

# CITY OF SAUSALITO



## Sewer System Management Plan August 2019

Original Adoption: April 3, 2009

1<sup>st</sup> Revision: April 27, 2014 Resolution No. 5442

2<sup>nd</sup> Revision October 7, 2019 Resolution No. 5863

**State Waste Discharge Identification Number 2SSO10114**



**RESOLUTION NO. 5863**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAUSALITO ACCEPTING THE 2019 INTERNAL AUDIT REPORT AND APPROVING AND ADOPTING THE AUGUST 2019 CITY OF SAUSALITO SANITARY SEWER SYSTEM MANAGEMENT PLAN INCLUDING THE OVERFLOW EMERGENCY RESPONSE PLAN AND WATER QUALITY MONITORING PROGRAM.**

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**WHEREAS**, On May 2, 2006, the State Water Resources Control Board issued order No. 2006-0003-Dwq requiring all public wastewater collection system agencies in California with greater than one mile of sewers to and discharging to a publicly owned wastewater treatment plant be regulated under general waste discharge requirements; and

**WHEREAS**, the waste discharge requirements replaced similar regulations previously required of the City by the San Francisco Regional Water Quality Control Board; and

**WHEREAS**, portions of the order related to monitoring and reporting as established by the waste discharge requirements were amended by order No. 2013-0058-EXEC, Dated July 30, 2013 and effective on September 9, 2013 The Monitoring and Reporting Program; and

**WHEREAS**, With resolution No. 4891 of April 3, 2007 The City Council of the City of Sausalito adopted a Sewer System Management Plan dated April 2007; and

**WHEREAS**, the intent of the Sewer System Management Plan is to comply with the waste discharge requirements, and the Monitoring and Reporting Program and an update has been prepared to document changes to policies and procedures employed by the City in the day-to-day operations of its sanitary sewer enterprise since the adoption of the April 3, 2007 Sewer System Management Plan; and

**WHEREAS**, in October 2018 the City conducted an internal audit of the sewer system management plan which is required every two years based on waste discharge requirements; and

**WHEREAS**, the Statewide Waste Discharger Requirement requires the City Council to approve and adopt a Sewer System Management Plan at a minimum of every five years from the original adoption date; and

**WHEREAS**, the Waste Discharger Requirements stipulate that the City's Legally Responsible Official shall certify that the internal audit and the Sewer System Management Plan revisions were prepared under his/her direction and shall certify the required data is submitted to the State sanitary sewer database by the governing body immediately following public consideration and adoption; and

**WHEREAS**, the importance of the City's compliance with these applicable and relevant regulations is such that adoption of the updated Sewer System Management Plan is recommended by the City's Public Works Director / City Engineer.

**NOW, THEREFORE, THE CITY COUNCIL HEREBY RESOLVES:**


1. Accepts the Sewer System Management Plan 2019 internal audit report.
2. Approves and adopts the updated City of Sausalito Sewer System Management Plan including the revised Overflow Emergency Plan and Water Quality Mentoring Plan.
3. Authorizes the City's legally responsible official to certify the adopted updated Sewer System Management Plan to regulatory agencies as required and placed the revised documents and all references on the City website.

**RESOLUTION PASSED AND ADOPTED**, at the regular meeting of the Sausalito City Council on the 8th day of October, 2019, by the following vote:

<b>AYES:</b>	Councilmember:	Cox, Reilly, Withy, Cleveland-Knowles, Mayor Burns
<b>NOES:</b>	Councilmember:	None
<b>ABSENT:</b>	Councilmember:	None
<b>ABSTAIN:</b>	Councilmember:	None

  
\_\_\_\_\_  
Joe Burns  
Mayor

**ATTEST:**

  
\_\_\_\_\_  
Serge Avila  
Acting City Clerk

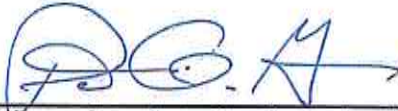
**EXHIBIT**

- A. City of Sausalito Sewer System Management Plan dated August 2019 and Internal Audit Report dated August 2019 including the Overflow Emergency Response Plan and Water Quality Monitoring Plan



