Montara Water and Sanitary District

Keeping Our Local Waters Clean

SEWER SYSTEM MANAGEMENT PLAN

Update Prepared August 2014

RESOLUTION 1583

Montara Water and Sanitary District is a member of SAM, the agency that cleans our Coastside community's wastewater before it enters the ocean

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MONTARA, CA 94037

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Montara Water and Sanitary District

LIST OF ACRONYMS

ADWF	Average Dry Weather Flow
ASBS	Areas of Special Biological Significance
AWWF	Average Wet Weather Flow
BACWA	Bay AREA Clean Water Agencies
BMP	Best Management Practice
Cal EMA	California Emergency Management Agency
CCTV	Closed-Circuit Television
CFR	Code of Federal Regulations
CIP	Capital Improvements Program or Plan
CIWQS	Capital Integrated Water Quality System
CMMS	Computerized Maintenance Management System
CDFW	California Department of Fish and Wildlife
EHS	Environmental Health Services
FOG	Fats, Oils and Grease
FSE	Food Service Establishment
GIS	Geographical Information System
GPM	Gallons per Minute
GSD	Granada Sanitary District
HMB	Half Moon Bay
I/I OR I&I	Inflow & Infiltration
IPS	Inter-tie Pipe System (SAM Pump Stations, Force Mains and Express Gravity Pipes)

JPA	Joint-Power Authority (i.e.: SAM is a JPA consisting of GSD, HMB, & MWSD)
LRP	Lateral Replacement Program
LRO	Legally Responsible Official
MGD	Million Gallons per Day
MRP	Monitoring and Reporting Program
MWSD	Montara Water and Sanitary District
NASSCO	National Association of Sewer System Companies
NPDES	National Pollution Discharge Elimination System
OERP	Overflow Emergency Response Plan
PACP	Pipeline Assessment and Certification Program
POTW	Public-Owned Treatment Works
RWQCB	Regional Water Quality Control Board
SAM	Sewer Authority Mid-Coastside
SIP	Sewer Improvement Project
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Over Flow
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
WWTP	Waste Water Treatment Plant

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LIST OF TERMS

Groundwater Induced Infiltration (GWI) – Infiltration attributed to groundwater entering the sewer system.

Infiltration – The seepage of groundwater into a sewer system, including service connections. Seepage frequently occurs through defective or cracked pipes, pipe joints, connections or manhole walls and joints.

Inflow – Water discharged into a sewer system from such sources as roof leaders, cellars, yard and area drains, foundation drains, through holes in manhole covers, cross connections from the storm system or street wash waters. Inflow differs from infiltration in that it is a direct discharge into the sewer rather than a leak through defects in the sewer.

Lateral or Private Lateral – The privately-owned sewer pipeline that conveys wastewater from the premises of a user to the District's sewer system. The upper lateral extends from the building to property line (or easement line). The lower lateral extends from the property or easement line to the connection to the pipe.

Monitoring and Reporting Program – The program used by the District to monitor, maintain records, report issues and complete needed public notifications.

Overflow Emergency Response Plan – This document identifies measures that are needed to respond to sanitary sewer overflows in a way that maximizes the protection of public health and the environment.

Preventive Maintenance (PM) – Regularly scheduled servicing of machinery, infrastructure or other equipment using appropriate tools, tests, and lubricants.

R-Value – The amount of rainfall that reaches the collection system via infiltration and inflow. This value is typically expressed as a percentage of total rainfall volume that reaches the collection system.

Rainfall Dependent Infiltration and Inflow – Infiltration and Inflow that is attributed directly to rainfall R-Value.

Regional Water Quality Control Board – San Francisco Bay Area Regional Water Quality Control Board, also known as the Regional Board or Region 2.

Rehabilitation and Replacement Plan (also referred to as a Capital Improvement Plan) – Identifies and prioritizes system deficiencies and implements short-term and long-term rehabilitation actions to address each deficiency.

San Francisco Bay Regional Water Quality Control Board – Also known as Region 2 or RWQCB. This regulatory agency preserves, enhances and restores the quality of California's water resources, and ensures their proper allocation and efficient use for the benefit of present and future generations. Website: http://www.waterboards.ca.gov/sanfranciscobay

Sanitary Sewer Overflow (SSO) – Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system, including overflows or releases that reach or do not reach waters of the United States, and backups into private property caused by conditions within the publicly owned portion of the sewer system.

Sanitary Sewer System – Any system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to the wastewater treatment plant.

Satellite Collection System – The portion, if any, of a sanitary sewer system that is owned or operated by a different public agency or user.

Sewer System Management Plan – A series of written programs that address how a collection system owner/operator conducts daily business. Each SSMP is unique for an individual discharger. The plan includes provisions to provide proper and efficient management, operation, and maintenance of sanitary sewer systems, while taking into consideration risk management and cost benefit.

State Water Resources Control Board – Also called the State Board. This agency developed and passed the Statewide Waste Discharge Requirements for collection systems and maintains the SSO reporting web site.

System Evaluation and Capacity Assurance Plan – A required component of an agency's SSMP that provides hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event.

Statewide Waste Discharge Requirements – The Statewide General Waste Discharge Requirements for Sanitary Sewer Systems was adopted by the SWCRB in 2006 to provide a structure and guidance for SSMP development. Also known as Order No. 2006-0003-DWQ.

Wastewater Collection System – See Sanitary Sewer System.

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INTRODUCTION

Executive Summary

This Sewer System Management Plan (SSMP) has been prepared in compliance with requirements of the San Francisco Bay Regional Water Quality Control Board (RWQCB) pursuant to Section 13267 of the California Water Code, and the State Water Resources Control Board (SWRCB) Order No. 2006-0003-DWQ.

Background

The RWQCB expressed in their to the District dated July 7, 2005 orders that the District prepare an SSMP following the guidelines in the SSMP Development Guide prepared by the RWQCB in collaboration with the Bay Area Clean Water Agencies (BACWA). The District must also abide by RWQCB sanitary sewer overflow (SSO) electronic reporting requirements issued in November 2004.

More recently, the State Water Resources Control Board (SWRCB) acted at its May 2, 2006 meeting to require all public wastewater collection system agencies in California with greater than one mile of sewers to be regulated under General Waste Discharge Requirements (WDR). The WDR's and the Monitoring and Reporting Program (MRP) requirements were revised in Order 2008-0002-EXEC and again in 2013 by Order No. WQ 2013-0058-EXEC. The SWRCB action, which applies to the Montara Sanitary District, located in the western sector of the SWRCB Region 2 (See Figure 1), also directs the development and biannual audits of an SSMP, Overflow Emergency Response Plan (OERP) and the reporting of SSOs via an electronic reporting system. The SWRCB SSMP requirements are similar to those disseminated by the RWQCB, but differ in organization and some details.

The District's SSMP has been prepared with the intent of meeting the requirements of both the RWQCB and the Statewide WDR. The organization of this document is consistent with the RWQCB guidelines, but the contents address both the RWQCB and SWRCB requirements. The SSMP includes eleven elements, as follows:

I. Goals
II. Organization
III. Overflow Emergency Response Plan
IV. Fats, Oil and Grease Control Program
V. Legal Authority
VI. Measures and Activities
VII. Design and Construction Standards
VIII. Capacity management

IX. Monitoring, Measurement, and Program Modifications
X. SSMP Audits
XI. Communication Plan

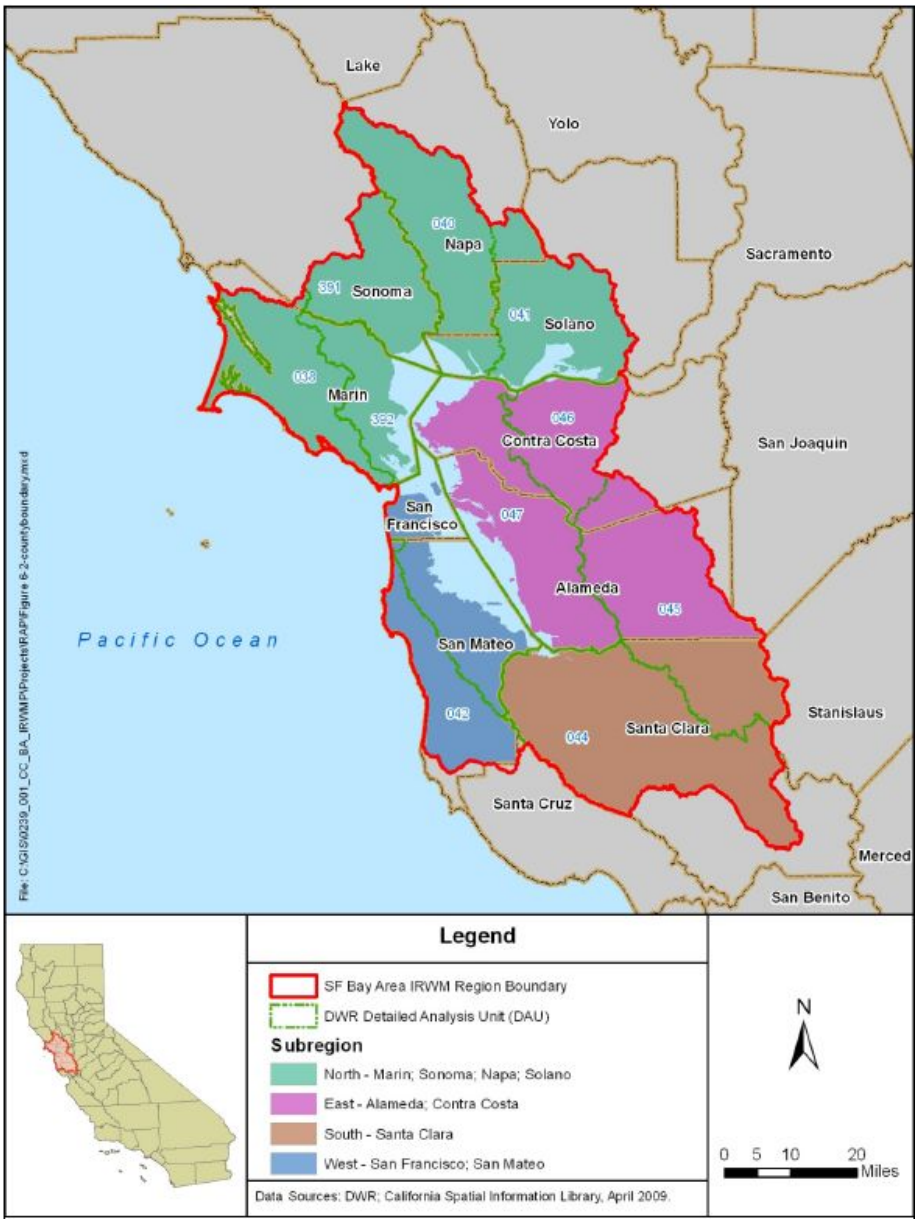

Figure 1: State Water Quality Control Board Region 2, San Francisco Bay Region

System Overview

The Montara Water and Sanitary District (MWSD) was formed in 1958 to provide sewage collection and treatment services for the unincorporated areas of Montara and Moss Beach. MWSD serves an estimated 2010 population of 6,000 in about a 7-square mile area and provides sewerage collections services to approx. 2400 sewer connections, privates homes and businesses. MWSD consists of approximately **125,000 LF (about 24 miles)** of gravity sewage collection system, **13 major pump stations 28 District maintained individual house pumps** and **28,600 LF (about 5.5 miles)** of force main pipes. MWSD once operated its own wastewater treatment plant at the District offices of 8888 Cabrillo Highway, and discharged through a shallow water discharge pipe in the heart of what is now known as the Fitzgerald Marine Reserve.

The MWSD sewer service area is located 30 miles south of San Francisco, 40 miles north of San Jose, and lies on the most western edge of the County of San Mateo in the western sector or SWQCB Region 2 (See Figure 1). The service area is roughly 3 square miles inside the urban-rural boundary (urban developed areas) and 4 square miles of rural (partially developed) areas of San Mateo County.

Today, MWSD is one of three member agencies of Sewer Authority Mid-Coastside (SAM), the agency that collects and cleans our Coastside community's wastewater before it enters the ocean. SAM is a joint-power authority (JPA) that was formed in 1976 by the City of Half Moon Bay (City of HMB or HMB), Granada Sanitary District (GSD), and Montara Water and Sanitary District (MWSD, Formerly known as Montara Sanitary District, MSD) and provides wastewater treatment services to three coastal communities in the Mid-Coast region: the City of HMB, Granada, and Montara. The JPA Agreement creating SAM is included as Attachment 1. MWSD and the other member agencies of SAM work diligently to protect ocean water quality by preventing sewer spills and recognize the importance of working toward MWSDs goal of *keeping our local waters clean*.

The SAM regional system includes three main pumping stations, an 8-mile transmission Intertie Pipeline System (IPS) line, the SAM wastewater treatment plant (WWTP), and an ocean outfall, where final effluent is dispersed to the Pacific Ocean and a part of the Monterey Bay National Marine Sanctuary. Each of the member agencies owns and operates its individual collection systems including local pump/lift stations. There are no individual connections to the SAM system and SAM provides contract services to its member agencies to operate and maintain the collection systems. The SAM conveyance system has 1.9 miles of express gravity pipeline and 5.8 miles of force main.

The SAM WWTP and collection system is permitted for 4.0 MGD average dry weather flow (ADWF), and currently the ADWF is 1.65 MGD. Treatment processes at the SAM WWTP include primary sedimentation, activated sludge, secondary clarification, disinfection and anaerobic sludge digestion.

All of the Montara sewage is pumped through the IPS by SAM's northern pump station, often referred to as the Montara Pump Station because it is situated at the site of the old Montara treatment plant. The MWSD flows at the pump stations range from an ADWF of approximately 0.18 million gallons per day (mgd) to an AWWF of approximately 0.93mgd.

MWSD provides approximately 23 percent share of the sewage flow to SAM and therefor participates a similar amount in the operating and capital costs of the SAM Treatment Plant and IPS. In addition MWSD contracts SAM staff to clean and maintain the Districts collection system and Pump Stations. The Maintenance Agreement between SAM and MWSD for the cleaning and maintenance of the collection system and pump stations is Attachment 2.

MSWD is continuously upgrading their sanitary sewer system. Ongoing review of the system facilitates annual updates of the seven year Capital Improvement Plan (CIP). Active annual maintenance of all sewer lines, frequent maintenance of HOTSPOTS and weekly and daily maintenance and inspection of Pump Stations helps to *keep our locals water clean*.

