North San Mateo County Sanitation District

a subsidiary of the City of Daly City

Sewer System Management Plan

WDDID # 2SSO10161

April 2025

August 2006 - SSMP Completed
August 31, 2008 – District Staff Audit – KM/CJR
March 10, 2010 – District Staff Audit – KM/CJR
March 1, 2011 – District Staff Audit – KM/CJR
August 2019 – 5 year review and update of contents
December 2019 -- 5 Year Revision
June 2023 – Updated the Sewer Spill Emergency Response Plan (DKF)
November 2024 – Internal SSMP Audit
April 2025 – SSMP Update and City Council Re-certification

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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
SERP	Spill 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. The section meets requirements in Attachment D, Section 1.1 to 1.3 of the WDR which describes the items to be included in a "Narrative Introduction section" of the SSMP.

SSMP Regulatory Background and Update Schedule

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 required 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 WDR also mandated the development of an SSMP and the reporting of SSOs using an electronic reporting system maintained by the SWRCB, the California Integrated Water Quality System (CIWQS). SSMP reporting and monitoring requirements were updated through SWRCB Order No. WQ 2013-0058-EXEC. The WDR was most recently reissued as 2022-0103-DWQ and became effective June 5, 2023.

This current version of the SSMP was revised in April 2025 to align with new and revised requirements in the 2022 WDR. An Internal Audit of the SSMP was conducted in November 2024 and it will be repeated every three years. The SSMP will be updated, as needed, after each Audit, with a minimum requirement for updates and Council re-certification every six years. The April 2025 update satisfies the requirement that the SSMP be updated by May 2, 2025.

The District's waste discharge identification number (WDID) in CIWQS is 2SSO10161.

Current WDR 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 and Introduction
2. Organization
3. Legal Authority

4. Operation and Maintenance Program
5. Design and Performance Provisions
6. Spill Emergency Response Plan
7. Sewer Pipe Blockage Control Program
8. System Evaluation, Capacity Assurance, and Capital Improvements
9. Monitoring, Measurement, and Program Modifications
10. Internal Audits
11. Communication Program

Each element section is organized into subsections, as follows:

1. Description of the WDR 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. The District estimates that it serves a population of approximately 105,000 in Daly City and other small unincorporated areas tributary to its service area.

The District's sewer system consists of approximately 176 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 24,617 service connections. Of these, 91 are city/government-owned, 646 are commercial, 1,691 are multi-family, 3,106 are new property, and 19, 083 are residential. Collected sewage is conveyed to the North San Mateo Water Quality Control Plant (RWQCP) for treatment.

The District does not own and is not responsible for maintaining neither the lower nor upper portions of sewer laterals tributary to its system. There are no structures that divert stormwater to the sewer system within the District's service area. The District uses Lucity, a computerized maintenance management system, to inventory its assets and track maintenance, inspections, and repair work orders throughout its service area.

A discussion on maps of the service area and assets is included in Section 4.3 *Collection System Map Discussion*. The District is developing an Electronic Sanitary Sewer System

Service Area Boundary Map which will be submitted to the SWRCB by December 31, 2025, as required by the WDR.

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 WDR (Element 1) SSMP requirements.

1.1 Regulatory Requirements for Goals Element

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

WDR Requirement:

The goal of the SSMP is to provide a plan and schedule to: (1) properly manage, operate, and maintain all parts of the Enrollee's sanitary sewer system(s), (2) reduce and prevent spills, and (3) contain and mitigate spills 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 follows:

Goal 1 –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.

Goal 2 –Minimize the Frequency of SSOs

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

- Implement a capital improvement plan that provides 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.
- Identify problem areas in the system and make all feasible repairs
- 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

Goal 3 – 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 WDR (Element 2) SSMP requirements.

2.1 Regulatory Requirements for Organization Element

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

WDR Requirement:

The SSMP must identify organizational staffing responsible and integral for implementing the local Sewer System Management Plan through an organization chart or similar narrative documentation that includes:

1. The name of the responsible or authorized representative;
2. The position titles, telephone numbers, and email addresses for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program;
3. Organizational lines of authority; and
4. 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, as 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.