**CERTIFICATION**

I certify under penalty of law that this document and all attachments 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, 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



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*Pat Guasco, Sewer System Coordinator, Legally Responsible Official*



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# 1.0 Introduction

## 1.1. Sewer System Management Plan

This Sewer System Management Plan (SSMP) has been prepared by the Public Works Department of the City of Sausalito with the assistance of Causey Consulting, Walnut Creek, CA. It is a compendium of the policies, procedures, and activities that are included in the planning, management, operation, and maintenance of the City's sanitary sewer system.

The State Water Resources Control Board (SWRCB) has issued statewide waste discharge requirements for sanitary sewer systems, which include requirements for development of an SSMP. The State Water Board requirements are outlined in Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, dated May 2, 2006 (GWDR), and Order No. WQ-2008-0002-EXEC, dated February 20, 2008, which was amended by Order No. 2013-0058-EXEC, effective September 9, 2013, which changed the Monitoring and reporting Program (MRP). This SSMP is intended to update the City's existing SSMP, in continued compliance with the GWDR.

The structure (section numbering and nomenclature) of this SSMP follows the above referenced GWDR and MRP. This SSMP is organized using the SWRCB outline of elements; and contains language taken from the GWDR at that beginning of each element. The GWDR uses the term "Enrollee" to mean each individual municipal wastewater agency that has completed and submitted the required application for coverage under the WDR (in this case, the Enrollee is the City of Sausalito). The City's waste discharger identification number (WDID) in the California Integrated Water Quality System (CIWQS) is 2SSO10114.

## 1.2. Sanitary Sewer System Facilities

The City is located approximately 10 miles north of San Francisco, north of the Golden Gate Bridge in southern Marin County. The City is approximately 2.2 square miles in area, 1.8 square miles of which is on land (Intro Figure No. 1). The City provides sewer service to a population of 7,037 on 3041 parcels. The City's sanitary sewer collection system serves 4185 equivalent residential dwelling units (EDUs) and 1340 non-residential customers<sup>1</sup>.

City staff reports the City's wastewater collection system consists of 20.9 miles of gravity pipelines, four lift station, three (3) four force mains and one (1) open-ended force main totaling 1773 linear feet, 650 manholes and access points, with 635 main lines in the collection system. The City has no responsibility for the lower laterals connecting parcels to the mainline sewers.

The wastewater transported through the City's collection system is discharged into the Sausalito-Marín City Sanitary District (SMCSD) conveyance system for final transport, treatment and disposal through a deep-water discharge to the San Francisco Bay. The City is responsible for the

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<sup>1</sup> City of Sausalito Sewer rate Study, June 2019 NBS



gravity sewer mains. SMCSD is responsible for the operation and maintenance of the three City lift stations and force mains.

The City is required to report all sanitary sewer overflows (SSO) and reports to the California Integrated Water Quality Reporting System (CWIQS) using its unique waste discharge identification number (WDID) issued by the State 2SSO10114. This WDID can be used by the City Council, customers or anyone interested in obtaining specific information regarding the City's record of sewer performance.

Intro Tables 1 to 3 provide specific information regarding the gravity sewer pipes maintained by the City of Sausalito. In addition, the City maintains lower laterals that have installed backflow prevention devices in the lateral at City easements.

An overview map of the City's sanitary sewer system service area is displayed below.

