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Sanitary District No.5 of Marin County SSMP



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Sanitary District No.5 of Marin County

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- APPENDIX H – Element 9 (Monitoring, Measurement, & Program Modifications) Supporting Documents
- APPENDIX I – Element 10 (SSMP Audits) Supporting Documents
- APPENDIX J – Element 11 (Communication Program) Supporting Documents

List of Abbreviations and Acronyms

BACWA Bay Area Clean Water Agencies
BAPPG Bay Area Pollution Prevention Group
CIWQS California Integrated Water Quality System
FOG Fats, Oils, and Grease
GWDR General Waste Discharge Requirements
OERP Overflow Emergency Response Plan
OES Office of Emergency Services
RWQCB Regional Water Quality Control Board, San Francisco Region
SORP Sanitary Sewer Overflow Response Plan
SSMP Sanitary Sewer System Management Plan
SSO Sewer System Overflow
SWRCB State Water Resources Control Board
TOWN Town of Tiburon
NPDES National Pollution Discharge Elimination System
USA Underground Service Alert

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

SSMP Requirement Background

This 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, as described in the letter from the RWQCB to the Sanitary District No.5 of Marin County dated July 7, 2005. The RWQCB letter mandates that the District prepare an SSMP following the guidelines in the SSMP Development Guide prepared by the RWQCB in cooperation with the Bay Area Clean Water Agencies (BACWA). The District must also comply with RWQCB sanitary sewer overflow (SSO) electronic reporting requirements issued in November 2004.

More recently, the State Water Resources Control Board (SWRCB) acted at its meeting on May 2, 2006 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 (GWDR). The SWRCB action also mandates the development of an SSMP and the reporting of SSOs using an electronic reporting system. The SWRCB SSMP requirements are similar to the RWQCB requirements, but differ in organization and some details. Furthermore on August 8, 2013 the SWRCB adopted Order No WQ-2013-0058-EXEC which amended the reporting requirement for the GWDR.

Document Organization

This SSMP is intended to meet the requirements of both the RWQCB and the Statewide GWDR. 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 listed below. Each of these elements forms a section of this document. Parentheses indicate the title of the comparable SWRCB element.

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

Each element section is organized into sub-sections, as follows:

1. Description of both the RWQCB and SWRCB requirements for that element

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

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

Sanitary District Service Area and Sewer System

Sanitary District No.5 of Marin County is located in Marin County and serves the City of Belvedere and parts of the Town of Tiburon east of Gilmartin Drive. As of 2006, the District's service area had a population of approximately 6,400 people.

The District's sewer system consists of approximately 30.9 miles of pipe, ranging from 4 inches to 18 inches in diameter, and 24 pump stations (9 in the Tiburon Zone, 13 in the Belvedere Zone and 2 in the Paradise Cove Zone). 28.5 Miles of sewer is gravity line and the remaining 2.4 miles is Force Main. The District provides sewer service to most businesses and residents within the service area, as well as unincorporated areas within the District's sphere of influence. Collected sewage is conveyed to Sanitary District No.5 of Marin County's Main Plant. The main plant is located at 2001 Paradise Drive

SD#5 operates and maintains the sewer systems for both the City of Belvedere and the Town of Tiburon east of Gilmartin Drive and the majority of sewer collected in treated in the service area is residential with a very small commercial component serving downtown Tiburon. There is no industrial activities in our service area and the Tiburon/Belvedere peninsula is fully developed with very few opportunities for future developments.

Element 1: GOALS

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

1.1 Regulatory Requirements for Goals Element

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

RWQCB Requirement:

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 Requirement:

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.

1.2 Element 1 Appendix

There is no appendix associated with Element 1.

1.3 Goals Discussion

Providing safe, responsive, and reliable sewer service is a key component to fulfilling the District's mission statement: "The mission of Sanitary District No.5 of Marin County is to operate and maintain the wastewater treatment plants and related facilities in a safe, environmentally sound, efficient, and effective manner; to maintain a diverse work place for professional growth and job satisfaction; to protecting its assets and investments through sound and financial policies and practices; to improve service through long-range planning and wise use of technology; and to lead the discussion and development of strategies for addressing wastewater issues to benefit all customers."

In support of this mission, the District has developed the following goals for the operation and maintenance of its sewer system. These goals are to be carried out by District staff as part of the Operations and Maintenance program activities, which includes the sewer system.

1. Minimize sanitary sewer overflows.
2. Prevent public health hazards.
3. Minimize inconveniences by responsibly handling interruptions in service.
4. Protect the large investment in collection systems by maintaining adequate capacities and extending useful life.
5. Prevent unnecessary damage to public and private property.
6. Use funds available for sewer operations in the most efficient manner.
7. Convey wastewater to treatment facilities with a minimum of infiltration, inflow, and ex-filtration.
8. Provide adequate capacity to convey peak flows.
9. Perform all operations in a safe manner to avoid personal injury and property damage.

This SSMP supplements and supports the District's existing Operations & Maintenance Program and goals by providing high-level, consolidated guidelines and procedures for all aspects of the District's sewer system management. The SSMP will contribute to the proper management of the collection system and assist the District in minimizing the frequency and impacts of SSOs by providing guidance for appropriate maintenance, capacity management, and emergency response.

Element 2: ORGANIZATION

This section of the SSMP identifies District staff who is 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.

2.1 Regulatory Requirements for Organization Element

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

RWQCB Requirement:

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 Requirement:

The collection system agency's SSMP must identify:

1. The names of the responsible or authorized representatives;
2. The names and telephone numbers of management, administrative, and maintenance workers responsible for implementing specific measures in the SSMP program. Include lines of authority as shown in an organization chart or similar document with a narrative explanation; and
3. The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies, if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).

2.2 Element 2 Appendix

Supporting information for Element 2 is included in Appendix A. This appendix includes the following documents:

1. Table of sewer staff names and phone numbers (updated as needed).

2.3 Organization Discussion

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

Senior Wastewater Treatment Plant Operator: Under direction, leads, schedules, oversees, reviews, and reports the full range of Wastewater Treatment Plant Operator duties, including operations, controls and maintenance work in one or more of the District's wastewater treatment plants, pump stations, collection system, and related facilities; demonstrates a full understanding of all applicable policies, procedures, and work methods associated with assigned duties; performs other related duties as required.