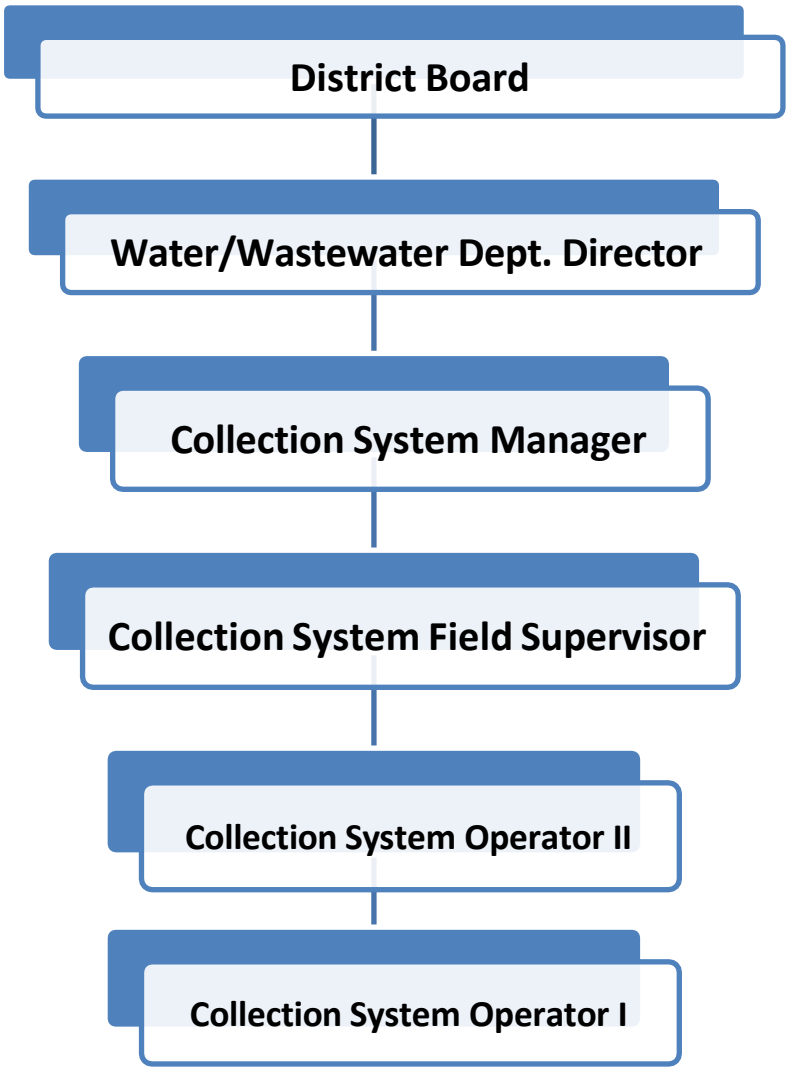

Figure 2-1. Organization Chart of District Collection System Staff

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, repairs sewer lines, and repairs sewer laterals at City-owned facilities, when needed. 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	Responsible Position	Name	Phone Number	Email Address
Introduction	Collection Systems Manager	Louie Langi	(650) 991-8200	llangi@dalycity.org
I – Goals	Collection Systems Manager	Louie Langi	(650) 991-8200	llangi@dalycity.org
II – Organization	Collection Systems Manager	Louie Langi	(650) 991-8200	llangi@dalycity.org
III – Legal Authority	Water/Wastewater Resources Director	Joshua Cosgrove	(650) 991-8200	jcosgrove@dalycity.org
IV – O&M Program	Collection Systems Manager	Louie Langi	(650) 991-8200	llangi@dalycity.org
V – Design & Performance Provisions	Water/Wastewater Resources Director	Joshua Cosgrove	(650) 991-8206	jcosgrove@dalycity.org
VI – Spill Emergency Response Plan	Collection Systems Manager	Louie Langi	(650) 991-8200	llangi@dalycity.org
VII – Sewer Pipe Blockage Control Program	Environ. Res.& Compl. Inspector	FOG: Kaila DeFries Other: Louie Langi	(650) 991-8200	kdefries@dalycity.org
VIII – System Evaluation, Capacity Assurance, and Capital Improvements	Water/Wastewater Resources Director	Louie Langi	(650) 991-8200	llangi@dalycity.org
IX – Monitoring, Measurement, and Program Modifications	Collection Systems Manager	Louie Langi	(650) 991-8200	llangi@dalycity.org
X – Internal Audits	Collection Systems Manager	Louie Langi	(650) 991-8200	llangi@dalycity.org
XI -Communication Program	Water/Wastewater Resources Director	Joshua Cosgrove	(650) 991-8200	jcosgrove@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 Attachment A, the District's Sewer Spill Emergency Response Plan (SSERP). The SSERP is also available on the City of Daly City website at:
https://www.dalycity.org/660/Sewer-System-Management-Plan