**Intro Figure 1: Sausalito Sanitary Sewer System Map**



**Intro Table 1: Gravity Sewer System Size Distribution\***

Pipe Size	Number of Pipe Segments	Pipe Length by Pipe Size, feet	Percentage of the System
4	11	1,813	1.708
6	452	85,377	80.555
8	60	11,668	11.005
10	18	4,207	3.965
12	7	1,773	1.096
18	1	199	1.644
Totals	549	105,037	99.973
<b>Total, miles</b>		<b>20.072</b>	
<b>Average Segment Length, feet</b>		<b>191.32</b>	

Reference: City 4/8/19 Excel Spreadsheet

**Intro Table 2: Sewer System Materials of Construction**

Pipe Material	Number of Pipe Segments	Pipe Length by Pipe Size	Percentage of the System
ACP	11	2,335	2.23
DIP	3	465	0.45
HDPE	3	484	0.46
PVC/PVC 900	25	5,127	4.91
RCP	3	462	0.44
VCP	387	73,239	70.09
Unknown	105	19,905	19.05
Total	578*549	110,585*104,788	
<b>Totals, miles</b>		<b>19.85</b>	

Reference: City 4/8/19 Excel Spreadsheet



**Intro Table 3: Inventory of Sewer Lines by Pipe Age**

Period of Construction	Percentage of the System	Pipe Length, Linear Feet
2000 – current	1	1,106
1980 – 1999	14	15,482
1960 – 1979	60	66,351
1940 – 1959	25	27,646
1920 - 1939	0	0
1900 - 1919	0	0
Totals	100	110,585
<b>Totals, miles</b>		<b>20.9</b>

Reference: CIWQS June 30,2019

## 2.0 Definitions, Acronyms, and Abbreviations

### **Asbestos Cement Pipe (ACP)**

### **Bay Area Clean Water Agencies (BACWA)**

### **Best Management Practices (BMP)**

Refers to the procedures employed in commercial kitchens to minimize the quantity of grease that is discharged to the sanitary sewer system. Examples include scraping food scraps into a garbage can and dry wiping dishes and utensils prior to washing.

### **Building Lateral – see Private Sewer lateral**

### **Calendar Year (CY)**

### **California Integrated Water Quality System (CIWQS)**

Refers to the State Water Resources Control Board online electronic reporting system that is used to report SSOs, certify completion of the SSMP, and provide information on the sanitary sewer system. The electronic reporting requirement became effective on February 14, 2007 in Region 9.

### **Cal OES**

See OES below.

### **California Department of Fish and Wildlife (CDFW)**

### **Capital Improvement Plan (CIP)**

Refers to the document that identifies future capital improvements to the City's sanitary sewer system.

### **Cast Iron Pipe (CIP)**

### **City**

Refers to the City of Sausalito

### **Closed Circuit Television (CCTV)**

Refers to the process and equipment that is used to internally inspect the condition of gravity sewers.

### **County of Marin Environmental Health Department (CMEHD)**

### **Computerized Maintenance Management System (CMMS)**

Refers to the Lucity computerized maintenance management system that is used by the City to plan, dispatch, and record the work on its sanitary sewer system.

### **Ductile Iron Pipe (DIP)**

### **Division of Water Quality (DWQ)**

Refers to the State of California Division of Water Quality of the State Water Resources Control Board.

**Environmental Health Services (CMEHS)**

**Fats, Oils, and Grease (FOG)**

Refers to fats, oils, and grease typically associated with food preparation and cooking activities that can cause blockages in the sanitary sewer system.

**Feet per sec (fps)**

**First Responder**

Refers to the field crew or the On-Call personnel that are the City's initial response to an SSO event or other sewer system event.

**Fiscal Year (FY)**

Means a 12-month periods beginning July 1<sup>st</sup> and ending June 30<sup>th</sup>.

**Food Service Establishment (FSE)**

Refers to commercial or industrial facilities where food is handled/prepared/served that discharge to the sanitary sewer system.

**Full-time Equivalent (FTE)**

Refers to the equivalent of 2,080 paid labor hours per year by a regular, temporary, or contract employee.

**General Waste Discharge Requirements (GWDR or WDR)**

Refers to the State Water Resources Control Board Order No. 2006-0003, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, dated 5/2/2006.

**Geographical Information System (GIS)**

Refers to the City's system that it uses to capture, store, analyze, and manage geospatial data associated with the City's sanitary sewer system assets.

**Global Positioning System (GPS)**

Refers to a field device it that is recommended to determine the longitude and latitude of sanitary sewer overflows for use in meeting CIWQS reporting requirements.

