CITY OF SAUSALITO

Jonathan Leone, Mayor

Adam Politzer, City Manager

October 15, 2009

Jo Ann Cola
US Environmental Protection Agency, Region 9
75 Hawthorne Street (WTR-7)
San Francisco, CA 94105

Michael Chee
San Francisco Bay Region
California Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

SUBJECT: CITY OF SAUSALITO ANNUAL SEWAGE SPILL REPORT JULY 1 THROUGH SEPTEMBER 30, 2009

Dear Ms. Cola and Mr. Chee:

The purpose of this Report is to provide the tabulation of sewage spills that occurred in the City of Sausalito during the calendar quarter beginning July 1, 2009 and ending September 30, 2009 (the "Reporting Period"). This Report is submitted pursuant to requirements included in the San Francisco Bay Regional Water Quality Control Board Letter, New Requirements for Reporting Sanitary Sewer Overflows, dated November 15, 2004, as well as the California Water Resources Control Board ("State Board"), Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Order No. 2006-0003-DWQ) issued May 2, 2006 and subsequently modified as to monitoring and reporting requirements by State Board Order No. 2008-0002-EXEC (the "2008 Modified State Order"). In addition, this report is required by Section IX.of USEPA Region IX Findings of Violation and Amended Order for Compliance (Docket No CWA-309(a)-08-031) dated November 24, 2008 (the "2008 Amended Order") issued to the City of Sausalito, Sausalito-Marin City Sanitary District ("SMCSD") and Tamalpais Community Services District ("TCSD"). For purposes of this Report, the City refers to sewage spills and sanitary sewer overflows ("SSOs") as SSOs.

It should be noted that only one (1) SSO occurred during the Reporting Period. A graphical summary of the subject SSO is included as Figure 1 on the following page, followed by four tables providing additional information on the SSO. The single SSO was associated with a cleanout connecting to a gravity sewer. No private SSOs occurred during the reporting period.

The number of SSOs is provided in Table 1. The volumes of SSOs contained and returned to the sewer system, as well as the volumes reaching waters of the State are included in Table 2. Table 3 describes the cause of each SSO, and Table 4 identifies the SSO locations.

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Figure 1. Graphic Summary of Number and Chronology of SSOs -- July 1, 2009 - September 30, 2009

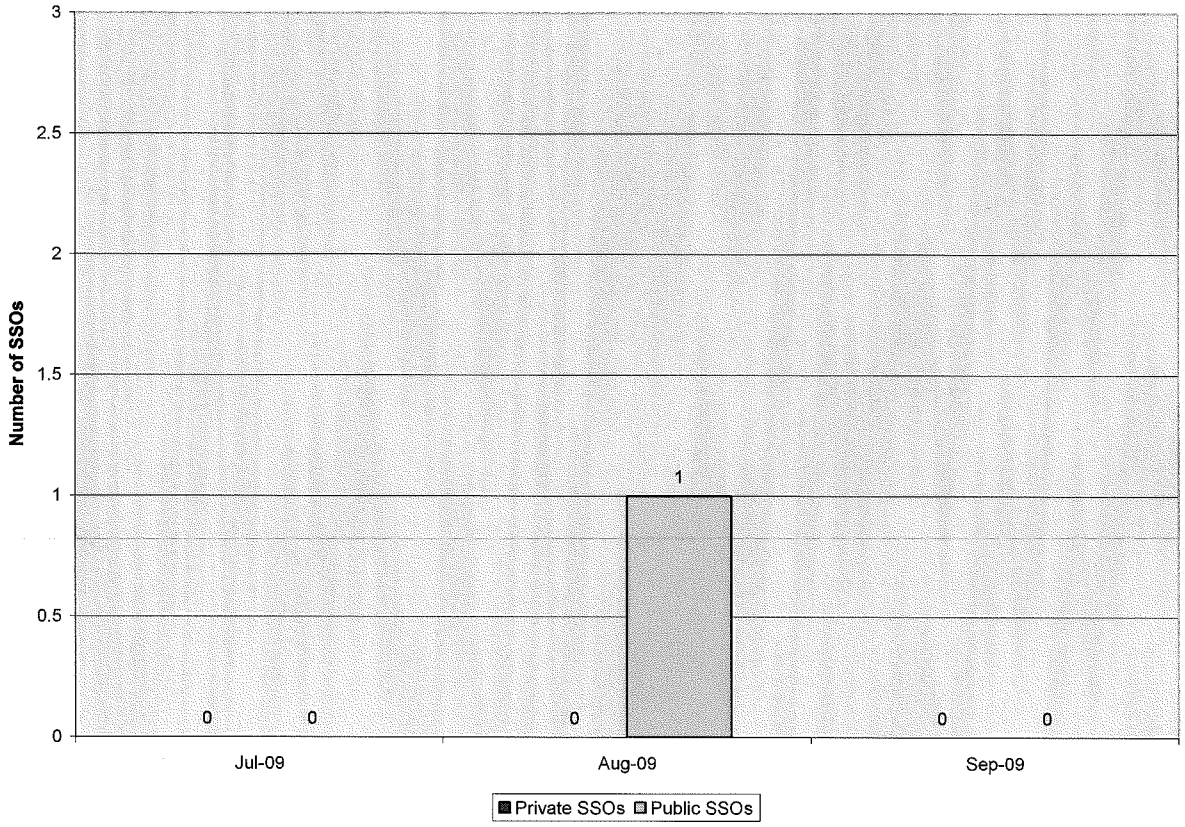


Table 1. Number and Volume of SSOs -- July 1, 2009 - September 30, 2009

Size of SSO (gallons)	Public SSO's	Public %	Private SSO's	Private %	Total SSO's	% of Total
Greater than or equal to 1,000	0	0	0	0	0	0
From 100 to 999	0	0	0	0	0	0
From 10 to 99	1	100%	0	0	1	100%
Less than 10 [can include in line above]	0	0	0	0	0	0
[Public portion of lateral (if applicable)]	NA	NA	NA	NA	NA	NA
Total	**1**	**100%**	**0**	**100%**	**1**	**100%**

6B
2

Table 2. Volume of SSOs

	Public SSO Volume (gallons)	Public %	Private SSO Volume (gallons)	Private %
Total volume contained and returned to sewer system for treatment	0	0	0	0
Total volume reaching waters of the State	0	0	0	0
Total volume not contained but not reaching waters of the State (everything else)	5	100%	0	0
Total	**5**	**100%**	**0**	**0**

The cause of the SSO during the Reporting Period of this report was blockage resulting from roots.

The distribution of SSOs by cause is shown in Table 3 below.

Table 3. Causes of SSOs – July 1, 2009 - September 30, 2009

Cause of SSO	Public SSO	Public %	Private SSO	Private %
Blockage:				
Roots	1	100%		
Grease				
Cleaning Rags (hand towels, cleaning pads)				
Debris				
Debris from Laterals				
Vandalism				
Animal Carcass				
Construction Debris				
Multiple Causes				
Subtotal for Blockage				
Infrastructure Failure				
Inflow & Infiltration				
Electrical Power Failure				
Flow Capacity Deficiency				
Natural Disaster				
Bypass				
Cause Unknown				
Subtotal for Blockage				
Total	**1**	**100%**	**0**	**0**

The single SSO occurred in flat terrain within a quarter-mile from Richardson's Bay. The location, date and other pertinent information regarding the SSO that occurred during the reporting period is included in Table 4 and graphically summarized on the attached Figure.