Senior Wastewater Treatment Plant Operator: Under direction, leads, schedules, oversees, reviews, and reports the full range of Wastewater Treatment Plant Operator duties, including operations and maintenance work in one or more of the District's wastewater treatment plants, pump stations, collection

Sanitary District No5 of Marin County Org Chart



Figure 2-1. Organization Chart of Sewer Staff

Description of General Responsibilities

District Manager: Under policy direction, serves as the Chief Administrative Officer of the District and directs the activities and operation of all District functions, including administrative, financial, engineering, operating, maintenance, and construction; advises and assists the District Board in the conduct of District business; provides administrative oversight to the operational and policy functions of the District; coordinates District business with the various programs, officials, and outside agencies; provides a variety of other responsible and complex administrative support to the District Board; and performs other related duties as required.

SR WWTP Operator: Under direction, leads, schedules, oversees reviews and performs the full array of Wastewater Treatment Plant Operator duties, including operations, controls and maintenance work in one or more of the Districts WWTPs, pump stations, collections systems and related facilities. Demonstrates a full understanding of all applicable policies, procedures and work methods associated with assigned duties; performs other related duties as required.

Permits and Inspections: Under general supervision, performs the full array of duties, including the maintenance tasks for the sewer collection system, pump stations, treatment plant and related District facilities and equipment; demonstrates a full understanding of all applicable policies, procedures, and work methods associated with assigned duties; performs other related duties as required.

WWTP Operator: Under direction, leads, schedules, oversees, reviews, and performs the full array Wastewater Treatment Plant Operator duties, including operations, controls and maintenance work in one or more of the District's wastewater treatment plants, pump stations, collection system and related facilities; demonstrates a full understanding of all applicable policies, procedures, and work methods associated with assigned duties; performs other related duties as required.

SR WWTP Maintenance and Collection System Worker: Under direction, leads, schedules and performs the full array of duties, including the maintenance tasks for the sewer collection system, pump stations, treatment plant and related District facilities and equipment; demonstrates a full understanding of all applicable policies, procedures, and work methods associated with assigned duties; performs other related duties as required.

WWTP Collection System Worker: Under general supervision, performs the general array of duties, including the maintenance tasks for the sewer collection system, pump stations, treatment plant and related District facilities and equipment; demonstrates a general understanding of all applicable policies, procedures, and work methods associated with assigned duties; performs other related duties as required

Office Manager: Under direction, plans, coordinates, manages, and performs the District's administrative support activities for such functions as office support, budgeting, personnel, insurance, risk management, records management, and purchasing; performs a wide variety of paraprofessional administrative and financial tasks; prepares and learns policies, procedures, and work methods associated with assigned duties; performs other related duties as required.

Administrative Assistant: Under general supervision, performs a wide variety of routine, complex, and confidential office, secretarial, and administrative support tasks and duties; assists the public by providing information personally or directing information requests according to established procedures; sorts, logs, and maintains records and other documents; learns policies, procedures, and work methods associated with assigned duties; performs other related duties as required.

The Permits and Inspections Worker and the three Maintenance/Collection System Workers make up the Collection system staff responsible for the response to Sewer System Overflows, Emergencies, Pump Station Maintenance and Inspections, USAs and other general duties related to our Collection System during working hours. During non-working hours, the On-call operator is responsible for responding to such activities. The Permits and Inspection Worker is responsible for scheduling outside contractors to perform scheduled maintenance as part of our line cleaning program. The District uses ArcView GIS to store all the collection system activities within our service area, (videos, maintenance, permits, maps, etc).

Authorized Representative

The District's authorized representative in all wastewater collection system matters is the District Manager. The District Manager is authorized to certify electronic spill reports submitted to the SWRCB.

The SR WWTP Operator is authorized to act in the District Managers absence.

The District Manager is authorized to submit SSO reports to the appropriate government agencies. The Senior Wastewater Treatment Plant Operator is authorized to certify electronic spill reports in the absence of the District Manager

Responsibility for SSMP Implementation

The District Manager with assistance from SR WWTP Operator is responsible for implementing and maintaining all elements of this SSMP.

2.4 SSO Reporting Chain of Communication

Figure 2-2 contains a flowchart depicting the chain of communication for responding to and reporting SSOs, from observation of an SSO to reporting the SSO to the appropriate regulatory agencies. Table 2-1 lists contact phone numbers for the parties included in the chain of communication. The SSO Reporting process is described in more detail in Element 3: Overflow Emergency Response Plan.

Table 2-1. Contact Numbers for SSO Chain of Communication

Contact	Telephone Number
Sanitary District No.5 of Marin County (Main #)	(415) 435-1501
Answering Service (Sanitary District's Emergency #)	(415) 779-9048
District Manager (24/7 Availability)	(415) 716-7224
Senior Wastewater Treatment Plant Operator (On-call)	(415) 716-6371
Senior Wastewater Treatment Plant Operator (On-call)	(415) 947-2879
Senior WWTP Maintenance/Collection System Tech	(415) 286-1477
Senior WWTP Maintenance/Collection System Tech	(415) 572-8601