**Gallons per Day (GPD)**

**Grease Removal Device (GRD)**

Refers to grease traps and grease interceptors that are installed to remove FOG from the wastewater flow at food service establishments.

**High-density Polyethylene (HDPE)**

**Infiltration/Inflow (I/I)**



Refers to water that enters the sanitary sewer system from storm water and groundwater.

Infiltration enters through defects in the sanitary sewer system after flowing through the soil.

Inflow enters the sanitary sewer without flowing through the soil. Typical points of inflow are holes in manhole lids and direct connections to the sanitary sewer (e.g. storm drains, area drains, and roof leaders).

**Lateral – See Private Sewer Lateral**

**Lateral Replacement Grant Program (LRGP)**

**Legally Responsible Official (LRO)**

Person(s) formally designated by an agency to be responsible for formal reporting and certifying of all reports submitted to the CIWQS.

**Lower Lateral**

That portion of a private sewer lateral from the City mainline lateral connection to the property line or cleanout at the property line.

**Manhole (MH)**

Refers to an engineered structure that is intended to provide access to a sanitary sewer for maintenance and inspection.

**Mainline Sewer**

Refers to City wastewater collection system piping that is not a private lateral connection to a user.

**Monitoring, Measurement, and Plan Modifications (MMPM)**

**Monitoring and Reporting Program (MRP)**

State Water Resources Control Board WQ 2013-0058-EXEC effective September 9, 2013.

**Municipal Separate Storm Sewer System (MS4)**

**National Association of Sewer Service Companies (NASSCO)**

Refers to the national association responsible for the North American Standards for pipeline, manhole and lateral defect identification and assessment.

**National Pollution Discharge Elimination System (NPDES)**

**Notification of an SSO**

Refers to the time at which the City becomes aware of an SSO event through observation or notification by the public or other source.

**Nuisance**

California Water Code section 13050, subdivision (m), defines nuisance as anything that meets all of the following requirements:



Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.

Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

Occurs during, or as a result of, the treatment or disposal of wastes.

**Office of Emergency Services (OES)**

Refers to the California State Office of Emergency Services.

**Operations and Maintenance (O&M)**

**Overflow Emergency Response Plan (OERP)**

**Pipeline Assessment and Certification Program (PACP)**

Refers to the NASSCO certification program that is used for the evaluation and condition assessment of sewer lines and appurtenances from closed circuit televising of the lines and appurtenances.

**Polyvinylchloride Pipe (PVC) and PVC C900**

**Publicly Owned Treatment Works (POTW)**

**Preventive Maintenance (PM)**

Refers to maintenance activities intended to prevent failures of the sanitary sewer system facilities (e.g. cleaning, CCTV, repair, etc.).

**Private Sewer Lateral (PSL)**

That portion of a private property's building sewer as defined by the plumbing code, and is further defined as the piping of a drainage system that extends from the end of the building drain to the public sewer which includes the connection to the public sewer.

**Private Lateral Sewage Discharges (PLSD)**

Sewage discharges that are caused by blockages or other problems within a privately-owned lateral.

**Property Damage Overflow**

Refers to a sewer overflow or backup that damages a private property owner's premises.

**Pump Station (PS)**

A facility that transmits and lifts sewage into the City gravity sanitary sewer collection system

**Public Works (PW)**

**Regional Water Quality Control Board (SFRWQCB)**

Refers to the San Francisco Regional Water Quality Control Board.

**Reinforced Concrete Pipe (RCP)**

**Sanitary Sewer Backup (Backup)**

A wastewater backup into a building and/or on private property caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

**Sanitary Sewer Overflows (SSO)**

Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:

- (i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;
- (ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and
- (iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

SSOs that include multiple appearance points resulting from a single cause will be considered one SSO for documentation and reporting purposes in CIWQS.

NOTE: Wastewater backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned are not SSOs.

**SSO Categories:**

Category 1: Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either:

- Reaches surface water and/or drainage channel tributary to a surface water; or
- Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.