Table 4. Locations of SSOs -- July 1, 2009 - September 30, 2009

Key Number (see Figure 2 attached)	Date	Line Segment	Destination	Public (SS) or Private (PVT)	Repaired, Cleaned, CCTV
1	8/14/2009	Map No S1, private cleanout at 3000 Broadway	Roadway - did not enter storm drain	SS	Cleaned, CCTV

SSO Mitigation Efforts by the City of Sausalito – July 1, 2009 – September 30, 2009

When an SSO occurs; the particular information regarding when, where and why the SSO occurred are reported in compliance with the 2006 Order and logged into the City's ICOMMM, Inc. sewer system management software ("ICOM3™") as a report and carefully evaluated to determine an appropriate course of action. The goal is to prevent future spills at the same or similar locations from the same causes. The ICOM3™ report includes an assessment as to how often and which method of cleaning will be most effective or identification of a site for priority repair by the City or the responsible private entity.

An overflow occurred from the publicly-owned collection system at one (1) location during the reporting period as summarized above and on the attached Figure 1. Location 1 was cleaned immediately and normal flow was restored. Details regarding the location, cause and corrective actions are as follows:

- 3000 Bridgeway, Sausalito: Blockage in sanitary sewer caused by poorly-configured manhole channel (concrete constricted during rehab from old SMCSD pump station wet well to gravity flow manhole) and root build-up at the manhole discharge (structure 440101 City of Sausalito SS Map S1). Rodded, cleared, and removed the root infiltration. Scheduled maintenance of system item 440101 – 430115 SS Map S1 has been increased to 6 month maintenance.

These measures and other actions were performed in cooperation and coordination with other local and regional agencies including SMCSD and TCSD.

Other Information

During the quarter ended September 30, 2009, twenty five (25) private laterals were repaired or replaced as a result of the City's existing private lateral program. As indicated above, the City promptly identifies the cause and prioritizes either for repair, replacement or increased maintenance frequency when any blockage or SSO involves the public system. Further, a potentially significant number of the private sewer laterals in the City of Sausalito are known to be old and may be in need of repairs. Since

1991[1], the City of Sausalito has had a program requiring the inspection and repair of private sewer laterals upon sale or major remodel of habitable structures. In Sausalito, laterals are privately-owned from the structure to the final termination point (including the *wye*) at the City Sanitary Sewer main line. Actions that trigger the mandatory inspection are either home (or building) sale or major remodel work (including, but not limited to, an improvement value of $50,000 or more). As the need for repairs is identified on the basis of those inspections, performance of maintenance or repair is required by the City as a condition of certificate of occupancy or recordation of transfer of deed. The City's criteria for requiring such maintenance or repair is expressed in the Ordinance and Council Administrative Interpretation (*ibid.*) to eliminate infiltration of pollutants into the groundwater, or surface water including Richardson's Bay. This has been a very successful program. The City is in the process of developing improvements to the existing private lateral program to expedite identification and repair of private facilities to prevent discharge of pollutants to waters of the State.

Repairs during the Reporting Period were also made at two public "hot spots" identified on the basis of problems identified during maintenance. Those consist of:

- 1 spot repair to the sanitary sewer on Caledonia Street
- 1 spot repair to the sanitary sewer on Sausalito Boulevard

Other repairs or other mitigation efforts performed by the City during the Reporting Period included:

- New manhole installed on a portion of sewer system in the public right-of-way as a means to provide access for maintenance needs
- 60' of 6" private sewer lateral found to have been incorrectly installed several years ago was replaced. Said installation included 1 manhole installation.
- Two (2) sewer ejection systems failed initial inspection and one (1) passed provisionally. All three sewer ejection system owners have been notified to upgrade their systems in order to become compliant with existing requirements.
- Three (3) existing hydro-mechanical grease Interceptors were evaluated have been notified to upsize their systems in order to comply with existing requirements.
- One (1) newly-installed hydro-mechanical grease Interceptor was installed and approved and installed.
- Continued collection, analysis and interpretation of storm water samples affected by elevated fecal coliform, Escherichia coli (abbreviated as *E. coli*) and *enterococcus* bacterial concentrations was performed in conjunction with the City's investigation associated with the Bee/Dunphy incident first identified in late May, 2009. While an urgent repair accomplished within a few days of the first notice of the incident addressed an observed connection between the leaky base of a sanitary sewer manhole located at the intersection of Bee and Caledonia, elevated bacterial concentrations have been sustained in the storm water samples collected progressively upstream from the Bee and Caledonia location. The City retained West Yost Associates to assist with sample collection and characterization planning. On the basis of the most recent results, a storm drain segment of interest has been identified for more detailed investigation during the next few weeks. The EPA, Regional Board and Marin County Health Department will continue to be informed as the City's investigation and remedial actions occur.

[1] Copies of the Sausalito Municipal Code are publically accessible at http://www.ci.sausalito.ca.us/Index.aspx?page=121, as is a copy of the City's promulgated administrative interpretation of the relevant code section at http://www.ci.sausalito.ca.us/Modules/ShowDocument.aspx?documentid=265.

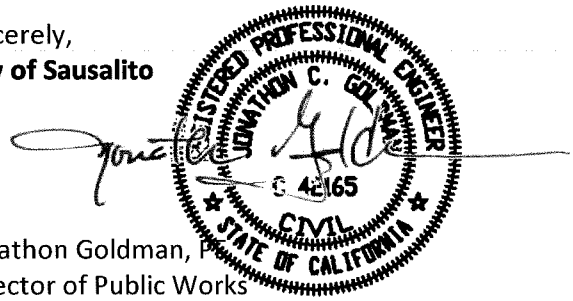
6B
5

- Associated Laboratories of Orange, California analyzed representative samples of solid waste produced during sewer maintenance activities using Schedule 1 and Schedule 2 Waste Acceptance Profiles. During the Reporting Period, the City of Sausalito contracted with PSC Industrial Outsourcing Group to transport and properly dispose of eight (8) cubic yards of Class II solid wastes collected by the City during maintenance of its sewer system.