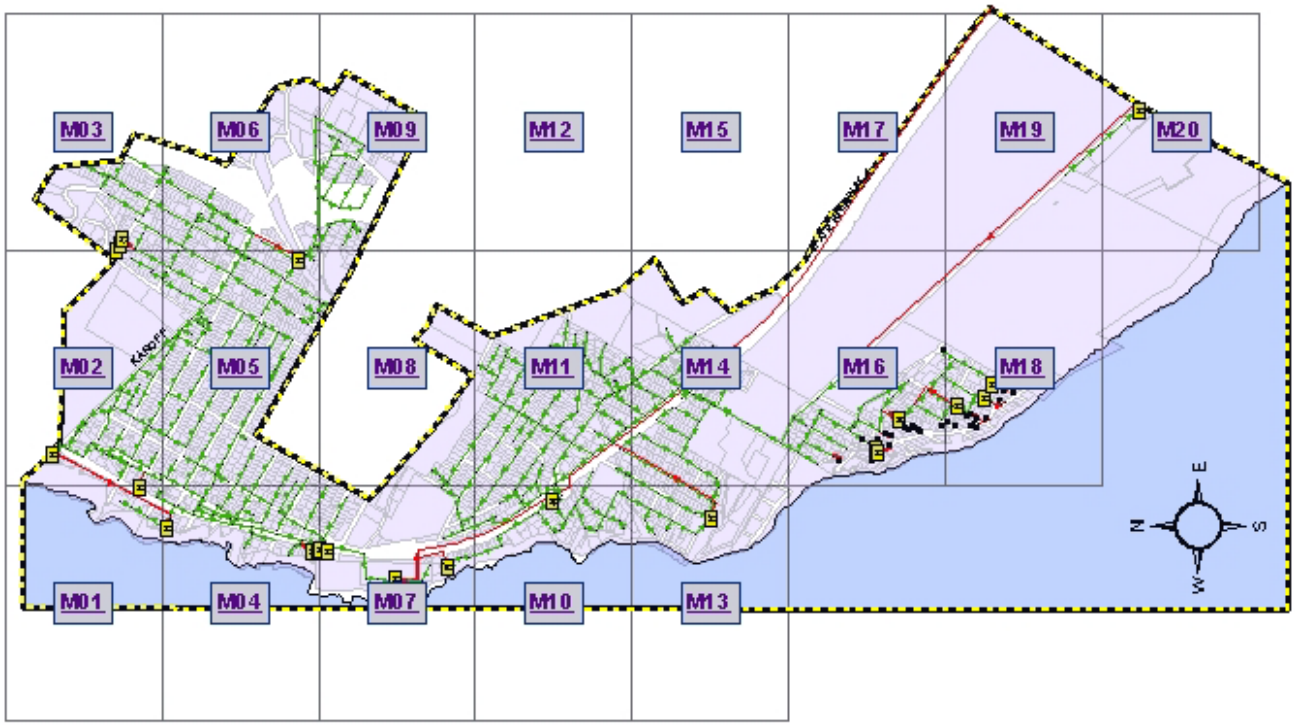

Figure 2: Thumbnail Map of MWSD Sanitary Sewer System Facility Map Book Grid

ELEMENT I: GOALS

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

Regulatory Requirements Summary of Goals Element
RWQCB REQUIREMENTS: 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.
SWRCB REQUIREMENTS: The collection system agency must develop goals to properly manage, operate, and maintain all parts of its wastewater collection system in order to reduce and prevent SSOs, as well as to mitigate any SSOs that occur.

Goals Discussion

The District seeks to provide high quality and cost-effective wastewater collection for its constituents by meeting these goals:

- Be available and responsive to the needs of the public and work cooperatively with local, state, and federal agencies to reduce, mitigate impacts of, and properly report SSOs.
- Properly manage, operate and maintain the District's facilities to minimize SSOs.
- Identify, prioritize, and continuously renew and replace sewer system facilities to maintain reliability.
- Provide capacity for peak wastewater flows
- Implement regular, proactive maintenance of the system to remove roots, debris, and fats, oils and grease in areas prone to blockages that may cause sewer backups or SSOs
- Uphold the District's standards and specifications on newly constructed public and private sewers.

ELEMENT II: ORGANIZATION

The intent of this section of the SSMP is to identify District Staff who are responsible for implementing this SSMP, responding to SSO events, and meeting the SSO reporting requirements. This section also includes the designation of the Authorized Representative to meet SWRCB requirements for completing and certifying spill reports. This section fulfills the Organization requirement of both the RWQCB (Element 2) and the SWRCB (Element 2) SSMP requirements.

Regulatory Requirements Summary for Organization Element
RWQCB REQUIREMENTS: 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.
SWRCB REQUIREMENTS: The collection system agency's SSMP must identify: • The name of the responsible or authorized representative; • The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. Include lines of authority as shown in an organization chart or similar document with a narrative explanation; and • The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES).

District Organization Discussion

Figure 3, below, is a graphic representation of MWSD staff organization. Similarly each member of the JPA has their own staff organization. The City of Half Moon Bay (City of HMB) and Granada Sanitary District (GSD) formed the Sewer Authority Mid-Coastside (SAM) in a Joint Exercise of Powers Agreement (JPA) dated February 3, 1976. MWSD and GSD are empowered under the sanitary district provisions of the California Health and Safety Code, and the City of HMB is empowered under the California Government Code. SAM is an independent public agency and is not financially responsible for any other governmental entity nor is it a component unit of another governmental entity. SAM is governed by a six-member Board of Directors, which is comprised of two representatives of each member agency, appointed by their respective agencies. Members of the Board elect a chair, customarily for a one-year term of office. Historically, the tenure of directors has generally been long, thereby enabling SAM to maintain continuity and stability in policies and service. The Board of Directors appoints the SAM Manager, who is responsible for overseeing the general administration of the SAM system. Including the SAM Manager, there are currently a total of 12 employees budgeted for SAM Operations, Source Control, Collections and Administration. Figure 4, below, is a graphic representation of SAM staff organization.

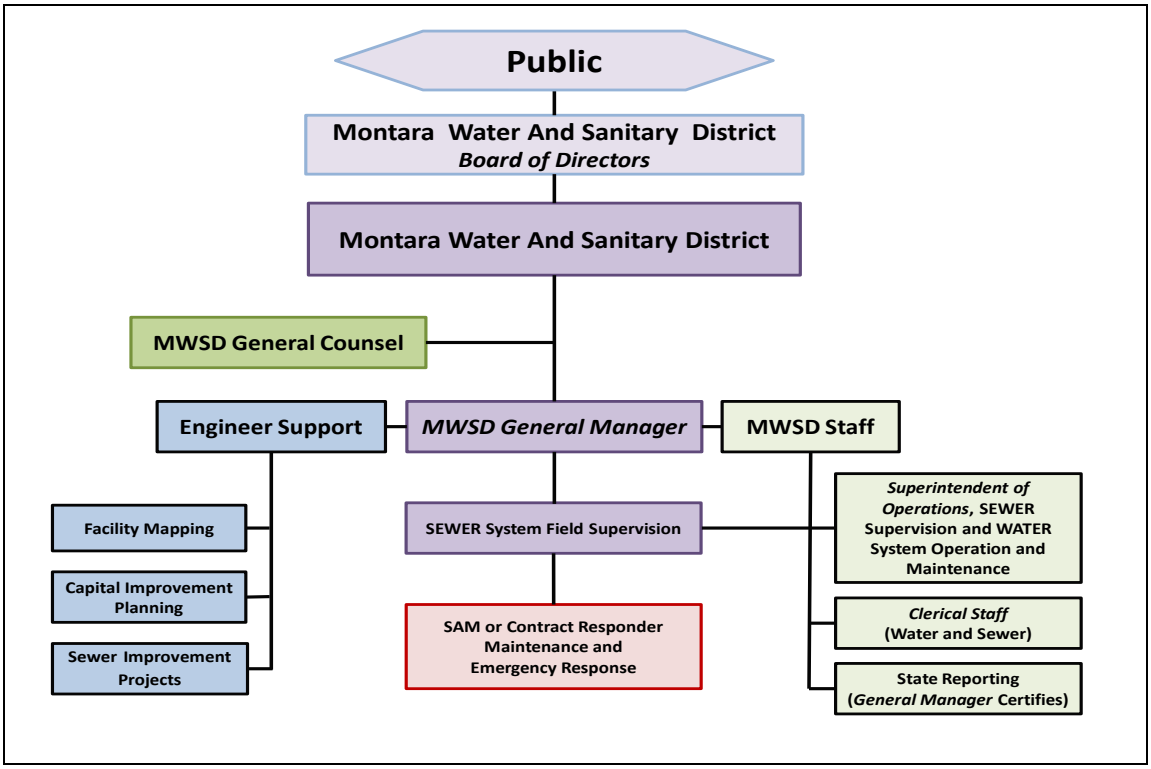

Figure 3: MWSD Organizational Chart

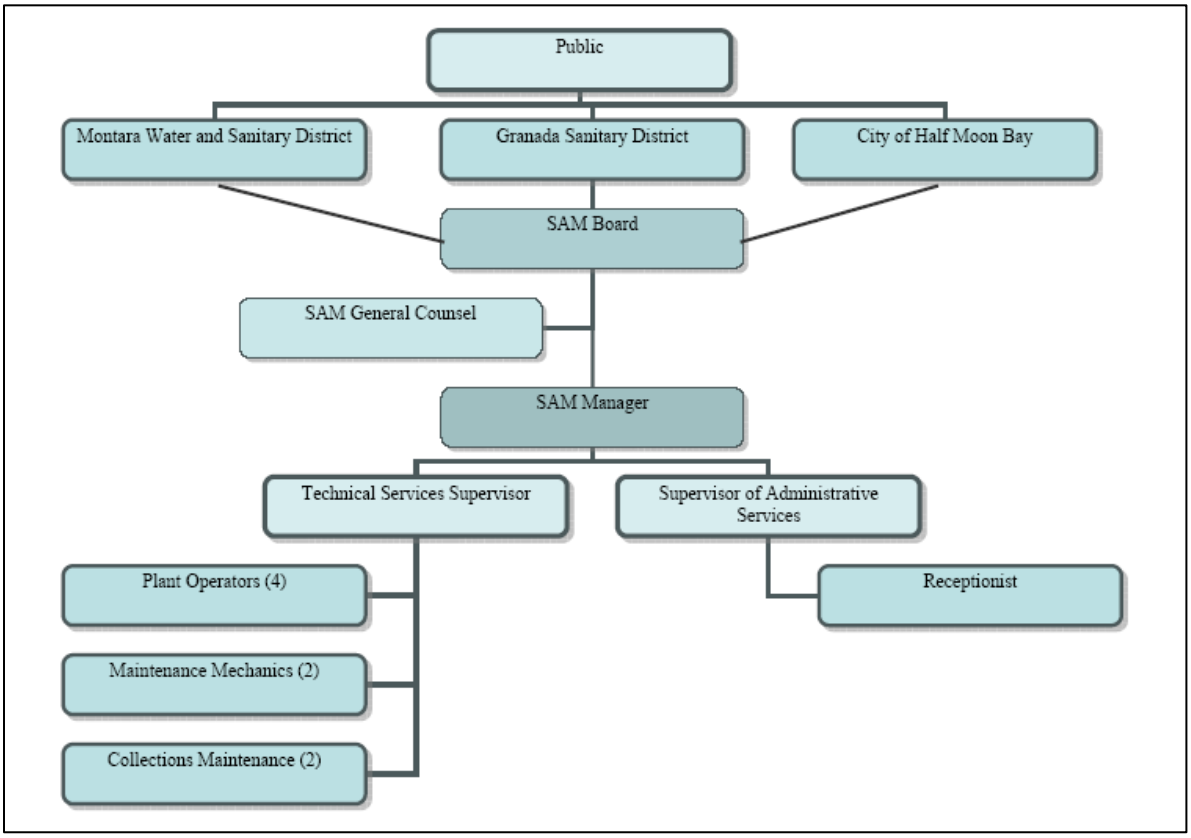

Figure 4: SAM Organizational Chart, MWSD Participation in SAM management, JPA.

Description of General Responsibilities

The MSWD Manager is the representative responsible for all applications, reports, and information associated with this SSMP. Currently, the MWSD Manager is Clemens Heldmaier and the SAM Manager is Steve Leonard. Additional representatives responsible for overseeing the SSMP are the Director of Public Works, City of HMB; the General Manager, GSD; and the General Manager, MWSD. The names, roles, and contact information for all of the parties responsible for implementing different measures of this SSMP can be found in Table 1.

Table 1: SSMP Responsible Parties

Name	Title	Responsibility	Contact Information
Clemens Heldmaier	MWSD District Manager	Receives alerts regarding SSOs from residents within MWSD service area; reports SSOs to SAM Receptionist, SAM Manager, or SAM Technical Services Supervisor (Staff)	(650) 728-3545 mwsd@coastside.net
Julian Martinez	MWSD District Superintendant of Operations	Head Sewer and Water System field management, first responder coordination for District Staff, Reports SSOs to SAM Staff	(650) 728-3545 Cell: (650)766-6986 julian@coastside.net
Judy Gromm	MWSD Clerk	District Receptionist, Permit Processing, Reports SSOs to SAM Staff	(650) 728-3545 clerk.mwsd@coastside.net
Rob Hopkins	SAM Manager	Receives reports from HMB, GSD, and MWSD ans Staff regarding SSOs in their respective service areas; receives alerts from the public regarding SSOs; notifies field crew to address the spill	(650) 726-0124
Anthony Pullin (Tim Castello, alternate)	SAM Technical Services Supervisor	Receives reports from HMB, GSD, and MWSD regarding SSOs in their respective service areas; receives alerts from the public regarding SSOs; notifies field crew to address the spill	(650) 726-0124 Cell: (650) 863-2664 tony@samcleanswater.org (timc@samcleanswater.org)
Gabriel Aguilar	Field Technician	Clean-up Response and Reporting	(650) 726-0124 Cell (650) 303-7935 gaguilar@samcleanswater.org
Susan Turbay	SAM Receptionist	Receives reports from HMB, GSD, and MWSD regarding SSOs in their respective service areas; receives alerts from the public regarding SSOs; notifies field crew to address the spill	(650) 726-0124 susan@samcleanswater.org

Magda Gonzalez	HMB City Manager	Receives alerts regarding SSOs from City of HMB residents; reports SSOs to SAM Receptionist, SAM Manager, or SAM Technical Services Supervisor	(650) 726-8272 mgonzalez@hmbcity.com
Larry Carahan	HMB Public Works Superintendent	Receives alerts regarding SSOs from City of HMB residents; reports SSOs to SAM Receptionist, SAM Manager, or SAM Technical Services Supervisor	(650) 726-7177 (650) 726-8260 (Main) cvoos@hmbcity.com
Chuck Duffy	GSD District Manager	Receives alerts regarding SSOs from residents within GSD service area; reports SSOs to SAM Receptionist, SAM Manager, or SAM Technical Services Supervisor	(650) 726-7093 gsd@granada.ca.gov

District Manager

Under administrative direction from the Board of Directors, the District Manager plans and manages the affairs of the District and directs the staff in all functions and operations. The District Manager represents Board policy and programs with employees, community organization, and the general public. The District Manager reviews budget requests and makes recommendations to the Board on final expenditure levels, oversees all labor/management activities, and performs all related work as required.