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

Contact	Telephone Number
Collection System Maintenance	(650) 991-8200
Collection Systems Manager	(650) 991-8200
Collection System Field Supervisor	(650) 991-8200
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 WDR (Element 3).

3.1 Regulatory Requirements for Legal Authority Element

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

WDR Requirement:

The SSMP must include copies or an electronic link to local sewer system use ordinances, service agreements and/or other legally binding procedures to demonstrate that the Public Agency possesses the necessary legal authority to:

- Prevent illicit discharges into its wastewater collection system (examples may include infiltration and inflow (I/I), unauthorized storm water, chemical dumping, unauthorized debris; FOG, roots, trash, etc.);
- Collaborate with storm sewer agencies to coordinate emergency spill responses, ensure access to storm sewer systems during spill events, and prevent unintentional cross connections of sanitary sewer infrastructure to storm sewer infrastructure;
- Require that sewers and connections be properly designed and constructed;
- Ensure access, including easement accessibility, if needed, for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency, and
- 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 and is incorporated by reference and available on the City of Daly City website.

3.3 Legal Authority Discussion

Pertinent chapters of the North San Mateo County Sanitation District Code and the Daly City Municipal Code include the following provisions:

Prevention of Illegal Discharges

North San Mateo County Sanitation District Code

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

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

Proper Design and Construction

North San Mateo County Sanitation District Code

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 Drawings

Section 02720 – Sanitary Sewer Collection System
Drawings SS 1-13

City of Daly City Design Standards

Section 4 – Sanitary Sewer System

The Unified Plumbing Code - Requires all pipe materials and fittings be UPC labeled and approved.

CALTRANS Manual on Uniform Traffic Control – Includes *Worker Safety Considerations* (Section 6D.03) and *Temporary Traffic* Control *Plans* (Section 6C.01)

Ensure Access for Lateral Maintenance

North San Mateo County Sanitation District Code

Chapter 1.40 – Administration, Section 1.40.070 – District Inspection

Daly City Municipal Code

Chapter 8.16 – Property Maintenance and Nuisance Abatement Ordinance

Limit Discharge of FOG

Grease Interceptor Calculation Form – City-created worksheet developed to aid project applicants in the proper design and sizing of grease interceptors. The worksheet incorporates requirements from the 2007 California Plumbing Code – Chapter 10.

North San Mateo County Sanitation District Code

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

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), 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.

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.

In addition, the District keeps updated maps of stormwater infrastructure from agencies operating in its service area (City of Daly City, South San Francisco, Town of Colma) so it can respond to and contain spills that reach stormwater conveyance systems. The District also maintains contacts for these agencies' Public Works Departments to inform them of any spills into their systems and collaborate on cleanup and containment.

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 WDR (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 WDR requirements described for each category as applicable.

Collection System Map

WDR Requirement: An up-to-date map(s) of the sanitary sewer system, and procedures for maintaining and providing State and Regional Water Board staff access to the map(s). The map(s) must show gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities within the sewer system service area boundaries.

Preventive Operation and Maintenance Activities

WDR Requirement: A scheduling system and a data collection system for preventive operation and maintenance activities conducted by staff and contractors. The scheduling system must include:

- Inspection and maintenance activities;
- Higher-frequency inspections and maintenance of known problem areas, including areas with tree root problems;
- Regular visual and CCTV inspections of manholes and sewer pipes.

