991-8201	tpiccolotti@dalycity.org
VI – Overflow Emergency Response Program	Collection Systems Manager	Kevin McCarthy	(650) 991-8654	kmccarthy@dalycity.org
VII – FOG Control Program	Environ. Res.& Compl. Inspector	Ward Donnelly	(650) 991-8208	wdonnelly@dalycity.org
VIII – System Evaluation and Capacity Assurance Plan	Water/Wastewater Resources Director	Tom Piccolotti	(650) 991-8201	tpiccolotti@dalycity.org
IX – Monitoring, Measurement, and Program Modifications	Collection Systems Manager	Kevin McCarthy	(650) 991-8654	kmccarthy@dalycity.org
X – SSMP Program Audits	Collection Systems Manager	Kevin McCarthy	(650) 991-8654	kmccarthy@dalycity.org
XI -Communication	Water/Wastewater Resources Director	Tom Piccolotti	(650) 991-8201	tpiccolotti@dalycity.org

2.3 SSO Reporting Chain of Communication

Table 2-2 lists contact phone numbers for the parties included in the chain of communication. A detailed description of the SSO chain of communication is included in the District Overflow Emergency Response Plan (OERP) on the City of Daly City website at

http://www.dalycity.org/City_Hall/Departments/wwr/SSMP_SSO_Database.htm

The SSO Reporting process is also discussed in detail in Element 6 - Overflow Emergency Response Plan.

Table 2-2. Contact Numbers for SSO Chain of Communication

Contact	Telephone Number
Collection System Maintenance (Pager)	(650) 997-1944
Collection System Maintenance (Cell Phone)	(650) 740-2573 (650) 452-9531
Collection Systems Manager	(650) 515-0263 (650) 991-8654
Collection System Field Supervisor (Anthony)	(650) 238-7776
Collection System Field Supervisor (Sione)	(650) 515-0262
PG&E (Power Failure Info)	1-888-743-4911
California Office of Emergency Services	(800) 852-7550
County of San Mateo Department of Environmental Health	(650) 372-6200
San Francisco Bay Regional Water Quality Control Board	(510) 622-2300

Element 3: LEGAL AUTHORITY

This element of the SSMP discusses the District's Legal Authority, including its District Code and agreements with other agencies. This section fulfills the Legal Authority requirement for the SWRCB (Element 3).

3.1 Regulatory Requirements for Legal Authority Element

The requirements for the Legal Authority element of the SSMP are summarized below:

SWRCB Requirement

The wastewater agency must demonstrate, through collection system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

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

3.2 Element 3 Supporting Documents

Supporting information for Element 3 is included in the California Plumbing Code, District Code, City Code, Design Standards, and Standard Specifications "Attachments B, C, D, E, and F," which can be reviewed at

http://www.dalycity.org/City_Hall/Departments/wwr/SSMP_SSO_Database.htm

3.3 Legal Authority Discussion

This attachments include the following provisions:

Prevention of Illegal Discharges

North San Mateo County Sanitation District Code (Attachment C)

Chapter 1.04 – General Provisions

Chapter 1.16 – Building Sewers, Lateral Sewers and Connections, Section 1.16.080 – Maintenance of Side Sewers

Chapter 1.24 – Use of Public Sewers

Chapter 1.44 – Enforcement, Section 1.44.020 – Violation constitutes public nuisance

Daly City Municipal Code (Attachment D)

Chapter 14.04 – City of Daly City Storm Water Management and Discharge Control Ordinance

Proper Design and Construction

North San Mateo County Sanitation District Code (Attachment C)

Chapter 1.12 – Private Sewage Disposal

Chapter 1.16 – Building Sewers, Lateral Sewers and Connections

Chapter 1.20 – Public Sewer Construction

City of Daly City General Conditions Standard Specifications and Drawing (Attachment E)

Section 02720 – Sanitary Sewer Collection System

Drawings SS 1-13

City of Daly City Design Standards (Attachment F)

Section 4 – Sanitary Sewer System

The Unified Plumbing Code

Requires all pipe materials and fittings be UPC labeled and approved.

CALTRANS Manual of Traffic Controls for Construction and Maintenance Work Zones.

Ensure Access for Lateral Maintenance

North San Mateo County Sanitation District Code (Attachment C)

Chapter 1.40 – Administration, Section 1.40.070 – District Inspection

Daly City Municipal Code (Attachment D)

Chapter 8.16 – Property Maintenance and Nuisance Abatement Ordinance

Limit Discharge of FOG

Grease Interceptor Calculation Form (Attachment B)

North San Mateo County Sanitation District Code (Attachment C)

Chapter 1.24 – Use of Public Sewers, Sections 1.24.030 – Discharges that may be prohibited by District engineer, 1.24.060 – Interceptors: Required, and 1.24.070 – Interceptors: Maintenance

Enforce Violations

North San Mateo County Sanitation District Code (Attachment C)

Chapter 1.44 – Enforcement

3.4 Control of I/I from Satellite Collection Systems

Approximately half of the Town of Colma’s sewer service area, as well as the Westborough District of South San Francisco, discharge flow into the City’s collection system. Therefore, these two entities can be considered satellite collection systems of the City. Although there are no known capacity problems due to I/I in the City’s system (refer to Element 8: System Evaluation and Capacity Management), the SSMP requirements state that the District must demonstrate that it has the legal authority to control I/I into its collection system, including I/I from satellite systems. In fact, the District does have agreements with its tributary agencies as described in Section 3.5.