Administrative Assistant (Clerk)

Under direction and supervision of the District Manager, the Administrative Assistant (or Clerk) performs secretarial, receptionist and administrative tasks, some of which are complex and confidential in nature. The Administrative Assistant provides technical assistance to the general public and public agencies regarding implementing District procedures for development review and permit issuance.

Superintendent of Operations

Working cooperatively with the District Manager under direction from the Board, the Superintendant of Operations oversees sewer cleaning and repairs the activities with planed by the General Manager and performed by the SAM Maintenance staff for sewer facilities. The SAM Staff maintains, cleans, and performs minor repairs, and contracts repairs of the District's wastewater collection system, pump stations, and related appurtenances.

Field Technician

Under general supervision of the Superintendent and Assistant Superintendent, the Field Supervisor directs, leads, and personally performs a variety of tasks related to the maintenance, cleaning, and repair of the District's water system. MWSD does not maintain any Sewer Technicians at this time. See Contract Responder.

Maintenance Worker

Under supervision of the Field Supervisor, the Maintenance Worker performs a variety of tasks related to the maintenance, cleaning, and repair of the District's water system. MWSD does not maintain any Sewer maintanence workers at this time. See Contract Responder.

Authorized Representative

The District Manager is the District's authorized representative registered with the San Francisco Bay Regional Water Quality Control Board SSO e-Reporting Program (on-line) and the California Integrated Water Quality System (CIWQS) to certify SSO reports. The SAM Technical Services Supervisor, the SAM Head Technician are and the MWSD General manager authorized to prepare and submit electronic reports. See Attachment 7.

Responsibility for SSMP Implementation

The District Manager is responsible for overseeing the overall implementation of the SSMP. He is also responsible for implementing the separate SSMP elements, with the assistance of the Superintendent on elements 3 and 9. Table 2 summarizes the responsibilities for SSMP implementation by element.

Contract Responder

SAM is the initial contract responder. They respond to SSOs during non-business hours and during business hours. If response requirements exceed SAM and District staff capabilities, the OERP, Attachement 3, (or the Yellow Pages) list additional responders specializing in sewer emergencies.

Sewerage Agency Mid-Coastside

Provides wastewater collection, treatment, reclamation and disposal for JPA members, provides backup SSO Emergency response staff and equipment as a first responder for sewer emergencies, cleaning of the Sewer collection systems and maintenance of the Pump Stations through a Maintenance Agreement (see Attachment 2 – see also SAM SSMP for details).

Table 2: Responsibility for SSMP Implementation by Element

Element	Responsible Party
1- Goals	District Manager
2- Organization	District Manager
3- Overflow Emergency Response Plan	District Manager, Superintendant of Operations, and SAM Technical Services Representative
4- FOG Control	District Manager and SAM Technical Services
5- Legal Authority	District Manager
6- Measures and Activities	District Manager
7- Design and Construction Standards	District Manager
8- Capacity Management	District Manager
9- Monitoring, Measurement and Program Modifications	District Manager, Superintendant of Operations, and SAM Technical Services Representative
10 – SSMP Audits	District Manager
11 – Communication Plan	District Manager

Responsibility for Element 1 – Goals

The District Manager is responsible for leading staff in the implementation of the District's goals.

Responsibility for Element 2 – Organization

The District Manager is responsible for updating the organizational structure, SSMP implementation assignments, and SSO responding and reporting chains of communication, as needed.

Responsibility for Element 3 – Overflow Emergency Response Plan (OERP)

The District Manager and Field Maintenance and Operations and SAM Technical Services Representative are responsible for implementation of the Overflow Emergency Response Plan, including revisions to the plan and annual training for maintenance crew members.

Responsibility for Element 4 – Fats, Oils, and Grease Controls

The District Manager and SAM Technical Services Representative are responsible for identifying grease hot spots and maintaining an effective cleaning program for grease problem sewers The Senior Engineer is responsible for inspecting grease interceptor traps that have been installed at non-residential locations at the District Manager's direction, and for enforcing discharge regulations, as needed.

Responsibility for Element 5 – Legal Authority

The District Manager is responsible for upholding the District's Sanitary Code and drafting new ordinances, as needed.

Responsibility for Element 6 – Measures and Activities

The District Manager is responsible for 1) Resources and Budget, and 2) Outreach to Plumbers and Building Contractors. The Director of Field Maintenance and Operations is responsible for 1) Prioritized Preventive Maintenance, 2) Contingency Equipment and Replacement Inventories, 3) Training for Maintenance Workers, 4) the Collection System Map, and 5) Scheduled Inspections and Condition Assessment.

Responsibility for Element 7 – Design and Construction Standards

The District Manager is responsible for reviewing design and construction documents to ensure that all construction projects meet the District's standards. The District Manager is also responsible for updating standards for installation, rehabilitation and repair, as needed, inspecting all construction projects to ensure the District's construction standards have been followed.

Responsibility for Element 8 – Capacity Management

The District Manager is responsible for District's collection system and for preparation and implementation of the District's long-term System Evaluation and Capacity Assurance Plan, as well as the development and implementation of the Capital Improvement Plan including updating budgets and schedules.

Responsibility for Element 9 – Monitoring, Measurement and Program Modifications

The District Manager and Director of Field Maintenance and Operations and SAM Technical Services Representative are responsible for monitoring implementation and assessing success of the overall SSMP program. They are also responsible for identifying trends in SSO occurrences and providing recommendations to the District Manager.

Responsibility for Element 10 – SSMP Audits

The District Manager is responsible for overseeing annual SSMP Audits

Responsibility for Element 11 – Communication Plan

The District Manager is responsible for communicating with the public and nearby agencies the status of the District's SSMP.

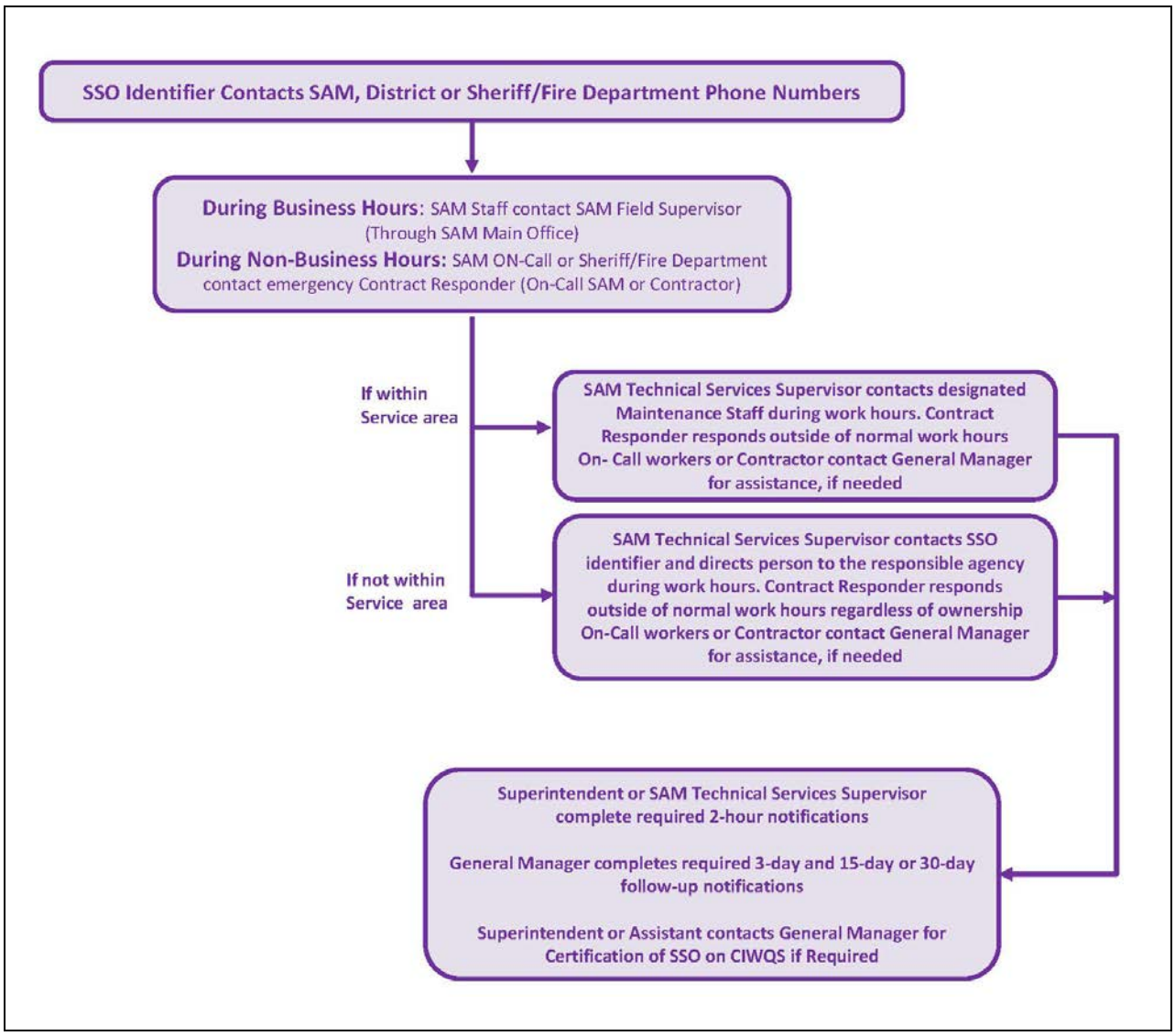

Figure 5: Chain of Communication for Responding to SSO

Chain of Communication for Responding to SSOs

The communication chain for responding to an SSO is shown above in Figure 5. Detailed information on the District's overflow response procedure can be found in Element 3 Overflow Emergency Response Plan Hand Book and in the District's Sewer Overflow Communication charts in Attachment 3.

Table 3: SSO Reporting Responsibilities

Personnel	Reporting Responsibilities
On-call Worker ⇩	• Faxes San Mateo Co. DHS SSO form (>100 gal or in private res.) • Completes SD#2 SSO report form **And for Spills >1000 gal or enters waterway/causes fish kill/ISDHH*:** • Calls OES to notify • Calls Dept. of Fish and Game • Faxes RWQCB *ISDHH = imminent and substantial danger to human health **Notifies Superintendent for all spills (Below)**
Superintendent	• Electronically submits RWQCB Long Form (>1000 gal or causes fish kill or ISDHH) • Electronically submits RWQCB Short Form (all other SSOs >100 gal)

Chain of Communication for Reporting SSOs

The chain of responsibilities for reporting SSOs to the various regulatory agencies is shown above in Table 3. Detailed information on SSO reporting can be found in Element 3 describing Overflow Emergency Response Plan and in the MWSD's detailed Overflow Emergency Response Plan Hand Book in Attachment 3.

ELEMENT III: OVERFLOW EMERGENCY RESPONSE PLAN

This section of the SSMP provides a summary of the District's overflow emergency response plan. The complete plan is attached in Appendix C. This section fulfills the Overflow Emergency Response Plan (OERP) requirement of both the RWQCB (Element 3) and the SWRCB (Element 6) SSMP requirements. See Attachment 3 for a the detailed Overflow Emergency Response Plan (OERP) Handbook and overall Sanitary Sewer Overflow Communication Org Charts are in Attachment 4. Additional information about the pump station drainage areas and each Pump Station's Site Specific Emergency Response Plan are available Attachments 5 and 6.

Regulatory Requirements Summary for OERP Element

RWQCB REQUIREMENTS:

The District must develop an overflow emergency response plan (OERP) that provides procedures for SSO notification, response, reporting, and impact mitigation. The response plan should be developed as a stand-alone document and summarized in the SSMP.

SWRCB REQUIREMENTS:

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

- Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;
- A program to ensure appropriate response to all overflows;
- Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, regional water boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Master Reclamation Permit (MR Permit). All SSOs shall be reported in accordance with this MR Permit, the California Water Code, other State Law, and other applicable Regional Water Board (WDR) or National Pollution Discharge Elimination System (NPDES) permit requirements. The SSMP should identify the officials who will receive immediate notification;
- Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Overflow Emergency Response Plan and are appropriately trained;
- Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and

- A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to waters of the United States and minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

OERP Discussion

The complete OERP is summarized in the sections below and seen in detail in Attachments 3, 4 and 5 and 6. The initial OERP is titled Sewer Overflow Response Manual. Subsequent updates to the plan will be titled OERP to align with the regulations.

SSO Notification

Section 2 of the OERP covers Spill Detection including the procedure for getting the first responder to the site of a potential SSO. The District receives phone calls at one main telephone number that is staffed 24 hours a day by either District Staff or an Answering Service. The District publishes the main telephone number in the local telephone books and on the District website (http://mwsd.montara.org/). Other local agencies, including the police and fire departments, have instructions to call the main telephone number if they receive a report of a problem with the sewer system. When District staff members notice an SSO during the course of their regular activities, they are instructed to call in and notify their supervisor and to begin responding to the situation, if applicable.

Figure 6 and Figure 7 are flowcharts show the District's notification processes during business hours and non-business hours. These flowcharts are also included in the OERP. These documents are intended to coincide with the SAM SSMP OERP when they are the primary responder and maintenance contractor for MWSD. Additional information in the form of charts is available in Attachments 3 and 4.