SSO Response Chain of Command

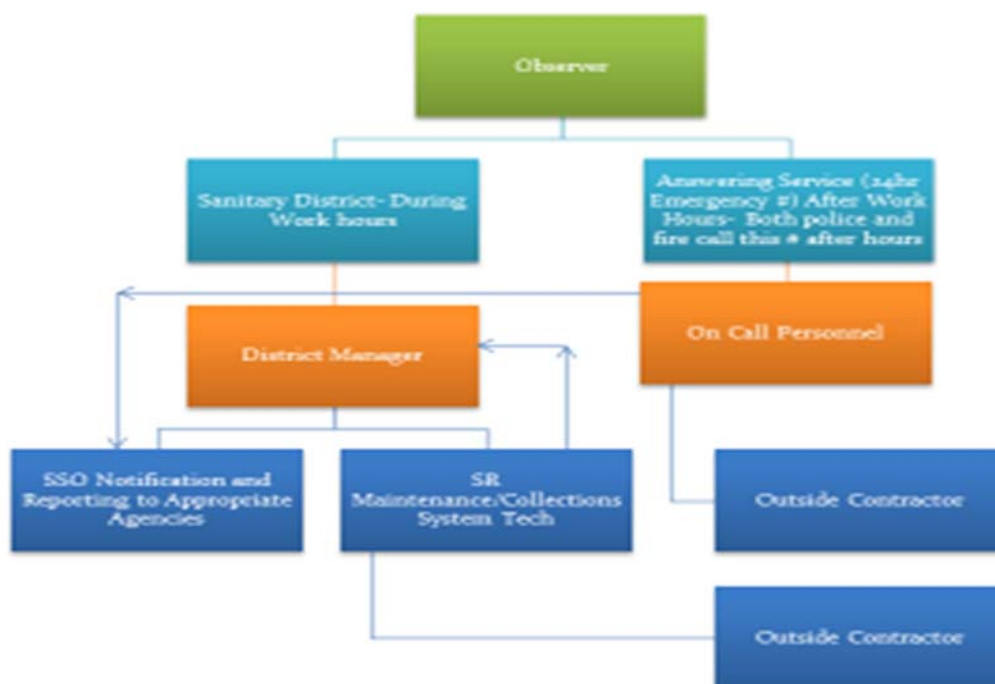


Figure 2-2. SSO Response Chain of Communication

Element 3: OVERFLOW EMERGENCY RESPONSE PLAN

This section of the SSMP provides an overview and summary of the District's emergency response documents and procedures for sewer overflows. Complete documentation of overflow response procedures are attached in Appendix B. This section fulfills the Overflow Emergency Response Plan requirement of both the RWQCB (Element 3) and the SWRCB (Element 6) SSMP requirements.

3.1 Regulatory Requirements for Overflow Emergency Response Plan Element

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

RWQCB Requirement:

The collection system agency 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 Requirement:

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

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

3.2 Element 3 Appendix

Supporting information for Element 3 is included in Appendix B. This appendix includes the following documents:

1. Sanitary District No.5 of Marin County Sanitary Sewer Overflow Response Plan
2. Sanitary District No.5 of Marin County Emergency Response Plan
3. Emergency Repairs Contractor Contact #'s

3.3 Overview of Sewer Overflow Response Documents

The District has three separate documents that define procedures or guidelines for responding to sewer overflows or other sewer-related emergencies (e.g., stoppages or pump station failures).

The Sanitary District No.5 of Marin County Sewer Overflow Response Plan (SORP) has been adopted as a general policy for the Sanitary District staff members and provides the overarching overflow emergency response procedures from the receipt of a sewer overflow complaint, through response and cleanup, to reporting of the overflow to the appropriate government agencies. This document is relevant to anyone involved in the overflow response process, including the person initially receiving information about SSOs, the response field crew and supervisor, the person responsible for submitting overflow reports, and other emergency responders who could potentially be involved in the process (police and fire departments). Also included in this plan are the report forms that must be filled out in the event of an overflow, as well as all contact numbers of relevant agencies requiring notification and web address with passwords for on-line submission to the Regional Board @ there ciwqs site.

The Sanitary District No.5 of Marin County Emergency Response Plan provides brief instructions on who to contact and how to respond in the case of a failure at either of the District's 24 pump stations located within the service area. This document includes information on all 24 pump stations within the District's service area and other emergency response documents related to the District.

The Emergency Contact #'s Binder is a list of contractors and their contact information in regards to emergency repairs in the event of sewer system emergencies and overflows. Also included is a list of on-call personnel of outside contractors for emergency cleaning activities in the collection system, all other emergency contact numbers and information are also included in this binder, i.e. staff, police, public works, fire, etc.

The Overflow Response Plan and Emergency Response Plan are summarized in the following subsections. These two documents and the Emergency Contact #'s binder are included in Appendix B. These documents provide the procedures and guidelines necessary for fulfilling both the RWQCB and SWRCB emergency response plan requirements.

3.4 Summary of Sewer Overflow Response Plan

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

- I. Introduction
- II. Sewer Overflow Inside
- III. Sewer Overflow Outside
- IV. Sewer Overflow Reporting Requirements
- V. Contractors for Emergency Repair
- VI. Report Forms

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

Initial Notification and Response

During regular work hours administrative staff answers phone calls. If a call comes in about an overflow, the administrative staff has a form called the S.S.O. Admin Initial Report Form, which is filled out with all the pertinent information for staff to respond to, investigate, and report on specific S.S.O's. This form also includes a chain of command in regarding who to notify in the event of an S.S.O. During non working hours the District has a 24/7 emergency phone number that can be called in regards to S.S.O's – a live operator takes the phone call and then calls the on-call operator and provides them all the pertinent information required to respond to the S.S.O. The District uses a SCADA system for alarming capabilities at all of the 22 pump stations within the service area.

Officials receiving immediate notification of the SSO vary depending on the size of the spill and whether or not the spill contains hazardous materials, affects surface waters, or has the potential to impact human health. Table 3-1 lists these officials and the circumstances under which they are notified immediately.

Table 3-1. Officials Receiving Immediate Notification of SSOs

Contact	Circumstance for Immediate Notification
Sanitary District Manager	All spills
Sanitary District Board of Directors	Major spills or those affecting surface water or human health
Tiburon or Belvedere Police	Major spills requiring police assistance for traffic control and/or public notification
Tiburon Fire Department	Spills involving hazardous materials
Marin County Department of Environmental Health	Spills that may impact human health or those affecting surface water
State Office of Emergency Services	Major spills (greater than 1,000 gallons) or those affecting surface water or human health.(within 2 hrs).
Regional Water Quality Control Board	Major spills (greater than 1,000 gallons) or those affecting surface water or human health (within 2 hours).

