City of Morro Bay
Sewer System Management Plan

SSMP Report
2025

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Glossary and Acronyms

Terms and acronyms used in this document and/or the Statewide GWDR, along with their definitions, are as follows:

AR or (Authorized Representatives) - The person designated, for a municipality, state, federal or other public agency, as either a principal executive officer or ranking elected official, or a duly authorized representative of that person.

BAT- Best Available Technology

Blockage or stoppage- something that fully or partially blocks the wastewater from flowing through a sewer pipeline.

BMP- Best Management Practice

CWEA (California Water Environment Association) - CWEA is an association of professionals in the wastewater field. CWEA trains and certifies wastewater professionals, disseminates technical information, and promotes sound policies to protect and enhance the water environment. CWEA provides technical references for sewer system operation and maintenance.

CCTV- Closed Circuit Television

CFR- Code of Federal Regulations

CIP- Capital Improvement Program

CITYWORKS-GIS centric asset management system-initiated September 2018 (replaced CMMS)

CIWQS (California Integrated Water Quality System) - All SSO reporting is done on the CIWQS website.

CMMS- Computerized Maintenance Management System

Clean-out or CO- Access hole on a sewer line, normally at the end of the line and normally smaller than a manhole.

Dynamic Model- Computer hydraulic model simulation that solves dynamic flow equations for accurate simulation of backwater, looped connections, surcharging, and pressure flow in a collection system.

FOG (Fats, Oils and Grease)- Fats, Oils and Grease that are discharged into the sanitary sewer system by food service establishments (FSE), homes, apartments, retirement

homes, and other sources. FOG is a major cause of blockages leading to increased maintenance and sometimes SSOs.

GIS (Geographical Information System)- A database linked with mapping, which includes various layers of information, such as sewer maps, storm drain maps, parcels and other features. The City uses ARCGIS.

Governing Board- In the City of Morro Bay this is the City Council.

GPS- Global Positioning System

GWDR or WDR (General Waste Discharge Requirements)- Order No. 2022-0103, State General Waste Discharge Requirements for Sanitary Sewer Systems (WDR) is designed to ensure proper design, and safe operation and maintenance of the sanitary sewer systems throughout California. All federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California were required to comply with the terms of this Order. The Statewide General WDR for Sewer systems was adopted by the SWRCB and is implemented by the RWQCB and SWRCB.

I/I- Infiltration and Inflow

Infiltration- The seepage of groundwater into a sewer system, including service connections. Seepage can be through cracked pipes, pipe joints, connections, or manhole walls and joints.

Inflow- Water discharged into a sewer system and service connections from roof leaders, cellars, yard and area drains, foundation drains, springs, swampy areas, around manhole covers, surface runoff, drainage etc. Inflow differs from infiltration in that it is a direct discharge into the sewer rather than a leak.

Lamphole- In the past this was used to lower a lamp into the line for inspection. They are currently used the same as an end of the line clean-out.

Lateral- The portion of a sewer that connects the customer with the City's main line.

Upper lateral: Portion from the building to the property line.

Lower Lateral: Portion from the property line to the sewer main either in an easement or street. Upper and lower lateral are privately owned and maintained.

Lift Station (LS) or Pump Station- A station with redundant pumps, which raise sewage to a level from which it can flow by gravity.

LRO (Legally Responsible Official)- A legally responsible official (LRO) is any individual authorized to enter and certify data into the online sanitary sewer overflow (SSO) database on behalf of an agency enrolled under Statewide General Waste

Discharge Requirements for Sanitary Sewer Systems (WQO No. 2022-0103). An LRO must certify any submitted SSO report. An LRO is defined as either a principal executive officer or ranking elected official for an agency, or a duly authorized representative of that person.

Manhole or MH - Access hole on a sewer line with cones and barrels. Installed every 300-400 feet to facilitate cleaning or change in direction.

Monitoring and Reporting Program (MRP) - Established in the WDR for monitoring, reporting, recording and public notification requirements of the WDR.

O&M- Operation and Maintenance

OES- Office of Emergency Services

Order- SWRCB Order No. 2022-0103-DWQ adopted December 06, 2022

OneWater Plan- Water, Sewer and Storm drain Master Plan adopted in October 2018

Preventive Maintenance (PM) - Regularly scheduled service of machines, infrastructure and other equipment.

Private Lateral Sewage Discharge (**PLSD)** – Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately-owned sewer lateral connected to the City's sanitary sewer system or from other private sewer assets.

Publicly Owned Treatment Works (POTW) – Any city-owned devices or systems used in the collection, storage, treatment, recycling, and reclamation of sewage or industrial wastes of a liquid nature and any conveyances, which convey wastewater to a treatment plant.

R&R- Rehabilitation and Replacement can also be CIP.

Regional Water Quality Control Board (RWQCB)- There are nine regional water quality control boards that exercise rulemaking and regulatory activities by basins. The City is in RWQCB Region 3.

Supervisory Control and Data Acquisition (**SCADA) -** A computerized control and data recording system that operates a wastewater, treatment or water system remotely, recording operational data.

SOP- Standard Operating Procedure

Sanitary Sewer Overflow (SSO) - Any overflow, spill, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system.

Category 1: Discharges of untreated or partially treated wastewater of **any volume** resulting from an enrollee's sanitary sewer system failure or flow condition that:

- Reach surface water and/or reach a drainage channel tributary to a surface water; or
- Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).

Category 2: Discharges of untreated or partially treated wastewater of **1,000 gallons or greater** resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface water, or a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.

Category 3: Discharges of untreated or partially treated wastewater **equal to or greater than 50 gallons and less than 1,000 gallons** resulting from an enrollee's sanitary sewer system failure or flow condition. All other releases from the enrollee's sewer system.

Category 4: Discharges of untreated or partially treated wastewater **less than 50 gallons** resulting from an enrollee's sanitary sewer system failure or flow condition. All other releases from the enrollee's sewer system.

Private Lateral Sewage Discharges (PLSD): Discharges of untreated or partially treated wastewater resulting from blockages or other problems **within a privately-owned sewer lateral** connected to the enrollee's sanitary sewer system or from other private sewer assets. PLSD's that the enrollee becomes aware of may be voluntarily reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.

Sewer System Management Plan (SSMP) - This management plan preparation was required by the SWRCB Order No. 2022-0103, State General Waste Discharge Requirements for Sanitary Sewer Systems (WDR or GWDR).

Sewer Collection System Master Plan (SCSMP) - This refers to the Master Plan submitted by the Wallace Group in 2006 also referred to as the Wallace report 2006.

Sewer Pipe Blockage Control Program – This plan is responsible for scheduling, legal authority, inspection, identification, and implementation of source control measures for all sources of fats, oils, and grease.

Sanitary Sewer System- A system of pipes, pump stations, sewer lines or other conveyances upstream of the Wastewater Treatment Plant, used to collect and transport wastewater to the publicly owned treatment works.

Satellite Collection System or Agency- The portion of a sanitary sewer system owned and operated by a different public agency other than the agency that owns the wastewater treatment plant, to which the sanitary sewer system is tributary.

Spill Emergency Response Plan (SERP) - Identifies a plan for notification procedure(s), appropriate response, recordkeeping, procedures to address emergency operations, and ensure that all reasonable steps are taken to contain and prevent discharges.

State Water Resources Control Board (SWRCB or State Board) - the State Board protects water quality by setting statewide policy, coordinating and supporting the Regional Water Board efforts and reviewing petitions that contest Regional Board actions. There are nine regional water quality control boards that exercise rulemaking and regulatory activities by basins. The State Board is the agency responsible for developing and adopting the GWDR (WDR) for collection systems.

WDR- See: Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2022-0103-DWQ

WRC- Water Resources Center

WWTP- Wastewater Treatment Plant

Element I: Goals and Introduction

The collection system agency must develop goals to manage, operate, and maintain all parts of its collection system. The goals should address the provision of adequate capacity to convey peak wastewater flows, as well as a reduction in the frequency of sanitary sewer overflows (SSOs) and the mitigation of their impacts. This section is to fulfill the Goals and Introduction Element of the SWRCB (Element 1) SSMP requirements.

SWRCB Requirement

The goal of the Sewer System Management Plan (Plan) 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.

The Plan must include a narrative Introduction section that discusses the following items:

1.1 Regulatory Context
The Plan Introduction section must provide a general description of the local sewer system management program and discuss Plan implementation and updates.

1.2 Sewer system management Plan Update Schedule
The Plan Introduction section must include a schedule for the enrollee to update the Plan, including the schedule for conducting internal audits. The schedule must include milestones for incorporation of activities addressing prevention of sewer spills.

1.3 Sewer System Asset Overview
The Plan Introduction section must provide a description of the Enrollee-owned assets and service area, including but not limited to:

- Location, including county(ies);
- Service area boundary;
- Population and community served;
- System size, including total length in miles, length of gravity mainlines, length of pressurized (force) mains, and number of pump stations and siphons;
- Structures diverting stormwater to the sewer system;
- Data management systems;
- Sewer system ownership and operation responsibilities between Enrollee and private entities for upper and lower sewer laterals;
- Estimated number of percent of residential, commercial, and industrial service connections; and
- Unique service boundary conditions and challenge(s).

Mission Statement and Goals

The mission of the Collections Division is to preserve and enhance the quality of life in the City of Morro Bay and to protect the public health and the environment by collecting and conveying wastewater in a safe, environmentally conscientious, and efficient manner.

This can most readily be accomplished by:

- Managing, maintaining and improving the City's collection system infrastructure within the City in a manner consistent with the adopted OneWater Plan now and into the future.
- Reducing the number and impact of sanitary sewer overflows (SSOs) that may occur throughout the City of Morro Bay.
- Cost-effectively minimize inflow/infiltration (I/I) and provide adequate sewer capacity to accommodate design peak wet weather flow.
- Controlling source discharges from entering and affecting the collection system and the Wastewater Treatment Plant in accordance with Local, State and Federal regulations.
- Developing and implementing programs necessary to comply with State and Federal mandates, rules, and regulations.
- Proactively train Utility Staff on emerging technologies, new equipment technologies and industrial systems required by State and Federal mandates, rules and regulations.

Introduction

Wastewater Collections Division

The Division operates under the general supervision of the Utility Division Manager. The Division includes a Utility Supervisor and two levels of Utility System Operators. The division operates a scheduled preventive maintenance and enhanced maintenance program to maintain the system. The division records and maintains historical data about the system and utilizes this information to prioritize maintenance activities. The programs contained and outlined within the City's SSMP meet the requirements of the WDR.

Source Control

In 1999 businesses in Morro Bay were surveyed for possible industrial-waste discharges. The survey included business names, addresses, names of contacts, telephone numbers, inventories of chemicals, discharge volumes, and other pertinent information. Based on this information and a master list of businesses developed from business license applications, certain businesses were found to have no potential for industrial discharge, such as offices, and retail stores. Others were excluded from further consideration as industrial dischargers because they discharged only domestic wastewater. For the remaining industries, waste discharge volumes were estimated in proportion to water usage

determined from billing records provided by the City Water Department. Follow-up activities for these businesses include scheduled return visits, surprise on-site inspections and formal tours of the facilities. These include but may not be limited to commercial laundry, car washes, a dry cleaner, print shops and the oil-water separator maintained by the Harbor Department.

1.1 Regulatory Context

On December 06, 2022, the State Water Resources Control Board (SWRCB) enacted Order No. 2022-0103, Statewide General Waste Discharge Requirements (WDR) for Sanitary Sewer Systems. The SWRCB updated the 2006 WDR and requires any public agency that owns or operates a sanitary sewer system more than one mile in length that conveys untreated or partially treated wastewater to a Publicly Owned Treatment Works (POTW) in the State of California; comply with the requirements of the WDR.

The City of Morro Bay (City) owns and operates a wastewater collection system more than one mile in length that conveys untreated wastewater to a Publicly Owned Treatment Works (POTW) and therefore is required to comply with the WDR. The SSMP was originally adopted by the Morro Bay City Council on June 08, 2009. Per the requirements of the WDR, the City has performed five audits of the SSMP (June 2011, June 2013, June 2016, June 2018, and June 2021), that focused on the effectiveness of the SSMP and the City's compliance with the SSMP requirements identified within the WDR, including identification of any deficiencies in the SSMP and the steps to correct them. In addition, the WDR requires that the SSMP must be updated and adopted by the City Council at least every six years (updated from every 5 years for the 2006 WDR). The revisions contained within this SSMP comply with the requirements of the WDR by updating the SSMP on a six-year schedule.

1.2 SSMP Development Plan Update and Schedule

This document is required to be approved by the City Council during a public meeting at least every six years. As noted earlier, The SSMP was originally adopted by the Morro Bay City Council on June 08, 2009. Per the requirements of the 2006 WDR, the City performed two audits of the SSMP, in 2011 and 2013. For the re-certification in 2014, two audits were performed in 2016 and 2018 that focused on the effectiveness of the SSMP and the City's compliance with the SSMP requirements identified within the WDR, including identification of any deficiencies in the SSMP and the steps to correct them. Again in 2019, recertification was obtained, and an audit was performed in 2021 that focused on the effectiveness of the SSMP and the City's compliance with the SSMP requirements identified within the WDR. In addition, the current WDR requires that the SSMP must be updated and adopted by the City Council at least every six years. Audits must be completed triennially.

The SSMP is a living document, meaning that it will evolve, and modifications will be made as necessary to meet the required regulations. The Collections Division recognizes the SSMP may be amended during the six-year recertification time frame as a result of

recommendations contained within the triennial audit of the SSMP or to reflect a change in organizational structure or changes based on modifications to the O&M program or equipment changes. For this reason, the Collections Division has requested and been granted permission from the City Council to have the Director of Public Works authorize and approve any significant changes to the SSMP during this time period. Any amendments incorporated would be highlighted during the public recertification process. Appendix D contains all modifications to the SSMP; Appendix D serves as a working list used if regulations change or through our internal audit changes to the document are warranted.

1.3 Sewer System Asset Overview

The City of Morro Bay is located within the County of San Luis Obispo. The City's collection system serves residential and commercial users within the city limits boundary. The 2024 population was reported to be about 10,531 residents. The collection system includes approximately 52.38 miles of gravity main, 0.84 miles of private gravity main, 13.74 miles of force main, 871 manholes/lampholes, 404 cleanouts, one siphon, and five lift stations which are monitored two or more times weekly and can be accessed remotely 24 hours a day, 7 days a week, 365 days a year. Of the five lift stations, there are three lift stations all of which operate with submersible pumps and above ground control panels. The other two lift stations are counted as pump stations. The mainlines are made of a variety of materials, depending on the age; terra cotta salt glazed pipe, vitrified clay pipe (VCP), polyvinyl chloride (PVC), asbestos concrete (AC), High-density polyethylene (HDPE), and cast iron. The system is made up of approximately 5620 total service laterals, considering residential, commercial, and industrial service connections.

There are no unique structures diverting stormwater to the City's sewer system.

Data management is primarily conducted within the City's ArcGIS Geodatabase. Work orders, service requests, and inspections are managed within CityWorks.

An up-to-date map of the City's sanitary sewer system is referred to later in this SSMP under Element 4, Operation and Maintenance.