The data collection system must document data from system inspection and maintenance activities, including system areas/components prone to root-intrusion potentially resulting in system backup and/or failure.

Training

WDR Requirement: In-house and external training provided on a regular basis for sanitary sewer system operations and maintenance staff and contractors. The training must cover:

- The requirements of the WDR;
- The Spill Emergency Response Plan procedures and practice drills;
- Skilled estimation of spill volume for field operators; and
- Electronic CIWQS reporting procedures for staff submitting data.

Equipment Inventory

WDR Requirement: An inventory of sewer system equipment, including the identification of critical replacement and spare parts.

4.2 Element 4 Supporting Documents

Supporting information for Element 4 is a description of maintenance activities included in Attachment B.

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 Preventive Operations and Maintenance Activities

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 is 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

Scheduled Inspections

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 funding of $1.1 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.

4.5 Training

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. CWEA holds regular trainings on all aspects of the WDR requirements, including SSMP requirements, emergency response, spill volume estimation, and spill reporting procedures.

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.

4.6 Equipment Inventory

Replacement inventories are located in the DWWR 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 WDR (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.

WDR Requirements:

1. Updated Design Criteria and Construction Standards and Specifications.

   Updated design criteria, and construction standards and specifications, for the construction, installation, repair, and rehabilitation of existing and proposed system infrastructure components, including but not limited to pipelines, pump stations, and other system appurtenances. If existing design criteria and construction standards are deficient to address the necessary component-specific hydraulic capacity as specified in Section 8 (System Evaluation, Capacity Assurance and Capital Improvements) of the SSMP, the procedures must include component-specific evaluation of the design criteria.
2. Procedures and Standards

   Procedures, and standards for the inspection and testing of newly constructed, newly installed, repaired, and rehabilitated system pipelines, pumps, and other equipment and appurtenances.

5.2 Design Criteria and Construction Standards and Specifications Discussion

The North San Mateo County Sanitation District incorporated its construction specifications into 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 at the Daly City website:

https://www.dalycity.org/660/Sewer-System-Management-Plan

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".

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. These procedures are deemed appropriate to address potential component-specific hydraulic capacity issues in the system.

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 ensures 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

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:
SPILL 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 Spill Emergency Response Plan requirement of the WDR (Element 6) SSMP requirements.

6.1 Regulatory Requirements for the Spill Emergency Response Plan

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

WDR Requirement:

The SSMP must include an up to date Spill Emergency Response Plan (SERP) to ensure prompt detection and response to spills to reduce spill volumes and collect information for prevention of future spills. The SERP must include procedures to:

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

6.2 Element 6 Supporting Documents

Supporting information for Element 6 is included in the District Sewer Spill Emergency Response Plan (SSERP) in Attachment A, which is also available on the City's website at:

https://www.dalycity.org/660/Sewer-System-Management-Plan

6.3 Overview of Sewer Spill Emergency Response Plan

In Element 2 of the SSMP, the District's organizational chart clearly identifies the internal chain of command and responsibilities during a SSO event. In addition, the District's SSERP, 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 Districts SSERP details the lines of authority, responsibilities and response of District personnel during an overflow/ emergency event.

The District provides appropriate training on its SSERP. 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 SSERP was overhauled in July 2023 to comply with requirements in the 2022 WDR; it is reviewed and, if needed, updated annually.

6.4 Summary of Sanitary Sewer Emergency Response Plan

The District's overflow response plan is divided into 15 sections, as follows:

1. Purpose
2. Policy
3. Definitions as used in this Spill Emergency Response Plan
4. State Regulatory Requirements for Element 6, Spill Emergency Response Plan
5. Spill Emergency Response Plan Objectives
6. Spill Detection and Notification
7. Spill Response Procedures
8. Recovery and Cleanup
9. Water Quality
10. Notification, Reporting, Monitoring and Recordkeeping Requirements
11. Post-Spill Assessments of Spill Response Activities
12. Spill Response Training
13. Sewer Backup Into/Onto Private Property Claims Handling Policy
14. Authority
15. Appendices

Objectives of the District's SSERP 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:
SEWER PIPE BLOCKAGE CONTROL PROGRAM

This section of the SSMP discusses the District's sewer pipe blockage control measures, including FOG, rags, wipes, roots, and other problematic debris. This section fulfills the FOG Control requirement for the WDR (Element 7) SSMP requirements.