Public Notification

Potential public notification measures include temporary signage to indicate any polluted surface water or groundwater due to an SSO and notification through media outlets. The District Manager is responsible for determining whether temporary signage or notification is necessary for S.S.O's within the District's service area. The Marin County Health Officer is responsible for determining whether temporary signage and further notification are necessary in cases of S.S.O's reaching receiving waters. The District Manager is the contact person for all media notification.

Agency Reporting

Category 1

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

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

Notification Requirements: Category 1 SSOs require notification to CalOES (800-852-7550) within 2 hrs.

Reporting Requirements: All Category 1 SSOs shall be reported to the CIWQS online reporting database as soon as possible, but never later than three (3) business days after becoming aware of the SSO. A final certification of the report shall be completed within 15 calendar days of the conclusion of the SSO response and remediation.

For Category 1 SSOs with volume greater than or equal to 50,000 gallons, the following shall also be required:

1. **Technical Report** – to include detailed description of;
 - a. Causes and circumstances of the SSO
 - b. Enrollee's Response to the SSO
 - c. Water Quality Monitoring
2. **Sampling Requirements** – the receiving water shall be sampled and tested for the following constituencies per the SSO Water Quality Monitoring Plan.
 - a. Ammonia
 - b. Bacteriological contamination

Category 2

Definition: Discharges of untreated or partially treated wastewater greater than or equal to 1,000 gallons (applies to unrecovered volume) resulting from an enrollee's sanitary sewer system failure or flow condition that does not reach a surface water, a drainage channel or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.

Notification Requirements: All Category 2 SSOs require notification to CalOES (800-852-7550) within 2 hours.

Reporting Requirements: All Category 2 SSOs shall be reported to the CIWQS online reporting database as soon as possible, but never later than three (3) business days after becoming aware of the SSO. A final certification of the report shall be completed within 15 calendar days of the conclusion of the SSO response and remediation.

Agency Reporting

Category 3

Definition: All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.

Notification Requirements: Category 3 SSOs do not require CalOES notification.

Reporting Requirements: All Category 3 SSOs shall be reported to the CIWQS online reporting database no later than thirty (30) days after the end of the calendar month in which the SSO occurred.

“No Spill” Certification:

Definition: When no (0) SSO's occur in the month

Notification Requirement: None

Reporting Requirements: Certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred.

3.5 Sanitary District Emergency Response Plan

The Sanitary District Emergency Response Plan is a collection of forms and detailed response procedures directed at first responders and response crews. The emergency response plan is the District's main plan in regards to Emergency Response. This plan includes the Sewer System Response Plan in Section 4. The Emergency Response Plan consists of 7 sections. Section 5 and 6 are relevant to this SSMP. Section 5 consists of information regarding Hazardous Material Spill Response and Section 6 consists of information regarding Contingency Plans in regards to our pump stations and treatment plant.

Element 4: FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM

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

4.1 Regulatory Requirements for FOG Control Element

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

RWQCB Requirement:

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 Requirement:

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:

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

4.2 Element 4 Appendix

Supporting information for Element 4 is included in Appendix C. This appendix includes the following documents:

1. List of food facilities in our District's service area (potential grease dischargers)
2. Blank restaurant inspection form
3. "Fat Free Sewers" public outreach brochure
4. No Grease Down The Drain Poster

4.3 FOG Control Discussion

The District Adopted Ordinance 2015-01 in July 2015. An ordinance regulating the acceptance of fats , oil and grease into the sanitary sewer system of SD5. Less than 25 food service facilities are located within the District's service area that discharges into the Districts sewer system. This section discusses measures the District takes to control FOG. The District conducts yearly inspections and issues questionnaires and checks grease hauler logs to those facilities that do have grease removal devices installed.

The District's FOG control activities consist of focused cleaning and maintenance, as well as source control. The following subsections discuss identification and cleaning of grease-prone areas, legal authority to prohibit grease discharge or require a grease removal device, facility inspection, and public outreach.

Identification and Sewer Cleaning

The core means of FOG control utilized by the District is identification of trouble spots or sewer lines that are likely prone to grease accumulation and targeted cleaning of these areas.

- a. Identification of Grease Problem Areas: The District identifies potential grease problem areas by tracking areas with several restaurants or grease-producing facilities. Most of the restaurants located in our service area are bunched together on three streets (Main Street, Beach Road, and Tiburon Boulevard).
- b. Focused Cleaning: Cleaning frequency depends on the history of stoppages or overflows on a line, as well as areas expected to be prone to grease buildup. The District's downtown area has the highest concentration of restaurants; therefore, lines in this area are cleaned on a 6-month schedule.

The District maintains a computerized program that keeps track of all maintenance activities and schedules cleaning based on frequency as entered by the Collections staff. All man holes, pump stations, gravity lines, force mains, and restaurants that have grease removal devices installed are all located on this mapping system.

The focused cleaning also includes additional lines that are cleaned for reasons other than FOG. Additional information on this program, including a figure showing all lines in the program, is included in Element 6: Measures & Activities.

Additional information about cleaning and maintenance is included in Element 6: Measures & Activities.

Legal Authority

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

- Authority to prohibit discharges
 - Authority to require a grease removal device
 - Enforcement measures, as appropriate
- a. Legal authority to prohibit discharges. Ordinance 2014-02 of the Districts municipal code prohibits grease disposal, as follows:

Section 803. Types of Wastes Prohibited, Except as hereinafter provided, no person shall discharge or cause to be discharged any of the following described waters or wastes to any public sewer: (b) any water or waste which may contain more than 100 part per million, by weight, or fat, oil or grease

- b. Interceptors Required. Ordinance 2014-02 of the Districts municipal code requires Grease Interceptors per the opinion of the District Engineer:

Section 804. 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 building used for residential purposes. All interceptors shall be of a type and capacity approved by the District Engineer, and shall be so located as to be readily and easily accessible for cleaning and inspection.