The large number of grease production from fish-fry restaurants on Embarcadero Boulevard is considered a unique service boundary condition.

Satellite agencies include the San Luis Coastal Unified School District, the State Parks (2) at the north end of town (Morro Strand State Park) and south end of town (Morro Bay State Park).

Element II: Organization

The collection system agency's SSMP must identify staff responsible for implementing measures outlined in the SSMP, including management, administration, and maintenance positions. Identify the chain of communication for reporting and responding to SSOs. This section is to fulfill the Organization Element of the SWRCB (Element 2) SSMP requirements.

SWRCB Requirement

The Plan 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:

- The name of the Legally Responsible Official as required in Section 5.1 of this General Order;
- The position titles, telephone numbers, and email addresses for management administrative, and maintenance positions responsible for implementing specific Sewer System Management Plan elements;
- Organizational lines of authority; and
- Chain of communication for reporting spills from receipt of a complaint or other information, including the person responsible for reporting spills to the State and Regional Water Board and other agencies if applicable (For example, county health officer, county environmental health agency, and State Office of emergency Services.)

Organization Discussion

The Utility Division is part of the City Public Works Department. The Utility Division is responsible for administration and implementation of the SSMP. The Division includes Wastewater Treatment, Wastewater Collections, Water Treatment and Water Distribution. The Utility Operators are responsible for the daily maintenance and response to SSOs during regular work hours and after hours and weekends on standby.

The authorized representative or Legally Responsible Official (LRO) for implementing and administrating the City's SSMP and completing and certifying spill reports electronically are the Lead Utility Operators and the Utility Division Manager.

Figure 1 is the organization chart for the Wastewater Division as a part of the Public Services Department.

Figure 2 illustrates the City's chain of communication and responsible staff for receiving reports, responding to SSOs. This flow chart then refers to the notification checklist

(Appendix B, Attachment C) which is used for notifying the proper authorities and for reporting and certifying the spills electronically.

Figure 1 Organization Chart
Updated March 2025

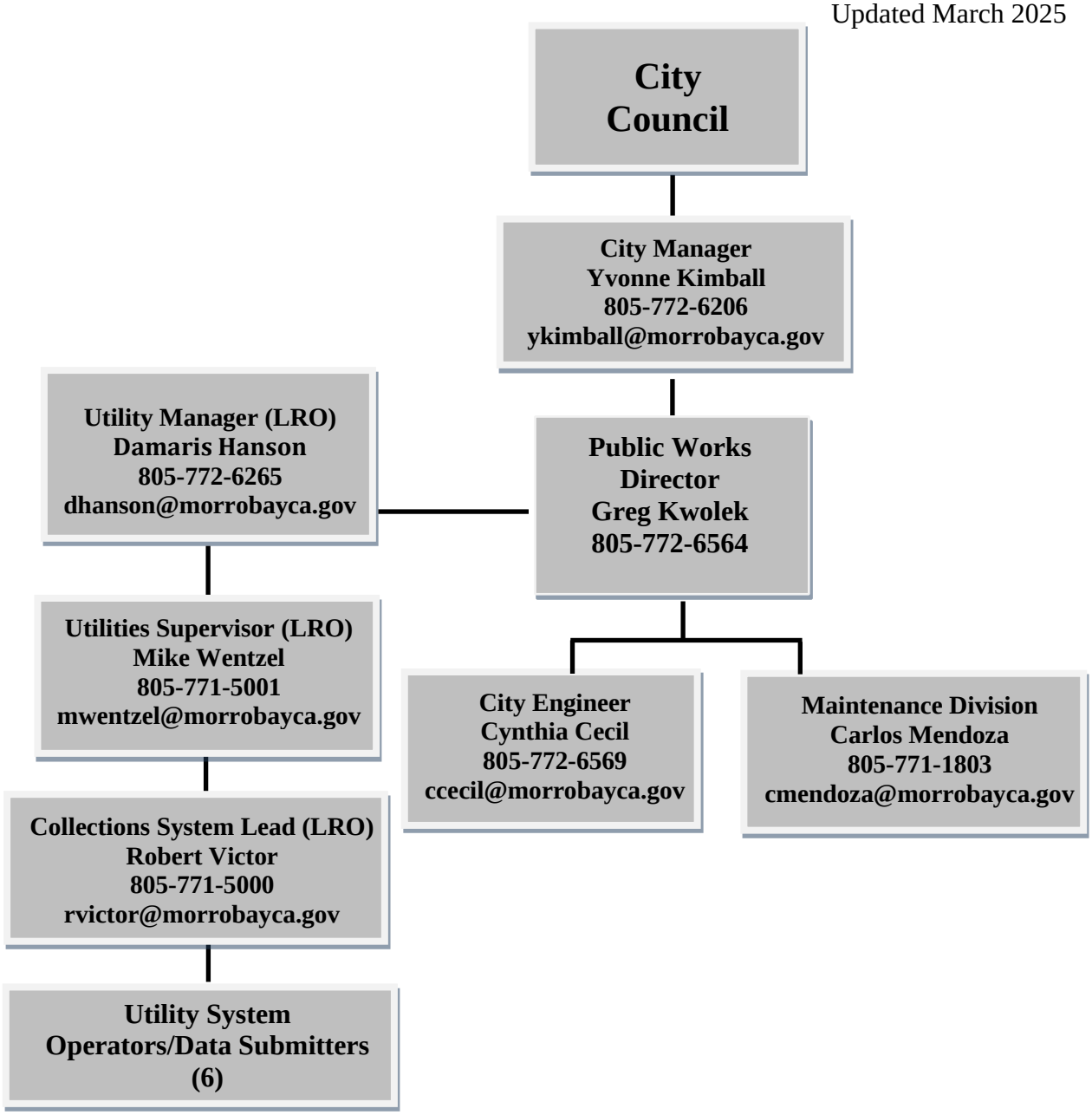
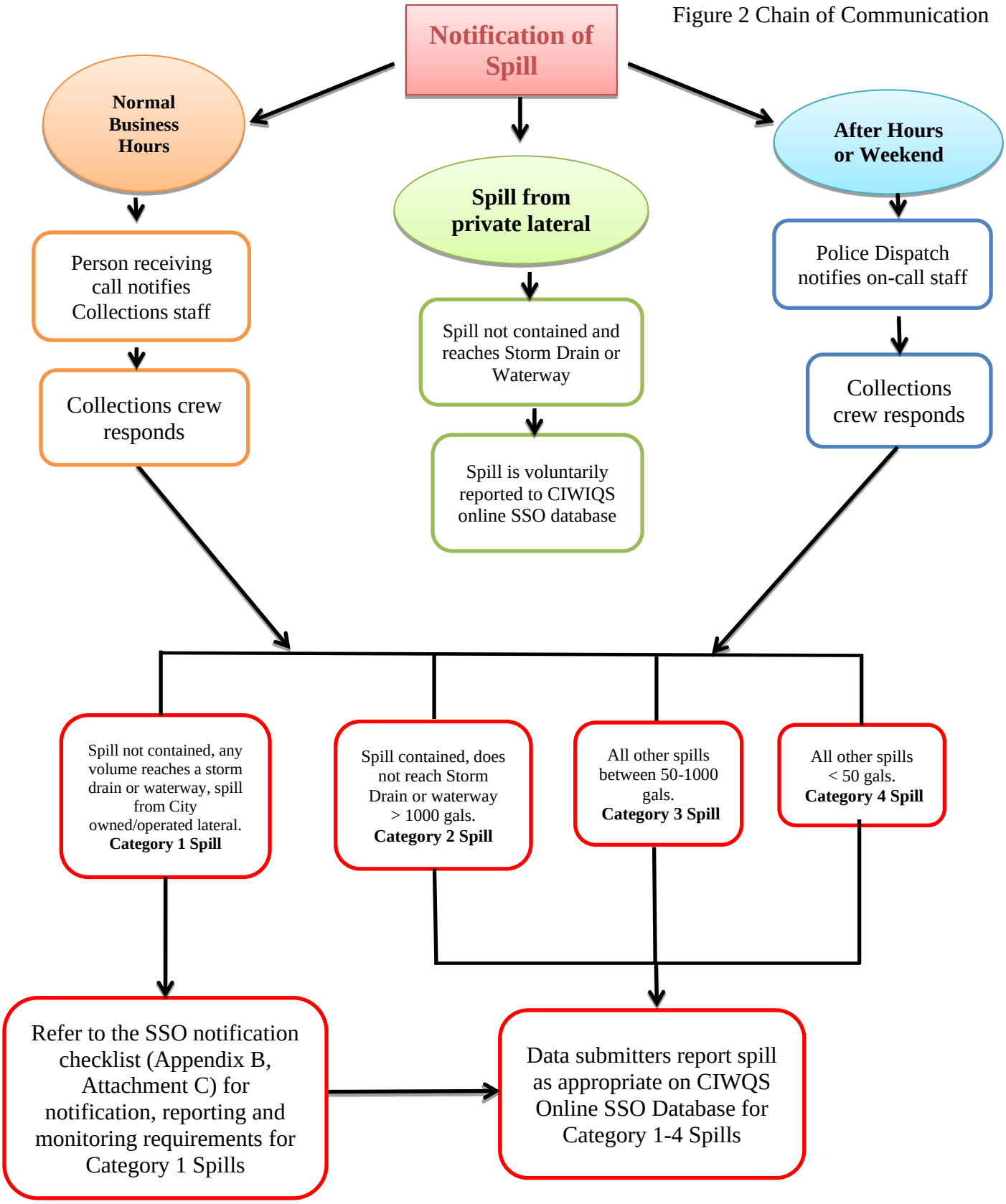


Figure 2 Chain of Communication



Element III: Legal Authority

This section of the SSMP discusses the City of Morro Bay's Legal Authority including Municipal Code and agreements with other agencies. This section is to fulfill the Legal Authority Element of the SWRCB (Element 3) SSMP requirements.

SWRCB Requirement

The plan must include copies or an electronic link to the Enrollee's current sewer system use ordinances, service agreements, and/or other legally binding procedures to demonstrate the Enrollee possesses the necessary legal authority to:

- Prevent illicit discharges into its sanitary sewer system from inflow and infiltration (I&I); unauthorized stormwater; chemical dumping; unauthorized debris; roots; fats, oils, and grease; and trash, including rags and other debris that may cause blockages;
- 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 sewer system components and connections be properly designed and constructed;
- Ensure access for maintenance, inspection, and/or repairs for portions of the service lateral owned and/or operated by the Enrollee;
- Enforce any violation of its sewer ordinances, sewer agreements, or other legally binding procedures; and
- Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable.

Legal Authority Discussion

The City of Morro Bay's Municipal Code, Standard Specifications and Development Fee Schedule contain the legal authority required by the SSMP and the SWRCB.

(a) Chapter 13.12 Sewers of the Municipal Code is dedicated to the city's sewer system (Appendix A, Attachment A). This chapter contains sections stating the city's requirements for the use of sanitary sewer within the city. This chapter includes provisions to protect public health and prevent pollution. This municipal code chapter has been modified since the last SSMP submittal in 2021 with the recent implementation of the City's Water Resources Center.

(b) Title 8 of the Engineering Standard Drawings and Specifications contains the city's requirements for the construction of sanitary sewer facilities installed, altered, or repaired within the city (Appendix A, Attachments B and C).

(c) Development Fee Schedule contains policies pertaining to fees, including service charges, billing and collection, and calculation of fees.

Segments of these documents are discussed in the following subsections as they pertain to the prevention of illicit discharges, proper design and construction of sewer mains and connections, maintenance access, and enforcement measures.

Prevention of Illicit Discharges

Chapter 13.12 outlines legal discharges to the City of Morro Bay's sewer system. The chapter also contains measures prohibiting illicit discharges to prevent damage to the collection system, treatment process, or cause harm to the public health or environment.

(a) Stormwater and I/I Section 13.12.200 A. prohibits any user introduce or cause to be introduced into the POTW any pollutant or wastewater which causes pass through or interference. These general prohibitions apply to all users of the POTW whether or not they are subject to categorical pretreatment standards or any other national, state, or local pretreatment standards or requirements. Section 13.12.1145 requires that all stormwater and unpolluted discharge shall be discharged to such sewers as are specifically designated as combined sewers or storm sewers, or to a natural outlet approved by utilities division/department manager. Unpolluted industrial cooling or unpolluted process waters may be discharged, upon approval of the utilities division/department manager, to a storm sewer, combined sewer or natural outlet.

(b) Prohibited Discharges Section 13.12.200 B. prohibits the discharge or cause of discharge of any of the following described pollutants, substances, or wastewater to any POTW.

- Solid or viscous substances in amounts which will cause obstruction of the flow in the POTW resulting in interference but in no case solids greater than one-half inch or one and two-seven hundredths centimeters in any dimension;
- Pollutants, including oxygen-demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which, either singly or by interaction with other pollutants, will cause interference with the POTW;
- Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin, in amounts that will cause interference or pass through;
- Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
- Trucked or hauled pollutants except at discharge points designated by the utilities division/department manager in accordance with this chapter;
- Septic tank cleanings or any raw or chemically treated sewage from septic tanks;

- Noxious or malodorous liquids, gases, solids, or other wastewater which, either singly or by interaction with other wastes, are sufficient to create a public nuisance or a hazard to life, or to prevent entry into the sewers for maintenance or repair;
- Wastewater which imparts color which cannot be removed by the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions, which consequently imparts color to the treatment plant's effluent, thereby violating the city's NPDES permit;
- Wastewater containing any radioactive wastes or isotopes except in compliance with applicable state or federal regulations;
- Stormwater, surface water, ground water, artesian well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, noncontact cooling water, and unpolluted wastewater, unless specifically authorized by the utilities division/department manager;
- Sludges, screenings, or other residues from the pretreatment of industrial wastes;
- Medical wastes, except as specifically authorized by the utilities division/department manager in an industrial wastewater discharge permit;
- Wastewater causing, alone or in conjunction with other sources, the treatment plant's effluent to fail toxicity test;
- Detergents, surface-active agents, or other substances which might cause excessive foaming in the POTW;
- Pollutants, substances, or wastewater prohibited by this section shall not be processed or stored in such a manner that they could be discharged to the POTW;
- Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid, or gas.

(c) The Sewer Pipe Blockage Control Program contained in this SSMP goes into detail about the city's Fats, Oils, and Grease (FOG) control measures. Sections 13.12.720 and 13.12.730 of the Municipal Code prohibit specific discharges of FOG that may accumulate and/or cause or contribute to blockages in the sewer system lateral from food facilities.

Section 13.12.330 requires grease or oil and sand interceptors to be installed when deemed necessary and where installed to be maintained by the owner at their expense.

Debris discharge into the City of Morro Bay's sanitary sewer is prohibited as a discharge in Section 13.12.200 B. which prohibits the discharge of any solid or viscous substance capable of causing obstruction to the flow in the POTW resulting in interference but in no case solids greater than one-half inch or one and two-seven hundredths centimeters in any diameter.

Section 14.07.030 (c) states that the property owner is responsible for the maintenance of the sewer lateral, up to and including, the connection to the public main.