7.1 Regulatory Requirements for Sewer Pipe Blockage Control Program Element

The requirements for the Sewer Pipe Blockage Control Program element of the SSMP are summarized below:

WDR Requirements:

The SSMP must include procedures for the evaluation of the service area to determine whether a sewer pipe blockage control program is needed to control fats, oils, grease, rags and debris. If the Enrollee determines that a program is not needed, the Enrollee shall provide justification in its Plan for why a program is not needed. The procedures must include, at minimum:

- An implementation plan and schedule for a public education and outreach program that promotes proper disposal of pipe-blocking substances;
- A plan and schedule for the disposal of pipe-blocking substances 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 substances generated within a sanitary sewer system service area;
- The legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages;
- Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, best management practices requirements, recordkeeping and reporting requirements;
- Authority to inspect grease producing facilities, enforcement authorities, and whether the Agency has sufficient staff to inspect and enforce the fats, oils, and grease ordinance;
- An identification of sanitary sewer system sections subject to fats, oils, and grease blockages and establishment of a cleaning schedule for each section; and
- Implementation of source control measures for all sources of fats, oils, and grease reaching the sanitary sewer system for each section identified above.

7.2 Sewer Pipe Blockage Control Program Discussion

The District has determined that a Sewer Pipe Blockage Control Program is necessary per WDR requirements.

FOG Implementation Plan

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

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, including for FOG and wipes, are regularly distributed in utility bills, during inspections, and at community events. The District reports on its Pollution Prevention efforts annually; the reports are available on CIWQS.

The District is a member of the Bay Area Clean Water Agencies (BACWA) and their Bay Area Pollution Prevention Group (BAPPG). BAPPG conducts regional pollution prevention efforts regarding several regional pollutants of concern, including FOG, rags, and wipes. Details on regional efforts supported by the District are noted in BAPPG Annual Reports, available on the BACWA website at https://bacwa.org.

BAPPG conducts several FOG campaigns throughout the year and it has also developed several FOG-related messaging, including a custom downloadable FOG checklist can be found at Baywise.org[1]. Through a google-translation plugin, this website is now available in 14 languages, including Spanish, Chinese (both Simplified & Traditional), and Vietnamese. The website also includes messaging on baby wipes and other 'do-not-flush' items with the potential to cause sewage blockages.

FOG 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. To date, the center has recycled over 13,625 gallons of used cooking oil and grease.

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 SSOs. The work group consists of wastewater agencies, regulators, consulting firms, 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.

Roots Program

Collection System Maintenance Division Roots Program includes quarterly preventive maintenance schedule of sewer mains, televising of areas of the City with a history of root problems, and notifying sewer lateral owners with root issues. The Division responds to all potential sewer calls and provides a one-time service for sewer laterals. The residents of the City are informed of sewer lateral root issues and responsibilities and best practices.

Sewer Blockages Cleaning Hot Spots

The District has a list of "hot spots" that are cleaned on a regular basis to ensure blockages associated with FOG, wipes, or roots are kept to a minimum.

[1] https://baywise.org/learning-center/what-to-do-with-cooking-grease-hint-it-cant-go-down-the-drain/

Legal Authority

FOG control and general discharge prohibitions legal authority is covered under:

North San Mateo County Sanitation District Code

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

Grease Removal Device Requirements

North San Mateo County Sanitation District Code

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. This worksheet is based on requirements from the 2007 California Plumbing Code – Chapter 10.

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

The District's Source Control Inspector has authority to inspect and enforce grease producing facilities or others through the District Code identified in Legal Authority above.

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. Restaurant Posters are distributed as needed.

Recent Results

There are approximately 225 food service establishments located in the District's service area. During FY 2023-2024, a total of 30 FOG inspections of the City's FSEs were conducted. The treatment plant FOG recycling center received 250 gallons of waste. The District has not experienced FOG-related SSOs in the past 5 years.