Certification

I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,
City of Sausalito



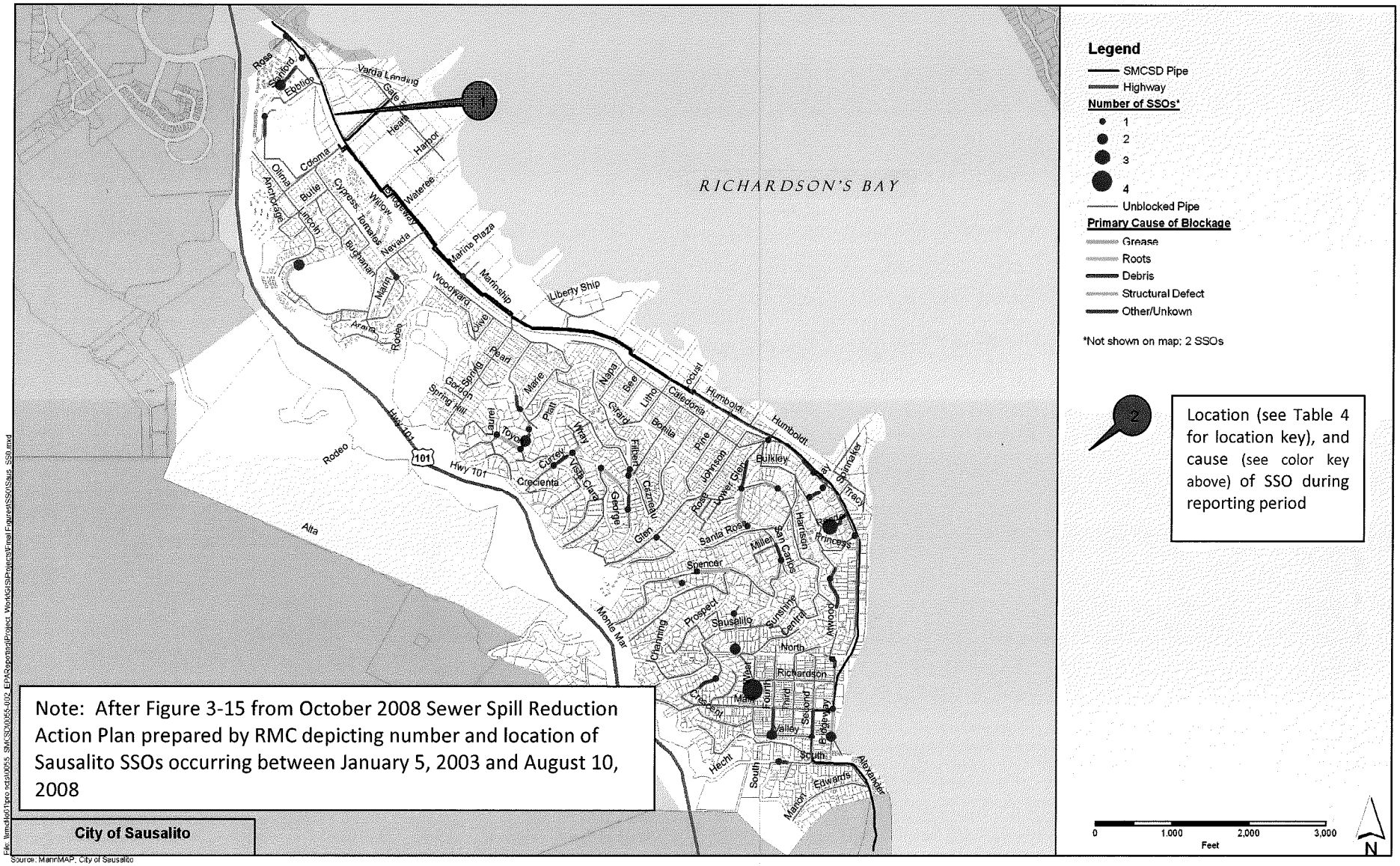
Jonathon Goldman, P
Director of Public Works
California Civil Engineer C042165
Sealed 15OCT09
Expires 31MAR11

Attachment

cc: Rebecca Ng – Chief, Marin County Environmental Health Services
Bob Simmons – SMCSD
Jon Elam – TCSD
Vivian Housen – West Yost Associates
Steve Clary -- RMC
Adam Politzer – City Manager
Mary Wagner – City Attorney
File – Regional Board Order Compliance 2009

Attachment to City of Sausalito's Report to
Jo Ann Cola
US Environmental Protection Agency, Region IX
Michael Chee
California Regional Water Quality Control Board, San Francisco Bay Region
Dated October 15, 2009

Figure – Locations of SSO – July 1 – September 30, 2009 with Historic Data from January 5, 2003 – August 10, 2008



Annual Report

Prepared by:

On Behalf of:

City of Sausalito

In Response to:

EPA Docket No.: CWA 309(a)-08-031

October 15, 2009

6B
9

Certificate and Signatures

I certify under penalty of law that this document and all attachments relating to my jurisdiction were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Adam W. Politzer
City Manager
City of Sausalito

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

CCTV	Closed-Circuit Television
CIP	Capital Improvement Plan
CWA	Clean Water Act
EHS	County of Marin Environmental Health Services
EPA	U.S. Environmental Protection Agency
GIS	Geographic Information System
GWDR	Statewide General Waste Discharge Requirements
I&I	Infiltration and Inflow
MMS	Maintenance Management System
NASSCO	National Association of Sewer Service Companies
Order	Order for Compliance
PACP	Pipeline Assessment Condition
RWQCB	Regional Water Quality Control Board
SCADA	Supervisory Control and Data Acquisition
SMCSD	Sausalito-Marin City Sanitary District
SSMP	Sewer System Management Plan
SSO	Sewer System Overflow
SSRAP	Sewage Spill Reduction Action Plan
SWRCB	State Water Resources Control Board
TCSD	Tamalpais Community Services District

SECTION 1. OVERVIEW

PURPOSE OF REPORT

General

An Amended Order for Compliance (Order) dated November 24, 2008, included in Appendix A, was issued by the U.S. Environmental Protection Agency (EPA) to compel the City of Sausalito (the "City"), as well as the Sausalito-Marin City Sanitary District (SMCSD) and Tamalpais Community Services District (TCSD) to "consistently and substantially reduce the frequency and volume of sewage spills to waters of the United States" and to "complete improvements necessary to eliminate conditions in its collection system that cause or contribute to wastewater spills, bypasses or effluent limit violations from SMCSD's collection system or wastewater treatment plant." In addition, the Order states that "SMCSD shall...achieve consistent compliance with its 2007 [NPDES] permit". *(CWA-309(a)-08-031)*

This Annual Report serves as the October 15, 2009 submission to the EPA and the San Francisco Regional Water Quality Control Board (RWQCB) on behalf of the City of Sausalito. This Annual Report addresses the annual progress report requirements of the Order, and covers the period of time from October 1, 2008 to September 30, 2009 (the "Reporting Period").

SMCSD and TCSD will submit their reports that are due on October 15, 2009 under separate cover.

The purpose of each section of the Annual Report is further developed in the subsections below and throughout this submittal.

Sanitary Sewer Overflow Response Planning

Section 2 of this Annual Report submittal includes updates to the City's activities related to Spill Response, Record Keeping, Notification, and Reporting (Section II of the Order).

Collection System Maintenance and Management

Section 3 of this Annual Report submittal addresses Collection System Maintenance and Management (Section III.A.2, III.B.2, and III.C.4 of the Order).

Section 3A documents the activities of the City's sewer system cleaning and root control program during the Reporting Period. Included in Section 3A are the number of miles of pipe cleaned as part of the routine and "hot spot" cleaning programs and miles of pipe treated by each method used for controlling roots. Included is a description of the success of the sewer cleaning and root control program at preventing blockages and sewage overflows as well as any changes to be made to the program to further reduce spills.

Section 3B documents the activities of the City's Maintenance Management System.

Section 3C addresses pump station and force main renovations and upgrades made during the previous year and describes projects to be completed in the next reporting period.