Storm Sewer Agency Collaboration

The storm sewer system is overseen by the City's Maintenance Division. The City will collaborate with storm sewer agencies to coordinate emergency spill responses, as well as ensure needed access to storm sewer systems during spill events. Prior collaboration is necessary to prepare for unforeseen emergencies. This communication will also occur during and after spill events.

The City will work with these storm sewer agencies to prevent unintentional cross connections of sanitary sewer infrastructure to storm sewer infrastructure.

Proper Design and Installation of Sewers and Connections

Regulations pertaining to the design, construction and inspection of private sewer systems, building sewers, and connections are included in Chapter 13.12 of the Municipal Code and Title 8 of the Engineering Standard Drawings and Specifications.

(a) Permit Required: Section 105 of the California Building Code requires a permit to be obtained for the installation of a sewer.
(b) Design Requirements: Section 8.02 of the Standard Specifications specifies the minimum size and slope of a building sewer. Design requirements are contained in the Standard Specifications and are assessed and revised on a 2-year basis or as needed.
(c) Installation of Sewers: Section 8.09 states the requirements of lines and grades, trench widths, excavation for sewers, bracing and shoring, laying of pipe, trench backfill, testing of sewer lines, and cleaning for the construction of all sewer lines and connections.

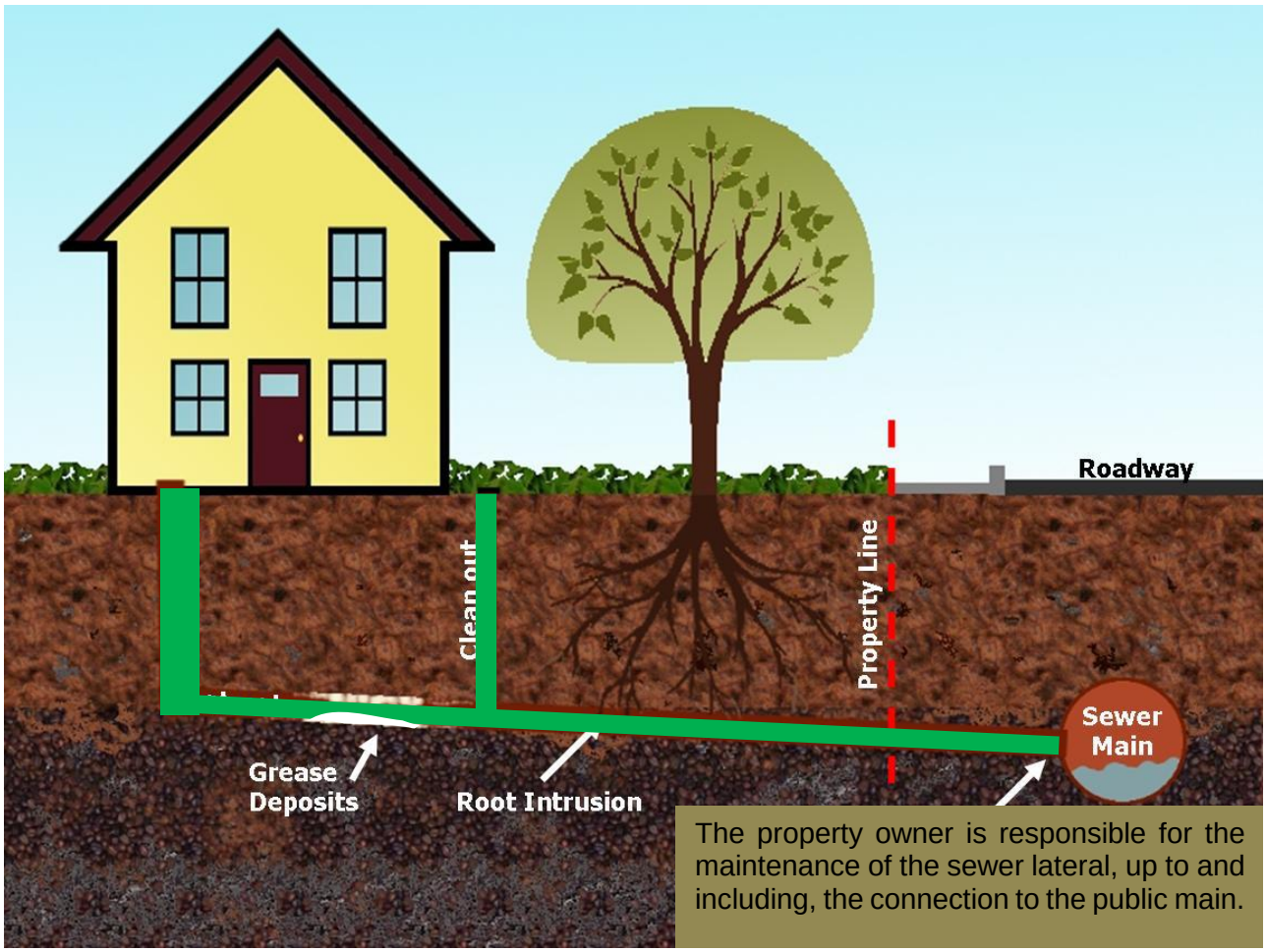
Lateral Maintenance Access

Property owners are responsible for maintaining satisfactory and effective operation in the street and sewer laterals all the way to the main lateral (see image below). Chapters 13.12 and 14.07.030(c) of the City of Morro Bays municipal code are the basis for the property owner maintaining their sewer lateral to the public sewer main. The Universal Plumbing Code also regulates property owners to maintain their sewer laterals. The city has maps of the City maintained sanitary sewer system.

The director of public works has the authority to enter all without prior notice, for the purpose of inspecting, sampling and testing in accordance with the provisions of Section 13.12.800 of the Municipal Code.

The following are listed under Section 13.12.800:

- Section 13.12.800 A. states that where a user has security measures in force which require proper identification and clearance before entry into its premises, the user shall make necessary arrangements with its security guards so that the utilities division/department manager shall be permitted to enter without delay for the purpose of performing specific responsibilities.
- Section 13.12.800 B. states that the utilities division/department manager shall have the right to set up on the user's property, or require installation of, such devices as are necessary to conduct sampling and/or metering of the user's operations.
- Section 13.12.800 C. states that the utilities division/department manager may require the user to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the user at its own expense. All devices used to measure wastewater flow and quality shall be calibrated at a frequency established by the utilities division/department manager, but no less than the frequency recommended by the manufacturer.
- Section 13.12.800 D. states that any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the user at the written or verbal request of the utilities division/department manager and shall not be replaced. The costs of clearing such access shall be borne by the user.
- Section 13.12.800 E. states that unreasonable delays in allowing the utilities division/department manager access to the user's premises shall be a violation of Chapter 13.12 of the City's Municipal Code.



Enforcement Measures

The City of Morro Bay holds legal right to terminate water service through Section 13.12.1080 of the Municipal Code if any user fails to meet the requirements set forth in Chapter 13.12. The director of public works shall have the authority to terminate water service or use alternate actions to protect the wastewater treatment facilities, employees, and surrounding environment from hazardous discharges.

Section 13.12.1090 holds any person violating a provision of Chapter 13.12 liable for all damages resulting from such violation, or which arise from actions taken in the correction of such violation, which are incurred by the city. These damages include but are not limited to attorney's fees, court costs, and fines levied on the city by regulatory agencies.

Easement Accessibility Agreements

Easement accessibility documents are filed with the city clerk. The Utilities Department is currently working in conjunction with the GIS Department to effectively map out all of the City's locations requiring sewer system operation and maintenance, and to obtain all easement accessibility agreements.

Satellite Collection Systems

There are several agencies that discharge to the City wastewater collection system that we consider to be satellite agencies. These are:

1. Morro Bay High School (San Luis Coastal Unified School District)
2. Two California State Parks (Morro Bay State Park and Morro Strand State Park)

These systems are owned and operated by other agencies and may have more than a mile of lines. Under the Morro Bay Municipal Code these agencies are treated like any other discharger. The City does not maintain those systems but does have the right to regulate the discharge flow into our sewer system.

Element IV: Operation and Maintenance

The Utility Division is responsible for the operation and maintenance of approximately 52.38 miles of gravity main, 0.84 miles of private gravity main, 13.74 miles of force main, 871 manholes/lampholes, 404 cleanouts, five lift stations, and equipment and facilities related to wastewater collection and conveyance. Staff schedule and perform maintenance, repairs, and construction to the collection system and its appurtenances. In addition, staff record historical information concerning the system and/or repairs, changes, or other information. This section is to fulfill the Operation and Maintenance Element of the SWRCB (Element 4) SSMP requirements.

SWRCB Requirement

The Plan must include the items listed below that are appropriate and applicable to the Enrollee's system.

4.1 Updated Map of Sanitary Sewer System
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.

4.2 Preventive Operation and Maintenance Activities
A scheduling system and a data collection system for preventative 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 closed-circuit television (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.

4.3 Training
In-house and externa training provided on a regular basis for sanitary sewer system operations and maintenance staff and contractors. The training must cover:

- The requirements of this General Order;
- The Enrollee's 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.

4.4 Equipment Inventory
An inventory of sewer system equipment, including the identification of critical replacement and spare parts.

4.1 Updated Map of Sanitary Sewer System

As a reference for collection system operation and maintenance, utility staff refers to GIS generated maps. These maps divide the City into 14 numbered sections. On these maps, the numbering system generally follows flow direction, in that the lower numbers indicate either the highest point in a section, the end of a line, or where one section ties into another.

These maps are constantly being updated. When errors in distance or other issues are noticed they are updated on the maps. The information is then passed to the Engineering Division for inclusion in the digital Geographical Information System (GIS) sewer database described below.

The Public Works Department maintains a GIS map of the storm drain system. Maintenance of the storm drain maps is the responsibility of the Engineering Division, which is permitted under a separate NPDES permit issued by the RWQCB. The storm drain system can be laid over the ArcGIS system to enable rapid location of stormwater conveyance facilities in the event of a sewer spill. There is also a Geographical Information System (GIS) called ArcGIS available at Public Works and Utility Division offices. The ArcGIS program is updated on a regular basis. Utility staff have incorporated this program into the system operation and maintenance programs.

The State and Regional Water Boards will be provided access to these up-to-date maps by either posting maps on the agency's GIS database or maintaining maps in digital format that can be delivered electronically via remote link or emailed to the requestor. If the requestor specifies paper copies via mail or parcel service, this will be accommodated.

4.2 Preventive Operation and Maintenance Activities

Routine operations and maintenance activities are most readily categorized by dividing them into the normal frequency of occurrence.

Daily

Utility Staff inspect vehicles before use and then perform morning rounds. Morning rounds consist of Lift Station checks, USA marking, and periodic inspections of known problem areas.

Safety and Vehicle Inspection

Safety equipment is checked prior to use and/or daily, for faults and preparedness, so Staff can safely respond to an emergency. Vehicles are inspected, and maintenance is performed if any problems are found to ensure a reliable operating vehicle fleet.

Underground Service Alerts

Each day operations staff checks for Underground Service Alerts (USAs) received by the Public Works Department. The Administration Utilities Tech forwards all USA requests via CityWorks Service Request. Staff marks sewer facilities in and around the marked excavation area; the operator then initials the USA Service Request from CityWorks. Once both the water and collection utilities are marked and initials signed off on the CityWorks Service Request the last operator then closes out the Service Request.

Lift Station Checks

Utility Staff maintain five lift stations. Each lift station is checked regularly at least twice per week, and most often in the mornings, Monday through Friday. When Staff perform maintenance on pumps, piping system or motor control centers at lift stations, at least one trained stand-by personnel is required in addition to the trained worker performing the work.

Staff use standard criteria to assess lift station performance. The inspection list includes: 1) check the auto dialer for normal lights and/or faults, 2) observe pump and other indicator lights at the motor control center, 3) record total pump hours and pump run hours since last station check, record station total flow and flow since last station check and if a pump is operating during inspection, observe amp readings, flow readings and physical indicators of possible problems 4) inspect wet well surface for unusual objects and mat build up, and inspect equipment inside the wet well for unusual appearance, location within the wet well, or defects 5) inspect

the area around the lift station for any unusual appearance and general condition. Staff records the data and observations on lift station record sheets. Any abnormal operations and/or data are assessed, noted in a lift station record log kept at the station and on the lift station inspection workorder in CityWorks, reported to supervisory staff, and additional work or maintenance is scheduled as a Workorder in CityWorks.

Morning rounds may include problem area inspections and 'blind' areas where a Sanitary Sewer Overflow (SSO) could potentially go unnoticed, such as easements and creek crossings.

Electrical problems that cannot be solved or repaired will be contracted to a local electrician for troubleshooting and repair.

Following the morning rounds noted above, Staff performs various other scheduled tasks. These tasks can include PM (Preventive Maintenance) of sewer lines, manhole inspections, lateral/tie-in inspections, CCTV inspections, pretreatment program inspections, logging and recording of tasks completed or planned, or any of the other required tasks.

Customer and Interdepartmental Calls

Utility Staff respond to calls 24 hours a day, 7 days a week, 365 days a year. At least one operator is always on-call and carries a standby duty phone.

Customer calls are prioritized and responded to as soon as possible. All calls are recorded in CityWorks as a Service Request and is included in the Monthly Operation Summary. Standby personnel record after-hours calls in CityWorks and on a call out form that is then submitted to their supervisor for review, and possible staff discussion about the event(s).

Calls may come from different sources, including Public Works Department Staff, the Police Department, Sheriff Dispatch, directly from customers, or from other City Staff. When possible, staff record the date, time, phone number, name of the reporting party, reported situation, and the resolution of the call. In some instances, Utility Staff may not be able to solve a problem because it involves facilities on privately-owned property, which the City neither owns nor maintains. In these cases, Utility Staff record the call and assists to the degree possible but does not take responsibility for the incident. Utility Staff will respond to calls associated with Private Lateral Sewage Discharges (PLSD) and assist as possible, but in general they do not perform work on private facilities. Staff may assist with cleanup of PLSDs to City streets, and provide other assistance, where such assistance is necessary to protect the public health and welfare. The City encourages citizens to hire licensed plumbers to do repairs, maintenance, and facility cleaning on private property.

On-duty standby personnel assess and respond to after-hours calls. On-duty personnel decide on a course of action and may call other City Staff for assistance or additional equipment.

Line Cleaning

Line cleaning with the Hydro-Vac is one of the primary tasks Utility Staff perform. The City maintains approximately 52.38 miles of gravity main, 0.84 miles of private gravity main, 13.74 miles of force main, 871 manholes/lampholes, 404 cleanouts.

Line cleaning is broken into two maintenance activities:

1. **Scheduled Line Cleaning**

   The Utility Division's goal is to clean all collection system main lines on a 2-year cycle. Line cleaning is recorded in CityWorks asset management workorder program. CityWorks is a GIS-centric asset management system.

2. **Enhanced Line Cleaning**

   Utility Staff receive Enhanced Maintenance work orders each month, generated from CityWorks. Combination truck and trailer jetter operators record on the workorder the cleaning date, debris type and volume captured during enhanced line cleaning. Main lines on enhanced maintenance are suspected of having FOG, roots, or other debris that could lead to a SSO before their scheduled routine cleaning. Enhanced maintenance is performed on 30, 60, 90, and 180-day intervals. Staff utilize records, past practices, and operator familiarity to schedule enhanced maintenance.