Element 8: System Evaluation, Capacity Assurance, and Capital Improvements

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, Capacity Assurance, and Capital Improvements requirement of the WDR (Element 8) SSMP requirements.

8.1 Regulatory Requirements for Capacity Management

The requirements for the System Evaluation, Capacity Assurance, And Capital Improvements element of the SSMP are summarized below.

WDR Requirement:

The Plan must include procedures and activities for:

- Routine evaluation and assessment of system conditions;
- Capacity assessment and design criteria;
- Prioritization of corrective actions; and
- A capital improvement plan.

1. System Evaluation and Condition Assessment. The SSMP must include procedures to:
   - Evaluate the sanitary sewer system assets utilizing the best practices and technologies available;
   - Identify and justify the amount (percentage) of its system for its condition to be assessed each year;
   - Prioritize the condition assessment of system areas that:
     - Hold a high level of environmental consequences if vulnerable to collapse, failure, blockage, capacity issues, or other system deficiencies;
     - Are located in or within the vicinity of surface waters, steep terrain, high groundwater elevations, and environmentally sensitive areas;
     - Are within the vicinity of a receiving water with a bacterial-related impairment on the most current Clean Water Act section 303(d) List;
   - Assess the system conditions using visual observations, video surveillance and/or other comparable system inspection methods;
   - Utilize observations/evidence of system conditions that may contribute to exiting of sewage from the system which can reasonably be expected to discharge into a water of the State;
   - Maintain documents and recordkeeping of system evaluation and condition assessment inspections and activities; and
   - Identify system assets vulnerable to direct and indirect impacts of climate change, including but not limited to: sea level rise; flooding and/or erosion due to increased storm volumes, frequency, and/or intensity; wildfires; and increased power disruptions.

2. Capacity Assessment and Design Criteria. The SSMP must include procedures to identify system components that are experiencing or contributing to spills caused by hydraulic deficiency and/or limited capacity, including procedures to identify the appropriate hydraulic capacity of key system elements for:

- Dry-weather peak flow conditions that cause or contributes to spill events;
- The appropriate design storm(s) or wet weather events that causes or contributes to spill events;
- The capacity` of key system components; and
- Identify the major sources that contribute to the peak flows associated with sewer spills.

The capacity assessment must consider:

- Data from existing system condition assessments, system inspections, system audits, spill history, and other available information;
- Capacity of flood-prone systems subject to increased infiltration and inflow, under normal local and regional storm conditions;
- Capacity of systems subject to increased infiltration and inflow due to larger and/or higher-intensity storm events as a result of climate change;
- Increases of erosive forces in canyons and streams near underground and aboveground system components due to larger and/or higher-intensity storm events;
- Capacity of major system elements to accommodate dry weather peak flow conditions, and updated design storm and wet weather events; and
- Necessary redundancy in pumping and storage capacities;

3. Prioritization of Corrective Action. The findings of the condition assessments and capacity assessments must be used to prioritize corrective actions. Prioritization must consider the severity of the consequences of potential spills.

4. Capital Improvement Plan. The capital improvement plan must include the following items:

- Project schedules including completion dates for all portions of the capital improvement program;
- Internal and external project funding sources for each project;
- Joint coordination between operation and maintenance staff, and engineering staff/consultants during planning, design, and construction of capital improvement projects; and
- Interagency coordination with other impacted utility agencies.

8.2 Element 8 Supporting Documents

Supporting information for Element 8 is the *10-Year Wastewater System Master Plan* dated August 5, 2022, and available on the City's website at: https://www.dalycity.org/DocumentCenter/View/6915/Daly-CityNSMCSD---Wastewater-System-Master-Plan .

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. Since then, the District has successfully completed a series of capital improvement plan (CIP) projects that addressed most of the known deficiencies in the collection system.

