

SANITARY DISTRICT NO. 2 OF MARIN COUNTY
(A SUBSIDIARY DISTRICT OF THE TOWN OF CORTE MADERA)

SEWER SYSTEM MANAGEMENT PLAN

August 2006 (Elements 1-4)
August 2007 (Elements 5-7)
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Project #06-201



THE TOWN OF
CORTE MADERA

MARIN COUNTY CALIFORNIA

300 TAMALPAIS DRIVE
CORTE MADERA, CA 94925

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- Appendix B: Overflow Emergency Response Plan
- Appendix C: Sewer System Master Plan
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INTRODUCTION

Background:

This Sewer System Management Plan (SSMP) has been prepared in conformity with requirements of the San Francisco Bay Regional Water Quality Control Board (RWQCB) Pursuant to Section 13267 of the California Water Code, as expressed in the letter from the RWQCB to the District dated July 7, 2005. The RWQCB letter 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 sewers to be regulated under General Waste Discharge Requirements (WDR). The SWRCB action, which will apply to Sanitary District No. 2 of Marin County (District), also directs the development of an SSMP 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.

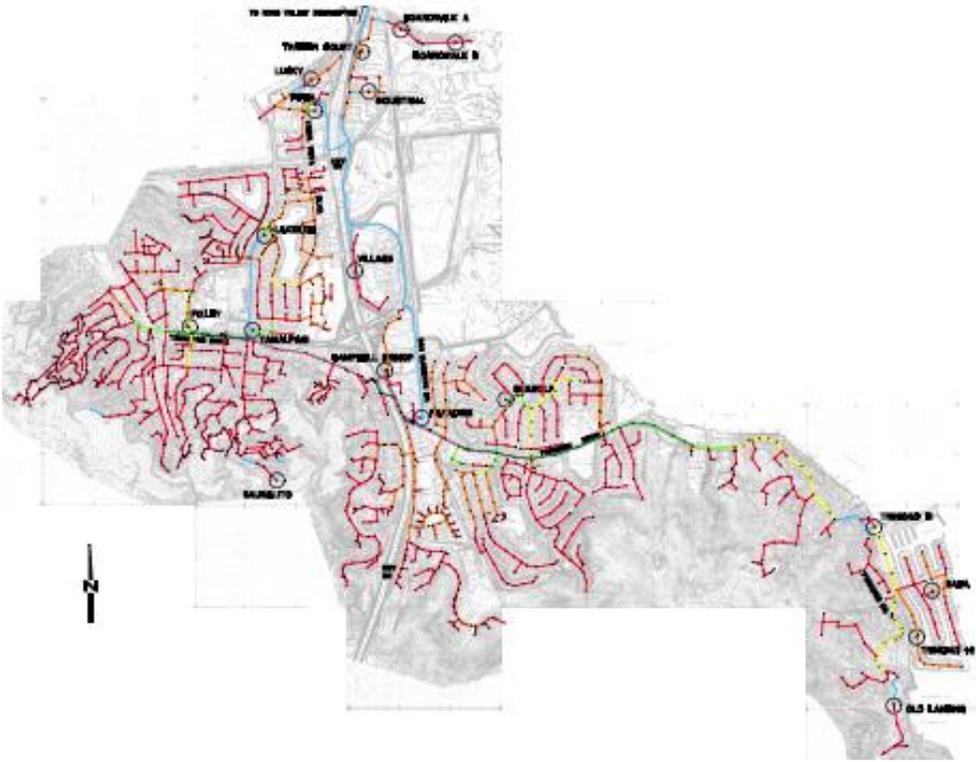
The District's SSMP has been prepared with the intent of meeting the requirements of both the RWQCB and the Statewide WDR. The organization of this document is consistent with the RWQCB guidelines, but the contents address both the RWQCB and SWRCB requirements. The SSMP includes eleven elements, as follows:

- 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

System Overview:

Sanitary District No. 2 of Marin County serves 4.5 square miles and provides sewerage collection services for the Town of Corte Madera, small portions of the surrounding communities of Larkspur and Tiburon and some adjacent unincorporated County land. The District operates the 44.7 miles of the gravity sewerage collection system, nineteen pump stations, and 5.1 miles of force mains. Upgrading the system’s pumping capacity and ongoing maintenance of all sewer lines are District priorities.