   Main lines on the enhanced maintenance list that have a history of roots will be chemically treated to control roots in main lines. Main lines on the enhanced maintenance list known for FOG and/or debris are hydro-cleaned to reduce potential problems.

   Staff maintain a list of known potential problem areas and periodically check these areas during morning rounds for soft blockages and stoppages. Staff clean these lines and manholes as needed.

Closed Circuit Television (CCTV)

Utility Division operators perform CCTV inspections of the collections system. It is the goal of the Utility Division that the collection system is inspected every five years. Other lines may be inspected by CCTV as problems occur or as requested for project planning purposes. Additional CCTV software is to be purchased and incorporated into the CityWorks asset management program.

CCTV inspections are used for discovering mainline defects, prioritizing repairs to familiarizing operators with the system, and developing a conditions-based system assessment for prioritizing CIP projects. During collection system CCTV, the CCTV operator uploads pipeline assessment data into a formula-based CCTV software program that evaluates and prioritizes pipeline conditions. These conditions are uploaded into the City's GIS and ranked by condition.

These monitoring and inspecting efforts are recorded and ranked in accordance with the above priority ranking. From a priority list generated through GIS, City Staff plan sewer rehabilitation and replacement (R&R) projects.

Roots

The City has a systematic chemical root control program to avoid sewer main line stoppages and collection system structural deterioration caused by root intrusion. The chemical root control program consists of treating approximately 13 miles of sewer main lines over a three-year recurring cycle. Main lines included in this program include root infested lines discovered by operators while hydro-cleaning, SSOs caused by excessive roots in main lines, and CCTV observations. A contractor applies the chemical root control treatment in annual installments on one, two, and three-year cycles. During these applications, pre-selected city mains are treated, along with additional lines discovered since the last treatment. After the initial application, the current root treatment product must be reapplied within two years and then within 3 years thereafter, unless Utility Staff determine more aggressive treatment is required. This schedule is used to plan root treatment for existing and future line treatment.

Work Orders

CityWorks Work Orders (WOs) are assessed and attended to by Utility Staff in a timely manner. After the WO task is completed, staff will fill out any necessary information pertaining to the task and complete the WO. Once the WO is completed it will be reviewed and closed by their supervisor.

Monthly Tasks

Utility Staff perform the following tasks on a monthly basis:

a. Perform Lift Station maintenance.
b. Prepare and submit the Wastewater Collections Monthly Report. The Monthly Report documents accomplishments, difficulties, collection system maintenance and repairs, calls/complaints, spill reports, other WWC subjects that occurred over the last month, and includes associated records. Staff submit these reports to the Wastewater Division Manager. Monthly Report information is compiled from CityWorks Workorders, Inspections, Service Requests, and other documents staff may use to record operation and maintenance activities.

c. Report Category III and IV SSOs or 'No Spill' certifications on the CIWQS website. Staff report Category I and II SSOs according to current Monitoring and Reporting Program requirements (see notification checklist Appendix B, Attachment C).
d. Calibrate atmospheric monitors and log test data in the Calibration Log.

Annual Tasks

The following tasks are completed on an annual basis:

a. Businesses must have an initial inspection by the City's Utilities Division. Certain business types are flagged in CityWorks for this inspection. Once the business undergoes this initial inspection, it enters the queue for annual inspections. This process is inherently tied to business type, primarily those with the most influence regarding production and disposal of FOG. Part of the business license workflow within CityWorks is that a business license is only to be certified if a new FOG inspection has been completed for that business. The FOG inspections will be staged annually across all businesses by CityWorks as to space out the inspections for Utilities.
b. Schedule Root Treatment for approximately 4 miles of sewer line. Utility Staff maintain records from previous treatment cycles for scheduling future treatment. Also, Staff maintains records of the root treatment guarantees, treated manhole-to-manhole reaches, and treatment costs.
c. Update emergency notification sheet as appropriate. Call all the phone numbers to ensure the proper number and contact are current. Assess and update any programs that may have changes to them including personnel or phone number changes.
d. Inflow and infiltration (I&I) into the sanitary sewer system is evaluated and discovered by smoke testing, video inspection, visual inspections, and flow meters at lift stations. Utility Staff can set portable flow meters throughout the sewer system to discover, assess, and reduce I&I.

This list is not all-inclusive, as numerous tasks are assigned to Utility Staff throughout each year.

4.3 Training

Training Staff is important to keep sewer systems operating efficiently. The City of Morro Bay encourages and sends staff to training seminars to teach sewer maintenance and operation skills. In addition, staff also bring ideas for new technology to the City for possible adoption into the sewer program.

The table below represents the minimum level of training for the Utility Staff. In addition to these training requirements, topics of interest to collections operations and maintenance are:

- California Water Environment Association trainings
- Waste Discharge Requirements training
- CJPIA online and classroom training
- Field Operator spill volume estimation
- Data entry for California Integrated Water Quality System (CIWQS)
- Safety and other Utility related training
- SERP procedures and practice drills

Training	Frequency
Injury Illness and Prevention Program	Initially, then at least annually
Hazard Communication	Initially, then at least annually
Bloodborne Pathogens	Initially, then at least annually
Heat Stress	Initially, then at least annually
Fire Extinguisher Operation	Offered annually
First Aid/CPR	Initially, then every two years
Forklift Operator Training	As needed, every 3 Years
Confined Space Entry	Recommended Every 2 Years
Lockout/Tagout/Basic Electrical Safety	Recommended Every 2 Years
Driver Awareness Traffic Control and Flagging Safety	Recommended Every 3 Years
Preventing Substance Abuse in the Workplace	Recommended Every 2 Years
Ladder Safety	Recommended Every 2 Years
Ergonomics - Office Personnel	Recommended Every 2 Years
Safe Workplaces	Recommended Every 2 Years
Hand and Portable Power Tool Safety Technology	Recommended Every 2 Years
Trench Safety Competent Person	Recommended Every 3 Years
Safety through Maintenance and Construction Zones	Recommended Every 3 Years
Fall Protection Awareness	As Needed
Backhoe Operator Training	As Needed

4.4 Equipment Inventory

Staff operate and maintain a combination cleaner (Hydro-Vac) used for scheduled and enhanced maintenance. This tool allows the city to clean main sewer lines on a routine basis and clean mains in response to an emergency. Wastewater Utilities owns three emergency generators to operate lift stations during a power outage. When a lift station is being worked on, staff can operate a trash pump to bypass the lift stations.

Spare parts are kept on hand in order to be make repairs at night or on weekends when supplies are hard to obtain. Spare parts on hand include:

- Fittings
- Wyes
- Pumps
- Seals
- Blind flanges for lift stations
- Check valve parts
- Valves
- Hydro-Vac parts
- Cleaner supplies
- Pipe

In the event of a catastrophic event where major repairs are needed, Utility Staff will provide a safe, temporary solution until a specially qualified repair crew is able to make needed repairs.

Element V: Design and Performance Provisions

This section of the SSMP identifies the City of Morro Bay's design and performance provisions found in the City's Municipal Code, Standard Drawings, and Specifications. This section is to fulfill the Design and Performance Provisions Element of the SWRCB (Element 5) SSMP requirements.

SWRCB Requirement

The Plan must include the following items as appropriate and applicable to the Enrollee's system:

5.1 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, the procedures must include component-specific evaluation of the design criteria.

5.2 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.

5.1 Updated Design Criteria and Construction Standards and Specifications

The City requires specific standards for new construction and rehabilitation of existing sewer lines. The City of Morro Bay Department of Public Works Engineering Standards Drawing and Specifications communicate these standards. These Engineering Standards are currently under review to incorporate new technologies in sanitary sewer installation, rehabilitation, and repair techniques.

The Engineering Standards are available on the City's website at:
www.morrobayca.gov/engineeringstandards

The City is in the process of updating its standard drawings and specifications. The update is currently in draft format and is expected to be completed within 2029. Some design standards have been finalized and are available on the City's website, however, these are not related to

sanitary sewer design. The previous update was in 1987. The City Engineer has the authority of maintaining and modifying these documents as needed.

Section 8 of the City's Engineering Standards addresses Sanitary Sewer Installation. This section includes specifications on pipe, manhole, cleanout, and sewer lateral materials and construction methods, including acceptable methods for sewer taps, as well as sewer line testing, acceptance, and abandonment of existing sewer mains. These requirements are used to ensure that sewers are constructed to meet or exceed the City's specifications and will perform adequately with minimal infiltration or maintenance problems and will maintain their structural integrity for the duration of their intended service lives.

Many of the specifications included in Section 8 of the City's Engineering Standards also apply to sewer pipeline rehabilitation and repair projects. Additional specifications related to specific sewer rehabilitation and repair projects will be added as the City selects the preferred method of such rehabilitations and repairs. Additional requirements will be included in project-specific specifications as needed to ensure a quality product.

The City owns and operates five lift stations. Lift station plans and specifications are not included in the standards and are reviewed on a project specific basis. Design standards and construction specifications for lift stations will be developed as needed on a project-specific basis.

All public sewer mains within the City are designed and constructed by the City or by consultants under contract to the City. The City's Engineering Standards contain design requirements for building sewers, including minimum sizes and slopes. Design flow and capacity criteria for sewer mains and trunk lines are described in the OneWater Plan.

5.2 Procedures and Standards

In order to prevent sanitary sewer overflows and operating problems attributed to poor construction or design, inspection and testing are performed to ensure project construction conforms to contract specifications and City standards. Completed construction is not accepted by the City until the facilities are tested in accordance with the provisions of the contract and meets City standards. Inspection and testing of construction projects may be conducted by the City Engineering Department, the Utility Staff, or by the contractor while a representative of the City monitors inspections.

Acceptance testing for gravity sewers can include:

- Low pressure air test or water test to identify leakage
- Mandrel test to identify deflection in flexible pipe
- Water, spark, or vacuum test of manholes to identify leakage
- Television inspection to identify grade variations or other construction defects
- Visual inspection

Larger construction projects, such as newly constructed or rehabilitated lift stations, are considered complete when the construction is sufficiently complete and when the facility is tested in

accordance with the contract and its specifications and can be used for its intended purpose. Before acceptance of a facility, Utility Staff and Engineering receive O&M manuals, records and as-built drawings, permanent keys, final cleanup, final repairs, etc. The testing and startup are completed when factory trained technicians start-up test results are City Staff approved, and a systems reliability test demonstrates the system functions as designed.

Element VI: Spill Emergency Response Plan

The collection system agency has developed a spill emergency response plan (SERP) that provides procedures for SPILL notification, response, reporting, and impact mitigation. This section is to fulfill the Spill Emergency Response Plan Element of the SWRCB (Element 6) SSMP requirements.

SWRCB Requirement

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

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

Spill Emergency Response Plan Discussion

The mission of the Utility Division is to provide wastewater collection and source control in a safe, environmentally conscious and efficient manner; to implement preventative maintenance and improvements that accommodate the community's adopted goals and objectives; to develop and implement programs that comply with State and Federal mandates, rules, and regulations; to protect the health and safety of the environment, the public, and the employees; to protect the City's investment in infrastructure and equipment; to perform preventative maintenance of the City's 52.38 miles of gravity main, 0.84 miles of private gravity main, 13.74 miles of force main, and five lift stations; to assure control of source discharges to the wastewater treatment plant in accord with State and Federal regulations; to reduce storm water sources flowing into the collection system by encouraging the use of BMP's; and to aggressively minimize the potential of discharge of untreated waters to Waters of the State, and throughout the City of Morro Bay.

Preventative maintenance is the best method for reducing Sanitary Sewer Overflows throughout the City's wastewater collection system. However, SPILLs can occur from time-to-time and Utility Staff are trained on quick response to the SPILL site, safe use of equipment to restore collection system flow, methods to mitigate effects of SPILLs on the environment, and safeguards to protect City Staff and the public.

Utility Staff respond to sewage overflow reports 24-hours-a-day, seven-days-a-week. If Utility Staff requires additional assistance, they may call upon other City Staff, including City Fire and Police.

Laterals

Sewer Laterals: The Utility Division responds to Sewer System Overflows and maintains manholes and main lines up to, but **not** including sewer laterals. Property owners are responsible for the repair and maintenance of private laterals. A "lateral is defined as any facility installed and intended to be used by one or more private properties, not the general public, including but not necessarily limited to, piping from City main to building and main connection. (See: Private lateral spills to city streets (PLSD), Page 3)

Current Information

It is the responsibility of the Utility Division to ensure that all phone numbers and other references in this manual are up to date.

Categories of Sanitary Sewer Overflows

The State Water Resources Control Board General Order No. 2022-0103-DWQ, for the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WDR's) categorizes SPILL's as follows:

Category 1: A spill of **any** volume of sewage from or caused by a sanitary sewer system regulated under this General Order that results in a discharge to:

a. A surface water, including a surface water body that contains no flow or volume of water; or
b. A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.
   Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water, unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.

A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of the General Order 2022-0103-DWQ.

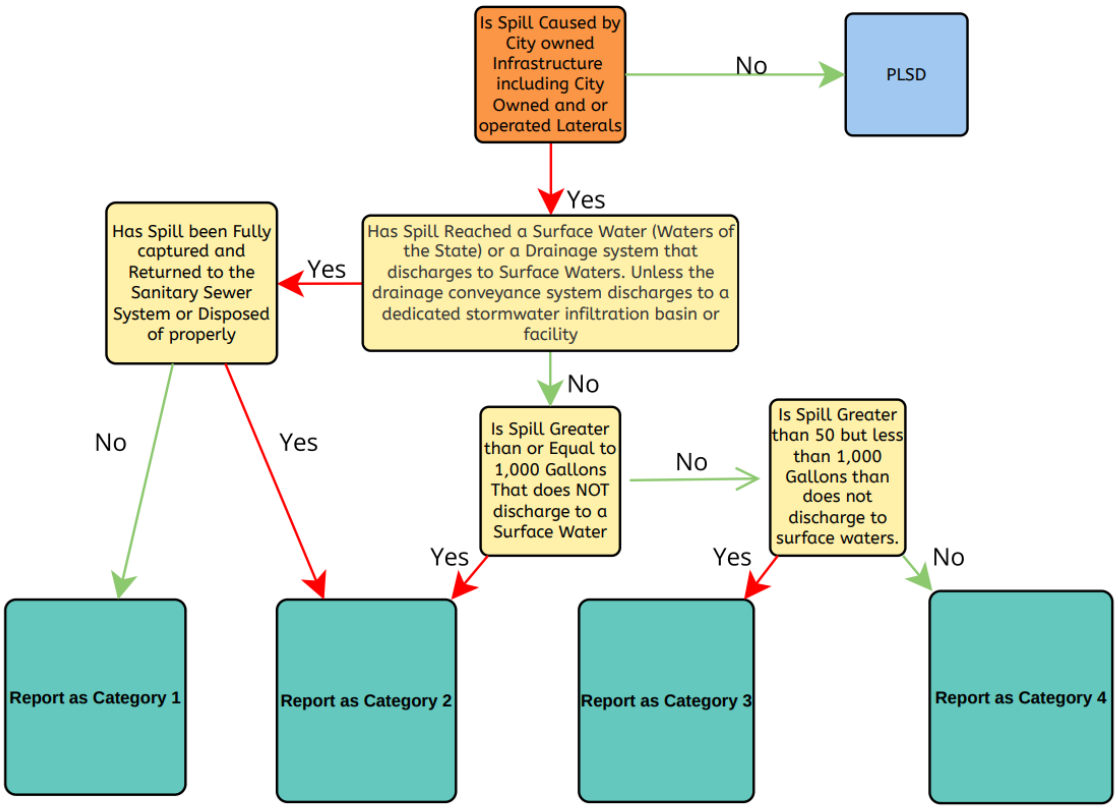
Category 2: A spill of **1,000 gallons or greater**, from or caused by a sanitary sewer system regulated under the General Order that **does not** discharge to a surface water.
A spill of 1,000 gallons or greater that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system, is a Category 2 spill.