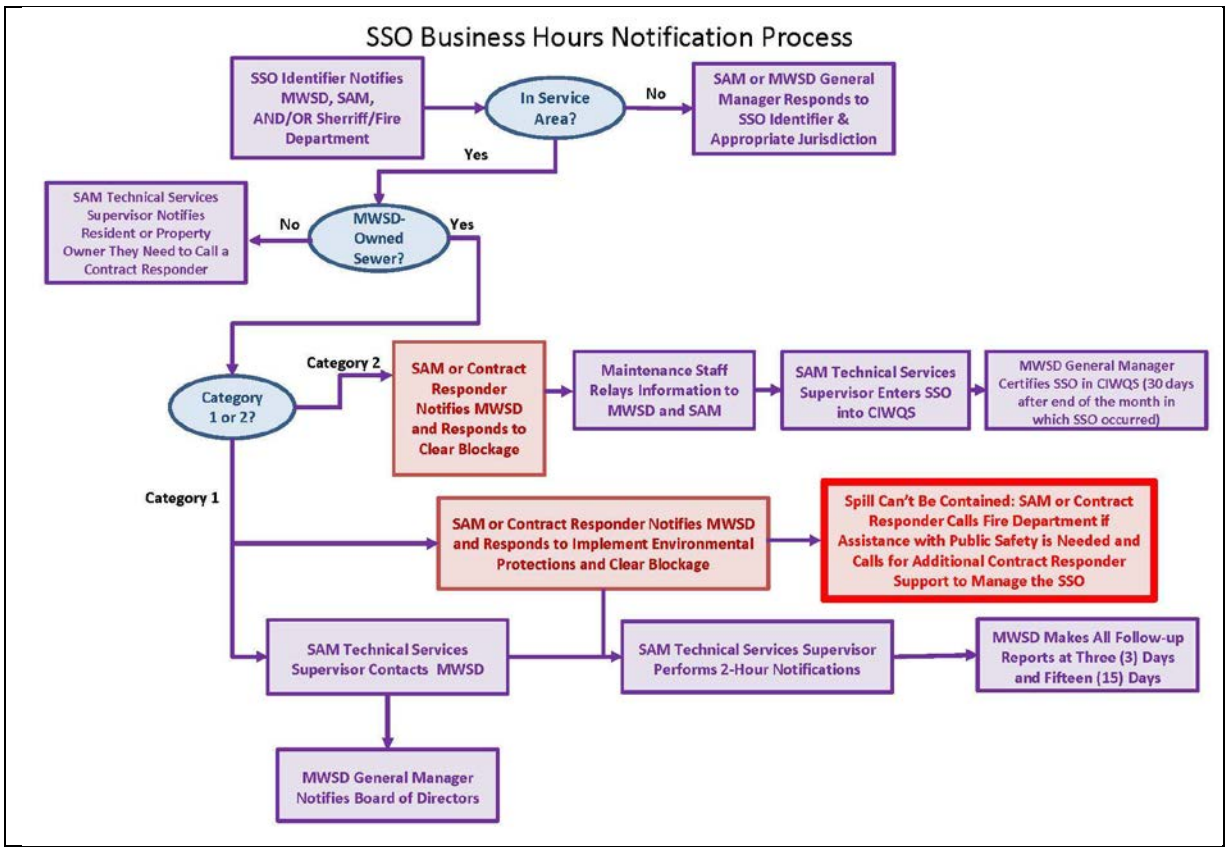

Figure 6: SSO Notification Process During Business Hours

Normal Working Hours

During normal working hours, which include Monday through Thursday and alternating Fridays from 8:00 a.m. to 12:00 p.m. and 1:00 p.m. to 5:00 p.m., except holidays, the City staff member that receives the call will dispatch the call directly to the Streets and Sewers Supervisor.

Alternatively, the Sheriff Department forwards the information to the SAM Supervisor who then contacts the maintenance staff. If contractor support is required, the Streets and Sewers Supervisor contacts the contract responder.

If the SSO is Category 1 (> 1000 gallons, enters waterway or could significantly impact public health and safety) the SAM Technical Services Supervisor contacts the MWSD General Manager, who notifies the MWSD Board of Directors. The SAM Technical Services Supervisor also contacts the Operations Superintendent who makes the initial (2-hour) notifications, and

maintenance staff for field response. The MWSD General Manager makes follow-up (maximum 3-day and 15-day) reports.

For Category 2 SSOs, the Contract Responder contacts maintenance staff for field response. SSO information is provided to the SAM Staff who enters the information in the California Integrated Water Quality System (CIWQS) database. The MWSD General Manager makes the follow-up report no later than 30 days past the last day of the month in which the SSO occurred.

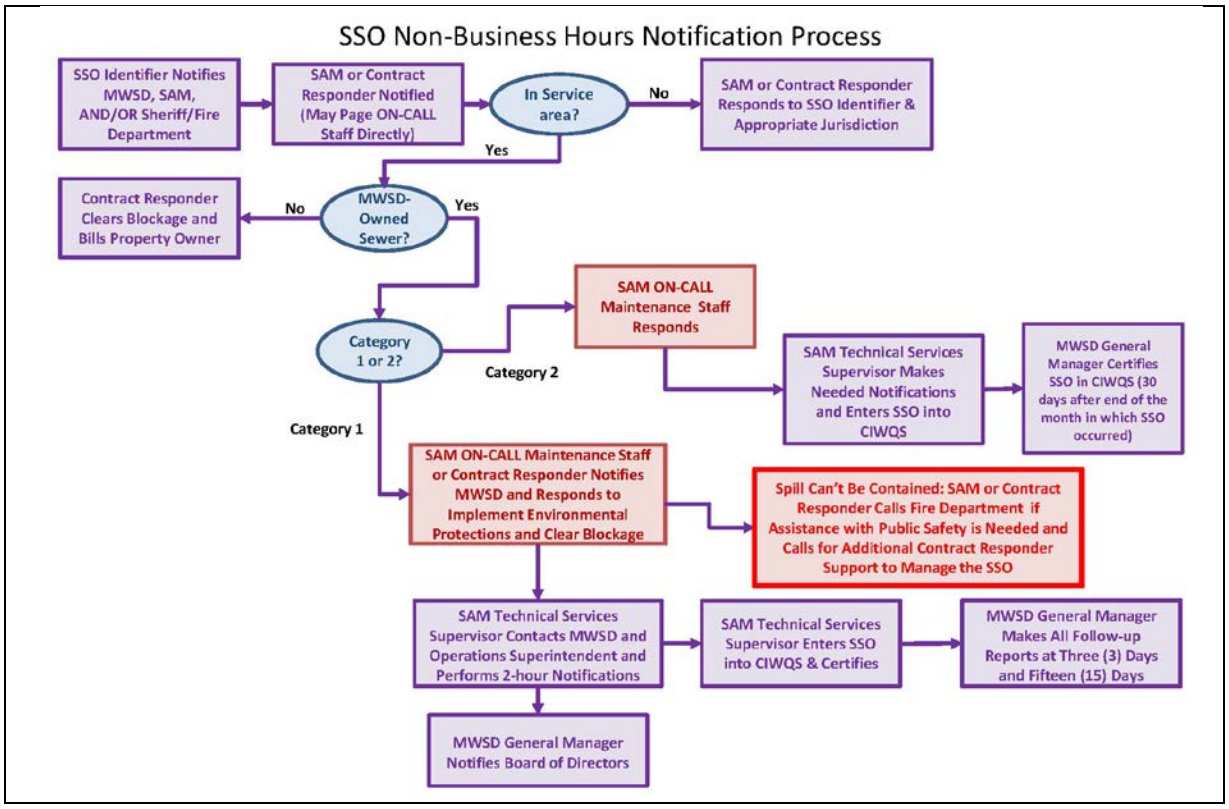

Figure 7: SSO Notification Process During Non-Business Hours

Outside of Normal Working Hours

After normal working hours, all calls that are received through the MWSD or SAM's main number are routed to SAM dispatch. The SAM dispatcher (or the Sherif Department, if contacted directly) takes essential information and then notifies the Contract Responder (SAM). The contract responder responds to the incident. For Category 1 SSOs, the Contract Responder staff notifies the Supervisor, who makes the initial (2-hour) notification. The Contract Responder also contacts Coast-Side Fire Department if assistance is needed to protect public safety, and the MWSD General Manager. For Category 2 SSOs, the Contract Responder provides documentation to the

SAM Field Technician who enters the SSO in CIWQS. The Technical Superintendant (SAM) and the MWSD General Manager makes all follow-up reports in the timelines described above.

SSO Response

Section 3 of the OERP covers Spill Response including response priorities, safety, and initial containment measures. During regular business hours, District office staff initiates one or more District Maintenance Workers to respond to a potential SSO notification. The District goal for responding to an SSO during business hours is 45-minutes from receipt of call (30-minutes or less where practical) to arrival at the scene of the problem. During non-business hours, the Answering Service representative pages and calls the on-call District Maintenance Worker to respond to a potential SSO notification. The District goal for responding to an SSO during non-business hours is 60-minutes (30-minutes or less when practical), including the on-call Maintenance Worker arriving at the SAM office to retrieve response equipment and then arrive at the scene of the problem. The Maintenance Worker(s) become the SSO First Responder and are responsible for mitigation, documentation, most reporting, and follow-up.

OVERFLOW EMERGENCY RESPONSE PLAN

The Contract Responder will take necessary measures to clear the cause of the overflow and document the incident, even if the overflow is on private property. For blockages on private property, the Contract Responder will clear the blockage and invoice the property owner. SAM and the District Superintendant of Operations maintenance workers later return to the site to verify the contractor's initial response and videotape the sewer main, if appropriate.

Notification from Pump Station SCADA Alarms

The District's pump stations are monitored using a Supervisor Control and Data Acquisition (SCADA) system. Alarm conditions and other pump station issues are monitored and response is provided SAM staff. SAM Staff responds as described above and reports these issues to the MWSD General Manager. Signal is transmitted from most stations by either radio and dialer. A few of the smaller stations only have the dialer communication at this time.

In a non-emergency response situation, a Work Order to address the issue is provided by SAM.

Staff and Contractor Training

All District and SAM personnel and contractor employees who may have a role in responding to, reporting and/or mitigating a sewer system overflow receive training on the contents of the OERP. All new employees receive training before they are placed in a position where they may

have to respond. Current employees receive annual refresher training on this plan and the procedures to be followed.

Records are kept of all training that is provided in support of this plan. The records for all scheduled training courses and for each overflow emergency response training event include date, time, place, content, name of trainer(s) and names of attendees.

Response Program

Currently, the following positions are responsible for responding to SSOs:

The First Responder's priorities are as follows:

- To follow safe work practices, including those related to traffic control, confined space, and employee and public safety
- To respond promptly with the appropriate equipment
- To evaluate the cause of spill and determine responsibility
- To restore the flow as soon as possible
- To contain the spill whenever feasible
- To minimize public access to and/or contact with the spilled sewage

Initial Response

The First Responder should report to the location within 60 minutes (30 minutes when practical) of the initial SSO report with the objective of minimizing and/or eliminating an overflow. The appropriate response measure will vary based on the circumstances and nature of the SSO and the information provided by the caller. Actions related to external and internal SSOs are summarized below.

The SAM staff uses SWRCB compliant SSO reporting forms to internally document the contact and response for each SSO that occurs. This form, labeled the SSO Field Report Form, and is submitted to the District Manager.

Available Equipment

The SAM Staff has a variety of equipment available for clearing blockages and impact mitigation and cleanup activities, including the following:

- Combination vactor/hydrojet truck
- Mainline video camera
- Spill Containment
- Spare Pipe and Repair Clamps
- Emergency Response truck or trailer (contains pumps, hose, flood lights, general tool box, absorbent materials and containment berms, cones and signage, generator and an air compressor)

In addition, the third party contractors have additional equipment readily available to maintains an emergency response trailer and an inventory of spare parts. Equipment lists are included as an appendix to the OERP. SAM is inprocess to purchase a new larger vactor/flusher with more capabilities. On call SAM and/or MWSD can obtain support from additional Contract Responders for:

- Truck-mounted rodder
- Hand rodder
- Lateral video camera
- Excavation Equipment

External SSO

Upon arrival at the site, the First Responder should complete the following:

- Note arrival time at spill site, and include the time in the SSO Field Report Form that is included in the OERP. Record basic incident information on site, and complete the form after finishing the response.
- Verify the existence of the SSO

- Field verify the address and nearest cross street, and confirm that the SSO is part of the sewer conveyance system

- Conduct visual monitoring to determine immediate actions, starting with documentation of SSO volume using the methods included in the OERP

- Identify and clearly assess the affected area and extent of spill, including possible impacts on surface water. Where it is safe and practical, visually inspect surface water in the vicinity of the SSO & record observations on the SSO Field Report Form. Signs of receiving water impacts include clear signs of sewage (solids, grease, paper), abnormal color, fish kills, etc.

- Notify the Technical Field Supervisor and the District General Manager if the spill appears to be large (over 1000 gallons), in a sensitive area, may imminently and substantially endanger human health, results in fish kills, if there is doubt regarding the extent, impact, or how to proceed, or if additional help is needed for line cleaning or repair, containment, recovery, lab analysis, and/or site cleanup

- Contain, mitigate, and minimize impacts from the SSO. If the SSO is the result of a blockage, and the blockage cannot be cleared within a reasonable time, containment and/or bypass pumping must be initiated.

- Where safe and feasible, take necessary water quality samples at the point of discharge and at upstream and downstream locations. Use best judgment and consult with the Streets and Sewers Supervisor if uncertain. Water quality monitoring is not given precedence over stopping the SSO or protecting public health. However, if sufficient personnel are available, monitoring is conducted in parallel with these activities or with the cleanup effort.

- Comply with all safety precautions (traffic, confined space, etc.)

- Contact caller, if time permits. Identify SSO cause, including conducting CCTV inspection as appropriate.

- Document all activities through photos and written documentation

The First Responder should provide the completed SSO response form to the SAM Technical Supervisor for input into the SSO database and to the MWSD General Manager. Contact information, including a comprehensive Emergency Contact List, are included in the OERP.

Internal SSO

Upon arrival at the location of a spill into a house or a building, the First Responder should evaluate and determine if the spill was caused by a blockage in the lateral or in the District-owned sewer main. If a blockage is found in a property owner's lateral, it should be clearly communicated that response and repair of private laterals is not the District's responsibility. The homeowner is responsible for clearing any blockage in the home's plumbing system or private lateral and for any resulting flood damage to the structure. The homeowner is also responsible for damage that happens because a lateral was not properly installed.