Category 2: Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either:

- Does not reach surface water, a drainage channel, or an MS4, or
- The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.

Category 3: All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition.

**Sanitary Sewer System or Sewer System**

Refers to the sanitary sewer facilities that are owned and operated by the City of Sausalito.



**Sensitive Areas**

Refers to areas where an SSO could result in a fish kill or pose an imminent or substantial danger to human health.

**Sewer Service Lateral**

Refers to the piping that conveys sewage from the building to the City's wastewater collection system.

**Sewer System Management Plan (SSMP)**

**Sausalito-Marin City Sanitary District (SMCSD)**

**Standard Operating Procedures (SOP)**

Refers to written procedures that pertain to specific activities employed in the operation and maintenance of the Sanitary Sewer System.

**State Water Resources Control Board (SWRCB)**

Refers to the California Environmental Protection Agency, State Water Resources Control Board.

Note: The State Board is a separate entity from the Central Valley Regional Water Quality Control Board, although the two agencies are closely connected.

**Supervisory Control and Data Acquisition (SCADA)**

Refers to the system that is employed by the City to monitor the performance of its lift stations and to notify the operating staff when there is an alarm condition that requires attention.

**System Evaluation and Capacity Assurance Plan (SECAP)**

**Untreated or Partially Treated Wastewater**

Any volume of waste discharged from the sanitary sewer system upstream of a wastewater treatment plant headworks.

**Upper Lateral**

Refers to that portion of a private sewer lateral from the property line to clean out at the property line to the house cleanout just outside the house mud seal.

**Vitrified Clay Pipe (VCP)**

**Waste Discharge Identification Number (WDID)**

A unique identifier assigned by the State Water Board to each Enrollee for regulatory record and data management purposes.

**Waste Discharge Requirements for Sanitary Sewer Systems (WDR)**

**Wastewater Treatment Plant (WWTP)**

**Water Body**

Any stream, creek, river, pond, impoundment, lagoon, wetland, or bay.

**Water of the State**

Refers to “any surface water or groundwater, including saline waters, within the boundaries of the state.” (California Water Code § 13050(e)).

**Water Quality Monitoring Plan (WQMP)**

**Work Order (WO)**

Refers to a document (paper or electronic) that is used to assign work and to record the results of the work.

**2.1. References**

*State Water Resources Control Board Order No. 2006-0003*, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, California State Water Resources Control Board, May 2, 2006.

*State Water Resources Control Board Order No. Order No. 2013-0058-EXEC*, Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, September 9, 2013.

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## Element I: Goals

### SWRCB Waste Discharge Requirement:

The goal of the Sewer System Management Plan (SSMP) is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce and prevent SSOs, as well as mitigate any SSOs that do occur.

### I.1: SSMP Goals

The goals of the City of Sausalito SSMP are:

1. To properly manage, operate, and maintain all parts of the wastewater collection system, so as to preserve and protect the public's investment in that system
2. To provide adequate capacity to convey peak flows to the SMCSD treatment plant
3. To minimize the frequency and duration of SSOs, including implementing regular, proactive maintenance of the system to remove issues that may cause sewer backups or SSOs
4. To mitigate the impact of SSOs on public health and the environment
5. To respond quickly and respectfully to public notifications of SSOs or other collection system problems
6. To collect complete and accurate information regarding SSOs for reporting to the appropriate regulatory agencies
7. To uphold the City's standards and specifications on newly constructed public and private sewers
8. To provide a safe working environment for City employees
9. To provide City employees with the tools and training needed to perform their work effectively and achieve the City's goals

### I.2: References

None



## Element II: Organization

SWRCB Waste Discharge Requirement:

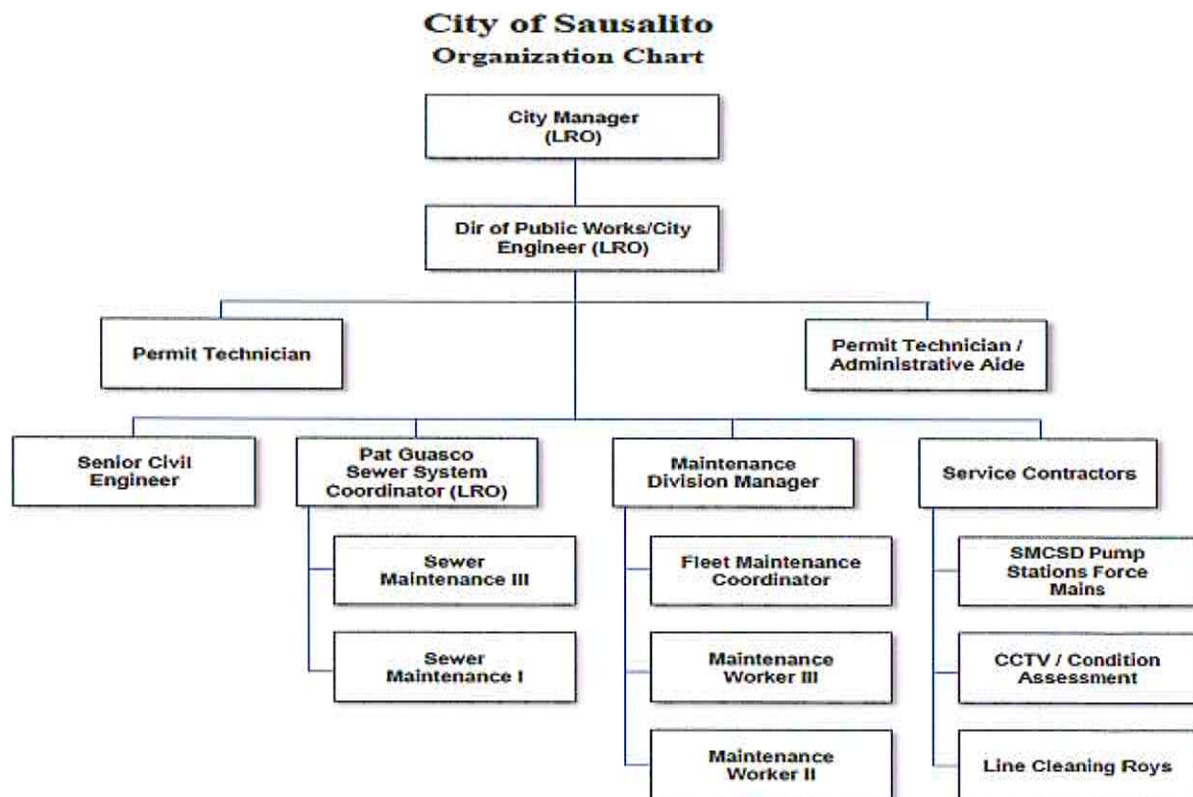
The Sewer System Management Plan (SSMP) must identify:

- a. The name of the responsible or authorized representative as described in Section J of this Order.
- b. The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and
- c. 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)).

### II.1: Organizational Structure

The organization chart for the management, operation, and maintenance of the City’s wastewater

Figure II – 1: Sausalito Public Works Collection Systems Organization Chart



## II.2: Authorized Representatives

The City's Authorized Representative in all wastewater collection system matters is the Public Works Director/City Engineer. He/she is authorized to submit verbal, electronic, and written spill reports to the San Francisco Regional Water Quality Control Board (RWQCB), SWRCB, County of Marin Environmental Health Department (CMEHD), and California Office of Emergency Services (OES). He/she, as one of the City's Designated LROs, is authorized to certify electronic spill reports submitted to the SWRCB through California Integrated Water Quality System (CIWQS) or otherwise.

The Sanitary Sewer Coordinator is authorized to act as the City's LRO in the Public Works Director's absence. He/she is authorized to submit verbal, electronic, and written spill reports to the San Francisco RWQCB, SWRCB, CMEHD, and OES. He/she is authorized to certify electronic spill reports submitted to the SWRCB.