Flow from both Colma and Westborough enters the District’s system.

3.5 Agreements with Other Agencies

As noted in Section 3.3, the SSMP requirements for legal authority are fulfilled by the City's municipal code. However, the District does have additional legal agreements with other agencies, which are described in this section for reference. The District's interagency agreements include a joint sewer system agreement with the Westborough Water District, the town of Colma, and the Bayshore Sanitary District.

Element 4: OPERATION AND MAINTENANCE PROGRAM

This section of the SSMP discusses the District's operations, maintenance and other related measures and activities. This section fulfills the Operation and Maintenance Program requirement of the SWRCB (Element 4) SSMP requirements.

4.1 Regulatory Requirements for Measures and Activities

The requirements for the Operation and Maintenance element of the SSMP are summarized below. Since requirements for this SSMP element contain several categories, this summary is organized by category, with RWQCB and SWRCB requirements described for each category as applicable.

Collection System Map

SWRCB Requirement: As appropriate and applicable to the system, the wastewater agency must maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments, manholes, pumping facilities, pressure pipes, valves, and applicable stormwater conveyance facilities.

Prioritized Preventive Maintenance

SWRCB Requirement: As appropriate and applicable to the system, the wastewater agency must 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 Preventive Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders.

Scheduled Inspections and Condition Assessment

SWRCB Requirement: As appropriate and applicable to the system, the wastewater agency must develop rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long term rehabilitation actions to address each deficiency. The program should include regular visual and 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.

Training

SWRCB Requirement: As appropriate and applicable to the system, the wastewater agency must provide training on a regular basis for staff in sanitary sewer system operations, maintenance, and require contractors to be appropriately trained.

Contingency Equipment and Replacement Inventories

SWRCB Requirement: As appropriate and applicable to the system, the wastewater agency must provide equipment and replacement part inventories, including identification of critical replacement parts.

4.2 Element 4 Supporting Documents

Supporting information for Element 4 is a description of maintenance activities and included in Attachment I on the City website at

http://www.dalycity.org/City_Hall/Departments/wwr/SSMP_SSO_Database.htm

4.3 Collection System Map Discussion

The District maintains an up-to-date atlas of the sewer and stormwater collection systems showing all infrastructure and their attributes: all line segments, force mains, manholes, pumping facilities and all other associated infrastructure.

The Wastewater Collection System atlas consists of a 59 grid map atlas showing the wastewater collection systems at 1" = 200 ft. scale. Location and attribute information for infrastructure is shown: manholes (ID, depth); pipes (ID, size, flow direction, length, material type, slope); lift stations (name). Laterals are not shown. Updated truck copies were distributed in 2010 with Storm System overlay.

CAD layers are currently being imported into GIS layers and the atlas is made from these GIS layers. GIS layers are updated with new infrastructure when as-built drawings and construction notes are received from project inspectors. Updates are also made when infrastructure is replaced with information provided by field crews. The new information is submitted by NSMCSD staff and then processed by GIS staff (see below). Edits to the atlases are confirmed by NSMCSD staff and then edited atlas pages are distributed. The GIS layer allows more capabilities than the CAD files, such as analysis and modeling.

In the mid-1990s, a sewer and stormwater infrastructure aerial mapping project was completed by an outside contractor. Detailed sewer and stormwater collection atlases were produced based on CAD files and an attribute database. The atlases show all gravity and force main lines, manholes, cleanouts, pumping facilities, other collection infrastructure, and locational reference features. The atlases are available in hardcopy at the NSMCSD offices and the Public Works Engineering Desk. Electronic versions in .pdf format are available to staff via Daly City's intranet.

GIS staff within the Public Works Department is responsible for the maintenance and distribution of the utility atlases. The workforce in this section consists of a GIS Analyst and an Engineering Technician.

Updates to the atlases are facilitated by NSMCSD staff upon completion of capital improvement projects, new development, or other system maintenance. Once the changes are made by the GIS section, the changes are confirmed by NSMCSD staff for final approval and distribution.

4.4 Prioritized Preventive Maintenance

The purpose of NSMCSD's Preventive Maintenance program (cleaning) is to continuously clean its sewer system to provide both uninterrupted service and maximum pipe capacity to convey sewage to the treatment plant for treatment. Additionally, preventive maintenance is used to keep the system clear of debris that could cause blockages or overflows, and to keep the system flowing smoothly in an effort to extend the useful life of the pipe.