If a backup in the main line is found to have caused the SSO in a house or building, the First Responder should take steps to address the issue as described above. The First Responder should provide a copy of the residential sewage contamination flyer in the OERP to the property owner, and instruct the property owner to follow the following guidelines:

- Keep all family members and pets away from the affected area
- Place towels, rags, blankets, etc. between areas that have been affected and areas that have not been affected, and move any uncontaminated property away from the overflow area
- Move any uncontaminated property away from the overflow area. Do not remove any contaminated items.
- Turn off the HVAC system

The First Responder should follow these steps to assist the homeowner:

- Gather information and fill out the Sewer Backup Summary Report
- Call a restoration company as described below (contact numbers are included in the OERP), and wait for the restoration firm to arrive
- Forward incident reports and related documents to SAM Techical Supervisor and the District Genreal Manager.

Pump Station SSO

The First Responder to a potential pump station or force main failure should determine whether flow can be restored within a reasonable time. If it appears that flow cannot be restored within a reasonable time or if the conveyance system facility requires construction and/or repairs, then the First Responder should employ a pump station contingency plan covering containment, bypass

pumping, contractual assistance. The District and SAM have a formalized emergency contingency plan for the pump stations with Site Specific spill prevention plans, emergency power and emergency pumping criteria outlined Attachments 5 and 6 and additionally in the SAM SSMP.

In addition, response activities discussed above should be implemented where applicable.

Recovery and Cleanup

The recovery and clean up phase begins when the flow has been restored and the spilled sewage has been contained to the extent possible. Spilled sewage shall be vacuumed or pumped and discharged to the extent possible back into the sanitary sewer system.

Clean Up and Disinfection

Clean up and disinfection procedures should be implemented to reduce the potential for human health issues and adverse environmental impacts that are associated with an SSO event. The procedures described are for dry weather conditions and should be modified as required for wet weather conditions. Clean up should proceed quickly in order to minimize negative impact. Any water that is used in the cleanup process should be de-chlorinated prior to use.

Where cleanup is beyond the capabilities of District staff, the Streets and Sewers Supervisor will contact a cleanup contractor to complete the work.

Spills inside houses or buildings should be cleaned by a professional cleaning company. Contact information for professional cleaning companies can be found in the Section 5 of the MWSD OERP (Attachment 3) or additional contacts can be found in the "Water Damage Restoration" section of the Yellow Pages. Claims by homeowners should be forwarded to the General Manager, and the SAM General Manager should be notified.

Guidelines for Cleanup

On hard surface areas, collect all signs of sewage solids and sewage-related material either by hand or with the use of rakes and brooms. Take reasonable steps to contain and vacuum up the wastewater. Disinfect all areas that were contaminated from the SSO using a SAM-supplied disinfectant solution. Apply minimal amounts of the disinfectant solution using a hand sprayer. Document the volume and application method of disinfectant that is employed. Allow area to dry. Repeat the process if additional cleaning is required.

On landscaped or unpaved areas, collect all signs of sewage solids and sewage-related material either by hand or with the use of rakes and brooms. Allow the area to dry. Repeat the process if additional cleaning is required.

If the SSO has reached the storm drain system, the combination sewer cleaning truck should be used to vacuum/pump out the catch basin and any other portion of the storm drain that may contain sewage. In the event that an overflow occurs at night, the location should be re-inspected as soon as possible the following day. The operator should look for any signs of sewage solids and sewage-related material that may warrant additional cleanup activities.

Water Quality Sampling

Water quality sampling and testing is required whenever the spilled sewage enters a water body. The purpose of testing is to determine the extent and impact of the SSO. The following guidelines must be followed:

- The First Responder should arrange for collection of samples. Samples should be collected as soon as possible after the discovery of the SSO event.
- For spills less than 1,000 gallons, at a minimum, water quality samples should be collected at the discharge point, 100 feet upstream, and 100 feet downstream
- If a spill is more than 1,000 gallons, additional sites should be sampled, following the requirements of the San Mateo of County Health Services Agency.
- The water quality sampling procedures should follow EHS procedures as follows:
- Keep the sterile collection bottle closed until it is to be filled. Do not contaminate inner surface of the lid or bottle rim.
- Collect water sample just below the surface in knee deep water, approximately 3 feet deep (full arm's length), without rinsing. If needed, extend the sampling pole to the fullest length to reach deeper water depth. Minimize contact with bank or beach bed as water fouling may occur.
- Remove cap and hold the bottle near its base and plunge it, neck downward, below the surface
- Turn bottle until neck points slightly upward and mouth is directed toward the current. Fill bottle leaving about 1 inch of air to allow lab to mix by shaking. Collect a minimum of 100 mL. (If applicable, insert sterile collection bottle into the holder on the sample pole. Extend the sample pole and plunge bottle end into the water, bottle opening downward.)
- Immediately place cap securely on bottle to avoid leaks and contamination

- Dry the bottle
- Label container with distinctive sample site name, date, and time collected
- Complete the laboratory requisition slip with requested information (site, bottle number, collector, date and time of collection, type of sample, test requested, name and phone number of responsible person for reporting purposes, and deliverer name). Note any field observations that may have occurred during the sampling.
- Samples should be tested for fecal coliform, total coliform and enterococcus.
- Samples should be stored and shipped by placing the water sample bottle in a cooler with frozen blue ice. Water sample must be kept cool. Ice may be used but care must be taken so water samples are not contaminated or diluted by the ice.

Water samples may be taken to a certified water quality testing lab for processing.

Records of monitoring information shall include the date, exact place, and time of sampling or measurements, the individual(s) who performed the sampling or measurements, the date(s) analyses were performed, the individual(s) who performed the analyses, the analytical technique or method used, and the results of such analyses.

Containment or Bypass

The first responder should attempt to contain as much of the spilled sewage as possible using the following steps:

- Determine the immediate destination of the overflowing sewage
- Plug storm drains using available equipment and materials to contain the spill, where feasible. If spilled sewage has made contact with the storm drainage system, attempt to contain the spilled sewage by plugging downstream storm drainage facilities.
- Contain/direct the spilled sewage using dike/dam or sandbags
- Pump around the blockage/pipe failure/pump station or vacuum flow from upstream of the blockage and dispose of downstream of the blockage to prevent further overflow
- If an SSO reaches a water body, follow the requirements below for posting and SSO notification signage. Also conduct water quality sampling as discussed above.

SSO Notification Signage

Barriers shall be installed to prevent the public from having contact with the sewage. Signs should be posted to keep vehicles and pedestrians away from contact with spilled sewage. Signs should remain in place until removal of the signs is directed by the Streets and Sewers Superintendent. A sample warning sign is included in the OERP.

If a creek, stream and/or beach has been contaminated as a result of an SSO, notifications should be posted at visible access locations until the risk of contamination has subsided to acceptable background levels. The warning signs, once posted, should be checked every day to ensure that they are still in place. "Closed" signs should be posted at the outfall and a minimum of 100 feet upstream and 100 feet downstream of the discharge. If there is a large volume of sewage, more signs must be posted downstream.

Signs must remain posted until at least two consecutive days of sampling meet the Public Beach Sanitation and Ocean Water-Contact Sports standards that are described above. The removal of signs must be approved by EHS and the County Public Health Officer.

Appendix E includes a full copy of the District's Sanitary Sewer Overflow Response Plan, which also serves as the SSMP Overflow Emergency Response Plan. The information in this document will change from time to time, and the OERP may have been superseded. Please contact the General Manager for the most recent updates to the OERP

SSO Reporting

Section 4 of the OERP covers Spill Reporting including internal District reporting and external state and local agency reporting and summarizes the reporting requirements in the OERP. It includes the current contact information for the agencies requiring reporting and includes an example of the District Blockage Card which is used for internal SSO record keeping.

Table 4: Summary of Reporting Requirements by Agency and SSO Type

	<100 gallons		100-1000 gallons		>1000 gallons	
	No fish kill, no ISDHH	Fish kill or ISDHH	No fish kill, no ISDHH	Fish kill or ISDHH	No fish kill, no ISDHH	Fish kill or ISDHH
SAM Blockage Card	X	X	X	X	X	X
San Mateo Co. HS Form	*	X	X	X	X	X
RWQCB 24 hr Form		X		X	X	X
RWQCB Short Form			X			
RWQCB Long Form		X		X	X	X
RWQCB Ann. Report	X	X	X	X	X	X
CDFG – Call		**		**	**	**
OES – Call		X		X	X	X

ISDHH – Imminent and substantial danger to human health
* - Only if the spill has occurred inside a private residence
** - Contacting CDFG directly is highly recommended but not a requirement

SSO Impact Mitigation

The OERP covers Spill Mitigation and Cleanup including procedures for handling a prolonged SSO situation. The OERP and the SAM OERP also covers SSO response for different situations including wet weather overflows, pump station failures, and force main breaks. Mitigation efforts include instructions for setting up perimeters and control zones to contain an SSO and prevent sewage from reaching surface waters, storm drains, or other sensitive environments. The OERP and the SAM OERP covers Public notification procedures to an SSO for endangering the public health.

ELEMENT IV:
FATS, OILS AND GREASE CONTROL PLAN

This section of the SSMP discusses the District's Fats, Oils, and Grease (FOG) control measures, including identification of problem areas, focused cleaning, and source control. This section fulfills the FOG Control Program requirement for both the RWQCB (Element 4) and the SWRCB (Element 7) SSMP requirements.

Regulatory Requirements Summary for FOG Element

RWQCB REQUIREMENTS:

The District must evaluate its service area to determine whether a Fats, Oils, and Grease (FOG) control program is needed. If so, a FOG control program shall be developed as part of the SSMP. If the District determines that a FOG program is unnecessary, proper justification must be provided.

SWRCB REQUIREMENTS:

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

- An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;
- A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area;
- The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;
- Requirements to install grease removal devices (such as traps or interceptors) design standards for the grease removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;

SWRCB REQUIREMENTS: (cont.)

- Authority to inspect grease producing facilities, enforcement authorities, and whether the District has sufficient staff to inspect and enforce the FOG ordinance;
- An identification of sewer system sections subject to FOG blockages and establish a cleaning maintenance schedule for each section; and
- Development and implementation of source control measures, for all sources of FOG discharged to the sewer system, for each sewer system section identified in (f) above.

FOG Control Program Discussion

MWSD, along with SAM and their member agencies, has the legal authority to prohibit discharges to its collection system through the NDWSCP Ordinance. In the early 1990s, SAM began developing its NDWSCP Ordinance as a basis for monitoring upstream non-domestic sources to ensure SAM could consistently meet its NPDES permit requirements. The Ordinance went into effect November 1991. The ordinance gave SAM the power to permit, inspect, and set forth pre-treatment requirements for non-domestic dischargers. NDWSCP documentation is included in the SAM SSMP.

Currently, the District's Contract Responder (SAM) performs preventive sewer cleaning for identified grease hot spots and has the legal authority to require installation of grease interceptors at non-residential locations. The elements of the District's FOG control program and planned FOG control activities are described below.

- Authority to inspect grease producing facilities, enforce requirements, and determine whether the District has sufficient staff to inspect and enforce the FOG ordinance
- An identification of sewer system sections subject to FOG blockages and the establishment of a cleaning maintenance schedule for each section
- Development and implementation of source control measures, for all sources of FOG discharged to the sewer system, for each sewer system section identified as subject to blockages.

Public Education Plan

The majority of FOG occurrences in the collection system is the result of residential FOG generation. Therefore, the District is developing a program to use a variety of educational outreach materials to inform residents about the impacts of grease waste on the sewer system, in terms of contributing to SSOs, impacting public health, and creating water quality concerns. Planned materials include introductory brochures and door hangers. The District also plans to participate in regional FOG control efforts. The program will be developed in 2013.

The District has approximately 40 food service establishments (FSE). The outreach program will include a component designed to educate the District's FSE owners and employees about minimizing FOG disposal into the sewer system. This component will include information about best management practices for minimizing FOG.

The District's program will use materials developed by the Tri-TAC CalFOG workgroup, or similar material from other sources. This information is found on the CalFOG website, through the following url: http://www.calfog.org.

Public Outreach

Information regarding keeping FOG out of the sewer system has been included in the Town's newsletter and provides FOG information flyers to homeowners and contractors at its permit counter. The District performs additional public education outreach activities as part of the SAM source control program.

FOG Disposal Plan

Currently, grease haulers dispose of grease pumped from interceptors at a grease collection facility located outside of the service area. At this time, there does not appear to be a need for additional grease disposal facilities to collect grease from the District's service area. However, the District may choose to evaluate this need further, should the need for additional grease disposal facilities become an issue in the future.

Identification of Grease Problem Areas and Sewer Cleaning

The District has a grease hotspot GIS database and three-month priority maintenance schedule for flushing and/or rodding these problem sewer lines. Additional sewer lines can be added to the three-month priority maintenance schedule after an SSO event or if closed circuit television inspection (CCTV) indicates grease buildup.