Category 3: A spill of **equal to or greater than 50 gallons and less than 1,000 gallons**, from or caused by a sanitary sewer system regulated under the General Order that does not discharge to a surface water.
A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.

Category 4: A spill of **less than 50 gallons**, from or caused by a sanitary sewer system regulated under the General Order that does not discharge to a surface water.
A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.

Private Lateral Sewage Discharges (PLSD): Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately-owned sewer lateral connected to the enrollee's sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of may be voluntarily reported to the California Integrated Water Quality System (CIWQS) Online SPILL Database.

Figure 3 Flow Chart of SPILL Categorization



Spill Policies and Guidelines

As with any wastewater collection system, the possibility exists that SPILLs may occur due to unforeseen circumstances. Utility Staff must be prepared to take the necessary steps to safely contain a SPILL, correct the source of the SPILL, Clean the affected area(s), and comply with all necessary reporting requirements.

The following procedures and information should serve as a guide for the safe and effective response to a SPILL. It should be recognized that these are guidelines; they are not a substitute for the ability of the responder(s) to use their knowledge, experience, and good judgment to protect the public, the environment, and comply with current regulatory requirements.

When called to the scene of a SPILL, the first concern of any responder shall be the safety of the public, City Staff, and others nearby. Staff shall follow all applicable safety procedures when responding. Close attention should be paid to potential hazards that may exist upon arrival, such as electrical hazards, slip/trip/fall hazards, traffic hazards, and other potential hazards.

Safety concerns always take precedence over the potential time required to mitigate a SPILL.

Responder(s) to any SPILL should follow applicable safety procedures and assess the site for hazards, establish the best course of action, and call for additional aid as needed and/or conditions change. After establishing a safe work zone, control and containment are the primary concerns, especially in the event of a Category 1 SPILL. In the event of a Category 1 SPILL, additional staff will be required to assist with the control, containment, correction, reporting, and potential collection and submission of lab samples.

When discussing SPILLs with the public or other agencies, do not volunteer or disown liability. Neutral comments should be used, indicating remediation of the SPILL is the primary concern. Liability cannot be addressed or assigned until all relevant information has been thoroughly evaluated. If there is a customer complaint regarding liability for a SPILL, direct them to the City Risk Manager at City Hall (805-772-6200).

Upon arrival at a blockage, spill, or SPILL on public property or Right of Way:

1. **Assess the SPILL** to determine the logical course of action to control, contain, correct, cleanup, and estimate the number of personnel necessary and type of equipment used for eliminating the SPILL and restoring collection system flow.
2. **Secure the area** to prevent public exposure and provide a work zone if safe to do so.
3. **Contact needed personnel**, appraise them of the location, situation, course of action, and ask them to pick up additional tools, equipment, reporting paperwork, etc. in order to effectively accomplish the course of action. Notify primary responders, appropriate local officials, and appropriate regulatory agencies of a spill in a timely manner.
4. **Wear appropriate PPE** and replace PPE that no longer protects from exposure.
5. **Contain the overflow** to the greatest extent possible and prevent it from entering any drainage area, or Waters of the State. If an overflow has entered any storm drain, block

the storm drain outlet and/or use sandbags or waddles to divert the overflow, Control the overflow as close to the source as possible in order to help reduce area affected by the overflow.

6. **Clear the blockage** using the appropriate course of action.
7. **Return the overflow** to the collection system by vacuuming or sweeping as much liquid and/or solids as possible. Materials used for containment need to be disposed of in an appropriate manner.
    a. If a spill enters into a drainage conveyance system, all feasible steps shall be taken to remove the sewage from the drainage conveyance system, and cleaning the system in a manner that does not inadvertently impact beneficial uses of the receiving water body and be returned to the collections system.
8. **Disinfect affected area** by spraying about a 1:10 solution of household bleach and water to disinfect the area; wait for the solution to dry. Ensure that no liquid leaves the containment area or enters Waters of the State or drainage channel.
9. **Post Sewage Pollutions signs,** near any body of water that is affected by the SPILL for 72 hours or until no threat can be demonstrated. (Signs are available in the Collection Division office.)
10. **Make appropriate notifications**. Refer to Sanitary Sewer Overflow Notification Checklist & Numbers- (Appendix B, Attachment B). Notify potentially affected entities of spills that potentially affect public health or reach waters of the State. The Morro Bay Sanitary Sewer Overflow Notification Checklist (Refer to Appendix B, Attachment C) is posted in the Utility Division office, and part of the SPILL packet stowed in Utility service vehicles.

    As part of the required notifications for Category 1 SPILLs, Utility Staff will contact the Utility Division Manager and The City Public Works Director. Then the Public Works Director or Designee will notify City Council by telephone or E-mail.

11. **Sample Creeks and/or Bay** based on the requirements herein and outline the STATEWIDE SANITARY SEWER SYSTEMS GNERAL ORDER 2022-0103-DWQ E1 2.3. This includes sampling up-stream and down-stream and a remote sample site if appropriate and safe to do so. Use proper sample bottles. Samples must be handled as required by **Standard Methods**. They must be iced and transported to a certified laboratory, in an ice chest at your earliest possible convenience. A Chain of Custody must be filled out and accompany the samples. At the certified laboratory the party accepting the samples will sign the Chain of Custody and the person delivering the samples will get a copy of the Chain of Custody and name the requested tests (total and fecal coliforms, normally).
12. **Gather information for reports**. Refer to State Waste Discharge Requirements SPILL-WDR Reporting Requirements Flow Chart- (Appendix B, Attachment A).
13. **Conduct Post Spill Assessment**. Ensure that all information required for the CIWQS reporting has been gathered and that the spill has been properly contained and cleaned up.

14. **Report to CIWQS** website.

Private Property Spills to the Bay

The Harbor Department must be notified of any sewage spill that touches the Bay, regardless of ownership or responsibility. Refer to the notification checklist for contact information outlined in Appendix B, Attachment C. Notification must be made a priority, and within a timely manner. Any spill to the Bay presents a health and safety hazard and must be made known to the Harbor Department as the closest agency to such a spill.

Spills on Private Property

Current City Policy is as follows:

1. Do not call or recommend any cleaning company.

2. Private property owners/renters must call a cleaning company and submit a claim to the City Risk Manager. The telephone number for the Risk Manager is 805-772-6200.

3. If cleanup is needed on private property, instruct the owners/occupants to avoid contact with contaminated articles and engage professional clean-up companies. If the owner/occupant believes the City is responsible direct them to the City Risk Manager at City Hall, during regular work hours.

Private Property spills to city streets

Utility Division personnel do not clear blockages in private laterals. The property owner is responsible for lateral maintenance/repair and must contact a plumber to clear blockages and restore flow in the lateral. In the event a PLSD overflows to city streets or right of ways and presents a health and safety hazard, Utility Staff may assist in containment and cleanup in the street or right of way.

Traffic and Crowd Control

In the case that traffic or crowd control is needed, employees from other divisions may be called. If none are available or more traffic and crowd control is needed, personnel may call the SLO Sheriff's Dispatch (phone number 805-543-7084) to dispatch Morro Bay Police Officers or volunteers on an as needed basis.

Lift Station Policies: Station Bypass

If a lift station must be by-passed, it may be necessary to contract a pump truck, set up the bypass pump, or both. If a pump truck is required, one of several local firms should be available.

There are manifolds at Lift Stations 1, 2, and 3 and Pump Stations A and B for bypass pumping. If the bypass pump is required along with Lift Station work, it may be necessary to ask for

additional Utility personnel to operate and monitor the pump. Emergency short-term by-pass at all three stations may be accomplished by use of the Hydro-Vac, however, long term by-pass requires a pump truck, because the Hydro-Vac may be called to a SPILL at any time.

Telemetry and Electrical Problems

For electrical and telemetry problems that cannot be resolved by Utility Staff, call one of several local electrical contracting firms that have a knowledge of our system.

Reporting SPILL's

All Category 1, Category 2, Category 3, and Category 4 sanitary sewer overflows are reported on the California Integrated Water Quality System (CIWQS) Online SPILL Database. Also, City Utility Staff may report PLSDs depending on the severity and category, even though reporting PLSD's is voluntary. The four different categories of SPILLs require different reporting timeframes, reporting information, and agency notification. Morro Bay is unique because the estuary/bay is adjacent to City infrastructure and is used for commercial aquaculture. For this reason, City Staff are obligated to contact commercial interests and other parties that may be affected by a SPILL that discharges to the estuary/bay. City Staff updated their notification checklist with the required agencies and additional organizations' contact information and required timeframes for SPILL categories (see Appendix B, Attachment C for Morro Bay Sanitary Sewer Overflow Notification Checklist).

In order to capture reporting data required by CIWQS, Utility Staff updated their SPILL Field Report that Staff complete when at a SPILL and/or during SPILL follow up (Appendix B, Attachment D).

This section describes procedures for external notifications and reporting to the California Office of Emergency Services (Cal OES), the State Water Board, and other agencies.

Electronic Reporting of Sewer System Overflows (SSO)

All Enrollees are required to obtain SSO Database accounts and receive a "Username" and "Password" by registering through the California Integrated Water Quality System (CIWQS) website. On an annual basis, all enrollees are required to complete an update to the "Collection System Questionnaire", which collects pertinent information regarding an Enrollee's collection system. This questionnaire must be updated at least annually. The questionnaires were first completed on April 17, 2007, and have been updated annually per the requirements of the WDR or as changes have been made. The Morro Bay Collection System has been assigned a Waste Dischargers Identification Number (WDID) of 3 SSO 11429.

Electronic reporting of SSOs was begun on May 2, 2007. This reporting of Category 1, Category 2 and Category 3 SSOs will be ongoing. The Collection Division maintains a spreadsheet regarding SSOs on the City's computer network shared drive; it is kept up-to-date listing all spills including spills originating from private laterals. Written and electronic (CityWorks) spill reports will be maintained at the Utility Division Office and will be reported on the Monthly Operation Summary.

Reporting Directly to Cal OES

Category 1, Category 2 SPILL's, and any City Owned and/or Operated Laterals that spill 1,000 Gallons or greater that discharges to any Waters of the State.

For Category 1 SPILL and Category 2 SPILLs greater than or equal to 1,000 gallons Per Water Code sections 13271 a spill that discharges in any Water of the State, City Utility Staff shall notify Cal OES and obtain a Cal OES Control Number as soon as possible but not later than **two (2) hours** after (A) the City Utility Staff become aware of the Spill; (B) notification can be provided without substantially impeding cleanup or other emergency measures. The Utility Division Manager, Utility Supervisor, Utility Lead Operator, or Designee will conduct these notifications.

Information requested by Cal OES may include:

- Name of person notifying Cal OES and direct return phone number,
- Estimated SPILL volume discharged (gallons),
- If ongoing, estimated SPILL discharge rate (gallons per minute),
- Estimated discharge rate (gallons per minute) directly into water of the State or indirectly into a drainage conveyance system,
- SPILL Incident Description:
    a. Brief narrative
    b. SPILL incident location (address, city, state, and zip code).
    c. On-scene point of contact for additional information (name and cell phone number)
    d. Date and time the Utility Staff became aware of the SPILL
    e. Name of sanitary sewer system agency causing the SPILL
    f. SPILL cause (if known)
- Indication of whether the SPILL has been contained,
- Indication of whether surface water is impacted,
- Name of receiving water body receiving or potentially receiving discharge; and
- Description of water body impact and/ or potential impact to beneficial uses.,
- Any other known SPILL impacts

At the end of the conversation with a Cal OES representative, Utility Staff will obtain and record a Cal OES notification control number unique to each SPILL,

Following initial notification to Cal OES and until the City certifies a final SPILL report in CIWQS Online Database, Utility Staff will update Cal OES if there are substantial change(s) to:

- The previously estimated SPILL volumes (increase or decrease in gallons initially estimated);
- Estimated discharge volume discharged directly into waters of the State or indirectly into a drainage conveyance system (increase or decrease in gallons initially estimated); and
- Additional known impact(s) to the receiving water(s) and beneficial uses.

If the CIWQS Online Database is not available, Utility Staff will fax all required information to the San Luis Obispo Regional Water Quality Control Board office at (805) 543-0397 in accordance with the reporting time schedules. When the CIWQS Online database becomes available, Utility staff will enter the required information.

For reporting purposes, if one SPILL event results in multiple appearance points in a sewer system asset, Utility Staff will complete one SPILL report in the CIWQS, which includes the GPS coordinates for the location of the SPILL appearance point closest to the failure point, blockage, or location of the flow condition that caused the SPILL, and provide descriptions of the location of all other discharge points associated with the SPILL event.

For Category 1 SPILL of Any Volume to Waters of the State (Bay/Estuary and Ocean)
Follow above category 1 SPILL reporting procedure and report to agencies and organizations as outlined on the Morro Bay Sanitary Sewer Notification Checklist (See Appendix B, Attachment C).

SPILL Reporting to CIWQS SPILL Online Database-Timeframes

Category 1 and Category 2 SPILLs
Utility Staff will **submit draft reports** to CIWQS SPILL Online Database within three (3) business days of becoming aware of the SPILL and **certify a final report** for these SPILLs within fifteen (15) calendar days of the end date of the SPILL. For a Category 1 spill in which **50,000 gallons or greater** discharged to surface water, submit a **Technical Report** within forty-five (45) calendar days after the spill end date.

Category 3 SPILL
Utility Staff will report and certify Category 3 SPILLs to the CIWQS SPILL Online Database within 30 calendar days after the end of the calendar month in which the SPILL occurs. For example, a category 3 that occurred in February is entered into the database and certified by the end of March.

Category 4 SPILL
Utility Staff will report and certify Category 4 spills monthly, the estimated total spill volume exiting the Sanitary Sewer System and the total number of all Category 4 spills, to the CIWQS Sanitary Sewer System Online Database within 30 calendar days after the end of the calendar month. Additionally, Utility staff will Upload and Certify a report, of all Category 4 spills to the online CIWQS Sanitary Sewer System Online Database, by February 1st after the end of the calendar year in which the spills occur.