Equipment

Two combination cleaning unit trucks that normally carry 600 ft of cleaning hose, rated at 3000 psi and 25 ft. of black leader hose. The trucks carry approx. 850-1,000 gallons of water to clean sewer lines using a variety of nozzles. Water pressure from the 50 GPM pump propels the cleaning hose up the sewer line to facilitate cleaning. The vacuuming system removes any debris that the cleaning operation brings back to the cleaning site. Material removed from the lines is collected in debris tanks on the truck and disposed of at the treatment plant. These trucks are also used for cleaning Lift Station wet wells. As with any piece of equipment, it is vital to familiarize yourself with the truck operators' manual and with the components of the truck before using.

Staffing

There are two crews consisting of two persons per crew. Each crewmember must possess a valid Class B driver's license. Each crewmember is issued personnel protective equipment (PPE) consisting of a hardhat, safety vest, an assortment of safety gloves, ear and eye protection. In addition, uniforms are provided as well as steel toe safety boots.

Method

The Daly City map is divided or sectioned off into grids. These grids are arranged so that the streets closest to the treatment plant are cleaned first and crews eventually work their way out to the furthest edges of the City, this cycle is then repeated. We strive to complete this cycle so that every line is cleaned every 6 - 12 months. Other line segments have been designated for more frequent cleaning due to heavy usage leading to increased grease or grit. These lines are cleaned three times per year: April, August, and December. In addition, the District provides this service to the Westborough area of South San Francisco, the Broadmoor/Colma area, and the Bayshore Sanitary District.

Maintenance Management and Work Orders

Work orders for the individual line segments are obtained from the District's Lucity asset Management system by the Field Supervisor in charge of the cleaning crews. It is the Field Supervisors responsibility to make sure that their crews have grids printed out and ready to go, and that their crews have all their vehicle and personal protective equipment. The Field Supervisor is also responsible for accurate recordkeeping and grid map additions and deletions. In the event

of an overflow, after initial response and follow up, the line segment is televised to identify any problems. The Field Supervisor then submits a written report containing recommendations to the Collection System Manager on what repairs or maintenance schedule adjustments could be made. The Manager then decides what course of action to take.

Collection System Maintenance activities are prioritized into three subsections:

1. Mainline Preventive Maintenance Crew
2. Customer Response and Lift Station Maintenance
3. Mainline CCTV Inspection, Manhole Rehabilitation and Pipeline Construction, Rodding, Root Control & Abatement Crew

4.5 Scheduled Inspections and Condition Assessment Discussion

The District maintains a prioritized Capital Improvement Program (CIP) project list that details the District's long and short-term CIP plans. The projects have been identified through maintenance activities and closed-circuit television (CCTV) inspection of identified problem sewers. Preventive Maintenance schedules have been modified to address these concerns until the capital improvement projects are completed. This insures that line segments stay in a serviceable condition until deficiencies are corrected. The District also conducts manhole inspections and records the results of the inspections on forms, which are entered into its computerized maintenance management system (Lucity).

The District initiated a system-wide condition assessment program in 2010. The program provides for CCTV and manhole inspection of the entire collection system over an approximate 10-year period. The District acquired new CCTV inspection equipment and software to conduct the inspections. Sewers were previously prioritized for inspection based on age, material, size, infiltration/inflow contribution based on flow monitoring (see Element 8 - Collection System Capacity Evaluation/Assurance) and known maintenance or structural problems. As part of the system-wide condition assessment, the District adopted NASSCO PACP standards for CCTV data collection and condition ratings and now make repair/replacement decisions and priorities based on those results. The District uses the results of the condition assessment to update its CIP, including short term project schedules and long term (20 year) plans.

In 2019, the District Commissioned an update to the Sanitary Sewer System Master Plan that will create Capital Improvement projects for the next 10 years. The sanitary sewer charges of the District will be adjusted to fund these projects just as the District did with its previous Master Plan. The District maintains its Capital Improvement Budget in a line item titled "SSMP" for this purpose.

In regards to funding the District added a "SSMP" line item to the CIP plans with annual funding of \$1.5 million annually for the next 20 years. During the biennial budget process data from CCTV or field knowledge are developed into capital projects. The amount in the SSMP line item is reduced from the \$1.5M. If any funds remain they are either carried forward to save for high priced rehabilitations/repairs or used for smaller items.

4.6 Training Discussion

The Collection Division crew continues with ongoing education and training as required by the California Water Environment Agency's (CWEA) Technical Certification Program (TCP). The majority of the crew holds higher certification than that which is required of their position. One crewmember has more than thirty years of experience with the District.

In order to properly respond to a sewer system emergency that requires reconstruction of District sewer facilities, the District placed its long standing high quality contractors on emergency services agreements. The list contains contractors who have demonstrated expertise in pumping station construction, pipeline construction, televising, and pipeline rehabilitation utilizing trenchless technology. These contractors are staffed with well-experienced workers who are able to handle the scope of emergencies experienced in the District.