Collection System Assessments

Section 4 of this Annual Report submittal summarizes collection system assessments (Section IV.A.3 and IV.B.2 of the Order).

Section 4A summarizes the inspection methods and findings of the sewer pipe maintenance hole inspection and condition assessments conducted during the previous year and the estimated miles of sewer pipe and number of maintenance holes planned to be inspected during the current year.

Section 4B references an independent study conducted by the City to provide results of collection system flow monitoring, including the average dry weather flow and peak wet weather flow from the collection system. The study is included in Appendix B.

Capacity Assurance

Section 5 of this Annual Report submittal is a placeholder for the Capacity Assurance Plan (Section V of the Order), which has future submittal deadlines of October 15, 2010 and October 15, 2013.

Infrastructure Renewal Program

Section 6 of this Annual Report submittal documents sewer repair, rehabilitation and replacement activities completed during the previous year, and describes projects to be completed in the next reporting period (Section VI.B of the Order).

Updated Annual Budget and Cost of Compliance

Section 7 of this Annual Report includes the City's updated wastewater collection system annual budget for the current year as well as the cost of compliance with the Order (Section X of the Order).

ORDER FOR COMPLIANCE BACKGROUND

The EPA issued an Administrative Order for Compliance (the "Original Order") on April 10, 2008 and transmitted a copy of the Original Order to SMCSD, the City, and TCSD, and the San Francisco RWQCB. The EPA amended the Original Order on November 24, 2008.

Agency Description

The following description is provided in the Order:

"The City of Sausalito operates a separate sanitary sewage collection system that collects sanitary sewage from approximately 6,200 connections serving a population of approximately 7,454 in southern Marin County. Sewage collected by Sausalito's collection system is conveyed to the sewage collection system operated by SMCSD and thereafter conveyed to SMCSD's WWTP for treatment."

Relationship between Report and Regulatory Documents

The City is responsible for adhering to the requirements of several regulatory agencies as well as their own internal policies and procedures. This Annual Report has been written solely to address the requirements of the EPA Order and is not intended to replace or supersede other policy and procedure documents. Some of the other regulatory documents, such as the Sewer System Management Plan (SSMP) required by the RWQCB and the State Water Resources Control Board (SWRCB) under the Statewide General Waste Discharge Requirements (GWDR) for Sanitary Sewer Systems, or the County of Marin Environmental Health Services (EHS) procedures, are directly relevant to the content of this document. The City will incorporate commitments made in this Annual Report as appropriate into documents required by other regulatory agencies.

SECTION 2. SANITARY SEWER OVERFLOW RESPONSE PLANNING

INTRODUCTION

This section addresses Sanitary Sewer Overflow Response Planning (Section II of the Order) for the City of Sausalito.

Requirements of the EPA Amended Order for Compliance

In compliance with the EPA Order, Section II, the City submitted a Sanitary Sewer Overflow Response Plan, including Record Keeping, Public Notification, and Regulatory Agency Notification and Reporting (the "Plan") to the EPA on October 15, 2008 and immediately commenced and has continued implementation of the Plan. There is no reporting requirement for October 15, 2009 related to this item. However, Sausalito is continuing to proactively implement the Plan.

In addition, during the prior annual period, the City developed a Sanitary Sewer Overflow and Backup Response Plan under the guidance of David Patzer, Risk Management Solutions. This document reiterates the City's established guidelines in responding to, relieving, cleaning and decontaminating sanitary sewer overflows and backups that occur within the City's service area, with a primary focus on safeguarding public health and the environment.

The City's successes in improving sewer system maintenance and performance are further documented by the information provided in this Annual Report.

6B
17

SECTION 3. COLLECTION SYSTEM MAINTENANCE AND MANAGEMENT

INTRODUCTION

This section addresses Collection System Maintenance and Management, including Sewer System Cleaning and Root Control Program (Section III.A.2 of the Order), GIS Mapping (Section III.B of the Order), and Pump Station Maintenance Planning (Section III.C.4 of the Order) for the City of Sausalito.

3A. Sewer System Cleaning and Root Control Program

The EPA Order, Section III.A.2 includes the following requirements:

> *III. COLLECTION SYSTEM MAINTENANCE AND MANAGEMENT*
>
> *A. Sewer System Cleaning and Root Control Program:*
>
> *2. By October 15 of each year, (SMCSD, TCSD, and) the City of Sausalito shall each submit annual reports to EPA documenting the activities of each agency's sewer cleaning and root control program during the previous annual cycle. The annual reports shall include the number of miles of pipe cleaned as part of the routine and "hot spot" cleaning programs and miles of pipe treated by each method used for controlling roots. (SMCSD, TCSD, and) the City of Sausalito shall include a description of the success of the sewer cleaning and root control program at preventing blockages and sewage overflows as well as any changes to be made to the program to further reduce spills.*

Routine Sewer System Cleaning

During the Reporting Period, the City has maintained a rigorous cleaning program, exceeding the guidelines set forth by the EPA Order. Sewer cleaning is performed using hydroflushing, power rodding, and hand rodding methods. Figure 3-1 displays and compares the City's planned cleaning program and cleaning completed during the Reporting Period. The City's goal for this Reporting Period was to clean the northernmost third of the collection system. However, as illustrated in Figure 3-1, the City's routine sewer cleaning activities covered 17.75 miles of pipeline, accounting for 64 percent of the entire system. Thus, nearly twice the amount of pipeline was cleaned during the Reporting Period.

The City does not use chemical root control methods. Therefore, all root control was addressed through the physical root removal processes described above. The number of miles of pipes involving root control is included in the 17.75 miles of system pipelines cleaned during the Reporting Period.

This aggressive cleaning program has resulted in a reduced number of SSOs as compared to the prior annual period, including a substantial reduction in Category 1 SSOs, and a substantial reduction in SSO volume.

6B
18

"Hot Spot" Sewer Cleaning

The City's cleaning program completed during the Reporting Period included cleaning of identified hot spots. Hot spots are assigned in locations where pipe blockages and SSOs have occurred due to root intrusion, grease build-up, or debris. Once identified, these locations are placed on an accelerated cleaning schedule (i.e., 3-month, 6-month, 12-month, or 36-month) in order to prevent future SSO events. Pipelines that are not on the hot spot list are placed on a 5-year cleaning cycle.

A small number of critical pipelines on the City's hot spot list require cleaning on a 3-month or 6-month cycle. The remaining hot spot pipelines are designated as requiring cleaning on an annual or less frequent basis.

During the Reporting Period, the City cleaned all of the pipe segments that were identified as needing cleaning on a 3-month or 6-month cycle, as well as additional pipe segments included on the annual or less frequent hot spot list. In addition, the City is in the process of replacing several problematic pipeline sections that are currently on a less-than-annual cleaning cycle.

Table 3-1, below, details the City's hot spot cleaning activity. Of the system's 615 pipes, 222 pipes or 8.23 miles have been cleaned at least two times over the past year, accounting for 36 percent of the pipes within the system. Figure 3-2 shows hot spot maintenance activity by the City during this reporting period.