Figure 1, Thumbnail Map of System:



Sanitary District No. 2 of Marin County is a member of the Central Marin Sanitation Agency (CMSA) whose member agencies (Sanitary District No. 1, Sanitary District No. 2, City of Larkspur and the San Rafael Sanitation District) joined together in 1979 to oversee the planning, construction and operation of a wastewater interceptor and treatment plant in central Marin. The CMSA plant on the north side of Point San Quentin was completed in 1985. Its dry weather capacity is ten million gallons per day (MGD). The flow from Sanitary District No. 2 is delivered to the treatment plant through the Ross Valley Interceptor that includes the flows from the other member Agencies

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 for Goals Element
<p>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.</p>
<p>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.</p>

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 and operate 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
<p>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.</p>
<p>SWRCB Requirement: The collection system agency's SSMP must identify:</p> <ol style="list-style-type: none">1. The name of the responsible or authorized representative;2. The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. Include lines of authority as shown in an organization chart or similar document with a narrative explanation; and3. 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)).

Organization Discussion

The following sections outline the District's organization, general and SSMP responsibilities of personnel, authorized representative, and chains of communication for SSO responding and reporting.

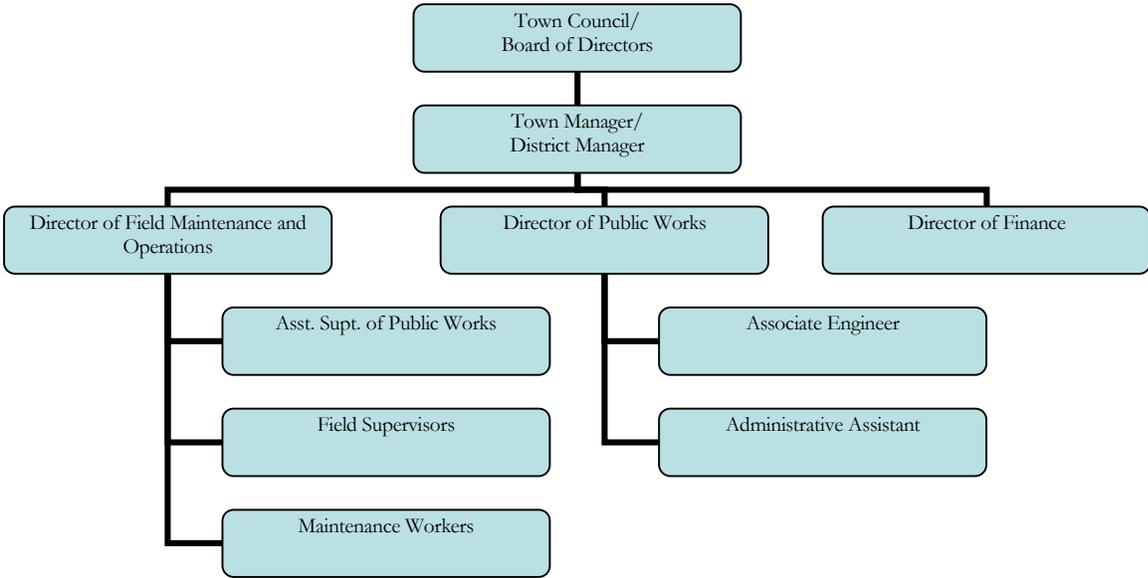
Names and contact information for current staff is available in Appendix A.

District Organization

The District is a subsidiary district of the Town of Corte Madera organized under the California Health and Safety Code and the Sanitary Acts of 1891 and 1923.

The District is governed by a 5-member Board of Directors elected at large as Council Members of the Town of Corte Madera. Directors serve four year terms. The District Board routinely meets on the first and third Tuesday of each month, with special meetings called as necessary. Daily management is carried out by the Director of Public Works who oversees the District's staff and reports to the District Manager who reports to Board of Directors. Figure 2-1 illustrates the District's organizational structure.

Figure 2, District Organization Chart:



Description of General Responsibilities:

Town Manager/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.

Director of Public Works

Under direction from the District Manager, the Director of Public Works plans and manages the affairs of the District and oversees in all functions and operations. The Director of Public Works represents Board policy and programs

with employees, community organization, and the general public. The Director of Public Works reviews budget requests and makes recommendations to the District Manager/Board on final expenditure levels, manages all labor/management activities, and performs all related work as required.

Director of Finance

Under general direction of the District Manager, the Director of Finance is responsible for the planning and supervision of the District's accounting and financial record keeping activities. The Director of Finance provides a variety of responsible professional assistance in the areas of accounting, budgeting, and fiscal planning and control, and performs related work as assigned.

Administrative Assistant

Under direction and supervision of the District Manager, the Administrative Assistant 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.