4.7 Contingency Equipment and Replacement Inventories

Replacement inventories are located in the DWWWR Warehouse and the satellite warehouse at the Westlake Pump Station Corporation Yard. All parts are identified by part number and have reorder flags set when inventory numbers get low. Parts include but are not limited to: replacement pipe for sanitary sewer pipe and recycled water pipe, fittings in a variety of sizes, high pressure hoses for the combination machines, back up Micro-Mac level controllers and VFD fuses for the lift stations, manhole rims and covers, HDPE grade ring risers. All parts standing inventories can be accessed through the Lucity asset management system by going to parts then the name of the product you are looking for this will show you the remaining stock on hand.

The Collection system also has a fleet of small equipment that is inspected weekly in order to insure the equipment's readiness for an emergency. Work orders print out monthly and are closed when the work is complete.

Element 5: DESIGN AND PERFORMANCE PROVISIONS

This section of the SSMP discusses the District’s design and construction standards. This section fulfills the Design and Performance Provisions requirement of the SWRCB (Element 5) SSMP requirements.

5.1 Regulatory Requirements for Design & Construction Standards

The requirements for the Design and Performance Provisions element of the SSMP are summarized below.

SWRCB Requirement

- (a) The wastewater agency must have design and construction standards and specifications for the installation of new sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sewer systems.

- (b) The wastewater agency must also have procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

5.2 Design & Construction Standards Discussion

The North San Mateo County Sanitation District incorporated its construction specifications in the Daly City General Conditions, Standard Specification and Drawings when it merged with the City of Daly City in 1985. These specifications are continuously reviewed by the District and are amended on an as needed basis to incorporate the latest advancements in materials and technology.

The Daly City General Conditions, Standard Specification and Drawings are available for purchase after payment of a nominal fee at the City’s Engineering Department located at 333 90th Street, Daly City, California, 94015. The Daly City General Conditions, Standard Specification and Drawings and District Code are also available at no charge on the internet at the Daly City website:

http://www.dalycity.org/City_Hall/Departments/wwr/SSMP_SSO_Database.htm

District staff attends classes, seminars and trade shows to keep up to date on the new technology available for the industry. This new technology is reviewed by District staff and when approved by the District Board, is included in the annual specification revision. The new technology is then used by District field crews performing routine duties and by District design staff in the planning and design of new or rehabilitation projects.

The design of the District’s new or rehabilitated projects incorporate these specifications, as well as the “Greenbook” Standard Specifications for Public Works Construction”, the District Code, the “Water and Wastewater Calculations Manual”, the “Buried Pipe Design”, and “The State of California, Department of Transportation, Standard Specifications”.

Element 5: Design and Performance Provisions

As the District's sewer system ages, the system is televised to determine pipe integrity and for the ability to accept newer rehabilitation practices. Trenchless technology such as pipe bursting, slip lining, directional boring and micro-tunneling is common practice in the District.

Lift stations are reviewed and designed on a case by case basis. Their design is based on a complex set of variables that make each station unique. Other appurtenances are viewed in much the same way and are designed for their distinct situation.

The District's approach insures that the sewer mains, private lateral connections and other appurtenances are properly designed and constructed with the latest industry advancements.

5.3 Procedures and Standards - Testing of New Facilities

The District's sewer system rehabilitation and repair projects are inspected by the District's Operations Technicians staff and are available for inspection duties throughout the normal work day and under special circumstances, after-hours inspection is available following the payment of additional fees.

The District has developed a comprehensive training program for the instruction of new inspection staff which is also used as a refresher course for its existing staff. New employees are required to participate in the program prior to performing inspection duties.

Inspection is provided continuously during the construction of new or rehabilitation projects. Testing procedures are clearly defined in the Daly City General Conditions, Standard Specifications and Drawings. District projects are not accepted without inspection and testing of each component of the new or rehabilitated infrastructure.

Element 6: OVERFLOW EMERGENCY RESPONSE PLAN

This section of the SSMP provides an overview and summary of the District’s emergency response documents and procedures for sewer overflows. Complete documentation of overflow response procedures are included in Attachment A on Daly City's website. This section fulfills the Overflow Emergency Response Plan requirement of the SWRCB (Element 6) SSMP requirements.

6.1 Regulatory Requirements for Overflow Emergency Response Plan Element

The requirements for the Overflow Emergency Response Plan element of the SSMP are as follows:

SWRCB Requirement:

The collection system agency shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

- (a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;
- (b) A program to ensure appropriate response to all overflows;
- (c) 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 Monitoring and Reporting Plan (MRP). All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDR or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification;
- (d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
- (e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
- (f) A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to waters of the United States and 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.