The District's most recent Master Plan, *10-Year Wastewater System Master Plan* completed in 2022, focuses on hydraulic capacity and condition of the wastewater collection system. The District's existing hydraulic model was updated and used to analyze the collection system. Piping in the model was updated to match the District's latest geographic information system (GIS) piping. Existing flows were updated and flows for planned developments were added to the model. The updated model was then analyzed to identify deficiencies for dry and wet weather flows. CIP projects were developed for identified capacity deficiencies. The Master Plan is located on the City's website at: https://www.dalycity.org/DocumentCenter/View/6915/Daly-CityNSMCSD---Wastewater-System-Master-Plan .

Design Criteria

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

Capacity Enhancement Measures

Based on the results of the most recent hydraulic modeling conducted in 2022, the District has identified several issues that will be addressed or further investigated, including: high-priority hydraulic capacity projects (I-280 Sewer Crossing project), replacement of terracotta piping, pipeline rehabilitation, CCTV inspections, flow model update, and lift station condition assessment.

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.

Capital Improvement Plan

The current 10-year CIP is included in Attachment C. The District updates the CIP program on an annual basis based on results of CCTV inspections and maintenance activities, and further investigation of capacity deficiencies and potential solutions.

Element 9: MONITORING, MEASUREMENT, AND 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 WDR (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:

WDR Requirement:

The SSMP must include an Adaptive Management section that addresses Plan implementation effectiveness and the steps for necessary Plan improvement, including:

- Maintaining relevant information, including audit findings, to establish and prioritize appropriate SSMP activities;
- Monitoring the implementation and measuring the effectiveness of each SSMP Element;
- Assessing the success of the preventive operation and maintenance activities;
- Updating SSMP procedures and activities, as appropriate, based on results of monitoring and performance evaluations; and
- Identifying and illustrating spill trends, including spill frequency, locations and estimate volumes.

9.2 Element 9 Supporting Documents

Supporting information for Element 9 is included in SSMP Internal Audits, and includes a variety of information related to SSOs, including causes, rates, volumes, response times, etc.

9.3 Monitoring and Measurement Discussion

The Collection Division has greatly reduced blockages and SSOs 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 SSOs is contained in the internal audit report that is completed every three years. The information is also available on the public database CIWQS.

Staff is constantly assessing the collection system infrastructure and contacting neighboring agencies to seek better methods of 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.

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 annually to ensure all the provisions are implemented and the program's effectiveness is discussed at Staff meetings. The Staff meetings 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 tracks in order to evaluate the effectiveness of the SSMP.

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
4 - Operation and Maintenance Program	Minimize blockages and SSOs by properly maintaining the system and keeping the system in good condition	▪ 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, categorized by type (FOG, wipes&rags, roots, etc.) ▪ Number of pump station failures ▪ Number of pipe failures

SSMP Element	Summary of Element Purpose	Parameters for Tracking Effectiveness (Annual)
5 - Design and Performance Provisions	Ensure new facilities are properly designed and constructed	None needed
6 - Spill Emergency Response Plan	Provide timely and effective response to SSO emergencies and comply with regulatory reporting requirements	▪ Average and maximum response time ▪ Percent of total overflow volume contained or returned to sewer
7 – Sewer Pipe Blockage Control Program	Minimize blockages and overflows due to FOG	▪ Number of overflows due to blockages, categorized by cause ▪ Number of FOG producing facilities inspected
8 - System Evaluation, Capacity Assurance, and Capital Improvements	Minimize SSOs due to insufficient capacity by evaluating system capacity and implementing necessary projects	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 - Internal Audits	Formally identify SSMP effectiveness, limitations, and necessary changes on an annual basis	Date of completion of last audit
11 - Communication Program	Communicate with the public and satellite agencies.	None needed

SSO Discussion

The trend of SSO occurrences (number, volume, causes) are included in the most recent internal audit completed in November 2024. The District's rate for recent years is very low, with only one SSO occurring in 2023 and the same for 2024. Both of these SSOs were under 2,000 gallons.

Aside from one large I&I spill in 2022, the cause of spills in the past three years (May 2021 to May 2024, the period that was the focus of the 2024 SSMP Audit) has been pipe blockages from roots, rags, FOG, and other debris. The large I&I spill in December 2022 took place in the extraordinarily wet winter of 2022-2023. 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 internal 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 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 six years, as required by the WDR.