Section 805. Maintenance of Interceptors. All grease, oil and sand interceptors shall be maintained by the owner, at his expense, in continuously efficient operation at all times.

- c. Enforcement. Ordinance 2014-02 Section 1001. Spell out the Districts enforcement procedures.

Section 1001. Violation. Any person found to be violating any provision of this or any other ordinance, rule or regulation of the District, except Sections 710 and 1101 hereof, shall be served by the Secretary or other authorized person with written notice stating the nature of the violation and providing a reasonable timetable for the satisfactory correction thereof. Said time limit shall be not less than two nor more than seven working days. The offender shall, within the time stated in such notice, permanently cease all violations. All persons shall be strictly responsible for any and all acts of agents or employees done under the provisions of this or any other ordinance, rule or regulation of the District. Upon being notified by the Secretary of any defect arising in any sewer or of any violation of this ordinance, the person or persons having charge of said work shall immediately correct the same.

Facility Inspection

The District voluntarily inspects grease-producing facilities (restaurants) yearly. Grease removal device cleaning logs and grease interceptors are inspected. Inspections are based on a list of food service facilities that have grease removal devices installed at their place of business. Inspections are conducted by the District Inspector on a semi-annual basis.

A current list of food service facilities within the District service area is included in Appendix C, based on the list maintained by the District ArcView GIS database. This list also indicates the Disposal Type and Company servicing their grease interceptor.

Public Outreach

The District has a brochure entitled “Fat-Free Sewers.” In addition to other means of reducing backups or blockages, this brochure discusses the role of fats, oils, and grease in causing blockages. This brochure is displayed at the District Main Office and on the Districts website (<http://www.sani5.org>). Additionally, sewer maintenance staff provides this brochure to residents who are affected by a blockage or backup. Additionally, all restaurants have been issued a “No Grease Down The Drain” poster to post in their kitchen to remind their employees to keep their drains and sewer free of grease. A copy of the brochure and poster is included in Appendix C.

Through our partnership fees and participation with the Wastewater Treatment Agencies of Marin County Public Education Group, the District also supports public outreach campaigns developed by the Group. The Group provides FOG public outreach at many different events by means of informational booths set up throughout Marin County. In addition to discouraging discharge of FOG into the sewers, our web-site also directs residents on how to properly dispose of FOG and also includes a link to www.baywise.org, which provides all kinds of information for disposal locations throughout the Bay Area.

The District also conducts seasonal outreach to the public prior to and during the November and December holiday season. There is anecdotal evidence of increased use of cooking oil during these holidays, particularly through the use of turkey fryers. The District, along with supporting materials from the Bay Area Pollution Prevention Group (BAPPG), is preparing for point-of-purchase labels that indicate the proper disposal of the grease to be located at deep fat fryer sales sites in local hardware stores.

Table 4-1. Summary Table With Respect to Possible FOG Elements Identified by the State

State Element	Sanitary District No.5 of Marin County
(a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG	Residential FOG not currently identified as a major SSO factor. The District's web site and current outreach programs are sufficient at this time. The routine inspection program planned is anticipated to be sufficient for restaurants.
(b) A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area.	The responsibility of grease disposal is on the restaurants
(c) The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG	The District's FOG program includes adequate legal authority to prohibit discharges and to identify measures to prevent SSOs and blockages from FOG.
(d) Requirements to install grease removal devices (such as traps or interceptors) design standards for the grease removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements	The District has an ordinance that requires grease interceptors for food service facilities, as required by the District Inspector.
(e) Authority to inspect grease producing facilities, enforcement authorities, and whether the City has sufficient staff to inspect and enforce the FOG ordinance	The District has adequate authority. Currently staff inspects food service facilities once a year with respect to assuring that the grease removal facilities are properly cleaned and maintained.
(f) An identification of sewer system sections subject to FOG blockages and establish a cleaning maintenance schedule for each section	Most food service facilities are located on two streets; therefore, a more aggressive approach is taken in regards to preventive maintenance of the lines in this area.
(g) Development and implementation of source control measures, for all sources of FOG discharged to the sewer system, for each sewer system section identified in (f) above	At this time, the cleaning schedule appears sufficient to prevent FOG overflows.

Element 5: LEGAL AUTHORITY

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

5.1 Regulatory Requirements for Legal Authority Element

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

RWQCB Requirement

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 Requirement

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

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

5.2 Element 5 Appendix

Supporting information for Element 5 is included in Appendix D. This appendix includes the following documents:

1. Ordinance 2014-02 –Sewer Use Reg
2. Ordinance 2010-03- Sewer Rates- Tiburon & Ordinance 2010-04 Sewer Rates- Belvedere

3. Ordinance 2014-01b – Connection Fees
4. Ordinance 2010-02 – Mercury Reduction
5. Ordinance 2015-01 – F.O.G
6. City of Belvedere 2005 annexation, SASM agreement.

5.3 Municipal Code

The legal authority required for the SSMP by the RWQCB and the SWRCB is contained within the District’s municipal code. Thirteen ordinances of the municipal code are dedicated to the sewer system.

Ordinance 2014-02 (70-02, 73-01, 93-02, 96-01, 2007-02, 2010-01 all amendments to 70-01) Regulating the use of public and private sewers and drains and discharge of waters and waste into the public sewer system and providing penalties for the violation of the provisions thereof.

Ordinance 2014-02 Adopting standard specifications as minimum standards for the design and construction of sewerage facilities within the boundaries of Sanitary District No.5 of Marin County.

Ordinance 2010-03, 2010-04 and 2014-01b Establishing and prescribing sewer service charges. Discusses policies pertaining to fees, including service charges, billing and collection, and calculation of connection fees.

Ordinance 2014-02, 2010-03 and 2010-04 as listed above pertain to the legal authority required for fulfillment of SSMP requirements. These chapters are included in full in Appendix D. Portions of these chapters are discussed in the following sub-sections as they pertain to prevention of illicit discharges, proper design and construction of sewer and connections, maintenance access, and enforcement measures.