6.2 Element 6 Supporting Documents

Supporting information for Element 6 is included in the District Overflow Emergency Response Plan (OERP) in Attachment A on the City's website at

http://www.dalycity.org/City_Hall/Departments/wwr/SSMP_SSO_Database.htm

6.3 Overview of Sewer Overflow Response

In Element 2 of this plan, the District’s organizational chart clearly identifies the internal chain of command and responsibilities during a SSO event. In addition, the District’s Emergency Overflow Response Plan, in the link noted above, provides detailed call out procedures and off duty phone, cell and pager numbers during non-working hours.

District policy is to respond to all spills within the District within 60 minutes of notification, 95% of the time whether on public or private property and to take all steps possible to prevent the spills from reaching the storm drains, flood control channels, or waters of the State, all in accordance with the waste discharge requirements. The District’s OERP details the lines of authority, responsibilities and response of District personnel during an overflow/emergency event.

The District provides appropriate training on its Emergency Overflow Response Plan. A copy of the plan is provided to each staff member. The plan is updated on a continual basis as personnel and contact information changes and is reviewed annually for accuracy.

The District follows the “CALTRANS Manual of Traffic Controls for Construction and Maintenance Work Zones” for traffic control and relies on its police department for crowd control, if needed, during emergency operations.

6.4 Summary of Sanitary Sewer Overflow Response Plan

The District’s overflow response plan is divided into 10 sections, as follows:

- I. Introduction
- II. SSO Categories
- III. Scope of the Plan
- IV. Response Procedures Following SSO
- V. Water Quality Monitoring Plan
- VI. Spill Containment
- VII. Cleanup Procedures and Warning Signs
- VIII. Documentation of Spill
- IX. Video Inspection
- X. Regulatory Reporting Requirements

Objectives of the District’s OERP are to protect public health and the environment, satisfy regulatory agency requirements, and minimize risk of enforcement actions against the District. Additional objectives include providing appropriate customer service and protecting District personnel, the collection system and facilities, and private and public property.

Element 7: FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM

This section of the SSMP discusses the District's FOG control measures, including identification of problem areas, focused cleaning, and source control. This section fulfills the FOG Control requirement for the SWRCB (Element 7) SSMP requirements.

7.1 Regulatory Requirements for FOG Control Element

The requirements for the FOG Control element of the SSMP are summarized below:

SWRCB Requirement:

The wastewater agency shall evaluate its service area to determine whether a FOG control program is needed. If the agency determines that a FOG program is not needed, the agency must provide justification for why it is not needed. If FOG is found to be a problem, the agency must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. The FOG source control program shall include the following as appropriate:

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

7.2 FOG Control Discussion

The District has determined that a FOG control program is necessary per SSMP requirements.

Implementation Plan

FOG specific door hangers are distributed whenever District staff responds to a sewer lateral backup. In addition, these were distributed in the highest known trouble spot areas.

Element 7: Fats, Oils and Grease (FOG) Control Program

The Residential Grease Receiving Station located at the wastewater treatment plant is a vault where residential customers may dispose of used cooking fats, oils and grease, free of charge.

Public Education Messages are regularly distributed in utility bills, during inspections and at events and other information regarding pollution prevention can be found on the City's website at the following places on the City of Daly City's website

http://www.dalycity.org/City_Hall/Departments/wwr/Pollution_Prevention/education.htm

http://www.dalycity.org/City_Hall/Departments/wwr/wastewater.htm

Restaurant Posters are distributed as needed.

Disposal Plan

Residential Grease: A grease recycling vault is located at the wastewater treatment plant for residential customers to dispose of used cooking fats, oils and grease free of charge.

Commercial Grease Disposal: The California Fats, Oils, and Grease work group (Cal FOG) was formed in 2001 as a result of increased regulatory focus on FOG-related sanitary sewer overflows. The work group consists of wastewater agency, regulator, consulting firm, and restaurant and related industry representatives. The focus of the work group is to utilize collective resources to develop FOG control tools and to provide technical support and information to the work group members.

Legal Authority

http://www.dalycity.org/City_Hall/Departments/wwr/SSMP_SSO_Database.htm

FOG legal authority is covered under:

North San Mateo County Sanitation District Code (Attachment C)

Chapter 1.24, Use of Public Sewers – Sections 1.24.030 – Discharges that may be prohibited by District engineer, 1.24.060 – Interceptors: Required, and 1.24.070 – Interceptors: Maintenance

Chapter 1.44 – Enforcement, Section 1.44.020 – Violation constitutes public nuisance

GRD Requirement

North San Mateo County Sanitation District Code (Attachment C)

Chapter 1.24, Use of Public Sewers – Sections 1.24.030 – Discharges that may be prohibited by District engineer, 1.24.060 – Interceptors: Required, and 1.24.070 – Interceptors: Maintenance

For new and redevelopment projects staff developed a grease interceptor sizing worksheet to aid applicants in the proper design and sizing of grease interceptors.

2007 California Plumbing Code – Chapter 10 (Attachment B)

To verify maintenance, a Bill of lading must be kept on file for review during inspections.