Director of Field Maintenance and Operations

Working cooperatively with the Director of Public Works under direction from the District Manager, the Director of Field Maintenance and Operations plans, directs, manages, and reviews the activities of the Maintenance Department of the District. The Maintenance Department maintains, cleans, and repairs the District's wastewater collection system, pump stations, and related appurtenances.

Assistant Superintendent

The Assistant Superintendent assists the Superintendent in planning, directing, managing, and reviewing the activities of the Maintenance Department of the District. The Maintenance Department maintains, cleans, and repairs the District's wastewater collection system, pump stations, and related appurtenances.

Associate Engineer

Under general direction of the Director of Public Works, the Associate Engineer plans, organizes, administers and directs the maintenance, repair, installation and upgrading of the District's wastewater collection system infrastructure and maintains a database on these facilities. The Senior Engineer provides highly technical professional assistance to the Director of Public Works. The Associate Engineer performs the full range of civil engineering and office work of a routine to complex nature, including development review, design, management, upgrading, inspection of physical facilities and related project work. The Associate Engineer provides engineering services to District staff, including field operations and maintenance personnel and performs related duties as assigned.

Field Supervisor

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 wastewater collection system, pump stations, and related appurtenances. The Field Supervisor is responsible for regularly leading a crew(s) and has specialized responsibilities such as enforcement of District safety regulations.

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 wastewater collection system, pump stations, and related appurtenances.

Authorized Representative

The Director of Public Works is the District's authorized representative registered with the San Francisco Bay Regional Water Quality Control Board SSO eReporting Program and the California Integrated Water Quality System (CIWQS) to certify SSO reports. The Director of Field Maintenance and Operations and Asst. Supt. of Public Works are authorized to prepare and submit electronic reports.

Responsibility for SSMP Implementation

The Director of Public Works is responsible for overseeing the overall implementation of the SSMP. He is also for implementing the separate SSMP elements, with the assistance of the Superintendent on elements 3 and 9. Table 2-1 summarizes the responsibilities for SSMP implementation by element.

Table 1, Responsibility for SSMP Implementation by Element

Element	Responsible
1- Goals	Director of Public Works
2- Organization	Director of Public Works
3- Overflow Emergency Response Plan	Director of Public Works, Director of Field Maintenance and Operations
4- FOG Control	Director of Public Works
5- Legal Authority	Director of Public Works
6- Measures and Activities	Director of Public Works
7- Design and Construction Standards	Director of Public Works
8- Capacity Management	Director of Public Works
9- Monitoring, Measurement and Program Modifications	Director of Public Works, Director of Field Maintenance and Operations
10 – SSMP Audits	Director of Public Works

11 – Communication Plan	Director of Public Works
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Responsibility for Element 1 - Goals

The Director of Public Works is responsible for leading staff in the implementation of the District’s goals.

Responsibility for Element 2 – Organization

The Director of Public Works 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

The Director of Public Works and Director of Field Maintenance and Operations are responsible for implementation of the Overflow Emergency Response Plan, including revisions to the plan and annual trainings for maintenance crew members.

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

The Director of Public Works is 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 Director of Public Works is responsible for upholding the District’s Sanitary Code and drafting new ordinances, as needed.

Responsibility for Element 6 – Measures and Activities

The Director of Public Works 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, and 3) Training for Maintenance Workers. The Senior Engineer is responsible for 1) the Collection System Map, 2) Scheduled Inspections and Condition Assessment, and 3) Training for Department.

Responsibility for Element 7 – Design and Construction Standards

The Director of Public Works is responsible for reviewing design and construction documents to ensure that all construction projects meet the District’s standards. The Director of Public Works 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, and updating standards for inspections and testing of new and rehabilitated facilities, as needed.

Responsibility for Element 8 – Capacity Management

The Director of Public Works is responsible for establishing and assessing capacity requirements for the District’s collection system and for preparation and implementation of the District’s System Evaluation and Capacity Assurance Plan, as well as the development and implementation of the District’s long-term Capital Improvement Plan including updating budgets and schedules.

Responsibility for Element 9 – Monitoring, Measurement and Program Modifications

The Director of Public Works and Director of Field Maintenance and Operations are responsible for monitoring implementation and assessing success of the overall SSMP program elements with the assistance of staff. They are also responsible for identifying trends in SSO occurrences and providing recommendations to the District Manager.