Prevention of Illicit Discharges

All measures prohibiting illicit discharges are included in Ordinance 2014-02 Article VIII. Use of Public Sewers. The specific purpose of the Ordinance is to prevent the discharge of any pollutant into the sewers that would obstruct or damage the collection system, interfere with treatment, or threaten harm to human health or the environment. Examples of discharges covered are included below. Refer to the municipal code included in Appendix D for the complete text.

Section 801. Drainage into Sanitary Sewers Prohibited, relates to I/I Inflow and Infiltrations into the sewer system

Section 802. Use of Storm Sewers Required, relates to the use of storm sewers for storm water and all other non-polluted drainage to storm sewers.

Section 803. Types of Wastes Prohibited, lists all described wastes and waters that are prohibited for discharge into any public sewer.

Ordinance 2010-02 Mercury Reduction Program, relates to the reduction of mercury discharged to the sewer system, by requiring dental amalgam removal devices for dentists in our service area.

Proper Design and Construction of Sewers and Connections

Regulations pertaining to the design, construction, and inspection of private sewer systems, building sewers, and connections are included in Ordinance 70-01, 96-02 and 2007-02 of the Municipal Code.

Section 901 of Ordinance 2014-02. Permit Required, No unauthorized person shall uncover, make any connections with or opening into, use, alter, or disturb any public sewer or appurtenance or perform any work on any plumbing or drainage system under the jurisdiction of the District, including additions to or modifications of plumbing facilities within a building, without first obtaining a written permit from the District.

Ordinance 2014-02 specifies the proper design of sewer connections and all applicable requirements and standards as required by the District. This information can also be found on our web-site under Specs/Standards @ www.sani5.org.

Ordinance 2014-02 specifies the Construction Requirements of sewer connections and all applicable requirements and standards as required by the District. This information can also be found on our web-site under Specs/Standards @ www.sani5.org.

Section 913 of Ordinance 2014-02 All Work To Be Inspected. All sewer construction work, building sewers, plumbing and drainage systems shall be inspected by an Inspector acting for the District or for the City, or for the County or for any and all of entities having jurisdiction thereover, to insure compliance with all requirements of the District, the City or County.

Lateral Requirements

Article VI of Ordinance 2014-02 Section 601-612 relate to all the District requirements and regulations pertaining to Lateral Sewers. Ordinance 2014-02 Section 613 relates to the Districts responsibility in preventing all SSO's including those from sewer laterals. In or to comply with the statewide WDR order the District placed section 613 into effect Ordinance 2014-02 as seen in appendix D.

Limit Discharge of FOG and Other Debris

As discussed under Element 4: Fats, Oils, and Grease (FOG) Ordinance 2015-01 prohibits grease disposal, including discharge to any public or private sanitary sewer, and requires a grease removal device for commercial grease generators as required by the District. It also includes requirements for cleaning grease removal devices.

Discharge of debris would be covered by the ordinance as well, which, among other things, prohibits discharge of any waste that could create a nuisance, cause damage to the sewer system or cause extra collection, treatment, or disposal cost. Additionally, the ordinance prohibits discharge of solids that will obstruct or damage the collection system.

Enforcement Measures

Different enforcement measures are available for enforcement of sewer provisions in Chapter 10.04 (use and construction of sanitary sewer facilities) and Chapter 10.08 (prevention and control of pollution).

Chapter 10.04, Article 6 includes enforcement measures for violations of provisions included in that chapter. Written notice is provided to persons in violation, with a time limit for correction. Further enforcement provisions include declaration of a public nuisance and disconnection from public sewers. The person in violation is liable to the city for expense, loss, or damage resulting from the violation.

Chapter 10.08, Section 10.04.440 through Section 10.08.470, includes enforcement measures for violations of provisions included in that chapter. Enforcement measures range from issuance of a notice of non-compliance to criminal penalties.

Element 6: MEASURES AND ACTIVITIES

The requirements for the Measures and Activities element of the SSMP are summarized below:

This section of the SSMP discusses the Districts operations, maintenance and other related measures and activities. This section fulfills the Measures and Activities SSMP requirement for the RWQCB (Element 6) and the Operation and Maintenance Program SSMP requirement for the SWRCB (Element 4).

6.0 Regulatory Requirements for Measures and Activities

RWQCB Requirement:

The District must maintain current maps of its collection system facilities.

SWRCB Requirement:

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.

Resources and Budget

RWQCB Requirement:

The District must demonstrate that adequate resources are allocated for the operation, maintenance, and repair of the District's collection system.

SWRCB Requirement:

None

Preventive Maintenance

RWQCB Requirement:

The District must demonstrate that prioritized preventive maintenance activities are performed by the District.

SWRCB Requirement:

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.

Condition Assessment

RWQCB Requirement:

The District must identify and prioritize structural deficiencies and implement a program of prioritized short-term and long-term actions to address them.

SWRCB Requirement:

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, 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 appropriating the funds needed for the capital improvement plan.

Equipment

RWQCB Requirement:

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.

SWRCB Requirement:

The District must provide equipment and replacement part inventories, including identification of critical replacement parts.

Training

RWQCB Requirement:

The District must provide training on a regular basis for its collection system operations, maintenance, and monitoring staff.

SWRCB Requirement:

The District must provide training on a regular basis for staff in sanitary sewer system operations, maintenance, and require contractors to be appropriately trained.

Outreach to Plumbers and Building Contractors

RWQCB Requirement:

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 Requirement:

None

Measures and Activities Discussion

The section summarizes the measures and activities of the District to manage its sewer system.

6.1 Map

The District maintains a computerized GIS system called ARCVIEW GIS program for mapping. Maps include manholes with identifying number, pipe diameters, and callouts for inverted siphons, pump stations, valve boxes, street names, and some pipe materials.

The Permits/Inspections worker 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 book that contains the entire sewer system at a scale of 1" = 225'. Each crew carries a copy of the map book in their truck. New copies of the map books pages are produced as changes occur.

6.2 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, miscellaneous equipment). Element 2 lists the District personnel with their responsibilities for overseeing implementation of the various SSMP Elements.