Table 3-1. "Hot Spot" Sewer Cleaning

Cleaning Frequency	# of Pipes	Pipe Length[(a)], miles	% of Pipes in System
2 cleanings/year	167	5.91	26.7
3 cleanings/year	47	2.00	9.0
4 or more cleanings/year	8	0.32	1.5
Total Hot Spots Cleaned	222	8.23	37.2%
Total Pipes in System	615	22.11	

[(a)] Includes 20.51 miles of gravity sewers and 1.60 miles of force mains

Progress Toward Reducing Sanitary Sewer Overflows

Table 3-2 summarizes the spills reported for the Reporting Period, as well as those of the prior reporting period ending October 15, 2008.

Table 3-2. Sanitary Sewer Overflows

Reporting Period	Number of SSOs	Total Spill Volume, gallons	Untreated Wastewater Released to the Waters of the United States, gallons	Category 1 SSOs
Prior: 10/01/2007 to 09/30/2008	11	58,581	13,781	9
Current: 10/01/2008 to 09/30/2009	10	3,713	800	5

As illustrated in Table 3-2, the total number of SSOs for the Reporting Period decreased from the prior reporting period ending October 15, 2008. In addition, the volume spilled, and more significantly, the volume of untreated wastewater released to the waters of the United States was reduced considerably. Also, the number of Category 1 SSOs decreased from nine (9) in the prior reporting period to five (5) during this Reporting Period. These positive results reflect the City's continued commitment to reducing blockages and SSOs through an aggressive program of routine maintenance and hot spot cleaning.

Figure 3-3 illustrates the location and cause of SSOs during this Reporting Period.

3B. Maintenance Management System

As set forth in the City's October 15, 2008 response to the Order, the City has implemented its maintenance management system in accordance with Order Section III.B.1. Section III.B.2 includes the following requirement:

> *III. COLLECTION SYSTEM MAINTENANCE AND MANAGEMENT*
>
> *B. Maintenance Management System:*
>
> *2. By October 15, 2009, the MMS shall be linked to a Geographic Information System (GIS) map of the sewage collection systems, which in turn shall be linked to an inventory of sewer system assets that includes information on asset age, materials, dimensions, and capacities.*

GIS Maps and Linkages

The City continues to implement its computerized maintenance management system (MMS) developed by ICOMMM, called ICOM3 MMS. ICOM3 is linked to GIS mapping of the sewer system and is used to store and track information on sewer cleaning and inspections, as well as condition ratings, sewer repairs, and sewer replacements.

The City's asset database includes information on asset materials and dimensions. Age information for the original pipelines was not recorded. However, as Sausalito completes its condition assessments and otherwise obtains additional information about system age, this information will be added to the database.

Pipe diameter is one component of pipeline capacity. Additional information on sewer system capacity is included in Section 5. As the City completes future capacity assessments, pipeline capacity information will be included in the database.

3C. Pump Station Reliability Certification

The EPA Order, Section III.C.4 includes the following requirements:

> *III. COLLECTION SYSTEM MAINTENANCE AND MANAGEMENT*
>
> *C. Pump Station Reliability Certification:*
>
> *4. By October 15 of each year, (SMCSD, TCSD, and) the City of Sausalito each shall submit an annual report to EPA documenting pump station and force*

6B
20

main renovations, and upgrades during the previous year and describing projects to be completed in the coming annual cycle.

Pump Station and Force Main Renovations and Upgrades

The City owns three pump stations within its service area; all pump stations are operated by SMCSD. Pump Stations were inspected, and their condition and recommended improvements summarized in the Sewage Spill Reduction Action Plan (SSRAP) – Volume II (RMC).

The ***Anchor Street Pump Station*** is a submersible wet well station constructed in approximately 1953, and upgraded in 1984. This pump station was identified as part of the City's Priority 1 Sewer Replacement projects.

The Anchor Street Pump Station Replacement Project will:

- Replace the top slab, which is deteriorating
- Coat the interior of the wet well
- Relocate internal valving to a new external valve box
- Apply protective coatings to the all valves and piping, including discharge piping, which appear to be in good condition; replace any valves and piping found to be in corroded or otherwise poor condition.
- Extend pump guide rails
- Replace all electrical components and add Supervisory Control and Data Acquisition (SCADA) in collaboration with Sausalito-Marin City Sanitary District (SMCSD)
- Add a wye and quick-connect to allow connection of a portable pump for added reliability. This portable pump will be used in lieu of the third pump that is discussed in SSRAP Volume II. The need for the third pump will be reassessed after completion of the Spinnaker Pipeline Replacement project, discussed in Section 5, which will reduce the pump station's primary source of I&I.

The Anchor Street Pump Station Replacement Project is scheduled to be advertised for bid in December 2009, and to complete construction by mid-2010.

The ***Gate 5 Road Pump Station*** is a submersible wet well station constructed in 1953 and completely renovated in 2002. The Pump Station Reliability Certificate submitted by the City in April 2002 reports that the station does not have sufficient firm capacity to convey peak dry weather flows, due to excessive infiltration and inflow (I&I). As part of the Gate 5 Road Pipeline Replacement Project described in Section 5, which is expected to reduce I&I, the City is installing a quick-connect and valve on the existing 6-inch wye cleanout located in a vault northeast of the pump station. This quick-connect will enable a portable pump connection if required. Construction will be completed by mid-2010, in conjunction with the Gate 5 Road construction schedule.

The ***Whiskey Springs Pump Station*** is a dry pit non-submersible pump station constructed in 1971 that is described in the SSRAP Volume II as in good condition. The station includes a redundant pump and rented backup generator. The City is reviewing the current generator

6B
21

configuration and, in the next reporting period, will work with SMCSD to complete the studies and electrical designs needed to upgrade the backup power generation system to further increase pump station reliability.

Projects to be Completed in the Next Annual Cycle

In the next reporting period, the City will complete construction of improvements for the Anchor Pump Station upgrades, and will install fittings to enable the City to connect an additional pump to the Gate 5 pump station. The City will evaluate and further improve backup power reliability at the Whiskey Springs pump station, and will complete a capacity assessment (due on October 15, 2010), to develop a plan to address I&I at the Anchor Street and Gate 5 pump stations.