Authority to Inspect GRDs

The District's Source Control Inspector has sufficient authority to inspect and enforce FOG produced by grease producing facilities or others through the legal authorities identified in Legal Authority above.

FOG Cleaning Maintenance

The District has a list of "hot spots" that are cleaned on a regular basis to ensure blockages associated with oil and grease is kept to a minimum.

FOG Source Control Maintenance

In addition to all the above and the District Code, District staff routinely provide plan review comments on proposed new or redeveloped property, perform inspections at grease producing businesses, and additionally, provide informational brochures to customers.

Recent Results

There are 225 food service establishments (FSE) that are located within District limits that discharge to District sewers. During CY 2018, a total of 37 FOG inspections of the City's FSEs were conducted. The District cleaned 670,600 feet of its sewer system infrastructure, and the treatment plant FOG recycling center received 250 gallons of waste.

Element 8: SYSTEM EVALUATION AND CAPACITY MANAGEMENT

This section of the SSMP discusses the District's capacity management measures, including the most recent Master Plan and recommended capacity improvement projects. This section fulfills the System Evaluation and Capacity Management requirement of the SWRCB (Element 8) SSMP requirements.

8.1 Regulatory Requirements for Capacity Management

The requirements for the System Evaluation and Capacity Management element of the SSMP are summarized below.

SWRCB Requirement:

The enrollee shall prepare and implement a capital improvement plan that will provide hydraulic capacity of key sewer system elements under peak flow conditions. This plan must include:

- (a) **Evaluation:** The enrollee must identify actions needed to evaluate those portions of the sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows, estimates of the capacity of key system components, hydraulic deficiencies, and the major sources that contribute to the peak flows associated with overflow events.
- (b) **Design Criteria:** Where design criteria do not exist or are deficient, the agency should undertake the evaluation identified in (a) above to establish appropriate design criteria.
- (c) **Capacity Enhancement Measures:** The enrollee must identify the steps needed to establish a short- and long-term capital improvement plan (CIP) to address identified hydraulic deficiencies including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.
- (d) **Schedule:** The enrollee shall develop a schedule of completion dates for all portions of the CIP developed in (a) through (c) above. This schedule shall be reviewed and updated at least every five years.

8.2 Element 8 Supporting Documents

Supporting information for Element 8 is included in the Appendices related to the capacity evaluation, Technical Memoranda 2,3, and 4 regarding the evaluation results, and Attachment H which displays a prioritized project schedule to address these system capacity issues. These are all located on the City's website at

http://www.dalycity.org/City_Hall/Departments/wwr/SSMP_SSO_Database.htm

8.3 Capacity Discussion

Evaluation

The District completed a Collection System Master Plan in 1993 based on flow monitoring and hydraulic modeling of the trunk sewer system (10-inch and larger lines plus some 8-inch lines). The Master Plan quantified existing and future base wastewater flows and peak wet weather flows for a 5-year recurrence frequency design storm. Thirteen gravity sewer relief projects and one pump station project were identified for the separate portion of the sanitary sewer system. All but one of those projects was subsequently completed.

The District completed a wet weather flow monitoring program in the winter 2007/08 at 11 locations in the trunk sewer system, and has also analyzed total flows to its wastewater treatment plant for major storm events that have occurred over the past five years. The results of the analyses indicate that total peak flows in the system have not exceeded the design flows projected in the 1993 Master Plan for the year 2010. However, because additional development has occurred in some portions of the service area and metered peak flows in some trunk sewers are close to the Master Plan predicted values, the District completed an update of its Master Plan capacity assessment in 2009 by developing a new hydraulic model of the system calibrated to the 2007/08 flow monitoring data and incorporating updated estimates of service area growth. The new model has been used to perform an up-to-date capacity assessment of the system and identify any improvements needed to address identified hydraulic deficiencies.

Design Criteria

The District established design flow criteria for evaluating system capacity as part of its 1993 Master Plan. The criteria included unit flow factors for new development, sanitary flow peaking factors, infiltration/inflow parameters, and a 4-hour, uniform intensity 5-year design storm based on historical rainfall statistics for the Daly City area. As part of its 2009 capacity assessment update, the District refined its design flow criteria, including use of a more conservative, varying intensity 5-year design storm, to be used for assessment of peak wet weather flow capacity requirements. These criteria will provide for adequate capacity in the system to minimize the risk of capacity-related SSOs.

Capacity Enhancement Measures

Based on the results of the hydraulic modeling conducted in 2009, as described in Section VII(a) above, the District has identified eleven areas with potential capacity deficiencies that will be investigated further to confirm the need for CIP projects. These projects are listed in Technical Memorandum 3B and Attachment H at

http://www.dalycity.org/City_Hall/Departments/wwr/SSMP_SSO_Database.htm

In addition, the District plans to conduct field investigations to identify sources of infiltration/inflow in the Skyline/Belcrest area of the system, which has experienced previous wet weather overflows due to lift station backup. This capacity deficiency was also confirmed by the hydraulic modeling.