Appendix E contains a copy of the budget for the latest fiscal year and the 10 year CIP program and sample of the collections system map for both zones.

6.3 Preventive Maintenance

The District has equipment and staff needed to clean all pump stations. All main lines and large diameter trunk line cleaning is performed by outside contractors as needed. The District cleans the entire 33-mile system every 12-18 month. The frequency of cleaning all lines has improved due to the purchase of the Rodder truck, and cleans specific portions of the system, with known problems, on a 6-month basis. Maintenance is performed by 4 maintenance/collections system workers. These 4 workers handle all pump station maintenance activities and assist our outside contractors' on-line cleaning and repairing activities. All major pump stations (PS#1 Belvedere & PS#5 Tiburon, which pump directly to the main plant) are checked daily and all minor pump stations (PS#2,3,5,7,8,9,10,11,12,13,14,15 Belvedere & PS#1,2,3,4,6,7,8,9 which pump to gravity sewers or small force mains) are checked on Mondays, Wednesdays, and Fridays by the pump station crew. Emergency and routine repairs, including installation of new manholes and roddng inlets, are performed by outside contractors.

All District service calls and work orders are recorded in CMMS. 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. The District has implemented and continues to refine its mapping program described above, CMMS is used to serve as a computerized maintenance management system that will keep records of service calls and generate as-needed work orders for service calls, and automatic work orders for regular and 6-month maintenance. The CMMS tracks historical information about each pipe segment that will be used to identify additional pipe segments to be added or removed from the six-month priority maintenance schedule in order to optimize the District's preventive maintenance activities.

6.4 Condition Assessment

Currently, 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. Most CCTV inspection work is completed under contract, although the District does utilize a push camera for in-house CCTV inspection. Results of CCTV inspections are generally provided in the form of written or printed reports and videotapes. Beginning in Fiscal Year 2005, the District launched a CCTV inspection program to assess the condition of their entire gravity sewer system for both Tiburon and Belvedere zones. Inspection of each pipe segment was recorded and scored according to 5 rating criteria, the procedure is outlined in the Harris Report- Copies of these reports are in appendix E.

Over the past several years, the District has completed various sewer rehabilitation and replacement projects and maintains a list of identified sewer rehabilitation needs. The District's Harris Reports for both zones (2006) included a review of the District's list of identified sewer rehabilitation needs. The recommended system improvements presented in the 2006 Harris Reports were incorporated into the District's Capital Improvement Strategic Plan (CIP). As discussed in Section 6.2

In 2016 the District hired Nute Engineers to complete a Pump Station condition assessment report which would assist staff in completing a master 10 yr CIP project to also include Pump Station and Force Main Rehabilitation. The condition assessment report can be found in appendix E.

Resources and annual budgets for rehabilitation and replacement of gravity sewers, force mains, and pump stations are included in the CIP through Fiscal Year 2025. The budgets are accompanied by a schedule for implementing recommended system improvements.

6.5 Equipment

The District has equipment available for regular maintenance and repairs and to respond to an SSO event. Appendix E contains a current list of the District's equipment including quantities and location where the equipment is kept. The District also has a list of contractors who can be contacted during an SSO event to provide a variety of services, including private residence cleaning, force main and pipeline repairs, welding, diesel fuel, and tank trucks. Appendix E also contains a current list of local contractors.

6.6 Training

All District staff receives safety training in accordance with Occupational Safety and Health Administration (OSHA) requirements.

The safety officer at the District and Outside Contractors provide training to District staff for confined space, blood borne pathogens, self contained breathing apparatus (SCBA), and general emergency response.

The District provides training on system equipment, operations and maintenance, and annual lockout/tagout procedures. All operations personnel will be trained in overflow emergency response. 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 office.

6.7 Outreach to Plumbers and Building Contractors

The District historically has had intermittent contact with local plumbers and building contractors. In the future, the District anticipates utilizing the contractor and plumber outreach materials and guidelines being developed by the Bay Area Clean Water Agencies (BACWA).

Element 7: DESIGN & CONSTRUCTION STANDARDS

This section of the SSMP discusses the District's design and construction standards. This section fulfills the Design and Construction Standards SSMP requirement for the RWQCB (Element 7) and the Design and Performance Provisions SSMP requirement for the SWRCB (Element 5).

7.1 Regulatory Requirements for Design & Construction Standards

The requirements for the Design and Construction elements of the SSMP are summarized below.

RWQCB Requirement

The District shall identify minimum design and construction standards and specifications for the installation of new sewer systems and for the rehabilitation and repair of existing sewer systems. The District should evaluate if the existing design standards are appropriate and up to date. If the District believes its current standards are appropriate, the District can refer to the documentation that already exists.

The District shall also identify procedures and standards for inspecting and testing the installation of new sewers, pump stations, and other appurtenances and for rehabilitation and repair projects. The SSMP may refer to existing documentation.

SWRCB Requirement

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 also have procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

7.2 Element 7 Appendix

Supporting information for Element 7 is included in Appendix F. This appendix includes the following documents:

1. Ordinance 2014-02 "An ordinance adopting standard specifications as minimum standards for the design and construction of sewerage facilities within the boundaries of Sanitary District No.5 of Marin County.

7.3 Design & Construction Standards Discussion

Ordinance 2014-02 covers the District's Design and Construction standards as required per the SSMP element. Section 12 covers references to standard specifications, Section 13 of the Ordinance covers earthwork, Section 14 covers Sewer Pipelines, Section 15 covers Demolition and abandonment of lines and structures, Section 16 covers manholes, Section 17 covers structural concrete, section 18 covers casting and metal fabrications, Section 19 covers painting and Section 20 covers surface restoration.

Many of these specifications included in Ordinance 2014-02 of the District's standard specifications would also apply to sewer pipeline rehabilitation and repair projects. Additional specifications related to sewer rehabilitation and repair will be added as needed when such projects are implemented by the District, or will be included in project-specific specifications.