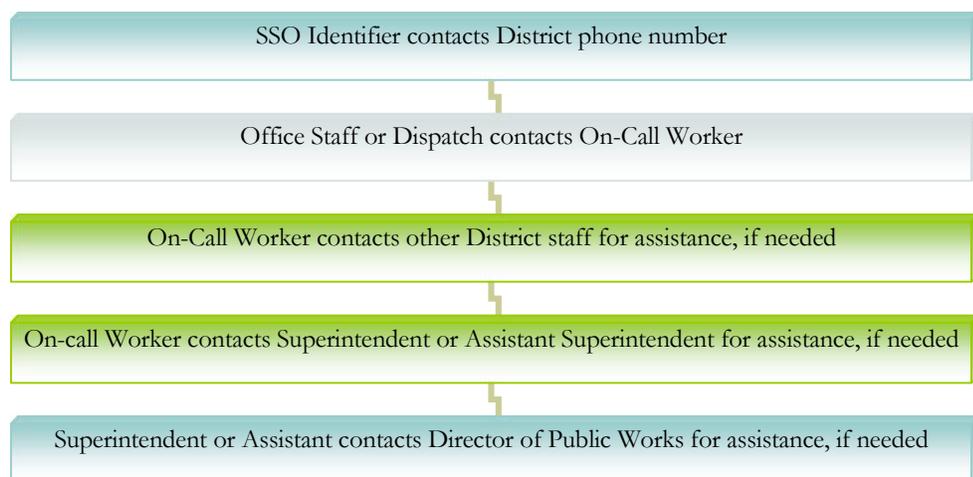
Responsibility for Element 10 – SSMP Audits

The Director of Public Works is responsible for overseeing annual SSMP Audits

Responsibility for Element 11 – Communication Plan

The Director of Public Works is responsible for communicating with the public and nearby agencies the status of the District’s SSMP.

Figure 3, Chain of Communication for Responding to SSOs



Chain of Communication for Responding to SSOs

The communication chain for responding to an SSO is shown above in Figure 2. Detailed information on the District’s overflow response procedure can be found in Element 3 Overflow Emergency Response Plan and in the District’s full Sewer Overflow Response Plan in Appendix C

Table 2, SSO Reporting Responsibilities

Personnel	Reporting Responsibilities
On-call Worker 	<ul style="list-style-type: none"> • Faxes Marin Co. DHS SSO form (>100 or in private res.) • Completes SD#2 SSO report form <p>And for Spills >1000 gal or enters waterway/causes fish kill/ISDHH*:</p> <ul style="list-style-type: none"> • Calls OES to notify • Calls Dept. of Fish and Game • Faxes RWQCB <p><small>*ISDHH = imminent and substantial danger to human health</small></p>
Superintendent	<ul style="list-style-type: none"> • 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 2. Detailed information on SSO reporting can be found in Element 3 Overflow Emergency Response Plan and in the District’s full Overflow Emergency Response Plan in Appendix C.

**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.

Regulatory Requirements Summary for OERP Element
<p>RWQCB Requirement: 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.</p>
<p>SWRCB Requirement: 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:</p> <ul style="list-style-type: none">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 Master Reclamation Permit (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 National Pollution Discharge Elimination System (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; andf. 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. 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 Town of Corte Madera's website (www.ci.corte-madera.ca.us). 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.

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 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 90-minutes, including the on-call Maintenance Worker arriving at the Public Works Maintenance office to retrieve response equipment and then 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.

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 3, Summary of Reporting Requirements by Agency and SSO Type

	<u><100 gallons</u>		<u>100-1000 gallons</u>		<u>>1000 gallons</u>	
	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
SD#2 Blockage Card	X	X	X	X	X	X
Marin Co. DHS 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 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 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
<p>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.</p>
<p>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:</p> <ol style="list-style-type: none"> a. An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG; b. A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area; c. The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG; d. Requirements to install grease removal devices (such as traps or interceptors) design standards for the grease removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements; e. Authority to inspect grease producing facilities, enforcement authorities, and whether the District has sufficient staff to inspect and enforce the FOG ordinance; f. An identification of sewer system sections subject to FOG blockages and establish a cleaning maintenance schedule for each section; and

SWRCB Requirements: (cont.)

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.

FOG Control Program Discussion

Currently, the District 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.

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.

In 2006, 2 of the District’s 18 SSOs, or 11 percent, were attributed to grease blockages. Of the 2 2006 SSOs caused by grease blockages none occurred during wet weather and none occurred at the same location.

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.