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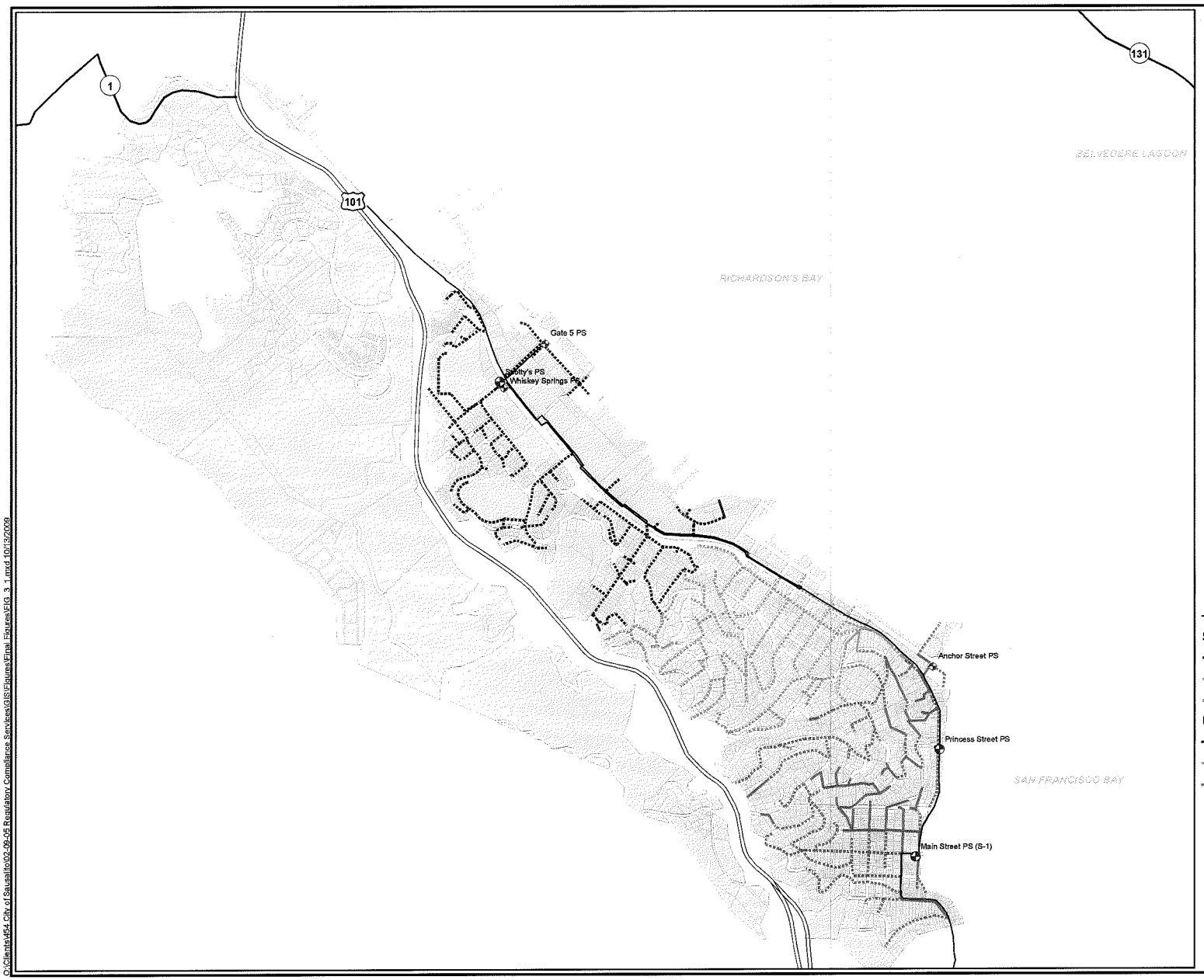

FIGURE 3-1

City of Sausalito Annual Report

Routine Maintenance

October 2008 through September 2009

NOTES:

LEGEND:

- City Owned, District Operated PS
- District Owned, District Operated PS
- SMCSD Pipeline

Serviced Lines by Year Planned

- 07/2008 to 06/2009
- 07/2009 to 06/2010
- 07/2010 to 06/2011

Unserviced Lines by Year Planned

- 07/2008 to 06/2009
- 07/2009 to 06/2010
- 06/2010 to 06/2011

WEST YOST ASSOCIATES

O:\Clients\454 City of Sausalito\02-08-05 Regulatory Compliance Services\GIS\Figures\Final Figures\FIG 3_1.mxd 10/13/2009

FIGURE 3-2

City of Sausalito Annual Report

Hot Spot Maintenance

October 2008 through September 2009

N

0 0.04 0.08 0.16 0.24 Miles

NOTES:

LEGEND:

- City Owned, District Operated PS
- District Owned, District Operated PS
- SMCSD Pipeline

Hot Spot Cleaning Frequency

- 4 or More Cleanings/Year
- 3 Cleanings/Year
- 2 Cleanings/Year
- 1 Cleaning/Year
- Pipes Not on Hot Spot List

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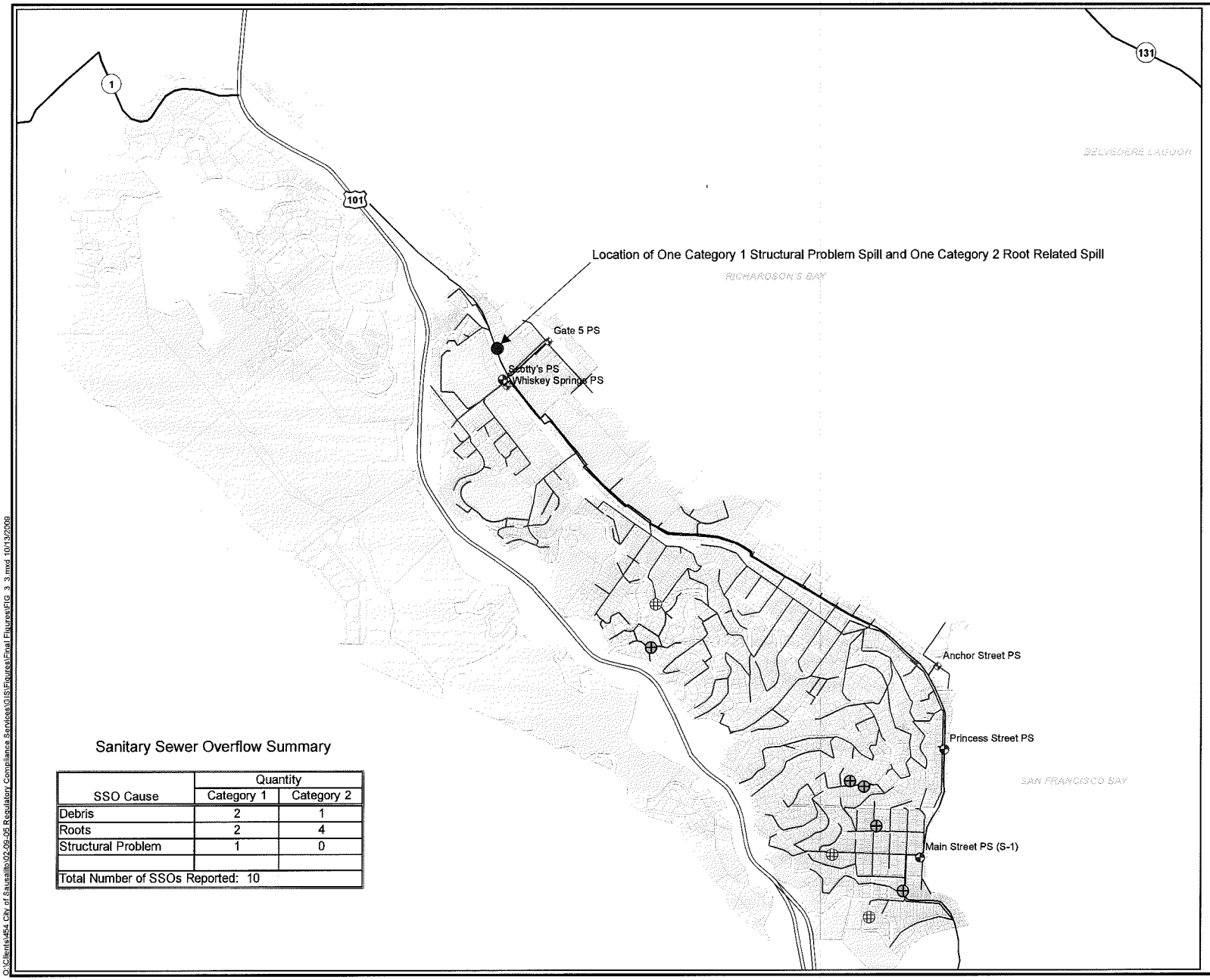
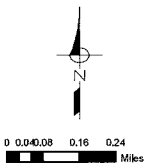
FIGURE 3-3