PLSD Voluntary Reporting

Upon observing or acquiring knowledge of any of the following from a private sewer lateral or private sanitary sewer system that is **not** owned/operated by the City, the Utility Staff is encouraged to notify the California Office of Emergency Services (as provided by Health and Safety Code section 5410 et. seq. and Water Code section 13271), or inform the responsible party that State law requires such notification to the Office of Emergency Services by any person that causes or allows a sewage discharge

to **waters of the State**:

- A spill equal to 1,000 gallons or more that discharges (or has a potential to discharge) to waters of the State, or a drainage conveyance system that discharges to waters of the State; or
- A spill of any volume to surface waters.

No Spill Certification

Utility Staff will certify a no spill certification statement in the CIWQS Online SPILL Database within 30 days after the end of each calendar month. This certification states there were no spills for the reporting month. Also, the Utility Staff may certify no spill reports on a quarterly basis.

If there are no SPILLs during a calendar month but the enrollee reported a PLSD, the Utility Staff will still certify a 'No Spill' certification statement for that month.
If there is a spill from an owned and/or operated lateral(s) during a calendar month, Utility staff shall **not** certify "no spills" for that calendar month.

Amended SPILL Reports

City Staff that are CIWQS registered Legally Responsible Officials may update or add additional information to a certified SPILL report within **90 calendar days** of the SPILL end date by amending the report or by adding an attachment to the SPILL report on the CIWQS Online SPILL Database. After 90 calendar days, City LROs shall contact the State Water Board at SanitarySewer@waterboards.ca.gov to request to amend a SPILL report if the LRO shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

SPILL Technical Report (50,000 gallons or Greater Spilled to Surface Waters)

City Staff will submit a SPILL Technical Report in the CIWQS Online SPILL Database within 45 calendar days of the SPILL end date for any SPILL in which 50, 000 gallons or greater are spilled to waters of the State. This report, which does not preclude the Water Boards from requiring more detailed analyses if requested, will include at a minimum, the following:

1. **Causes and Circumstances of the SPILL**:

a. Complete and detailed explanation of how and when the SPILL was discovered.
b. Photographs illustrating the spill origin, the extent and reach of the spill, drainage conveyance system entrance and exit, receiving water, and post-cleanup site conditions.
c. Diagram showing the SPILL failure point, appearance point(s), the flow path, and final destination(s).
d. Detailed description of the methodology employed, and available data used to calculate the discharge volume and, if applicable, the SPILL volume recovered.
e. Detailed description of the cause(s) of the SPILL.
f. Description of the pipe material, and estimated age of the pipe material, at the failure location.
g. Description of the impact of the spill.
h. Copy of original field crew records used to document the spill.
i. Historical maintenance records for the failure location.

2. City's Response to the SPILL:

a. Chronological narrative description of all actions taken by enrollee to terminate the spill.
b. Explanation of how the SSMP Spill Emergency Response plan was implemented to respond to and mitigate the SPILL.
c. Final corrective action(s) completed and a schedule for planned corrective actions including:
    a. Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable,
    b. Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences,
    c. Necessary modifications to the Emergency Spill Response Plan to incorporate lessons learned in responding to and mitigating the spill.

3. Water Quality Monitoring including at minimum:

a. Description of all water quality sampling activities conducted
b. List of pollutant and parameters monitored, sampled and analyzed; as required in section 2.3 (Receiving Water Monitoring)
c. Laboratory results, including laboratory reports,
d. Detailed location map illustrating all water quality sampling points.
e. Other regulatory agencies receiving sample results (if applicable)

4. Evaluation of spill impact(s), including a description of short-term and long-term impact(s) to beneficial uses of the surface water.

Utility Staff and other City Staff plan to develop and implement a SPILL Water Quality Monitoring Program prescribed by the State General Order 2022-0103-DWQ. This program will cover visual assessments and impacts from SPILLs to surface waters and Water Quality sampling and Analysis for which 50,000 gallons or greater are spilled to surface waters. The SPILL Water Quality Monitoring Program, at a minimum, will:

1. Contain protocols for water quality monitoring.
2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible, such as safety, access restrictions, etc..
3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory (ELAP).
4. Require monitoring instruments and devices used to implement the SPILL Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.
5. Within 18 hours of the Utility Staff becoming aware of the SPILL, require water quality sampling for, at a minimum, the following constituents:
    i. Ammonia
    ii. Appropriate Bacterial indicator(s) per the applicable Basin Plan water quality objective or Regional Board direction which may include total and fecal coliform, enterococcus, and e-coli.

Record Keeping Requirements

The City and/or Utility Staff will maintain the following records for five (5) years and make available for review by the Water Boards during an onsite inspection or through an information request:

1. General records that document compliance with all provisions of the State General Order No. 2022-0103-DWQ, including any required records generated by the City's sanitary sewer system contractors.
2. SPILL records for each SPILL event, including but not limited to:
    a. Complaint records documenting how the City responded to all notifications of possible or actual SPILLs, both during and after business hours, including complaints that do not result in SPILLs. The following information will be recorded for each complaint:
        i. Date, time, and method of notification.
        ii. Date and time the complainant or informant first noticed the SPILL.
        iii. Narrative description of the complaint, including any information the caller can provide regarding whether the complainant or informant reporting the potential SPILL knows if the SPILL has reached surface waters, drainage channels or storm drains.
        iv. Follow-up return contact information for complainant or informant for each complaint received, if not reported anonymously.
        v. Final resolution of the complaint. Records and information documenting steps and/or remedial actions undertaken by City Staff,
    b. Records documenting how all estimate(s) of volume(s) discharged and, if applicable, volume(s) recovered were calculated.
    c. All Cal OES notification records, as applicable,
    d. Records, in accordance with the Monitoring Requirements in WDR Attachment E-1 of the 2022-0103-DWQ

3. Recordkeeping of Category 4 Spills and Non-Category 1 Lateral Spills
    a. Recordkeeping of Individual Category 4 Spill Information:
        i. Contact information: Name and telephone number of City contact person to respond to spill-specific questions;
        ii. Spill location name;
        iii. Description and GPS coordinates for the system location where the spill originated;
        iv. Did the spill reach a drainage conveyance system? If Yes:
            1. Description of drainage conveyance system location,
            2. Estimated spill volume fully recovered within the drainage conveyance system, and
            3. Estimated spill volume remaining within the drainage conveyance system;
        v. Estimated spill volume exiting the sanitary sewer system;
        vi. Spill date and start time;
        vii. Spill cause(s);
        viii. System failure location;

ix. Description of spill response activities including description of immediate spill containment and cleanup efforts;
x. Description of how the volume estimation was calculated, including, at minimum:
    1. The methodology and type of data relied upon, including supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
    2. The methodology and type of data relied upon to estimate the spill start time, on-going spill rate at time of arrival (if applicable), and the spill end time;
xi. Description of implemented system modification and operating/maintenance modifications.

b. Recordkeeping of Individual Lateral Spill Information:
    i. Date and time the Enrollee was notified of, or self-discovered, the spill;
    ii. Location of individual spill;
    iii. Estimated individual spill volume;
    iv. Spill cause(s);
    v. Description of how the volume estimations were calculated;
c. Total Annual Spill Information:
    i. Estimated total annual spill volume;
    ii. Description of spill corrective actions, including at minimum:
        1. Local regulatory enforcement action taken against the sewer lateral owner in response to a spill, as applicable, and
        2. System operation, maintenance and program modifications implemented to prevent repeated spill occurrences at the same spill location.

4. Electronic Monitoring records relied on for documenting SPILL events and/or estimating the SPILL volume Discharged, including, but not limited to records from:
    a. Supervisory Control and Data Acquisition (SCADA) systems
    b. Alarm system(s)
    c. Flow monitoring device(s) or other instrument(s) used to estimate wastewater levels, flow rates and/or volumes.
5. Sewer System Management Plan Implementation Records
    a. Records documenting all changes made to the SSMP since its last certification indicating when a subsection(s) of the SSMP was changed and/or updated and who authorized the change or update. These records will be attached to the SSMP.
6. Audit Records
    a. Completed audit documents and findings,
    b. Name and contact information of staff and/or consultants that conducted or were involved in the audit,
    c. Follow-up actions based on audit findings.
7. Equipment Records

    a. Shall maintain a log of all owned and leased sewer system cleaning, operational, maintenance, construction, and rehabilitation equipment.
8. Work Orders
    a. Shall maintain record of work orders for operations and maintenance projects.

Training

Appropriate staff will participate in regularly scheduled training sessions to assist response crews in awareness of their responsibilities and executing their duties. These training sessions will be organized based on the latest SERP, as well as other reference materials. Training sessions should incorporate hands-on field demonstrations to ensure the preparedness of all response personnel to all anticipated situations.

An overview of the SSMP and the SERP should be provided to all appropriate staff. This will serve as a mode of instructing staff on the SSMP, SPILLs, and required documentation. Field demonstrations will be performed to test equipment, response time, training effectiveness, resources, and manpower capabilities.

Training and event participation will be documented and maintained. Currently, Utility staff is encouraged to receive training through various vendors and to participate in Collection System Maintenance classes, and Collection System Maintenance Certification through the California Water Environment Association (CWEA). Additional certification requirements may be imposed in the future if deemed necessary by the SWQCB.

Updating the SERP

As policies change and response procedures are refined, the SERP will be reviewed and modified to reflect all necessary changes.

Review, Update, and Availability of the SERP

City of Morro Bay staff shall maintain the SERP and update it as necessary by the addition of new facilities, or changes in the operation or maintenance of the wastewater collection system that may materially affect the potential for SPILLs. At a minimum, the plan will be reviewed annually and will include updating telephone numbers and forms in the appendices, and a review of procedures. The annual review of the plan will also ensure all provisions of the plan are being met and implemented.

City of Morro Bay staff shall also review and update this SERP as appropriate after any SPILL occurrence. SERP deficiencies and updates will be addressed and modified accordingly. The plan performance will be routinely evaluated and updated.

The updated SERP will be distributed to the appropriate City of Morro Bay Utilities staff and will be made available to the public and SWQCB for review upon request, or included in the SSMP revision due August 2025. Staff shall ensure that this SERP is readily available to Utilities

maintenance personnel, and that said personnel are familiar with the plan and comply with it at all times.

Element VII: Sewer Pipe Blockage Control Program

The City has determined that a sewer pipe blockage control program is necessary per the SSMP requirements. There is an average of between 45 and 55 food service facilities located within the city limits that discharge to the City sewers. Operations staff have also noted the tendency for grease to build up in specific sewer lines and in certain sections of the City.

The City's sewer pipe blockage control program consists of focused cleaning and maintenance as well as source control. The Utility division also maintains a spreadsheet of all spills and blockages to localize areas requiring further attention. Source control and collection system staff, along with appropriate departments, are included in the plan check process. The following subsections discuss identification and cleaning of grease prone areas or sewer lines that are prone to grease build-up, legal authority to prohibit grease discharge or require a grease removal device, facility inspection, public outreach, and Best Management Practices (BMPs) that can be instituted at each agency. This section is to fulfill the Sewer Pipe Blockage Control Program Element of the SWRCB (Element 7) SSMP requirements.

SWRCB Requirement

The Sewer system Management Plan must include procedures for the evaluation of the enrollee's service are 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 Enrollee 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.

Public Outreach

The City produces a City Manager's Update that discusses each division's accomplishments and difficulties, along with educational information. Plans and schedules for individual disposal of pipe-blocking substances generated within a sanitary sewer system area within the City are unique and depend on a number of factors, including quantity of FOG produced, type of FOG trap or interceptor used, and frequency of maintenance. Utility Division Staff are available to meet with business owners and staff and others to discuss Best Management Practices (BMPs), proper disposal of pipe-blocking substances, and other collection system-related issues. Appointments can be made by calling the Public Works office, the Utility's Division, or the Stormwater Program Manager.

Public Works Department:		805-772-6261
Utility Division:	Division Manager	805-772-6265
	Wastewater Utility Supervisor	805-772-6272
	Lead Utility Operator	805-772-6272
Stormwater Program Manager:	City Engineer	805-772-6569
	Engineering Technician	805-772-6285

Legal Authority to Control Sources of FOG

Legal measures available to the City to control sources of FOG include the following:

1. Authority to prohibit specific discharges
2. Authority to require grease removal devices
3. Preliminary treatment facility maintenance
4. Utility hole installation
5. Inspection and sampling of premises
6. Enforcement measures, as appropriate

Legal authority to prohibit specific discharges

Chapter 13.12.200 B. of the City's municipal code prohibits specific discharges, as follows:

No user shall introduce or cause to be introduced into the POTW the following pollutants, substances, or wastewater:

- Solid or viscous substances in amounts which will cause obstruction of the flow in the POTW resulting in interference but in no case solids greater than one-half inch or one and two-seven hundredths centimeters in any dimension;

- Pollutants, including oxygen-demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which, either singly or by interaction with other pollutants, will cause interference with the POTW;
- Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin, in amounts that will cause interference or pass through;
- Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
- Trucked or hauled pollutants except at discharge points designated by the utilities division/department manager in accordance with this chapter;
- Septic tank cleanings or any raw or chemically treated sewage from septic tanks;
- Noxious or malodorous liquids, gases, solids, or other wastewater which, either singly or by interaction with other wastes, are sufficient to create a public nuisance or a hazard to life, or to prevent entry into the sewers for maintenance or repair;
- Wastewater which imparts color which cannot be removed by the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions, which consequently imparts color to the treatment plant's effluent, thereby violating the city's NPDES permit;
- Wastewater containing any radioactive wastes or isotopes except in compliance with applicable state or federal regulations;
- Stormwater, surface water, ground water, artesian well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, noncontact cooling water, and unpolluted wastewater, unless specifically authorized by the utilities division/department manager;
- Sludges, screenings, or other residues from the pretreatment of industrial wastes;
- Medical wastes, except as specifically authorized by the utilities division/department manager in an industrial wastewater discharge permit;
- Wastewater causing, alone or in conjunction with other sources, the treatment plant's effluent to fail toxicity test;
- Detergents, surface-active agents, or other substances which might cause excessive foaming in the POTW;
- Pollutants, substances, or wastewater prohibited by this section shall not be processed or stored in such a manner that they could be discharged to the POTW;
- Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid, or gas.

Authority to install grease, oil and sand interceptors

Chapter 13.12.330 authorizes the installation of grease removal equipment as follows:

Grease, oil and sand interceptors shall be provided when, in the opinion of the utilities division/department manager, they are necessary for the proper handling of liquid wastes

containing grease in excessive amounts, or any flammable wastes, sand, and other harmful ingredients; except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the utilities division/department manager, and shall be located as to be readily and easily accessible for cleaning and inspection.

Grease and oil interceptors shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature. They shall be of substantial construction, watertight, and equipped with easily removable covers which, when bolted in place, shall be gastight and watertight.

Purchase and installation of the interceptor shall be at the user's expense. No exceptions shall be made to the requirements of this section due to expense, size of the installation or difficulties in locating the interceptor within the site boundary.

Grease, oil and sand interceptors - Maintenance

Chapter 13.12.330 provides the following:

Where installed, all grease, oil and sand interceptors shall be maintained by the owner, at his expense, in continuously efficient operation at all times.

Chapter 13.12.300 Pretreatment facility maintenance states the following:

Where preliminary treatment facilities are provided for any wastewater, they shall be maintained continuously in satisfactory and effective operation, by the owner at his expense.