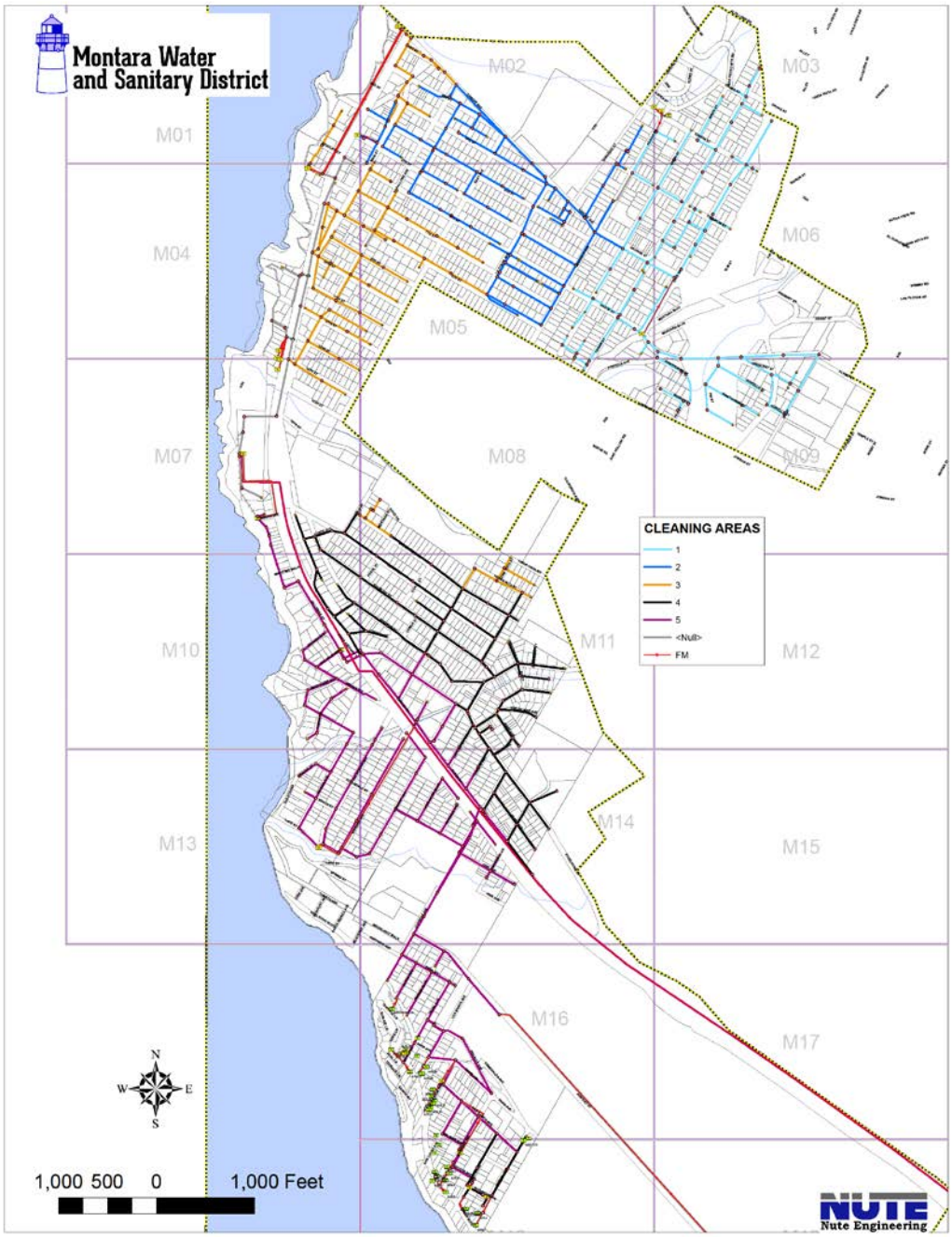

Figure 8: Sanitary Sewer System Cleaning Areas, GIS Mapping and Data System

In the last 18 months MWSD has had zero (0) spills. The State of California SSO Public Report can be seen in Attachment 7, and graphs and data for spill trends over the last 7 years can be seen in Attachment 8.

A portion of the gravity sewer system lines are on the six-month priority maintenance schedule for flushing or both flushing and rodding, with some of these lines identified as grease problems. While the District has known areas with commercial grease sources (e.g. restaurants), many of the District's grease problems are in residential areas and the result of lines with poor grade.

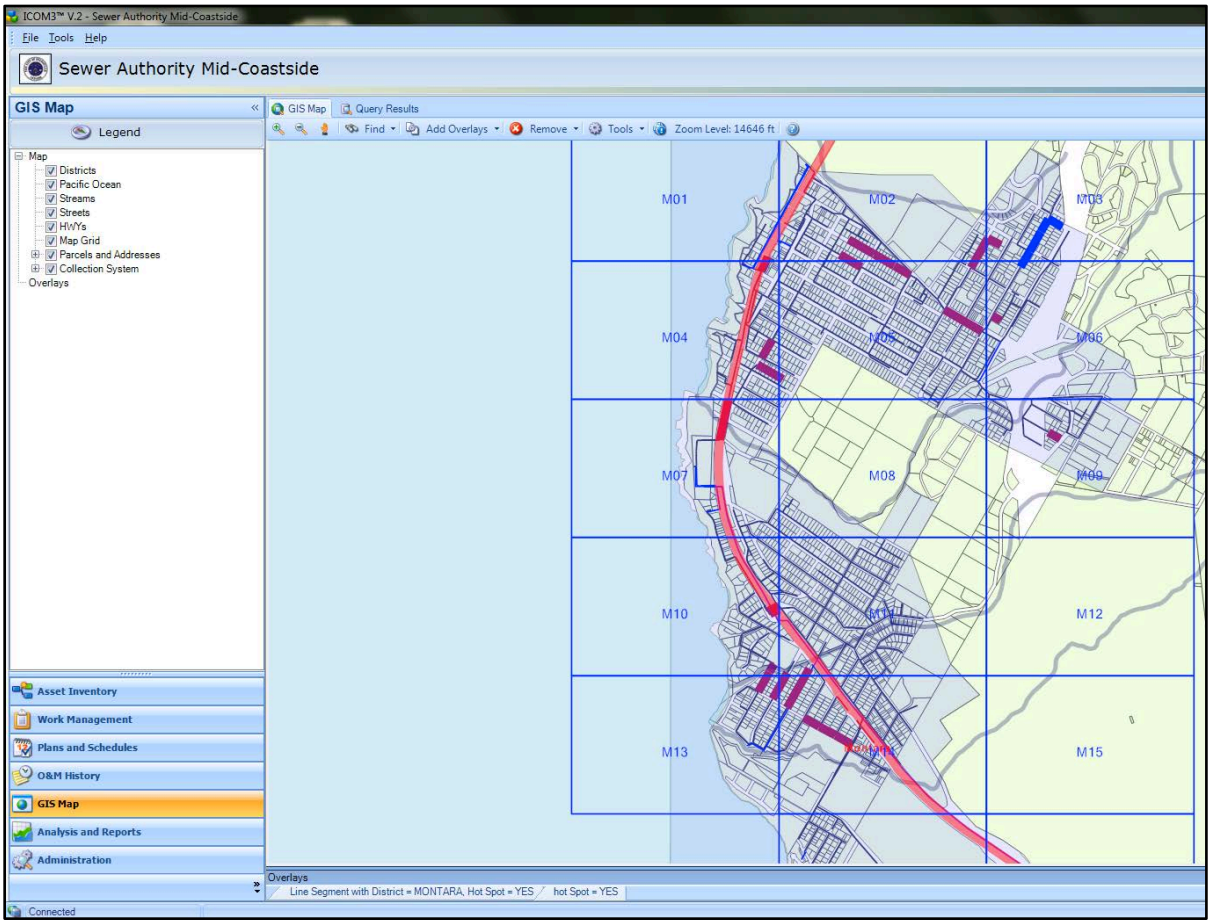

Figure 9: MWSD SAM Sewer System Cleaning Key HOTSPOT Areas sample, sewer shown in blue was reduced 'monitor' status after a recent CIP project, GIS Mapping and Data System

Table 5: SAM HOTLIST for frequent cleaning (Note this list has a the older SAM line Segment facility numbering system, this list will be converted to the MWSD Database numbers by the end of this year)

Line Segment								
Line Segment	**Pipe Size**	**Pipe Length**	**Pipe Material**	**Hot Spot**	**Comments**	**Month Due**	**IS Active**	**Hot Spot Type**
M01001-M04023	6	232.48	VCP	YES	Along the east side of hwy1	March, June, Sept, Dec	YES	Debris
M02032-M05089	6	335.57	VCP	YES		February	YES	Pipe
M02033-M02032	6	427.42	VCP	YES		February	YES	Pipe
M04001-M07006	12	596.73	VCP	YES		March	YES	To Monitor
M04014-M04018	6	231.06	VCP	YES		March	YES	Roots
M04018-M04020	6	302.76	VCP	YES		March	YES	Roots
M04019-M04012	6	327.91	VCP	YES		March	YES	Roots
M05006-M02023	6	361.94	VCP	YES		February	YES	Pipe
M05015-M05014	6	128.8	VCP	YES		February	YES	Roots
M05047-M05044	6	309.33	VCP	YES		February	YES	Roots
M05062-M05053	10	329.06	PVC	YES		February	YES	Pipe
M05063-M05062	10	290.02	VCP	YES		July	YES	Pipe
M05072-M05070	6	161.93	VCP	YES		January	YES	Roots
M05089-M05023	6	273.73	VCP	YES		March	YES	Pipe
M05096-M05091	6	269.69	VCP	YES		March	YES	Roots
M05104-M04030	6	252.5	VCP	YES		March	YES	Roots
M05106-M04037	6	429.07	VCP	YES		February	YES	Pipe
M09010-M09009	6	200	VCP	YES		February	YES	Roots

Line Segment								
Line Segment	Pipe Size	Pipe Length	Pipe Material	Hot Spot	Comments	Month Due	IS Active	Hot Spot Type
M10008-M13005	6	330.92	VCP	YES		May	YES	Pipe
M10009-M10008	6	137.89	VCP	YES		May	YES	Pipe
M10016-M10015	6	239.73	VCP	YES		May	YES	Offset
M11001-M10007	12	188.63	VCP	YES		May	YES	Pipe
M11032-M14020	6	656.69	VCP	YES	there is a manhole in the middle - it is not showing	May	YES	Grease
M11033-M13015	6	437.27	VCP	YES		May	YES	Pipe
M11052-M11049	6	106.2	VCP	YES		October	YES	Roots
M11057-M11056	6	334.03	VCP	YES		April	YES	Roots
M11069-M14024	6	262.98	VCP	YES		April	YES	Roots
M11076-M10023	6	154.1	VCP	YES		May	YES	Pipe
M13007-M13006	6	211.48	VCP	YES		May	YES	Roots
M13015-M13014	6	310.31	VCP	YES		May	YES	Roots
M14004-M14003	6	257.43	VCP	YES		May	YES	Pipe
M14005-M14004	6	264.53	VCP	YES		May	YES	Pipe
M14006-M14005	6	263.35	VCP	YES		May	YES	Pipe
M14020-M13012	6	308.42	VCP	YES		May	YES	Grease
M16016-M16015	6	630.01	VCP	YES		May	YES	Offset

As part of the District's rehabilitation plan, the District is performing additional CCTV work throughout the system. The CCTV work helps to identify and verify causes of root and grease problems. Lines with known poor grade or cleaning issues, or oldest previous CCTV data are

prioritized for CCTV inspection. With information on the causes of root or grease problems, maintenance activities and schedules can be modified or sewer repairs made to better control grease buildup and minimize grease-related SSOs.

Legal Authority to Prohibit SSOs and Blockages Caused by Fog Discharge

The District's Code, which is included provides the legal framework for enforcing illicit discharges to the collection system. Specifically code allows the General Manager to make and enforce regulations to protect the sewer system and the public health. Under this authority, the District and SAM developed the FOG policy. The FOG policy requires the following:

- All FSEs shall have a bin or drum for collecting waste kitchen grease and used cooking oil. Receipts or other documentation of the cleaning service for the bin or drum shall be retained at the FSE and presented to City staff or the County inspector on request.

- The FSE shall maintain adequate employee training and/or kitchen signage to assure that the container is used and maintained in an appropriate manner

- FSEs shall not discharge or create a situation that results in discharge of FOG or other wastes to storm water drainage

- Newly constructed FSEs shall install an interceptor of a size that meets Uniform Plumbing Code, and shall plumb all fixtures and equipment which may receive FOG to the interceptor

- The District reserves the right to require installation of an interceptor or grease trap when an FSE completes a major remodel, and to determine the requirements on a case by case basis

- Existing FSEs that do not currently have a grease trap or interceptor installed must implement the Best Management Practices (BMPs) for grease handling and disposal that are defined in the FOG policy

The FOG policy also includes requirements for the cleaning and maintenance of any installed grease interceptors and grease traps, for the submittal of documentation for review and City approval, and for provision of access for equipment inspection. The County of San Mateo Department of Public Works conducts regular inspections of the coastside businesses. These inspections include evaluating grease collection and disposal practices.

Legal Authority

Through the Montara Sanitary District Code Section 3-4, 3-5, 3-6 and Article 10 and Article 11 the District has legal authority to:

- Limit types of wastes discharged to public sewers
- Require installation of grease interceptors
- Require maintenance of grease interceptors

It further allows regulation of types of wastes discharged to public sewers.

> *3-7.300. Objectionable Wastes. No Person shall discharge or cause to be discharged the following described substances, materials, waters, or wastes if it appears likely in the opinion of the Engineer that such wastes can harm either the Sewers, Sewage treatment process, or equipment, have an adverse effect on the receiving waters, or can otherwise endanger life, limb, public property, or constitute a nuisance. In forming his opinion as to the acceptability of these wastes, the Engineer will give consideration to such factors as the quantities of subject wastes in relation to flows and velocities in the Sewers, materials of construction of the Sewers, nature of the Sewage treatment process, capacity of the Sewage Treatment Plant, degree or treatability of wastes in the Sewage Treatment Plant, and other pertinent factors. The substances prohibited are:*
>
> *(1) Any liquid or vapor having a temperature higher than one hundred fifty (150)degrees F (65 degrees C).*
>
> *(2) Any water or waste containing fats, wax, grease, or oils, whether emulsified or not, in excess of fifty (50) mg/hr containing substances which may solidify or become viscous27at temperatures between thirty-two degrees(32) and one hundred fifty (150) degrees F (0 and 65 degrees C).*

Installation of grease interceptors: 3-8.200 allows for the District to require installation of grease interceptors at non-residential buildings as follows:

> *3-8.200. Interceptors Required. Grease, oil and sand interceptors shall be provided when, in the opinion of the District Engineer, 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 buildings used for residential purposes. All interceptors shall be of a type and capacity approved by the District Engineer and shall be located as to be readily and easily accessible for cleaning and inspection. Failure to comply upon written request of the District shall be considered as a violation of Section 3-7.300 above and treated accordingly.*

Maintenance of grease interceptors. 3-8.300 delegates maintenance of grease interceptors to the owners as follows:

> *3-8.300. Maintenance of Interceptors. The owner, at his expense, shall maintain all grease, oil and sand interceptors in continuously efficient operation at all times.*

While the District has the legal authority to require installation and maintenance of grease interceptors, the District has not inspected these facilities nor actively enforced these sections of the Sanitary Code, it may begin doing so in the near future if warranted(see FOG Source Control).

FOG Source Control

SAM has a process of a FOG Control Program (See SAM SSMP) for use throughout the JPA service area, which includes the MWSD. SAM is regulating targeted Food Service Establishments (FSE) through source control activities, including developing a database of FSEs.

SAM has developed and implemented source control measures for all FOG sources that may be discharged to the sewer system. Source control includes the installation of grease removal devices (such as traps or, preferably, interceptors), installation of pre-treatment devices, removal of garbage grinders, and implementation of maintenance, best management practices, and reporting requirements. Permits are issued to all dischargers who SAM determines to require monitoring for ensured compliance. The permitted dischargers are categorized based on types of discharge.