As part of the District’s rehabilitation plan, the District is performing additional CCTV work through out the system. The CCTV work helps to identify and verify causes of grease problems. Lines with known poor grade are prioritized for CCTV inspection. With information on the causes of 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

Through the Town of Corte Madera’s Municipal Code, Title 21, the District has legal authority to:

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

- Require maintenance of grease interceptors

A. Types of wastes discharged to public sewers. Title 21, Chapter 21.16, Section 020 prohibits the discharge of fats, oils and grease as follows:

Except as hereinafter provided, no person shall discharge or cause to be discharged any of the following described waters or wastes to any district sewer...Any water or waste which contains more than one hundred parts per million, by weight, of fat, oil or grease.

B. Installation of grease interceptors. Title 21, Chapter 16, Section 030 allows for the District to require installation of grease interceptors at non-residential buildings as follows:

Grease, oil and sand interceptors shall be provided when in the opinion of district staff they are necessary for: (1) the proper handling of wastes containing grease in excessive amounts, flammable wastes, sand or other harmful ingredients; or (2) the protection of pumping stations, pneumatic ejectors or other facilities operated by the district from wastes containing grease in excessive amounts, flammable wastes, sand or other harmful ingredients. Interceptors shall be of a type and capacity approved by district staff, and shall be located in such a manner as to be readily and easily accessible for inspection by the district. (San. Dist. No. 2 Ord. 34 § 2 (part), 2002)

C. Maintenance of grease interceptors. Title 21, Chapter 16, Section 040 delegates maintenance of grease interceptors to the owners as follows:

All grease, oil and sand interceptors shall be maintained by the owner, at the owner's expense, in continuously efficient operation at all times. (San. Dist. No. 2 Ord. 34 § 2 (part), 2002)

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. However, it may begin doing so in the near future (see Section 4.2.3 FOG Source Control) if warranted.

FOG Source Control

In August 2006, the Central Marin Sanitation Agency (CMSA) started the process of developing a FOG Control Program for use throughout its tributary service area, which includes the District. Implementation of the source control program began in FY 2009-10. CMSA is regulating targeted Food Service Establishments (FSE) through source control activities, including developing a database of FSEs, issuing permits, and inspecting facilities for proper installation and maintenance of grease removal devices. CMSA accepts grease hauled from restaurant grease traps within their service area (www.cmsa.us/service.php).

4.2.4 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 CMSA source control program.

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
<p>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.</p>
<p>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:</p> <ol style="list-style-type: none">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, ande. 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 District's Sanitary Code, the Town of Corte Madera Municipal Code, Title 21: Sanitary District No. 2 of Marin County a Subsidiary District of The Town of Corte Madera 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 as Appendix.

Responsibility for Maintenance of Laterals

Title **21.20.060 Maintenance** establishes the property owners as the responsible party for ownership and maintenance of both the upper and lower lateral as follows:

The owner of the property served by any lateral or other type of sewer which is connected either directly or indirectly to a district main sewer shall have sole ownership and maintenance responsibilities for that sewer and its connection to the main, and shall abide by all of the rules and regulations of the district in maintaining, improving, repairing or replacing the sewer serving the owner's property. The lateral and appurtenances shall be kept pressure tight and in good working order at all times. All laterals, regardless of their age, are required to meet the general and technical requirements detailed in the latest edition of the district's standard specifications and drawings. (San. Dist. No. 2 Ord. 34 § 2 (part), 2002)

Prevention of Illicit Discharges

Title 21.16.010: **Drainage into sanitary sewers prohibited**, prohibits drainage to the District's sanitary sewers as follows:

No leaders from roofs and no surface drains for rainwater shall be connected to any sanitary sewer. No surface or stormwater, seepage, cooling water or unpolluted commercial process waters shall be permitted to enter any sanitary sewer by any device or method whatsoever. (San. Dist. No. 2 Ord. 34 § 2 (part), 2002)

Access for Maintenance, Inspection and Repairs

Title 21.20.100: **Inspection and correction of inflow and infiltration in lateral sewers** provides for the elimination of excessive flows from private sewers.

(a) The district finds that inflow and infiltration from the lateral sewers of property owners has caused the district sewer system to back up, leak, malfunction, and operate at a lower efficiency and capacity than the system is intended and designed to do. Further, the district finds that these problems have resulted in the district paying considerable extra expense annually in order to continue the operations of its sewage pump stations. The district also finds that this inflow and infiltration into the district sewer system is caused by the age and wear and tear to sewer laterals that have existed for many years without being tested, replaced and/or repaired. The district hereby establishes in this section a voluntary sewer

lateral replacement program to address the problems associated with inflow and infiltration in lateral sewers throughout the district.