Utility hole installation

Chapter 13.12.320 provides for the following:

When required by the utilities division/department manager, the owner of any property served by a building sewer carrying industrial wastes shall install a suitable control utility hole in the building sewer to facilitate observation, sampling and measurements of the wastes. Such utility hole, when required, shall be accessible and safely located, and shall be constructed in accordance with plans approved by the utilities division/department manager. The utility hole shall be installed by the owner at his expense, and shall be maintained by him so as to be safe and accessible at all times.

Inspection and sampling of premises

Chapter 13.12.800 provides for inspection as follows:

The utilities division/department manager shall have the right to enter the premises of any user to determine whether the user is complying with all requirements of this chapter and any industrial wastewater discharge permit or order issued hereunder. Users shall allow the utilities division/department manager ready access to all parts of the premises for the purposes of

inspection, sampling, records examination and copying, and the performance of any additional duties.

Enforcement measures where appropriate

Chapter 13.12.1080 provides the right to terminate water service as follows:

If any user of the city sewer system fails to meet the requirements set forth in this chapter, then the utilities division/department manager shall have the authority to terminate water service or use alternate actions to protect the sewer system, including the wastewater treatment facilities, employees and surrounding environment from hazardous discharges, upon forty-eight hours' written notice, unless imminent public safety requires more immediate action, as reasonably determined by the utilities division/department manager.

Chapter 13.12.1090 provides liability for damages from violation as follows:

Any person violating a provision of this chapter or permit issued hereunder shall be liable for all injuries, deaths, real or personal property damage and expenses incurred, including but not limited to, city staff time, including administrative overhead, reasonable attorney's fees and court costs, and fines levied on the city by any regulatory agency arising from any and all actions taken by the city, any other governmental entity or that person related to the correction of such violation.

FOG Control Discussion

Fats, oils and grease (FOG) can have negative impacts on wastewater collection and treatment systems. Most wastewater collection system blockages can be traced to FOG and roots. Blockages in the collection system are serious, causing sewage spills, manhole overflows and can cause back-ups into homes and businesses.

Problems caused by wastes from restaurants and other grease producing establishments are the basis for ordinances and regulations governing the discharge of grease materials to the sanitary sewer system. This type of waste requires the installation of preliminary treatment facilities, commonly known as grease traps or interceptors.

There are two kinds of FOG pollutants common to wastewater systems:

1. Petroleum-based oil and grease (non-polar concentrations) occur at businesses (automotive related normally) using oil and grease. These disperse on the surface of water causing a sheen. These concentrations are regulated by other agencies (local, state and federal), and <u>are not</u> a part of this program.
2. Animal and vegetable-based fats, oils and grease (polar concentrations) are more difficult to regulate due to the large number of restaurants in Morro Bay. These do not disperse in water, but instead congeal and regroup into large masses. These concentrations <u>are</u> the basis for this program.

Grease is singled out for special attention because of its poor solubility in water and its tendency to separate from the liquid solution. Grease in a warm liquid may not appear harmful. As the liquid cools, the grease or fat congeals and causes "nauseous mats" on the surface of settling tanks and digesters. FOG can coat the interior of pipes, wet-wells and other surfaces. It can cause the shut-down of wastewater treatment units. It is the cause for enhanced maintenance of specific mainlines throughout the City.

Traps and Interceptors

A trap is a small reservoir built into the wastewater piping a short distance from the grease producing area. Baffles in the reservoir retain the wastewater long enough for the grease to congeal and rise to the surface. The grease can then be removed and disposed of properly.

An interceptor is a vault with a minimum capacity of 500 gallons. It is normally located on the exterior of the building. The vault includes a minimum of two compartments. Flow between each compartment is through a 90-degree fitting designed for grease retention. The capacity of the interceptor provides adequate detention time for wastewater to cool down and allow the grease to congeal and rise to the surface where it accumulates until the interceptor is cleaned.

Maintenance staff, or other employees of the establishment, usually perform grease trap maintenance. Permitted haulers, licensed septic services, or recyclers usually perform interceptor maintenance. The entire volume of the interceptor (liquids and solids) is removed from the interceptor and properly disposed of. When performed properly and at the appropriate frequency, grease interceptor and trap maintenance can greatly reduce the discharge of FOG into the collection system.

The required maintenance frequency for grease interceptors and traps depends greatly on the amount of FOG a facility generates, as well as any best management practices (BMPs) that the establishment implements to reduce the FOG discharged into its sanitary sewer system.

Any establishment that introduces fats, oils, or grease into the sewer system in quantities large enough to cause line blockages or hinder treatment, or compromise compliance with the purpose of the FOG control program ordinance (Municipal Code 13.12.710) shall install a grease trap or interceptor (Municipal Code 13.12.780 and 13.12.790). Interceptors are the best choice for larger, high-volume restaurants, hotels, retirement homes and other larger commercial establishments. Smaller restaurants and take-out restaurants with limited menus, minimum dishwashing and/or minimal seating may find a trap suitable. Medium volume establishments may find that a trap will be too small and opt to install an interceptor.

Any establishment that does not install a trap or interceptor and generates or uses FOG in food preparation will eventually encounter a maintenance problem that will be grease related. If the blockage is in the building, the establishment has direct responsibility for paying for maintenance. If a blockage or restriction is in the public sewer, the establishment may have to pay to have the city main maintained. If the blockage affects other establishments or homes, there may be civil issues and penalties involved.

Facility Inspection

In 2002 the City conducted a survey of grease producing facilities. This included restaurants, retirement homes, markets and liquor stores with delicatessens, hotels and schools, sandwich shops, fast food agencies, and others. Inspections are based on the previous list and modified using information from business licenses provided by the City of Morro Bay.

An inspection database was created and has since been replaced by the integration of CityWorks. Staff complete a digital inspection form for source and FOG control inspections. Staff records the date, name of the business, owner/contact information, inspector, and condition of the trap, purpose of visit, and related comments. After an inspection is performed an inspection report is emailed to the owner/contact for their records. The Utility Staff perform inspections on a routine schedule. Staff use CityWorks to track and schedule visits at the various establishments.

Inspections are conducted using the guidelines outlined in EPA publication 831-B-94-001, entitled Industrial User Inspection and Sampling Manual for POTW's. This manual provides guidelines for the conduct of inspections and recording of field notes.

Other guidelines and information are gained from a publication entitled Fats, Oil and Grease, Best Management Practices Manual, Information, Pollution Prevention, and Compliance Information for Publicly-Owned Treatment Plants. This manual was produced by Brown and Caldwell, with the notation *"Reproduction with credits encouraged".*

Inspection Guidelines

1. Inspectors will maintain a professional, courteous demeanor at all times.
2. Inspections should be performed at times other than a facility rush hour.
3. The facility owner/contact or representative will open the trap or interceptor.
4. All records and field notes will be noted in the comment section of the inspection report.

The criteria used for the inspection will be as follows;

Percent of trap filled	Trap Condition
25%	Good
25%-50%	Fair
>50%	Poor

If the trap is in FAIR condition, the inspector will advise the establishment to alter the maintenance schedule. The cleaning frequency may need to be increased.
If the Trap is in POOR condition, it should be noted in the 'Comments" section of the Inspection Report and the owner/contact should be advised to clean it immediately. The establishment should then be re-inspected in about 30 days. Traps should not be allowed to be habitually kept in POOR condition.

The City has "No Grease-No Grasa" stickers available for sinks in establishments. These should be placed near all sinks as a reminder that it's best to remove the grease prior to washing and introducing FOG into the system. Removing as much FOG as possible and sending it to landfill will also help keep FOG from filling a trap prematurely, causing more maintenance.

For cleaning frequency, it is best for each establishment to keep a cleaning log. This will be the best way to find and maintain each facility's cleaning frequency. Schedules will be maintained for inspection activities, such as grease interceptors, food service establishments, CCTV of gravity pipes, manholes, and pump stations. The Utility division has produced a log sheet that is being made available for businesses to log cleaning frequency. Note: A BMP for establishments with interceptors is for the manager to monitor the agency cleaning the interceptor.

Identification and Sewer Cleaning

The City Utility Staff utilize records, past practices, and operator familiarity to identify and prioritize enhanced maintenance procedures. A list of known areas that are prone to grease build-up and root problems has been established and schedules maintenance on 30, 60, 90, and 180-day rotations. Maintenance activities include gravity main cleaning, lateral cleaning/rodding, and pump station maintenance, among other maintenance needs. The reason that root lines are included in this list is that grease is prone to accumulate on roots. The City has established a cyclical root control program using chemical root control measures to kill and retard the growth of roots in the sewer system. This program will expand to include areas where roots are noted by operators and CCTV inspections.

(a) Identification of Grease Problem Areas. The City identifies potential problem areas by tracking locations and causes of blockages and SSOs. A review of the City sewer overflow spread sheet for instance shows that most SSOs are caused by roots and grease. Additionally, debris type and severity are noted by operations staff during routine and enhanced maintenance. Areas with several restaurants or grease producing facilities are also considered potential grease problem areas.

(b) Enhanced Maintenance. Included in the enhanced maintenance program are lines cleaned specifically for FOG control, root control, and other lines prone to problems in the past. Cleaning frequency depends on the history of stoppages, as well as areas expected to be prone to grease build-up.

The Utility Division maintains records of each manhole-to-manhole reach scheduled for enhanced maintenance. These records are also used for cleaning logs, on which operator's note the date and time of cleaning, as well as the debris type and severity.
These records include additional lines that are cleaned for reasons other than FOG. Sewer lines not included in the enhanced maintenance program are cleaned on about a two-year cycle.

Two satellite agencies within the service area have restaurants. They are the San Luis Coastal Unified School District and the State Park on the south end of town. They are responsible for FOG generated in their areas.

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

This section of the SSMP identifies the City of Morro Bay's plan for system evaluation and capacity assurance. The City completed a comprehensive OneWater Plan in October 2018. This OneWater Plan includes a capacity evaluation and identifies necessary capacity-related future improvement projects. The OneWater Plan is a separate document from this SSMP; this section of the SSMP summarizes key capacity-related portions of the OneWater Plan and adopts it by reference. This section is to fulfill the System Evaluation, Capacity Assurance, and Capital Improvements Element of the SWRCB (Element 8) SSMP requirements.

SWRCB 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.

8.1 System Evaluation and Condition Assessment:

The plan must include procedures to:

- Evaluate the sanitary sewer system assets utilizing the best practices and technologies available;
- Identify and justify the amount (percentage) of it's 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 , video surveillance and/or other comparable system inspection methods;
- Utilize observations/evidence of system conditions that may contribute to existing 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.

8.2 Capacity Assessment and Design Criteria:
The plan 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 contribute 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.

8.3 Prioritization of Corrective Actions:
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.

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

- Project schedules include completion date for all portions of the capital improvement program;
- Internal and external project funding sources for each project; and
- 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.

8.1 System Evaluation and Condition Assessment

The City has an on-going commitment to conducting a sewer system management assessment to ensure that the City continues to meet the requirements of the WDR. This on-going assessment ensures the Collection Division activities meet the requirements of the WDR and identifies any

programs that may require modification or expansion. This program will be on-going, and the SSMP will continue to be modified and refined based on demonstrated need, the outcome of the triennial audit, and any amendments to the WDRs or the Monitoring and Reporting Programs adopted by the SWRCB.

Capacity assessments were completed as part of the City's OneWater Plan finalized October 2018. The OneWater plan is located on the City website at https://www.morro-bay.ca.us/onewaterplan. The OneWater Plan capacity analysis is based on hydraulic modeling of the City's collection system under both current and future design flows. The following sub-sections provide a brief summary of the modeled system, flow estimates, and evaluation criteria used for the City's sewer system capacity evaluation.

As part of the effort to reduce I&I, the City has purchased and installed flow monitoring equipment. These devices will allow the City to determine baseline flow conditions, and that data will be used to calibrate and check future models.

Hydraulic Model

The City's wastewater collection system hydraulic model was developed using InfoSWMM, developed by Innovyze. InfoSWMM is a geospatial wastewater modeling and management software built to run within the ESRI ArcGIS software platform. The wastewater collection system hydraulic model was developed using the City's most recent GIS database.

The elements of the wastewater collections hydraulic model included the following:

- Junctions: sewer manholes, cleanouts, locations where pipe sizes change etc.
- Pipes: gravity sewers and force mains, including the pipe length, invert elevations, diameter
- Storage nodes: lift station wet wells
- Pump: pump including pump curves and operational controls
- Outfall: locations where flow leaves the system, i.e. pump stations and WWTP headworks
- Rain gauges: used to simulate historical or theoretical hourly rainfall
- Inflow: three main wastewater inflows
    - External, Dry weather flows and Rainfall derived infiltration and inflow (I&I)

The model combines information on the physical and operational characteristics of the City's wastewater collection facilities, and performs calculations to solve a series of mathematical equations to simulate flows in pipes. This data, such as wet well dimensions, lift stations, and other special features, were input manually into the model based on available information using the City's as-built records and GIS data. Dry weather wastewater flows were then allocated to the appropriate model junctions. The hydraulic model calibrated for dry- and wet-weather conditions

using flow-monitoring data collected as part of this OneWater Plan. The calibrated model was used for the wastewater collection system analysis presented in this OneWater Plan.

Flow Estimates

Adequate estimates of the volumes of wastewater are important in maintaining and sizing sewer system facilities, both present and future conditions. Average dry weather flows (ADWF) were allocated in the hydraulic model based on land use data as well as flow data obtained with flow meters.

The existing ADWF was estimated using the ADWF for 2010-2014. The existing ADWF is 0.88 mgd.

Historical per-capita generation rates indicate a range between 56-164 gpcd. The OneWater Plan assumed a per capita flow of 82 gpcd for future flow projections. The table below summarizes the projected wastewater flows through 2040.

Year	Projected Population	Projected ADWF (mgd)
2017	10,714	0.88
2020	10,901	0.89
2025	11,213	0.92
2030	11,525	0.94
2035	11,837	0.97
2040	12,149	0.99

The existing peak wet weather flows (PWWF) was derived throughout the system based on the hydraulic modeling results. This was accomplished by routing the 10-year, 24-hour design storm through the hydraulic model. The City's ADWF is projected to increase from 0.88 mgd to 0.99 mgd by 2040, whereas the PWWF is projected to increase from 7.90 mgd to about 8.12 mgd by 2040.

Condition Assessment

The City's sanitary sewer system will be assessed each year. System areas that warrant prioritization will be assessed on a greater amount (or percentage) based upon its condition. System areas to be prioritized include the following: (1) those holding a high level of environmental consequences if vulnerable to collapse, failure, blockage, capacity issues, or other system deficiencies; (2) those located in or within the vicinity of surface waters, steep terrain, high groundwater elevations, and environmentally sensitive areas; and (3) those within the vicinity of a receiving water with a bacteria-related impairment on the most current Clean Water Act section 303(d) List.

Sanitary sewer system conditions are to be assessed using visual observations and video surveillance. Observations or evidence of system conditions that may contribute to sewage exiting from the system which can reasonably be expected to discharge into a water of the State will be utilized to effectively respond and prevent such happenings. Regardless, system evaluations and condition assessment inspections and activities will be documented. Additionally, the entire system will be assessed for identification of vulnerability to direct and indirect impacts of climate

change, including but not limited to sea level rise; flooding and erosion due to increased storm volumes, frequency, and intensities; wildfires; and increased power disruptions.