City of Sausalito Annual Report

Sanitary Sewer Overflows

October 2008 through September 2009





NOTES:

1. All incidents as reported to CIWQS during the period of 10/01/08 to 09/30/09.

LEGEND:

- City Owned, Disctrict Operated PS
- District Owned, District Operated PS
- SMCSD Pipeline
- City of Sausalito Pipeline

Overflow Cause

- Structural Problem
- Roots
- Debris

Sanitary Sewer Overflow Summary

SSO Cause	Quantity	
	Category 1	Category 2
Debris	2	1
Roots	2	4
Structural Problem	1	0
Total Number of SSOs Reported: 10		

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56

SECTION 4. COLLECTION SYSTEM ASSESSMENTS

INTRODUCTION

This section addresses the inspection methods and findings of the sewer pipe condition assessments conducted during the Reporting Period and the estimated miles of sewer pipe and number of maintenance holes planned to be inspected during the next reporting period (Section IV.A.3 of the Order). This section also references a separate report completed by the City to provide results on collection system flow monitoring for the Reporting Period (Section IV.B.2 of the Order).

4A. Sewer Pipe Maintenance Hole Inspection and Condition Assessment

The EPA Order, Section IV.A.3 includes the following requirements:

> *IV. COLLECTION SYSTEM ASSESSMENTS*
>
> *A. Sewer Pipe and Maintenance Hole Inspection and Condition Assessment:*
>
> *3. Beginning October 15, 2009, (SMCSD, TCSD, and) the City of Sausalito shall each submit an annual progress report to EPA summarizing the inspection methods and findings of the sewer pipe condition assessments conducted during the previous year and the estimated miles of sewer pipe and number of maintenance holes planned to be inspected during the current year.*

Collection System Inspection Methods

The City currently inspects pipes with its own crews and equipment, and supplements these inspections using closed circuit television (CCTV) inspection contractors. For mains with maintenance holes located in readily accessible locations, CCTV data is collected with the use of fully equipped CCTV vehicles. Each vehicle carries all of the inspection, video capture, and recording equipment needed to televise a sewer pipe. Pan and tilt cameras are used because they give the inspectors increased flexibility in identifying and assessing the main infrastructure as well as the service lateral connections. For mains with maintenance holes that are located in remote or difficult to access areas, inspection contractors may utilize a portable push camera, capable of viewing, recording and identifying defects located in the pipe. Upstream and downstream manholes are inspected concurrently with associated pipes.

Condition Assessments for Current Reporting Period

Table 4-1 summarizes the system-wide CCTV sewer inspections conducted in the current Reporting Period, and in the prior periods ending October 15, 2008. The City has established a goal of inspecting 15,798 linear feet of collection system pipe, covering the entire service area, by April 15, 2010.

6B
26

During the Reporting Period, Sausalito inspected over 8,186 feet of pipeline along and near Bridgeway, Spinnaker Drive, Gate 5 Road, Prospect Avenue, Napa and Bee Streets, and between Woodward Avenue and Toyon Court. The locations of inspected pipes are shown in Figure 4-1. These inspections located roots, joint offsets, and structural defects warranting repair. The City is currently preparing designs for the replacement of pipelines in all of these locations.

Table 4-1. CCTV Pipe Inspection

Inspection Period	# of Pipes[(a)]	Pipe Length[(a)], miles	% of System
Prior: 01/01/2000 to 09/30/2008	426	15.7	76.7
Current: 10/01/2008 to 09/30/2009	44	1.6	7.6
Remaining Uninspected Pipes	101	3.2	15.7
Total	571[(b)]	20.5[(b)]	100%

[(a)] This value does not include multiple inspections that were conducted for the same pipe.
[(b)] Totals only include gravity sewers, not force mains.

Inspection Planned For Future Period

Figure 4-1 illustrates the location of pipes planned for inspection during the upcoming reporting period. Because some inspections reported during the period between January 2000 and September 2009 involved duplicate inspections of a single pipe, approximately 3.2 miles or 15.7 percent of the system remains to be inspected. The City plans to complete these inspections by April 2010, using a combination of contract assistance and in-house staff.

4B. Capacity Assessment

The EPA Order, Section IV.B.2 includes the following requirements:

> *IV. COLLECTION SYSTEM ASSESSMENTS*
>
> *B. Capacity Assessment:*
>
> 2. *By October 15, 2009, and each year thereafter, (SMCSD, TCSD, and) the City of Sausalito each shall submit a report to EPA providing the results of collection system flow monitoring, including the average dry weather flow and peak wet weather flow from its collection system.*

This section is addressed in the report titled, "Sausalito Flow Monitoring Annual Report" (RMC), which is included in Appendix B of this Annual Report.