- (b) During each fiscal year and until the need shall no longer arise, the district board or staff may in its sole and unfettered discretion offer to owners served by the district sewer system the option of executing an agreement with the district whereby the owner would permit the district to test for inflow and infiltration and repair or replace the owner's lateral sewer at the sole cost and expense of the district in exchange for the owner's agreement to retain ownership and maintenance responsibilities over the lateral sewer after the district completes the repair or replacement of the lateral sewer. The agreement shall contain release, hold harmless and indemnification provisions in favor of the district and shall be in a form provided by district staff.*
- (c) The district shall not be required by this section to offer any owner being served by the district the opportunity to participate in the program described in this section. The district board or staff shall determine which properties, if any, are to be offered participation in this program based upon the availability of district resources, the needs of the property owners, and any other factors that it may deem relevant to its decision. Notwithstanding any other provision in this title, no person shall have the right to appeal any decision or determination made by the district under this section.*
- (d) The district shall test the lateral sewer for inflow and infiltration according to the "Standard Specifications and Drawings, Sanitary District No. 2 of Marin County" or similar guidelines that may be established by or for the district.*
- (e) Nothing in this section shall alter or modify the owner's maintenance, repair and ownership responsibilities over the lateral sewer as set forth in Section 21.20.060. (San. Dist. No. 2 Ord. 34 § 2 (part), 2002)*

Title 21 includes a prohibition against extraneous discharges, which includes I/I, and the general authority to access private property for purposes of enforcement of the provisions of the Title. It also provides the specific vehicle for identifying and correcting I/I on private property. The District has past and current sewer improvement projects that include the rehabilitation of both the upper and lower laterals.

Proper Design and Construction of Sewers and Connections

Title 21.28.030: **Design and construction standards** provides for the following:

- (a) Minimum standards for the design and construction of new sewers, and for the repair or replacement of existing sewers within the district shall be in accordance with the requirements of the district appearing in the current edition of the "Standard Specifications and Drawings, Sanitary District No. 2 of Marin County" or similar guidelines that may*

be established by or for the district. District staff, with the consent of the board, may permit modifications or may require higher standards where unusual conditions are encountered.

(b) Three complete sets of as-built drawings showing the actual location of all mains, structures, manholes and laterals shall be filed with the district before final acceptance of the work. (San. Dist. No. 2 Ord. 34 § 2 (part), 2002)

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.

Title 21.16.020: **Types of wastes discharged to public sewers**, prohibits the discharge of fats, oils and grease as follows:

Except as hereinafter provided, no person shall discharge or cause to be discharged any of the following described waters or wastes to any district sewer...Any water or waste which contains more than one hundred parts per million, by weight, of fat, oil or grease.

Title 21.16.030: **Installation of grease interceptors**, allows for the District to require installation of grease interceptors at non-residential buildings as follows:

Grease, oil and sand interceptors shall be provided when in the opinion of district staff they are necessary for: (1) the proper handling of wastes containing grease in excessive amounts, flammable wastes, sand or other harmful ingredients; or (2) the protection of pumping stations, pneumatic ejectors or other facilities operated by the district from wastes containing grease in excessive amounts, flammable wastes, sand or other harmful ingredients. Interceptors shall be of a type and capacity approved by district staff, and shall be located in such a manner as to be readily and easily accessible for inspection by the district. (San. Dist. No. 2 Ord. 34 § 2 (part), 2002)

Title 21.16.040 **Maintenance of grease interceptors** delegates maintenance of grease interceptors to the owners as follows:

All grease, oil and sand interceptors shall be maintained by the owner, at the owner's expense, in continuously efficient operation at all times. (San. Dist. No. 2 Ord. 34 § 2 (part), 2002)

The District has the legal authority to require installation and maintenance of grease interceptors, the District has inspected these facilities and actively enforced these sections of the Sanitary Code.

Enforcement Measures

The District's Sanitary Code in Title 21 provides for the following enforcement.