Element 10:
SSMP INTERNAL AUDITS

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

10.1 Regulatory Requirements for SSMP Internal Audits

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

WDR Requirement:
The SSMP shall include internal audit procedures, appropriate to the size and performance of the system, for the Agency to comply with WDR requirements.

10.2 SSMP Audits Discussion

The District completes audits of the SSMP once every three years. The Audits are required by Provision 5.4 which states that, at minimum, the audit must:

- Evaluate the implementation and effectiveness of the SSMP in preventing spills;
- Evaluate the District's compliance with the SSS WDR;
- Identify SSMP deficiencies in addressing ongoing spills and discharges to waters of the State; and
- Identify necessary modifications to the SSMP to correct deficiencies.

Upon completion of the audit, the City uploads a copy to CIWQS for SWRCB review. The audit findings inform modifications and changes to the SSMP which are identified and tracked by the SSMP Change Log and included as part of the SSMP in six year SSMP updates. This Log is used to track SSMP changes in the periods between audits as well as changes made as a result of other minor, SSMP updates noted in between auditing periods.

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 WDR (Element 11).

11.1 Regulatory Requirements for Communication Program

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

WDR Requirement:

The Plan must include procedures for the Agency to communicate with:

- The public for:
  - Spills and discharges resulting in closures of public areas, or that enter a source of drinking water, and
  - The development, implementation, and update of its SSMP, including opportunities for public input to SSMP implementation and updates.
- Owners/operators of systems that connect into the Agency's system, including satellite systems, for:
  - System operation, maintenance, and capital improvement-related activities.

11.2 Communication Program Discussion

The District maintains a website through the City of Daly City
https://www.dalycity.org/573/North-San-Mateo-County-Sanitation-Distri

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.

District Management meets with their counterparts from Town of Colma and Westborough District annually regarding relevant developments in their respective service areas. Frequent communications (emails, phone calls) take place as needed throughout the year.

NSMCSD
SSMP Change Log

Date	SSMP Element	Description of Change/Revision Made	Change Authorized By:
08/31/07	All	District Staff Additions	CJR
09/27/07	Section 6 and 8		RMC
02/19/09	Overflow Emergency Response Plan		District Staff
04/10/09	All sections	Minor updates	CJR
04/08/10	Section 8	District Staff Updates	CJR/RMC
05/13/10	Overflow Emergency Response Plan	Tab A - Beach Posting	KM
01/25/11	Overflow Emergency Response Plan	Tab H – Emergency Contractors	KM
09/20/11	Overflow Emergency Response Plan	Tab B.1 – Sampling Protocol, Field Testing	KM
03/29/12	Att. N: Collection System Maintenance Activities		KM
05/09/12	Overflow Emergency Response Plan	Tab K – 2 Hr. Notification	KM
07/12/12	All sections	Minor updates	KM
08/09/12	Att. O: Prioritized Near Term CIPs	Updated CIPs	KM
09/04/12	Overflow Emergency Response Plan: Tab I	Updated Restoration Contractors list	KM
12/03/12	Overflow Emergency Response Plan	Updated Tab L: Spill Containment	KM
01/19/13	All	Minor all sections	KM
02/12/13	Overflow Emergency Response Plan		KM
03/08/13	All	Minor all sections	CJR
03/26/14	VI – Data Management and XII – SSMP Program Certification		CJR
04/03/14	II – Organization III – Overflow emergency response plan VI – Measures & Activities / O & M Program VII – Design & Construction Standards / Performance Provisions	CAL EMA to CAL OES Impact Mitigation-Para.4 reporting Training, minor Minor	KM
04/13/14	Attachment O	Add completed project information	KM
04/25/14	TOC	Add new attachments	CJR
Aug. 2019	All	5-year review and content updates	
Dec. 2019	All	5-year revision	
Aug. 2023	II – Organization Overflow Emergency Response Plan	Contacts / Director change Changed to SSERP; updated link	KM
Apr. 2025	All	Updated all sections to comply with new / revised requirements in 2022 WDR Updated contacts Updated Element 8 to discuss 2022 Sewer Master Plan and current CIP Removed Legal Authority attachments (replaced with online links)	LL