In addition to requiring identified establishments to comply with source control measures, SAM launched a public outreach campaign regarding the awareness of FOG in the sewer system. SAM distributes the message of FOG control at public fairs and festivals and in schools through informational pamphlets, which is included in the SAM SSMP.

Facility Inspection

SAM inspects grease-producing facilities and implements source control enforcement actions, as required. Inspection methods include site visits, phone interviews, and waste manifest monitoring; the frequency of inspections for each facility is based on water usage. In the event a discharger falls out of compliance, the NDWSCP Ordinance specifies sanctions to establish compliance. In order to track new, potential FOG dischargers, SAM staff receives business license application reports from San Mateo County for all businesses in the service area. The NDWSCP inspector visits a new establishment and determines if they meet the criteria for inclusion in the NDWSCP.

Dischargers are invoiced annually after the SAM Board of Directors approves a fee schedule, which is based on the water usage and number of inspections. SAM staff handles all aspects of the fee collection, and when the fees are paid, the annual permit is renewed. SAM does not accept grease hauled from restaurant grease traps within their service area at this time, but may consider it after a plant process evaluation is completed.

ELEMENT V: LEGAL AUTHORITY

This element of the SSMP discusses the District's Legal Authority, including its Sanitary Code and agreements with other agencies. This section fulfills the Legal Authority requirement for the RWQCB (Element 5) and the SWRCB (Element 3).

Regulatory Requirements Summary for Legal Authority Element

RWQCB REQUIREMENTS:

The District must demonstrate that it has the legal authority (through ordinances, service agreements, and other binding procedures) to control infiltration and inflow (I/I) from satellite collection systems and private service laterals; require proper design, construction, installation, testing, and inspection of new and rehabilitated sewers and laterals; and enforce violation of ordinances.

The SSMP should describe specific applicable legal mechanisms, with citations of names and code numbers of ordinances. If legal authority does not currently exist for a required element, the SSMP should indicate a schedule of activities to obtain the proper legal authority.

SWRCB REQUIREMENTS:

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

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

Legal Authority Discussion

The District has the legal authority to:

- Assign responsibility for private laterals,
- Prevent illicit discharges,
- Require proper design and construction of sewers and connections,
- Access facilities for maintenance, inspection and repairs,
- Limit the discharge of fats, oils and grease, and debris
- Enforce the provisions of their Sanitary Code.

Sanitary Code

The Montara Water and Water and Sanitary Code Chapter 3, includes several provisions that establish the District's legal authority to control discharges and maintain their sanitary sewer system. A full copy of the District's Sanitary Code is included is available at the MWSD office and is summarized as follows:

> *3-0.000: Regulation of Public and Private Sewers and Drains; Installation and Connection of Building Sewers; Installation of Sewer Laterals and Public Sewer Main Extensions; Permits and Fees for Installation and Connection of Sanitary Sewers; Charges for Subdivisions; Regulating the Discharge of Waters and Wastes into Public Sewer System; Penalties.*

Responsibility for Maintenance of Laterals

The MWSD Code establishes the property owners as the responsible party for ownership and maintenance of both the upper and lower lateral in Section 3.3 as follows:

> *3-2.700: Plumbing and Sewers on Private Property. The installation, use, maintenance, repair and inspection of all plumbing and Sewers inside private property shall be subject to and be governed by the Plumbing Ordinance of the County, now existing or as hereafter amended.*

Further details are described in Section 3.3 and 3.4.

Prevention of Illicit Discharges

Drainage and other none household sewage into sanitary sewers prohibited, prohibits yard drainage or illegal dumping to the District's sanitary sewers as follows:

> *3-3.300. Unlawful Disposal. Except as herein provided, it shall be unlawful to construct or maintain any privy, privy vault, septic tank, cesspool, seepage pit or other facility intended or used for the disposal of Sewage.*

Access for Maintenance, Inspection and Repairs

Inspection and correction of inflow and infiltration in lateral **sewers** provides for the elimination of excessive flows from private sewers.

> *3-4.600. Inspection Required. A Permit for a Private Sewer issued hereunder shall not become effective until the installation of the Private Sewer has been inspected by, and completed to, the satisfaction of the County Health Official and the District Engineer.*

And:

> *3-4.1100. Inspections. The District Engineer is hereby authorized, and shall have the authority, to inspect any Private Sewer to determine whether said Sewer is maintained and operated in a manner endangering the public health, or sanitation, or safety, or creating a public nuisance. The owner of the Parcel upon which such Sewer is located shall, upon direction by the District Engineer, take all necessary remedial measures to protect the public health, sanitation and safety, and to avoid a public nuisance, or otherwise to comply with the requirements of this Article or of any Permit issued hereunder.*

And:

> *3-5.1200. Testing. All Side Sewers shall be tested in the presence of the District Inspector by filling the line with water and inspecting for excessive leakage. The Person constructing the Sewer shall furnish fittings, plugs, water and labor for testing. All lines showing excessive leakage shall be repaired or replaced at the expense of the Person doing the work and shall be done at the direction and to the satisfaction of the District Inspector.*

Proper Design and Construction of Sewers and Connections

Design and construction standards provides for the following:

> *3-4.700. Design Requirements. The type, capacities, specifications and locations of a Private Sewer shall comply with requirements of the County Health Official, the District Engineer, the District's hydrologist or hydrogeologist, the Department of Public Health of the State of California and any other agency or officer*

having jurisdiction over such matters. No Private Sewer shall discharge, either directly or indirectly, into a Public Sewer, Storm Drain, road, or surface or subterranean pond, pool, stream, creek, river, or other watercourse or aquifer. (Amended12/06/07 by Ord. 146)

Limit Discharges of Fats, Oils and Grease, and Debris

As discussed in Element 4 – Fats, Oils and Grease Control Program, the District has the legal authority to control the discharge of fats, oils and grease (along with other substances) to the public sewer.

3-7.300. Objectionable Wastes. No Person shall discharge or cause to be discharged the following described substances, materials, waters, or wastes if it appears likely in the opinion of the Engineer that such wastes can harm either the Sewers, Sewage treatment process, or equipment, have an adverse effect on the receiving waters, or can otherwise endanger life, limb, public property, or constitute a nuisance. In forming his opinion as to the acceptability of these wastes, the Engineer will give consideration to such factors as the quantities of subject wastes in relation to flows and velocities in the Sewers, materials of construction of the Sewers, nature of the Sewage treatment process, capacity of the Sewage Treatment Plant, degree or treatability of wastes in the Sewage Treatment Plant, and other pertinent factors. The substances prohibited are:

(2) Any water or waste containing fats, wax, grease, or oils, whether emulsified or not, in excess of fifty (50) mg/l or containing substances which may solidify or become viscous

Additional requirements included in Code.

Installation of grease interceptors, allows for the District to require installation of grease interceptors at non-residential buildings as follows:

3-8.200. Interceptors Required. Grease, oil and sand interceptors shall be provided when, in the opinion of the District Engineer, 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 buildings used for residential purposes. All interceptors shall be of a type and capacity approved by the District Engineer and shall be located as to be readily and easily accessible for cleaning and inspection. Failure to comply upon written request of the District shall be considered as a violation of Section 3-7.300 above and treated accordingly.

Maintenance of grease interceptors delegates maintenance of grease interceptors to the owners as follows:

3-8.300. Maintenance of Interceptors. The owner, at his expense, shall maintain all grease, oil and sand interceptors in continuously efficient operation at all times.

Enforcement Measures

The District's Water and Sanitary Code Section 11 provides for the following enforcement.

Violation

> *3-11.100. Violation. Any Person found to be violating any provision of this or any other Code, Ordinance, rule or regulation of the District, except Section 3-11.100 hereof, shall be served by the District Inspector or other authorized Person with written notice stating the nature of the violation and providing a reasonable time limit for the satisfactory correction thereof. Said time limit shall not be less than two (2) nor more than seven (7) working days. The offender shall, within the period of time stated in such notice, permanently cease all violations. All Persons shall be held strictly responsible for any and all acts of Agents or employees done under the provisions of this or any other Code, rule or regulation of the District. Upon being notified by the District Inspector of any defect arising in any Sewer or of any violations of this Code, the Person or Persons having charge of said work shall immediately correct the same.*

Disconnection

> *3-11.300. Disconnection. As an alternative method of enforcing the provisions of this or any other ordinance, rule or regulation of the District, the Board shall have the power to disconnect the user or subdivision system from the Sewer mains of the District. Agreements with Other Agencies.*

More specific details follow in the Code, specific circumstances and procedures included.

The Joint Powers Authority

The District is a member agency of SAM, a joint-powers agency that provides treatment and disposal of wastewater flows through a deep water outfall in the pacific ocean. SAM is comprised City of HMB, GSD and MWSD and the wastewater treatment facility was commissioned in 1976. A copy of the SAM Exercise of Joint Powers Agreement is Attachment 1 and available at the District office.

ELEMENT VI: MEASURES AND ACTIVITIES

This element of the SSMP discusses the District's Measures and Activities, including Maps, Resources and Budget, Preventive Maintenance, Condition Assessment, Equipment, Training, and Outreach to Plumbers and Builders.

Regulatory Requirements Summary for Measures and Activities Element

RWQCB REQUIREMENTS:

- The District must maintain current maps of its collection system facilities.
- The District must demonstrate that adequate resources are allocated for the operation, maintenance, and repair of the District's collection system.
- The District must demonstrate that prioritized preventive maintenance activities are performed by the District.
- The District must identify and prioritize structural deficiencies and implement a program of prioritized short-term and long-term actions to address them.
- The District must demonstrate that contingency equipment is provided to handle emergencies, and that spare parts are available to minimize equipment/facility downtime during emergencies.
- The District must provide training on a regular basis for its collection system operations, maintenance, and monitoring staff.
- The District must implement an outreach program to educate commercial entities involved in sewer construction or maintenance about the proper practices for preventing blockages in private laterals. This requirement can be met by participating in a region-wide outreach program.

SWRCB REQUIREMENTS:

- The District must maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments, manholes, pumping facilities, pressure pipes, valves, and applicable storm water conveyance facilities.

SWRCB REQUIREMENTS: (Cont.)

- See below for resources and budget (the MWSD maintains a balanced budget with a detailed CIP)
- The District must describe routine preventive operation and maintenance activities by staff and contractors; including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance program should have a system to document scheduled and conducted activities, such as work orders.
- The District must develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short and long term plans plus a schedule for developing the funds needed for the capital improvement plan.
- The District must provide equipment and replacement part inventories, including identification of critical replacement parts.
- The District must provide training on a regular basis for staff in sanitary sewer system operations, maintenance, and require contractors to be appropriately trained.
- See below for outreach (MWSD works closely with the San Mateo County Building Department to communicate to building contractors the details of the MWSD code.)

Measures and Activities Discussion

This section summarizes the measures and activities of the District to manage their sewer system.

Map

The District maintains an ARC-Info based GIS system and transfers data to CAD. Maps include manholes with identifying number, pipe diameters, and callouts for inverted siphons, pump stations, valve boxes, street names, and some pipe materials. The Director of Public Works is responsible for updating maps as facilities are added, rehabilitated, and as corrections are identified through field work. Field personnel use a hard-copy map sets that contain the entire sewer system. Each crew carries a copy of the maps in their truck. The District's Sewer System Maps are in Appendix A. The District also shares GIS data with SAM, key map visible in Appendix B.

Resources and Budget

The District prepares an annual budget during the spring for the following fiscal year. The annual budget includes funds for operations (e.g. pump station maintenance, sewer line maintenance, and administration) and capital improvements (e.g. sewer line replacement, pump station replacement, force main replacement, and miscellaneous equipment).

For Fiscal Year 2014-15, the District's Operations budget is approximately $1.7 million and the District's Sewer Capital Funds budget is $0.85 million with the potential of another $0.875 million to be available from reserves if targeted capital projects obtain necessary permits for construction during this fiscal year. The Capital budget includes funds for sewer, pump station improvement projects, CCTV and Spot repairs as well as routine equipment repairs. The 7 Year Capital Improvement Budget outlines recommended capital improvement funds on an annual basis through Fiscal Year 2021.

In addition, there is a maintenance budget as part of the contract with the JPA.

Preventive Maintenance

The District has equipment and staff and contract services needed to clean all mainlines. The District cleans the entire 24-mile gravity system every 12 months, and cleans specific portions of the system with known problems or HOTSPOTS on a 3-month or 6-month basis and is currently managed in the field by SAM.

All pump stations are checked daily by the pump station crew. Emergency and routine repairs, including installation of new manholes and cleanouts, are performed by the crew or contractor.

Currently, all District service calls and work orders are generated manually. District staff and an after-hours answering service are available to receive customer phone calls 24 hours a day, 7 days a week. All customer calls are recorded and a work order is generated to address the customer's complaint or request.

Condition Assessment

Historically, closed circuit television (CCTV) inspection of sewers in the system has been performed after problems have been identified through system maintenance or as a result of SSOs.

Results of CCTV inspections are generally provided in the form of written or printed reports and videotapes. Beginning in Fiscal Year 2003, the District launched a CCTV inspection program to assess the condition of their entire gravity sewer system over a three year period, inspecting approximately 7.5 miles of gravity lines per year during the project. Follow up inspections have been made by SAM staff during cleaning. Inspection of each pipe segment are recorded and rated. Rating information will be used as a tool to evaluate the District's rehabilitation projects and maintenance actions.

Over the past decade, the District has completed various sewer rehabilitation and replacement projects and maintains a list of identified sewer rehabilitation needs. The budgeted repairs include about 3,000 feet of mainline sewers per year and 10 to 20 spot repairs. The 7 year capital plan attempts to increase this replacement rate by 5 to 10% per year as budget and favorable construction prices allow. Currently the overall approach it to try to address the CIP at a rate of 2.5% of the collection system or better per year.

Equipment

The District and SAM Staff have the following equipment available for regular maintenance and repairs, and to respond to an SSO event:

Items Kept at SAM plant and/or MWSD corp yard

Combination Cleaner
Service Truck with Containment Tools and Materials
Traffic control devices
Trash pump with hose (for emergency bypass)
Clamps (for force mains)
Repair bands in all required sizes
Spare pumps (for pump stations)
Pump hose and pipe
Pipe in 6- and 8-inch sizes (for gravity lines)
Pipes in all sizes (for force mains)
Emergency Generators
Tools

Training

The District conducts safety training in accordance with OSHA requirements. When new equipment is acquired, the District utilizes the equipment supplier to provide training to appropriate crew members.