Title 21.36.010 Violation

Any person found to be violating any provision of this or any other section, rule or regulation of the district, except Section 21.04.110 of this title, shall be served by district staff with written notice stating the nature of the violation and providing a reasonable time limit 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 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 title or any other section, rule or regulation of the district. Upon being notified by district staff of any defect arising in any sewer or of any violation of this title, the person or persons having charge of said work shall immediately correct the same. (San. Dist. No. 2 Ord. 34 § 2 (part), 2002)

Title 21.36.020 Correction of violations

District staff shall have the authority to correct the violation of any section in this title or of any other section, pursuant to Health and Safety Code Section 6523.3 or as may be amended from time to time. The cost of such correction may be added to any sewer service charge payable by the person violating the ordinance or the owner or tenant of the property upon which the violation occurred, and the charge levied by the district shall be made a lien on the property and be collected with the sewer user service charge on the property tax roll of the county of Marin as described in Section 21.40.020. (San. Dist. No. 2 Ord. 34 § 2 (part), 2002)

Agreements with Other Agencies

The District is a member agency of Central Marin Sanitation Agency (CMSA), a joint powers agency that provides treatment and disposal of wastewater flows through a deepwater outfall to the San Francisco Bay. CMSA is comprised the District, San Rafael Sanitation District, Sanitary District No. 1 of Marin County, and the City of Larkspur. The CMSA wastewater treatment facility was commissioned in 1985. A copy of the CMSA Exercise of Joint Powers Agreement is available at the District offices.

**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:

Map

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

Resources and Budget

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

Preventive Maintenance

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

Condition Assessment

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

Equipment

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.

Training

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

Outreach to Plumbers and Building Contractors

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:**Map**

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

None

Preventive Maintenance

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

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.

Equipment

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

Training

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

None

Measures and Activities Discussion

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

Map

The District maintains an ACR-Info based GIS system. 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.

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 2008, the District's Operations budget is \$2.5 million and the District's Capital Funds budget is \$3.3 million. The Capital budget includes funds for sewer and pump station improvement projects. The 5 Year Capital Improvement Budget outlines recommended capital improvement funds on an annual basis through Fiscal Year 2013.

For Fiscal Year 2008, the District's projected revenue is \$5.8 million. District revenue comes from a variety of sources including property taxes, sewer service charges, and reserves allocated for capital projects.

Preventive Maintenance

The District has equipment and staff and contract services needed to clean all mainlines. The District cleans the entire 44-mile gravity system every 18 to 24 months, and cleans specific portions of the system with known problems on a 3-month or 6-month basis.

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 2009, the District launched a CCTV inspection program to assess the condition of their entire gravity sewer system over a five year period, inspecting approximately 9 miles of gravity lines per year. Inspection of each pipe segment will be recorded and rated. Rating information will be used as a tool to evaluate the District's rehabilitation projects and maintenance actions.

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 Sewer System Master Plan (Appendix C)

Equipment

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

Item Number Location Kept

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 sizes
Spare pumps (for pump stations)
Pipe in 6- and 8-inch sizes (for gravity lines)
Pipes in all sizes (for force mains)
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. CMSA) or through industry groups such as the California Water Environment Association (CWEA). The District will develop strategic training plan in FY2009 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.

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:

Installation, Rehabilitation, and Repair

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.

Inspection and Testing of New and Rehabilitated Facilities

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:

Installation, Rehabilitation, and Repair

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.

Inspection and Testing of New and Rehabilitated Facilities

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 Drawings (Standards) that are available for review at the Public Works Office. The Standards (Appendix D) 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 Part B Section 4 of 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. Part B Section 4 of 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 Part D Section 14 of the Standards.

Criteria for the construction of new sewer lines and force mains are detailed in Part D Section 14 of 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 Part D Section 14 of the District's Standards including water tests, air tests, infiltration tests, deflection tests, cleaning and television inspection.

ELEMENT VIII: CAPACITY MANAGEMENT

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

Regulatory Requirements Summary for Capacity Management
<p>RWQCB Requirements:</p> <p>Capacity Assessment The District must show that a process is established to assess the current and future capacity requirements of its collection system.</p> <p>System Evaluation and Capacity Assurance Plan The District must prepare a CIP to provide hydraulic capacity of key collection system elements under peak flow conditions.</p>
<p>SWRCB Requirements:</p> <p>Capacity Assessment 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.</p> <p>System Evaluation and Capacity Assurance Plan 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.</p>

Capacity Management Discussion

In July of 2008, the District engaged Nolte Engineering to update its 2003 Sewer System Master Plan. The following discusses elements of project that pertain to this element. This element of the SSMP was updated upon completion of the project in the summer of 2009.