Element 8: System Evaluation and Capacity Management

Based on the results of the capacity assessment combined with the sewer rehabilitation needs identified to date through maintenance and CCTV inspection activities, the District has assigned priorities to potential capacity enhancement and structural improvement projects based on problem severity and assessment of relative risk. The current 20-year CIP is included in Attachment P. The District will update the CIP program on a biennial basis based on results of CCTV inspections and maintenance activities, and further investigation of capacity deficiencies and potential solutions.

Schedule

The prioritized capital improvements project schedule is in Attachment H, as mentioned above in Capacity Enhancement Measures. Brown and Caldwell was hired in December 2019 to update the Collection System Master Plan. The anticipated completion date is November 2020. There will be updated capacity related projects based on this work.

Element 9: MONITORING, MEASUREMENT, & PROGRAM MODIFICATIONS

This section of the SSMP discusses parameters the District tracks to monitor the success of the SSMP and how the District plans to keep the SSMP current. This section fulfills the Monitoring, Measurement, and Program Modifications requirement for the SWRCB (Element 9) SSMP requirements.

9.1 Regulatory Requirements for Monitoring, Measurement, & Program Modifications

The requirements for the Monitoring, Measurement, and Program Modifications element of the SSMP are summarized below:

SWRCB Requirement:

The wastewater agency shall:

- (a) Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;
- (b) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;
- (c) Assess the success of the preventative maintenance program;
- (d) Update program elements, as appropriate, based on monitoring or performance evaluations; and
- (e) Identify and illustrate SSO trends, including: frequency, location, and volume.

9.2 Element 9 Supporting Documents

Supporting information for Element 9 is included in Table 1 of previous audits, and includes a variety of information related to SSOs, including causes, rates, volumes, response times, etc. The most recent Audit is located on the City's website (as Attachment J) at

http://www.dalycity.org/City_Hall/Departments/wwr/SSMP_SSO_Database.htm

9.3 Monitoring and Measurement Discussion

The Collection Division has greatly reduced blockages and SSO's through the use of altering maintenance schedules as needed, making pipeline repairs and identifying areas for replacement or rehabilitation through the CIP process. The data regarding number, volume, and causes of SSO's is contained in the audit report that is completed biannually. Staff is constantly assessing the Collection system infrastructure and contacting neighboring agencies to seek better methods of

Element 9: Monitoring, Measurement & Program Modifications

system maintenance. Record keeping of cleaning and repairing of the system is maintained in the City's Lucity Asset Management System, which continuously maintains and update records of work performed on sewer infrastructure. Each sewer main is identified individually and has a maintenance schedule that can be adjusted as needed. Pipeline inspections are used to assess pipe condition and planning for future projects. The video inspection phase of the maintenance program has been switched to the image captured digitally and downloaded to a hard drive system which is more cost and time efficient. Other sources of information include field observations and shared practices from other agencies.

The District tracks several performance measures through tracking logs and annual reports, including but not limited to number, cause and location of stoppages; number, cause, location, category, volume of SSOs, and volume reaching waters; stoppage response time; number and reason for customer complaints; The District plans to continue tracking all performance measures that are currently tracked.

In order to monitor the effectiveness and success of its preventive maintenance program and the SSMP the District has selected certain, specific parameters that can be documented and compared on an annual basis in a simple format. These parameters were selected because they are straightforward, quantitative, and focused on results. Although the parameters may not track everything associated with SSMP implementation, changes in these parameters over time will indicate the overall success of the SSMP or, conversely, underlying problems that can then be investigated further.

The SSMP is reviewed quarterly to insure all the provisions are implemented and the effectiveness discussed at Staff meetings. The Staff meetings will include representatives from the field crews, supervisory and administrative staff.

Table 9-1 lists each SSMP element, the overall purpose of the SSMP element, and the specific parameters that the District plans to track that will help in evaluating the effectiveness of the SSMP. A Table of Annual SSO Statistics listing each of these parameters, which the District Completes Biannually in conjunction with completing the SSMP audit (Element 10).

Table 9-1. SSMP Monitoring Parameters, by SSMP Element

SSMP Element	Summary of Element Purpose	Parameters for Tracking Effectiveness (Annual)
1 - Goals	Establish priorities of City and provide focus for City staff	None needed
2 - Organization	Document organization of City staff and chain of communication for SSO response	None needed
3 - Legal Authority	Ensure the City has sufficient legal authority to properly maintain the system	None needed