8.2 Capacity Assessment and Design Criteria

The design criteria were established with the OneWater Plan. The City of Morro Bay has not experienced any dry weather sanitary sewer overflows due to hydraulic deficiencies in the sewer system. System defects such as cracks, misaligned joints, and broken pipelines can contribute to spill events during dry weather peak flows through groundwater infiltration. Flow can also be generated by routine water usage in residential, commercial, and industrial sectors of the collection system. The City's design criteria account for wet weather flows by reserving additional capacity for those events. Chapter 6 of the OneWater Plan delivers sufficient redundancy in pumping and storage capacity.

The City relies on the OneWater Plan, which through capacity analysis identified areas in the sewer system where flow restrictions occur or where pipe capacity is insufficient to convey the PWWFs. The OneWater Plan provides recommended improvements to mitigate the collections system deficiencies. These improvements include gravity main improvements, lift station improvements, and rehabilitation and replacement projects.

Capacity and evaluation of systems, specifically flood-prone systems subject to inflow and infiltration, are considered in Chapter 6 of the OneWater Plan. The capacity evaluation models both local and regional storm events, as well as projected 2040 storm events as a result of climate change. Information from system inspections, system audits, and spill history are considered as well. Major sources of the system contributing to the peak flows are identified in Figure 6.7, Chapter 6 of the OneWater Plan. No parts of the system exceed the established flow depth criterion, however, there are areas of the system that surcharge within 5-feet of the manhole rim. This is addressed in the OneWater Plan.

8.3 Prioritization of Corrective Actions

The City of Morro Bay maintains a list of capital improvement projects (CIPs) for the Wastewater Collection System to prevent hydraulic deficiencies from occurring. This list is generated through the Capital Improvement Program Prioritization process in the OneWater Plan to identify and prioritize projects for corrective actions. A complete list of Capital Improvement Projects and CIP estimated cost can be found in Table 8.8 of the OneWater Plan.

8.4 Capital Improvement Plan

The City follows the Capital Improvement Plan, located in Chapter 8 of the OneWater Plan.

The City has organized each capacity improvement project into a "20-year CIP" schedule with estimated completion dates. The capital improvements were phased into one of three phases: Near

Term Projects Phase 1 (Year by Year, 2019-2023); Near Term Projects Phase 2 (2024-2028); or Long-Term Projects (2029-2040).

The Morro Bay Public Services Department uses this list to update the 5-year CIP budget. The City reviews the capital projects, available funding, anticipated staff resources available, and priorities on an annual basis as part of the City's budgeting process.

Internal funding sources come from Public Works and Utilities funds set aside by the City. Funding also comes from water bills, WRC surcharge, and sewer rates. Sewer rates primarily cover sewer operation costs. External funding sources come from both state and federal grants and loans. These have been most recently used in the construction of the WRC.

To keep projects on track and resolve issues in a timely manner, interagency coordination will be maintained for each project through regular coordinating meetings with all providers, stakeholders, and impacted utility agencies, including operation and maintenance staff, engineering staff, and consultants. These regular coordinating meetings will occur during planning, design, and construction of capital improvement projects.

Element IX: Monitoring, Measurement, and Program Modification

This section of the SSMP discusses parameters that the City tracks to monitor the success of the SSMP and how the City plans to keep the SSMP current. This section is to fulfill the Monitoring, Measurement, and Program Modification Element of the SWRCB (Element 9) SSMP requirements.

SWRCB Requirement

The Plan 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 Plan activities;
- Monitor the implementation and measuring the effectiveness of each Plan Element;
- Assessing the success of the preventative operation and maintenance activities;
- Updating plan procedures and activities, as appropriate, based on results of monitoring and performance evaluations; and
- Identifying and illustrating spill trends, including spill frequency, locations, and estimated volumes.

Maintain Relevant Information

The City tracks several performance measures through tracking logs and annual reports. The City plans to continue tracking these performance measures. Tracking tools include:

- Monthly and Annual Reports
- Asset Management Software
- SSO Reporting and Tracking
- Staff Training Records
- Flow Monitoring Reports
- System Modeling and Capacity
- SSMP Audit Findings
- Video Inspection Results
- FOG Inspection Log

Monitor and Measure the Effectiveness

In order to monitor the effectiveness of each element of the SSMP, the City has selected 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 focus 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, and can aid in adaptive management of decision making.

Our Monitoring, Measurement, and Program Modification efforts for each element are:

Element I: Goals and Introduction

The goal of the collection system is unlikely to change significantly. As part of the internal audit process (Element 10) we will review the goal and make necessary modifications.

Element II: Organization

The dynamics of organizations can change dramatically with time. The effectiveness and staffing levels of the current organization will be reviewed and compared to required SSMP efforts to determine when adjustments will need to be made to either organizational or staffing levels.

Element III: Legal Authority

The legal authority by which the City operates and maintains its sewer system lies nested in the Municipal Code which can be changed as necessary through a formal City Council process. Changes to the City's legal authority will most frequently be made to stay in alignment with changes to both State and Federal requirements. Changes to our legal authority will occur on an as needed basis.

Element IV: Operation and Maintenance Program

Collections Operations and Maintenance (O&M) practices have evolved rapidly in the last several years and will continue to evolve as new technologies are developed. Modifications to the collections O&M Program are an ongoing effort. The process of auditing the SSMP every three years as required by Element X will be used as a systematic evaluation of the effectiveness of our O&M Program. Significant changes made to the O&M practices currently in place will be documented in the audit process and included in the updated SSMP.

Element V: Design and Performance Provisions

Design and performance provisions do not require frequent adjustment. On occasion new products, techniques, or practices are developed that warrant changes or revisions to design and performance standards. More frequently, rules, regulations, and code changes are made that need to be reflected in the City's standards. The authority to make these changes lies with the City Engineer and can be made as frequently as necessary. These changes will be documented in the SSMP which will be posted on the City's website and available at the Public Services Office.

Element VI: Spill Emergency Response Plan

Each spill from a sanitary sewer system is a unique event with its own set of circumstances. It is likely that as crews respond to events there may be refinements necessary to the adopted Spill Emergency Response Plan (SERP). The general approach for dealing with SSOs defined in the SERP is not likely to change. Adjustments will be made as necessary and will be documented, reviewed, and adopted in the SSMP audit process. The number and type of SSOs within the City

are tracked, and this log will be used to determine trends in SSO events with the intent of reducing or eliminating future SSOs.

Element VII: Sewer Pipe Blockage Control Program

The FOG control program in Morro Bay is viewed as the primary element of the Sewer Pipe Blockage Control Program. The effectiveness of site visits and other outreach efforts can be directly measured by the impact of FOG on the system. The City has had a fairly mature FOG Control program in place for a number of years so major changes are not anticipated. Refinements made to the program will be documented, reviewed and adopted in the SSMP audit process.

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

The City of Morro Bay uses the Master Plan process as the Capacity Assurance Plan (CAP). It is a goal of the City to update the Master Plan on a regular basis or when projects identified are largely completed; or when a significant change is made to the system (such as the addition of a large new development).

Element XI: Communication Program

The Utilities and/or Public Services Department sends out a biennial newsletter and posts the information on the City's website. Through these media, as well as through the televised Public Works Advisory Board and City Council Meetings, the department reaches out to the public. Collections Division staff are the first line of communication with the public on a daily basis. During their normal business practices, they provide information to the public including information on O&M procedures, lateral condition assessment and lateral repair/replacement, and information pertaining to SSO's, as well as BMPs, during site visits to commercial establishments. The effectiveness of this effort will be audited within the SSMP framework, and any necessary changes will be made during the SSMP audit process.

Success of Preventative Maintenance

The City's preventative maintenance program is designed to minimize corrective and emergency maintenance, as well as equipment failures. The City will assess the success of the preventative maintenance program by monitoring Operation and Maintenance records, asset inventories, equipment failures, and SSOs. If it is determined that the cause of any SSOs may have been prevented through preventative maintenance, job plans and schedules will be adjusted accordingly to help protect against the reoccurrence of future SSOs.

Update Program Elements

Program elements and plan procedures will be updated or modified based on the review of the monitoring and performance evaluation data through the self-audit process as described in Element 10 of this SSMP.

Identify and Illustrate Spill Trends

The City reports all SSO events to the California Integrated Water Quality System (CIWQS) per the WDR and MRP 2022-0103. The frequency, causes, volumes, locations, and other SSO details and trends are tracked and analyzed by the City. The Wastewater Collections Division keeps a historical listing of all SSO events. SSO events are investigated and a report is generated per the WDR and MRP 2022-0103, providing event details and causes of the SSO. SSO causes and actions taken to prevent similar SSO events from occurring will be included in the Element 10 of this SSMP.

Element X: Internal Audits

This section of the SSMP discusses the City's SSMP auditing program. This section is to fulfill the Internal Audits Element of the SWRCB (Element 10) SSMP requirements.

SWRCB Requirement

The Plan shall include internal audit procedures, appropriate to the size and performance of the system.

SSMP Program Audits

The City of Morro Bay will produce internal audits every three years to determine the effectiveness of the SSMP elements and programs. The program audit will include a review of relevant data and trends maintained as part of the SSMP Monitoring and Measurements Program to determine opportunities to improve compliance with the SSMP requirements and system performance. Input from sewer system operators will be considered. A prioritized list of improvements will be updated as part of the audit program. An overview of SSMP related progress between audits will be included in the program audit. The complete audit report will be electronically submitted in California Integrated Water Quality System (CIWQS). The report will be posted on the City's website and will be kept on file as an update to the City's SSMP and will be included in State of the Sewer Reports to the City Council.

As part of the audit process, the Utility Division will review the SSOs from the previous years and will provide details in the Audit on the causes of the SSOs and what actions were taken to prevent similar SSOs from occurring in the future. If any deficiencies are determined, the appropriate elements of the SSMP will be updated, as well as corresponding reference material. Staff will be informed and trained accordingly with any changes or updates to the SSMP. When major changes are made to the SSMP, the modified elements may be presented to City Council to be readopted.

Element XI: Communication Program

This section of the SSMP discusses the City of Morro Bay's communication during the development, implementation, and performance of the SSMP. This section also discusses the communication between the City of Morro Bay and systems that are satellite to the City's sanitary sewer system. This section is to fulfill the Communication Program Element of the SWRCB (Element 11) SSMP requirements.

SWRCB Requirement

The Plan must include procedures for the enrollee 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 Plan, including opportunities for public input to Plan implementation and updates.
- Owners/operators for systems that connect into the enrollee's system, including satellite systems, for:
  - System operation, maintenance, and capital improvement-related activities.

Communication Program for Development of SSMP

During the development of this SSMP, each element of the SSMP was presented to the Public Works Advisory Board (PWAB) prior to presentation to the Morro Bay City Council for approval and adoption. PWAB and City Council presentations were televised on the local public access television channel 20 and allowed for public review and comment.

The completed SSMP is posted on the City's website along with the triennial audits. This ensures public access to the adopted SSMP.

Communication Program for Implementation of SSMP

The City's Utility Division have a proactive public outreach program designed to provide information regarding best management practices to both commercial and residential customers. The outreach program utilizes utility newsletters, community outreach, the City's website, and individual source control site visits as appropriate to provide information on the SSMP and best management practices. Topics include, but are not limited to, FOG, proper disposal of unused medications, what not to flush, pet waste disposal, and any newsworthy items from the Utility Division.

Feedback on implementation and performance of the adopted SSMP elements will be recorded and taken into consideration for areas of review for the next revision of the SSMP. The current revisions to the SSMP will be adopted via a public process, ensuring continued public involvement and outreach opportunities.

Communication Program with Satellite Systems

There are several agencies that discharge to the City Wastewater Collection System that we consider to be satellite agencies. These are:

1. Morro Bay High School (San Luis Coastal Unified School District)
2. Two California State Parks (Morro Bay State Park and Morro Strand State Park)

Regular communication with these satellite agencies will continue, and concerns regarding these satellite agencies will be discussed with the agency as needed.

Appendix A

Legal Authority Element Reference Documents

Attachment A: City of Morro Bay Municipal Code Chapter 13.12
Attachment B: City of Morro Bay Standard Specifications: SEWERAGE
Attachment C: City of Morro Bay Engineering Standard Drawings: Sewer Section

Attachment A

City of Morro Bay Municipal Code Chapter 13.12

Attachment B

City of Morro Bay Standard Specifications

SEWERAGE

Attachment C

City of Morro Bay Engineering Standard Drawings
Sewer Section

Appendix B

Spill Emergency Response Plan Element Reference Documents

Attachment A: State Waste Discharge Requirements (2022-0103)
Attachment B: Revised Monitoring and Reporting Program (2013-0058)
Attachment C: Sanitary Sewer Overflow Notification Checklist & Numbers
Attachment D: SSO Field Report

Attachment A

State Waste Discharge Requirements (2022-0103)

Attachment B

Revised Monitoring and Reporting Program (2013-0058)

Attachment C

Sanitary Sewer Overflow Notification Checklist & Numbers

Attachment D
SSO Field Report

Appendix C

Sewer Pipe Blockage Control Program Element Reference Documents

Attachment A: Sample “NO GREASE/NO GRASA” Sticker
Attachment B: Sample Maintenance Log
Attachment C: Best Management Practices English/Spanish
Attachment D: Trap Inspection Report

Attachment A

Sample “No Grease/No Grasa” Sticker

Attachment B
Sample Maintenance Log

Attachment C

Best Management Practices English/Spanish

Attachment D
Trap Inspection Report

Appendix D

SSMP Modifications

Attachment A: Working list of modifications to the SSMP

Attachment A

Working list of modifications to the SSMP

SSMP Changes Log

Date	Reason for Change	Description of Change	Location in SSMP	Approved by
6/8/2009	Original SSMP	Original document creation	entirety	City Council
2011	Audit	Mandatory 2-year audit	various locations	Dylan Wade/Jim Hayes
2013	Audit	Mandatory 2-year audit	various locations	Dave Zevely/ Bruce Keogh
5/12/2014	Recertification	Incorporate new requirements from SWRCB's MRP amendments and updates to reflect changes in system assets and current O&M practices	entirety	City Council
6/21/2015	Track SSMP Changes in same document	Incorporate Change Log in body of SSMP	Appendix D	Dave Zevely
6/21/2015	Follow wording in Goal 1 of the SSMP 2016 Audit	Managing, maintaining and improving the City's collection system infrastructure	Page 10, first bullet, first sentence	Dave Zevely
2016	Audit	Mandatory 2-year audit	Various locations	Dave Zevely
2018	Audit	Mandatory 2-year audit	Various locations	Joe Mueller
2019	Recertification	Incorporate revisions to comply with requirements of the SWRCB's General Order 2006-0003-DWQ	entirety	City Council
2021	Audit	Mandatory 2-year audit	Various locations	Robert Victor
2025	Recertification	Incorporate new changes for SWRCB's General Order 2022-0103-DWQ	entirety	City Council