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

The rims and inverts on the manholes of pipes 10 inches in diameter and larger will be surveyed. The existing SewerCAD model was be populated with this new data. This model addresses approximately 33,000 feet of the collection system pipes (15%). Not all manhole data were recorded; manholes that are not visible were omitted and referred to the Public Works staff for supplemental location. Initial manhole location and size information will be based on the Town's existing block maps and StormCAD database. Data was be collected using GPS methods. The data was recorded in NAD 83 horizontal coordinates and NGVD 29 vertical elevations. Control was based on monumentation placed for the San Francisco Bay FEMA Costal Flood Study. 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

The calibration process was conducted for dry weather and wet weather conditions. 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.

At each step in this process Nolte discussed with the District the ramifications of the analysis and the potential weaknesses or anomalies that are became apparent. This process allowed Nolte and the District staff to be fully aware of the level of effort being expended and provide opportunities for acceptance and control of

the assumptions that were made. The discussions were conducted using teleconferencing and a simple web-based, data-sharing software.

Capacity Evaluation

The capacity evaluation extends the calibration process to the pipes greater than 10 inches in diameter in the collection system that were modeled. In this process the weaknesses in the collection system are identified. Nolte's experience indicates that the dry weather flow conditions do not generate problems. Any problems in the system occur during wet weather simulations. The major question 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 Master Plan. One of the outcomes of this phase of the analysis was the possible need for additional data monitoring to understand and analyze wet weather conditions. In this phase of the project, Nolte again believes coordination was very critical due to the relationship between the analysis and the assumptions. Meetings and teleconferencing were the primary tools for communication and developing consensus.

Field Measurement Recommendations

Based on the analysis of the capacity of the sewer system Nolte anticipated that several lines would be identified as either overloaded or critical. Nolte identified selected locations for field measurements that may be the best indicator of an impending an overflow condition during wet weather. Nolte also recommended locations for field measurements that will provide supplemental information to refine and clarify the calibration of the hydraulic model. Nolte prepared a memorandum recommending the installation of a field measuring device known as a "Smart Cover" in selected manholes. This memorandum will identified both the location and justification for these selected manholes. The memorandum also recommended the monitoring frequency for the equipment and other details of the monitoring devices operation. Nolte reviewed the justification for the locations and assisted the District in both selecting the most appropriate number of monitoring units to purchase and identifying the highest priority locations.

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 Master Plan the condition of the various pump stations were evaluated and recommendations were made for repair, rehabilitation or replacement. Nolte reviewed the District's status of the previous recommendations and an update to the condition assessment was made. As appropriate, interviews were conducted with District staff and CMSA maintenance staff to assist in establishing the condition of the existing components. CMSA 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 projects were also identified in the previous Master Plan. Nolte updated the mapping and tabulations of sewer ages to reflect current conditions. The results of this task are a list of projects, the timeline necessary to implement these projects, and the relative priority of the work. The projects reflect the needs identified in the evaluation of the components. The timeline was used to convey when the projects need to be completed. 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. This listing was transmitted to the District for review and comment prior to continuing the study.

Anticipated Growth

A probable annexation area was developed based on the General Plan of adjacent communities and the geographic proximity of adjacent areas. This area was used to develop projected future flows and facility needs. The General plan for areas currently within the District was also reviewed to determine internal growth potential. Flows based on this growth will be projected. 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 Nolte 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 capital improvement plan was reviewed and a new plan was developed that reflects the addition of the projects identified during the condition evaluation and 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.

**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
<p>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.</p>
<p>SWRCB Requirements: The District shall:</p> <ul style="list-style-type: none">a) Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;b) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;c) Assess the success of the preventative maintenance program;d) Update program elements, as appropriate, based on monitoring or performance evaluations; ande) 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 District 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, using an online program named IWORQ, to more efficiently track and utilize records related to any segment of pipe in their system. Using IWORQ, all complaints and service calls will be logged, 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. IWORQ will incorporate the pipe and manhole condition rating methodologies as described in detail in the Guidelines for Sewer Condition Assessment and Rehabilitation Decision Methodology Technical Memorandum

With the information available in the IWORQ 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

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

E L E M E N T X : S S M P A U D I T S

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

Regulatory Requirements Summary for Capacity Management
<p>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.</p>
<p>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.</p>

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 submitted a report of the audit along the annual report to the RWQCB in March of 2009.

**E L E M E N T X I :
C O M M U N I C A T I O N P L A N**

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

Regulatory Requirements Summary for Communication Plan
<p>RWQCB Requirements: None.</p>
<p>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.</p>

Communication Plan Discussion

The Town/District maintains a website (www.ci.corte-madera.ca.us) 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. 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 Town website. As a member of the CMSA joint powers agency, the District communicates with other Marin County wastewater agencies on a monthly basis.