The District maintains a log of safety training activities that is kept at the District maintenance office. The District is exploring opportunities for a more formalized training process in cooperation with other local agencies (e.g. SAM) or through industry groups such as the California Water Environment Association (CWEA). The SAM staff and District follow a continued strategic training plan in FY2014 that includes regular refreshers in sanitary sewer operations and maintenance.

Outreach to Plumbers and Building Contractors

The District utilizes contractor and plumber outreach materials and guidelines being developed by the Bay Area Clean Water Agencies (BACWA) as permit counter handouts.

The District also works closely with the San Mateo County Building Department to inform Contractors of Sanitary District requirements and standards.

ELEMENT VII: DESIGN AND CONSTRUCTION STANDARDS

This element of the SSMP discusses the District's Design and Construction Standards.

Regulatory Requirements Summary for Design and Construction Standards
RWQCB REQUIREMENTS: • The District must demonstrate that minimum design and construction standards and specifications are in place for the installation of new sewer systems and for the rehabilitation and repair of existing sewer systems. • The District must demonstrate that procedures and standards are in place for the inspection and testing of the installation of new sewers, pump stations, and other appurtenances, as well as for rehabilitation and repair projects.
SWRCB REQUIREMENTS: • The District must have design and construction standards and specifications for the installation of new sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sewer systems. • The District must have procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

Design and Construction Standards Discussion

The District maintains Standard Specifications and Details (Standards) Montara Water and Sanitary Standard Specifications and Code, current version, of the District's Standard Specifications and Code are available for review at the District Office or on Line at www.Montara.org. The Sample Lateral Standard Details is shown in the OERP (Attachment 3) are included here-in for example reference include information on both installation and inspection of sewer and force mains as discussed below. Specifications for pump stations have historically been developed on a case-by-case basis as needed for construction of specific pump station facilities or for improvements to facilities. The District is evaluating the need to develop design and construction standards for pump stations. However, with little to no development in the District's service area, new pump stations are seldom required, and such standards may not be warranted.

Installation, Rehabilitation, and Repair

Criteria for the design of new sewer lines and manholes are detailed in the District's Standards. Criteria include design flows, pipe materials, minimum pipe sizes and slopes, pipe depths and clearance with other utilities, and required fittings. The District's Standards also includes design requirements for private laterals including minimum slopes and cleanouts. Detailed technical requirements for pipe materials and appurtenances are included in the Standards.

Criteria for the construction of new sewer lines and force mains are detailed the District's Standards including trench widths, pipe jointing, connections to existing systems, and trench-less installations.

Inspection and Testing of New and Rehabilitated Facilities

Criteria for testing and inspecting new and rehabilitated sewers and force mains are detailed in the Montara Water and Sanitary Standard Specifications, current version, of the District's Standard Specifications including water tests, air tests, infiltration tests, deflection tests, cleaning and CCTV inspection.

ELEMENT VIII: CAPACITY MANAGEMENT

This element of the SSMP discusses the District's Capacity Management program.

Regulatory Requirements Summary for Capacity Management

RWQCB REQUIREMENTS:

- The District must show that a process is established to assess the current and future capacity requirements of its collection system.
- The District must prepare a CIP to provide hydraulic capacity of key collection system elements under peak flow conditions.

SWRCB REQUIREMENTS:

- The District must evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with the overflow events. Where design criteria do not exist or are deficient, the District must establish appropriate design criteria.
- The District must establish a short- and long-term capital improvement plan (CIP) to address identified hydraulic deficiencies including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.

Capacity Management Discussion

In 1999 the MWSD began a comprehensive effort to develop a long range CIP which included Capacity Management as one element. The current County costal plan does not allow for significant additiona development (See Anticipated Growth below.) If development does occure, MWSD is using far less than the allowable portion of the SAM treatment plant under the JPA. Additionally with conservation the MWSD is using only about 2/3 of its calculated flows compated to other users in the Sate of California.

I&I peak flow management and capacity have been the primary topics reviewed across all memebers of the JPA. The following discusses elements of project that pertain to this element. This element of the SSMP was updated as part of SAM annually since 2004. The CIP effort was made more effective after the CCTV was completed in 2005.

Capacity Evaluation

Previous Master Plan work developed a two-dimensional model of the sewer system for the purpose of compiling the length and age of sewers pipes. This capacity would continue the population of the current model with elevation and loading data. Model runs were conducted to evaluate system performance.

Data Collection and Entry

Previously rainfall studies have gathered field data for actual storms and set some design limits for design storms. More recently, the rims and inverts on the manholes of pipes 10 inches in diameter and larger have be surveyed on the primary express sewer. The existing CCTV has been updated with this new data. The overall approach it to try to address the CIP at a rate of 2.5% of the collection system or better per year and to CCTV 5% or better per year to reduce I&I to limit the need for additional wet weather capacity. Not all manhole data were recorded; manholes that are not visible were omitted and referred to staff for supplemental location. Initial manhole location and size information will be based on the existing block maps.

Facility verification data and been collected during project designs and a comprehensive GPS program is underway of all facilities. The data was recorded in NAD 83 horizontal coordinates and NGVD 29 vertical elevations. Initial inventories of sewer connections were made to establish number, location and category of connections. Flows from the various categories of users were be estimated. A value for connections were assigned to each pump station and/or manhole identified in the survey.

Model Calibration and Verification

Flow monitoring has been performed on several basins in the past to determine Peak Flow and I&I critical areas. This information was used to assist the CIP selection process. The calibration process was conducted for dry weather and wet weather conditions to define a design storm. In each case the data was developed around existing smaller areas and pump stations to control the number of variables and maximize the use of available data.

The dry weather process consisted of establishing the average flow, determining the number of connections and then establishing average loading rates followed by peaking factors. This data was extrapolated to adjacent sites for comparison and verification. A similar process was used for wet weather flow peaking factors.

Capacity Evaluation

The capacity evaluation extends the calibration process to the pipes greater than 10 inches in diameter in the collection system that were calculated. In this process the weaknesses in the collection system are identified. Nute Engineering's experience helped to apply the findings of problems in the system occurring during wet weather simulations to the CIP. The major question from past rain storm studies of I&I is the level at which the wet weather conditions are deemed critical. The corollary question is, "Is this level actual or caused by the assumptions implicit in computer modeling?" The purpose of the Capacity Evaluation is to bring the District up to the understanding of the location of the potential problems. The potential solutions and ultimately recommended projects are the subject of the CIP.

The primary efforts for flow analysis and capacity evaluation was performed in northern Montara (the oldest sections of town) as part of a larger study with SAM completed about 15 years ago. Its primary outcome was expected: peak rain I&I was more than desirable, so the District increased and updated the CIP program to incorporate those finding.

Field Measurement Recommendations

Based on the analysis of the conditions and capacity of major pipes and express sewers of the sewer system Nute Engineering anticipated that several lines would be identified as either overloaded or critical. Combined with their locations in or near Cabrillo Highway and their proximity to the ASBS of the Fitzgerald Marine Reserve, the rehabilitation of the trunk/express sewers has been prioritized as more urgent to relieve risk of damage to the environment from and SSO in these truck sewers.

Capacity Documentation

The information from this phase of the study was summarized in a technical memorandum. The memorandum includes the mapping, logs of the inspection, location of problem areas, size of replacement lines, and recommendations for appropriate materials and construction methods guided the final design.

Existing Condition Evaluation

During the previous CIP reviews the condition of the various pump stations were evaluated and recommendations were made for repair, rehabilitation or replacement. Recent projects to improve reliability and redundancy at pump stations have been completed and are underway. SAM personnel were available to assist in the inspections and provide records of maintenance for the pump stations and force mains and their appurtenances.

Sewer main and lateral replacement program as part of the SIPs were also identified as a parget to reduce I&I. In addition to District replacements of lower laterals, District contractors are encourage to provide District Sponsored CCTV of laterals and to provide quotations of private lateral replacements to the private owners. The priority of the work was used to indicate the ability to move the project in time to accommodate budget and funding constraints. In part, the priority assigned reflects the risk of a catastrophic failure of the component prior to replacement.

Anticipated Growth

The County and Costal general plan for areas currently within the District was also reviewed to determine internal growth potential is limited at this time to the remainder of undeveloped lots. Flows based on this growth will be projected, but are expected to be small. At this time it is not expected that major changes in flow will result from these calculations. It is recognized that wet weather flows are the most significant factor in determining the existing system size. Ongoing maintenance and rehabilitation will assist in controlling the peak wet weather. Therefore, increasing facility size due to growth is not expected. If growth is expected District engineer may identify a nexus between wet weather flow reduction measures and capacity availability to allow the District to collect funds from the new development for use on sewer rehabilitation / replacement projects.

Capital Improvement Plan

The District's existing 7 year Capital Improvement Plan was reviewed and was revised so that it reflects the addition of the projects identified during the capacity and condition evaluations and possible growth projections. An essential part of this task was assigning a construction cost to each of the various projects that were included in the plan. This capital improvement plan considers timing of the work to level out the capital expenditures in light of the priorities for repair and

replacement. As part of this effort, recommendations for a detailed study of components or sub-components may be made in the future. This plan was prepared in a draft form for review by the District prior to acceptance.

As noted above the District is maintaining a 2.5% or better replacement rate for the collection system and actively maintaining or rehabilitating its pump stations. This means that the district will replace the infrastructure on a 40 year plan (and will be completed with most of the system in about 27 years). This replacement rate is about twice the average Sanitary District or Sanitation Agency in Northern California.

ELEMENT IX: MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

This element of the SSMP discusses the District's Monitoring, Measurement, and Program Modifications plan.

Regulatory Requirements Summary for Monitoring, Measurement, and Program Modifications
RWQCB REQUIREMENTS: The District must monitor the effectiveness of each SSMP element and update and modify SSMP elements to keep them current, accurate, and available for audit as appropriate.
SWRCB REQUIREMENTS: The District shall: • Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities; • Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP; • Assess the success of the preventative maintenance program; • Update program elements, as appropriate, based on monitoring or performance evaluations; • Identify and illustrate SSO trends, including: frequency, location, and volume

Monitoring, Measurement, and Program Modifications Discussion

The District maintains complaint and blockage records in a hardcopy and spreadsheet format, maintains hard copy logs of cleaning and other preventive maintenance activities, and records problems (e.g., excessive debris, observed manhole defects) identified through regular sewer maintenance activities on special forms. In 2005, the SAM Staff began using the SWRCB's

electronic SSO reporting system which records the number, volume, locations, and causes of SSOs.

The District is currently developing the sewer inventory, mapping, and maintenance database, to more efficiently track and utilize records related to any segment of pipe in their system. In addition SAM enters all complaints and service calls logged into their database which is accessible to MWSD, all preventive and corrective maintenance activities will be recorded, and the sewer inspection history of any segment of pipe will be retrievable electronically and the data used to develop condition ratings that will aid in prioritizing future sewer rehabilitation projects, maintenance activities, and updating other SSMP program elements, as applicable. This data is linked to the GIS maps and incorporate the pipe and manhole statistics and can link condition rating methodologies. The preferred standard for the ratings is the NASCO system.

With the information available in the SAM and MWSD Data and the SSO reporting system, the District will be able to measure the effectiveness of the SSMP by tracking various parameters related to service calls, maintenance and inspection activities, as well as by comparing SSO trends from previous years and identifying system components that continually contribute to system failures. Specifically, the District plans to track the following parameters with which to measure the effectiveness of the SSMP and its effectiveness in reducing SSOs:

- Number of SSOs per year
- Volume of SSOs per year
- Number of dry weather SSOs per year
- Number of SSOs per year by cause (e.g., roots, grease, pipe failure, I/I, pump failure or other deficiency, etc.)
- Response time to SSOs and other service calls (time from call received to first responder arriving on site)
- Length of gravity sewers cleaned annually
- Actual versus scheduled cleaning dates for gravity sewers
- Length of gravity sewers CCTV inspected annually
- Record of pump station maintenance work orders completed annually

Attachments 7 and 8 have detailed data and graphs of the last 7 year SSO history.

The SSMP will be audited at least annually as described in Element 10 SSMP Audits.

ELEMENT X: SSMP AUDITS

This element of the SSMP discusses the District's SSMP Audits program.

Regulatory Requirements Summary for Capacity Management
RWQCB REQUIREMENTS: The District must conduct an annual audit of their SSMP that includes any deficiencies and steps to correct them that are appropriate to the size of the District's system and the number of overflows. The District must submit a report of its annual audit.
SWRCB REQUIREMENTS: The District shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the District's compliance with the SSMP requirements, including identification of any deficiencies in the SSMP and steps to correct them.

SSMP Audit Discussion

The District completes annual audits of their SSMP beginning in December 2008. The audit is completed internally. The audit will include:

- Review of progress made on development of SSMP elements
- Identification of successes of implementing SSMP elements and needed improvements
- Description of system improvements during the past year
- Description of system improvements planned for the upcoming year

The District Manager at SAM submitted a report of the audit along the annual report to the RWQCB. Starting this last year, 2013 MWSD has developed and is maintaining a fully independent SSMP, not just the CIP and the maintanence elements pertaining to MWSD in the SAM SSMP, under the state and regional compliance requirement that each Agency maintain their own independent SSMP. The SSMP and audit verifications will be submitted both my MWSD and SAM.

ELEMENT XI: COMMUNICATION PLAN

This element of the SSMP discusses the District's Communication Plan.

Regulatory Requirements Summary for Communication Plan
RWQCB REQUIREMENTS: None.
SWRCB REQUIREMENTS: The District shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the District as the program is developed and implemented. The District shall also create a plan of communication with systems that are tributary and/or satellite to the District's sanitary sewer system.

Communication Plan Discussion

The District maintains a website (www.mwsd.montara.org) and publishes a quarterly activities newsletter and a monthly email update to inform the public about their activities. Information on the development and implementation of SSMP elements has and will continue to be included in these periodicals. SAM also has a very informative website (www.samcleanswater.org). District staff reports on the progress of SSMP development and implementation periodically at District Board Meetings, which are held twice monthly and open to the public. Minutes from the Board Meetings are also available on the website. As a member of the SAM joint-powers authority, the District communicates with other member wastewater agencies on a monthly basis.

In addition, informative bill stuffers are sent out in the water billing about District activities. And a newsletter is issued with detailed activities. When important actions by the public are required additional notification is made by ads in the Half Moon Bay Review and other means as available.