Element 9: Monitoring, Measurement & Program Modifications

SSMP Element	Summary of Element Purpose	Parameters for Tracking Effectiveness (Annual)
4 - Operation and Maintenance Program	Minimize blockages and SSOs by properly maintaining the system and keeping the system in good condition	<ul style="list-style-type: none"> ▪ Total number and volume of SSOs ▪ Number of repeat SSOs (same location as any previous SSO, regardless of year of occurrence) ▪ Total number of mainline blockages ▪ Number of pump station failures ▪ Number of pipe failures
5 - Design and Performance Provisions	Ensure new facilities are properly designed and constructed	None needed
6 - Overflow Emergency Response Plan	Provide timely and effective response to SSO emergencies and comply with regulatory reporting requirements	<ul style="list-style-type: none"> ▪ Average and maximum response time ▪ Percent of total overflow volume contained or returned to sewer
7 - Fats, Oils, & Grease (FOG) Control Program	Minimize blockages and overflows due to FOG	<ul style="list-style-type: none"> ▪ Number of overflows due to FOG ▪ Number of FOG producing facilities inspected
8 - System Evaluation and Capacity Management	Minimize SSOs due to insufficient capacity by evaluating system capacity and implementing necessary projects	<ul style="list-style-type: none"> ▪ Number of SSOs due to capacity limitations or wet weather
9 - Monitoring, Measurement, & Program Modifications	Evaluate effectiveness of SSMP, keep SSMP up-to-date, and identify necessary changes	None needed
10 - SSMP Program Audits	Formally identify SSMP effectiveness, limitations, and necessary changes on an annual basis	<ul style="list-style-type: none"> ▪ Date of completion of last biennial audit
11 - Communication Program	Communicate with the public and satellite agencies.	None needed

SSO Discussion:

The trend of SSO occurrences and the corresponding SSO rates of SSOs/100 miles/year are shown visually in Table 1 of Attachment J, both in tabular and graphical forms. The District's rate for recent years is very low, 1.12.SSOs/100 miles/year for 2019, lower than the average rate for systems in both the Region and the State.

The causes of the District's SSOs are also indicated in Table 1. Identification of causes is important because it can enable the District to focus efforts on the main causes of SSOs in order to reduce them.

The volume of District SSOs and the volume and percentage recovered are also shown in Table 1. These are indicators that reflect the efforts the District has made to minimize SSOs and their impacts if and when they occur. There are minimal to no water quality impacts if SSO volumes do not reach waters, so a special effort is made to recover as much SSO volume as possible and practical.

9.4 SSMP Modifications

The SSMP needs to be updated periodically to maintain current information, and programs need to be enhanced or modified if they are determined to be less effective than needed. The District will review the successes and needed improvements of the SSMP as part of the SSMP biennial audit, described in Element 10. Modifications and changes to the SSMP made as a result of monitoring or performance evaluations will be identified and tracked by the SSMP Change Log, included in at the end of Element 11.

District staff will update critical information, such as contact numbers and the SSO response chain of communication, as needed. A comprehensive SSMP update will occur every 5 years, as required by the SWRCB.

Element 10: SSMP PROGRAM AUDITS

This section of the SSMP discusses the District's SSMP auditing program. This section fulfills the SWRCB (Element 10) SSMP Program Audit requirements.

10.1 Regulatory Requirements for SSMP Program Audits

The requirements for the SSMP Program Audits element of the SSMP are summarized below:

SWRCB Requirement:

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

10.2 Element 10 Supporting Documents

Supporting information for Element 10 is included in completed audits that can be reviewed in Attachment I at

http://www.dalycity.org/City_Hall/Departments/wwr/SSMP_SSO_Database.htm

10.3 SSMP Audits Discussion

The District will complete audits of the SSMP once every two years, and will include the audit report in Appendix J. The audit will include the following:

- Review of monitoring and measurement tracked under Element 9
- Identification of successes of implementation of SSMP elements and needed improvements
- Description of any system improvements during the audit period
- Description of any system improvements planned for the upcoming audit period, with an estimated schedule for implementation

Upon completion of the audit, the City will keep a report of the audit on file to fulfill the SWRCB audit requirement. Modifications and changes to the SSMP will be identified and tracked by the SSMP Change Log and included as part of the SSMP in five year SSMP updates. This Log will be used to track SSMP changes in the periods between audits as well as changes made as a result of audits or SSMP updates.

Element 11: COMMUNICATION PROGRAM

This section of the SSMP discusses the District's communications with the public and satellite agencies. This section fulfills the Communication Program requirement for the SWRCB (Element 11).

11.1 Regulatory Requirements for Communication Program

The requirements for the Communication Program element of the SSMP are summarized below:

SWRCB Requirement:

The agency 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 agency as the program is developed and implemented. The agency shall also create a plan of communication with systems that are tributary and/or satellite to the agency's sanitary sewer system.

11.2 Communication Program Discussion

The District maintains a website through the City of Daly City

http://www.dalycity.org/City_Hall/Departments/wwr.htm

The website is used to inform the public about District activities. The website is an effective communication channel for providing alerts and news to the public. The main page of the website provides important announcements and documents for District customers. Various announcements, technical documents and standards, capital improvement plans, and this SSMP are included in links on this web page..

The District plans to publish this revised SSMP on the District website. The completed SSMP will be certified by the District Board during a public meeting. The District will also use the website to notify the public of important upcoming activities related to sewer system management.