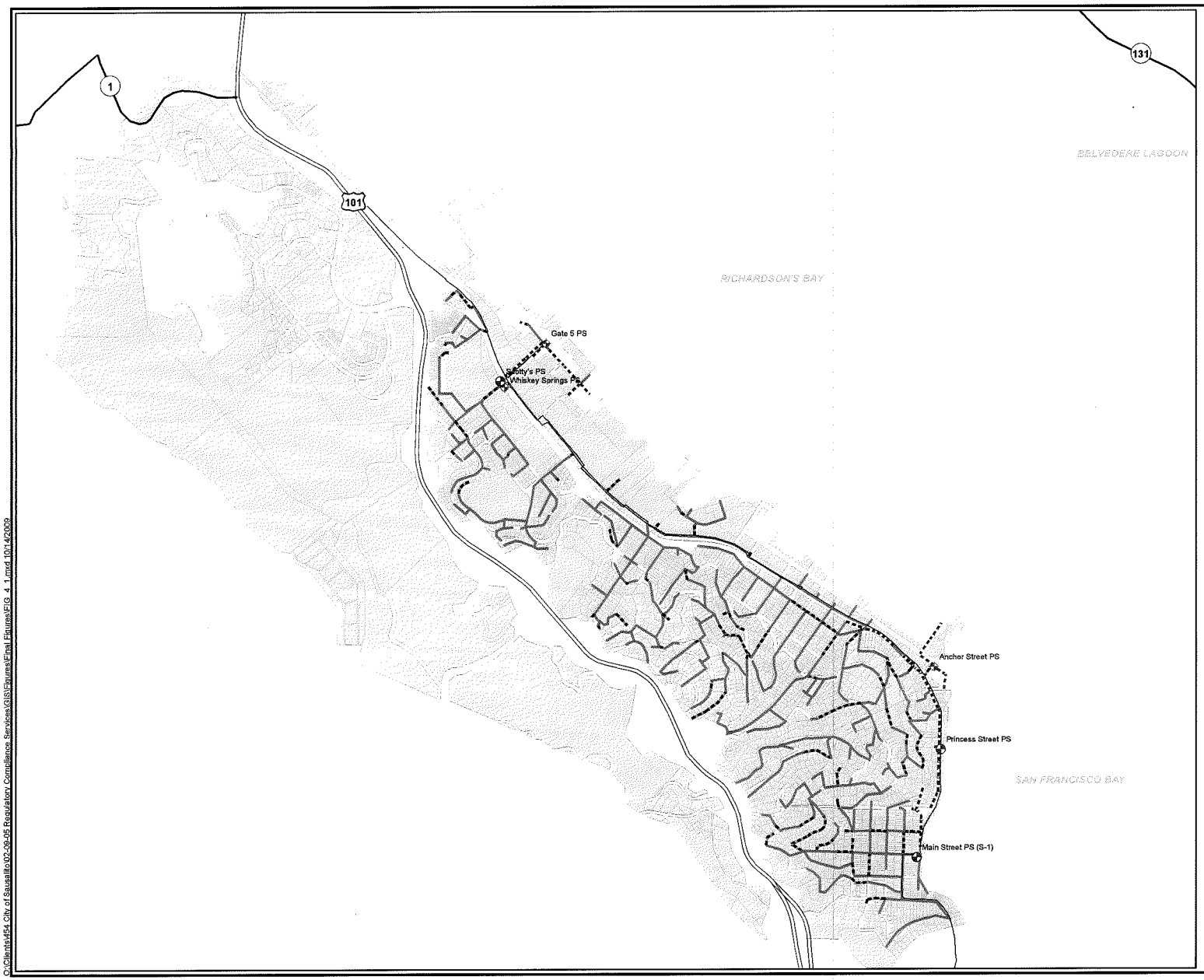

FIGURE 4-1

City of Sausalito Annual Report

CCTV Inspections

October 2008 through September 2009

N

0 0.05 0.1 0.2 0.3 Miles

NOTES:

LEGEND:

- City Owned, District Operated PS
- District Owned, District Operated PS
- SMCSD Pipeline
- Previously Inspected (since 1/1/2000)
- Inspected from 10/1/08 - 9/30/09
- Planned Inspections (by April 2010)

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26

SECTION 5. CAPACITY ASSURANCE

INTRODUCTION

Section 5 of the Order does not require the submission of any information during this Reporting Period. However, in order to create a document that will allow for consistent submittals, this section is included as a placeholder for future discussions on improvements that are identified to address condition and capacity needs in the system. Reports related to the item are required on October 15, 2010 and October 15, 2013 (Section V of the Order).

SECTION 6. INFRASTRUCTURE RENEWAL

INTRODUCTION

This section documents sewer repair, rehabilitation and replacement activities completed during the previous year and describes projects to be completed in the coming reporting period (Section VI.B of the Order).

Requirements for the EPA Amended Order for Compliance

6A. Sewer Repair, Rehabilitation and Replacement

Section VI.A. of the Order requires the City, by October 15, 2010, to submit a plan for short-term and long-term repair, rehabilitation, and replacement of sewer pipes (the 10-year Capital Improvement Plan (CIP)).

Section VI.A. does not require a submission of information during this Reporting Period. However, in order to create a document that will allow for consistent submittals, this section is included as a placeholder for future reports related to development of the 10-year CIP.

6B. Annual Report

The EPA Order, Section VI.B includes the following requirements.

> *VI. INFRASTRUCTURAL RENEWAL*
>
> *B. Annual Report:*
>
> *By October 15 of each year, (SMCSD, TCSD, and) the City of Sausalito shall each submit an annual report to EPA documenting sewer repair, rehabilitation or replacement activities completed in the previous year; describing projects to be completed in the coming annual cycle; and (after the required submittal on October 15, 2010) providing an updated 10-year Capital Improvement Plan (CIP).*

Sausalito has identified a 5-year priority replacement plan, and has initiated design activities for six of the projects listed in this plan:

- Priority 1a – Gate 5 Road Pipeline Replacement Project. This project converts the existing Gate 5 Road gravity sewer into a low pressure force main. The project is needed to remove sags, joint separations, and other structural defects in the existing pipe. The project is projected to bid in January 2010 and complete construction in mid-2010.
- Priority 1b – Spinnaker Grease Interceptor, Pipeline, and Anchor Pump Station Rehabilitation project. This project installs a new grease interceptor at the Spinnaker restaurant; converts the existing, failing gravity sewer between the Spinnaker Restaurant and Anchor Pump Station with a low pressure force main; and rehabilitates Anchor Pump Station as described in Section 3, above. The project is projected to bid in December 2010 and complete construction in mid-2010.

6B 30

- Priority 1c – Prospect Avenue Sewer Replacement corrects known pipeline defects that contribute to I&I. The project is projected to bid in October 2009 and complete construction by early 2010.
- Project 2b and 2c – Beach and Alexander Avenue Sewer Replacements. This project addresses pipelines that are partially or fully submerged in the San Francisco Bay, and present a reliability concern to the City. Design was initiated in 2009; construction will continue through 2010, and will be completed in 2011.
- Priority 3b – Woodward to Toyon Avenue Sewer Replacement addresses known structural defects within an existing pipeline located in private easements on a steep slope. Design was initiated in August 2009. Construction will be completed in 2010.
- Priority 3e and 3f (partial) – Napa and Bee Street Sewer Replacements. This project replaces pipelines with multiple structural defects. Design was initiated in August 2009. Construction will be completed in 2010.

Projects to be Completed During Upcoming Annual Cycle

During the upcoming annual cycle, the City will complete construction of the Priority 1a, 1b, and 1c projects, and will be in the construction phase for the Priority 2b, 2c, 3b, and 3e projects, and the portion of the Priority 3f project that includes Napa and Bee streets.

SECTION 7. UPDATED ANNUAL BUDGET AND COST OF COMPLIANCE

INTRODUCTION

Section 7 of this submittal includes the City's updated wastewater collection system annual budget for the current year as well as the cost of compliance with the Order (Section X of the Order).

Requirements of the EPA Amended Order for Compliance

The EPA Order, Section X includes the following requirements:

> *X. ANNUAL PROGRESS REPORTS*
>
> *...The annual progress reports shall also contain an updated wastewater collection system annual budget for the current year and the cost of compliance with this Order.*

The City's wastewater collection system annual budget for fiscal year 2009/10 is provided in Appendix C. The annual capital and operating budget includes $2.65 million in total charges to fulfill the requirements of system operations and maintenance, including the requirements of the Order.

The City, working with SMCSD and TCSD, continues to identify, evaluate and implement necessary improvements to facilities, operations and maintenance of the wastewater collection system. The City approved a new rate structure in June 2009 (following a California Proposition 218 process) in order to fund necessary capital and maintenance improvement programs. The goal of these efforts was to provide a thoughtful, fiscally-responsible plan to address the urgent environmental, health and safety needs identified in the EPA Order. In order to implement the intensive capital program identified, the City of Sausalito applied for American Recovery and Reinvestment Act and State Revolving Fund loans. Although no funding commitments from the State have yet been received, the existing rate structure will provide for debt service to allow a total of $5.5 million in capital improvements over the next five years.