The District owns 24 small pump stations and does not anticipate any additional pump stations to be built because the District's service area is pretty much built out. Therefore, pump station plans and specifications are not included in the standards. Design standards and construction specifications for pump stations will be developed as needed on a project-specific basis should any new pump stations or pump station rehabilitation projects be implemented.

Element 8: CAPACITY MANAGEMENT

This section of the SSMP discusses the District's capacity management measures. This section fulfills the Capacity Management SSMP requirement for the RWQCB (Element 8) and the System Evaluation and Capacity Assurance Plan SSMP requirement for the SWRCB (Element 8).

8.1 Regulatory Requirements for Capacity Management

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

RWQCB Requirement:

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

SWRCB Requirement:

The District must evaluate those portions of the sanitary sewer that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows associated with condition similar to those causing overflow events, estimates of the capacity of key systems components, hydraulic deficiencies, and major sources that contribute to the peak flows associated with 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 CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules.

Capacity Management Discussion

To date, the District has not had an overflow event that has been attributed to capacity deficiency. All main lines in the District's service area are of 6" diameter or larger in size. The Town of Tiburon in our service area and the City of Belvedere are close to being completely built out and no major increases in flow are anticipated in the near future. The District, up until this point has decided that because there have not been any SSO's attributed to hydraulic or capacity deficiencies that it would not be fiscally responsible to conduct such a large and expensive study. The District is very small in size and to conduct a study of this type would be very costly and would take away from the capital funds that have all ready been budgeted for repairs and replacement of bad sections of the sewer system, as was identified by the 2005 Harris Report and the District's 10-year Sewer Line and Man Hole rehabilitation CIP project. The District is currently in the preliminary stages of putting together a request for proposal to do the flow monitoring of our collection system in both zones during the dry weather season and wet weather season. This information will be updated as the District continues with its work in generating the document and as funds are budgeted for this type of activity in the next fiscal year 2010'-11'. Details are in appendix G.

Element 9: MONITORING, MEASUREMENT, & PROGRAM MODIFICATIONS

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

9.1 Regulatory Requirements for Monitoring, Measurement, & Program Modifications

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

RWQCB Requirement:

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. The SSMP should discuss performance indicators to be tracked and a description of how the District plans to keep the SSMP up-to-date.

SWRCB Requirement:

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; and
- Identify and illustrate SSO trends, including: frequency, location, and volume.

9.2 Element 9 Appendix

Supporting information for Element 9 is included in Appendix H. This appendix includes the following documents:

1. Element 9: SSMP Monitoring Tracking Sheet

9.3 Monitoring and Measurement Discussion

Table 9-1 lists each SSMP element, the overall purpose of the SSMP element, and the specific parameters that the District plans to track that will help in evaluating the effectiveness of the SSMP.

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

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

SSMP Element	Summary of Element Purpose	Parameters for Tracking Effectiveness (Annual)
Goals	Establish priorities of District and provide focus for District staff	None needed
Organization	Document organization of District staff and chain of communication for SSO response	None needed
Overflow Emergency Response	Provide timely and effective response to SSO emergencies and comply with regulatory reporting requirements	Average and maximum response time Percent of total overflow volume contained or returned to sewer
Fats, Oils, & Grease Control	Minimize blockages and overflows due to FOG	Number of blockages due to FOG Number of overflows due to FOG Number of FOG producing facilities inspected
Legal Authority	Ensure the District has sufficient legal authority to properly maintain the system	None needed
Measures and Activities	Minimize blockages and SSOs by properly maintaining the system and keeping the system in good condition	Total number and volume of SSOs Number of repeat SSOs (same location as any previous SSO, regardless of year of occurrence) Total number of mainline blockages Number of pump station failures Number of pipe failures
Design & Construction Standards	Ensure new facilities are properly designed and constructed	None needed
Capacity Management	Minimize SSOs due to insufficient capacity by evaluating system capacity and implementing necessary projects	Number of SSOs due to capacity limitations or wet weather
Monitoring, Measurement, & Program Modifications	Evaluate effectiveness of SSMP, keep SSMP up-to-date, and identify necessary changes	None needed
Program Audits	Formally identify SSMP effectiveness, limitations, and necessary changes on an annual basis	Date of completion of last annual audit
Communication Plan	Communicate with the public and satellite agencies.	None needed

9.4 SSMP Modifications

The SSMP needs to be updated periodically to maintain current information, and programs need to be enhanced or modified if they are determined to be less effective than needed. The District will review the successes and needed improvements of the SSMP as part of the SSMP annual audit, described in Element 10.

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

Element 10: SSMP AUDITS

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

10.1 Regulatory Requirements for SSMP Audits

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

RWQCB Requirement:

The District shall 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 the audit to the RWQCB by March 15 of the year following the calendar year for which the analysis applies.

SWRCB Requirement:

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 Districts compliance with the SSMP requirements, including identification of any deficiencies in the SSMP and steps to correct them.

10.2 SSMP Audits Discussion

The District will complete audits of the SSMP each year, and will include a report on the audit with the annual SSO report to the RWQCB submitted by March 15. The audit will include the following:

- Review of progress made on development of SSMP elements
- Review of monitoring and measurement tracked under Element 9
- 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, with an estimated schedule for implementation

Upon completion of the audit, the District will keep a report of the audit on file to fulfill the SWRCB audit requirement. A new audit form was completed in 2018 along with a change log identifying changes. A copy of each audit will be stored in Appendix I of the SSMP.

Element 11: COMMUNICATION PROGRAM

This section of the SSMP discusses the District's communications with the public. This section fulfills the Communication Program requirement for SWRCB (Element 11). The RWQCB has no equivalent requirement.

11.1 Regulatory Requirements for Communication Program

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

RWQCB Requirement:

None.

SWRCB Requirement:

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.

11.2 Communication Program Discussion

The District maintains a website (<http://www.sani5.org>) to inform the public about District activities. The District's website is an effective communication channel for providing alerts and news to the public. The main page of the website provides important announcements, agendas, and minutes of the District Board of Directors' meetings, and other key information for our residents.

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