The City Manager is also an LRO and is also authorized to submit verbal, electronic, and written spill reports to the RWQCB, SWRCB, CMEHD, and OES. He/she is authorized to certify electronic spill reports submitted to the SWRCB

The City Data Submitters are authorized to insert draft data into the CIWQS Online SSO Database on behalf of the City if authorized by the LRO for data entry to the CIWQS system and reporting to OES and other regulatory agencies.

## II.3: Responsibility for SSMP Implementation and Maintenance

The Public Works Director/City Engineer has the overall responsible for developing, implementing, and maintaining the City's SSMP. The City has designated certain classifications as legally responsible officials (LRO) with the responsibility for reporting and certification of all documents and SSO reporting in CIWQS required by the WDR. The City is required to notify the SWRCB within thirty (30) days of the addition or removal of any person designated as an LRO or DS.

Other City Staff responsible for developing, implementing, and maintaining specific elements of the City's SSMP, along with their job titles and contact information, are shown in Supplement 2-1 and further described in the following paragraphs:

**City Manager – LRO** – Reports to the City Council. Establishes policies and strategic plans for City activities, including those needed to support the SSMP. Serves as the liaison to the City Council, other agencies and the general public. The City Manager is a Legally Responsible Official.

**Director of Public Works / City Engineer – LRO** – Reports to the City Manager. Responsible for the design, construction, management and maintenance of the City's infrastructure, including sewers and storm drains. The Department includes engineering and maintenance/sewer functions. Supervises the preparation of the SSMP, monitors SSMP budget and performance, and allocates needed resources. Interfaces with the City Manager and Council in communications related to the SSMP. The Public Works Director & City Engineer is a Legally Responsible Official.



**Public Works Maintenance Division Manager** – Reports to the Public Works Director.

Oversees public works field operations and maintenance activities and works closely with the Sewer Systems Coordinator and Public Works Supervisor to recommend budget needs for the City's sewer maintenance program. In an emergency, the Public Works Maintenance Division Manager is responsible for supervising staffing of emergency sanitary sewer repairs.

**Sewer System Coordinator – LRO** – Reports to the Public Works Director. Oversees City and residential sanitary sewer repairs, replacements, installations, and rehabilitation activities.

Reviews all sanitary sewer lateral videotapes, establishes requirements, and makes recommendations to property owner(s) for rehabilitation or replacement. Responsible for development and management of an annual work plan for maintaining, inspecting, and improving the sewer system, and for managing and updating the Sewer System Management Plan and Computerized Maintenance Management System (CMMS) database. Prepares quarterly and annual regulatory reports and works closely with sewer consultants and contractors on design, repairs, replacement, installation, and/or rehabilitation of the City's sewer mains.

The Sewer Systems Coordinator is a Legally Responsible Official, and electronically reports sewer system overflows (SSOs) to the Regional Water Quality Control Board California Integrated Water Quality System (CIWQS) database, the California Office of Emergency Services (OES), and the County of Marin Environmental Health Department (CMEHD).

**Senior Wastewater Maintenance Worker III – DS** – Under general supervision of Sanitary Sewer Coordinator, leads, trains, oversees, and participates in the full range of duties related to the construction, modification, maintenance, and repair of City infrastructure, including wastewater collection, stormwater and drainage, and related systems; uses and operates a variety of manual and power tools and light to heavy power driven equipment; and performs related work as required

**Wastewater Maintenance Worker I** – Under direct supervision, performs a variety of skilled work in the construction, modification, maintenance, and repair of City infrastructure, including wastewater collection, stormwater and drainage, and related systems; uses and operates a variety of manual and power tools and light to heavy power driven equipment; and performs related work as required.

The Wastewater Maintenance Workers I responding to an SSO, document the event in the CMMS as a CalEMA/CMEHD and deliver these reports to the Sewer Systems Coordinator as soon as possible after the event. Sewer Maintenance Workers are licensed to drive all Public Works vehicles and can perform minor and/or shallow sanitary sewer repairs.

**Fleet Maintenance Mechanic** – Under general supervision, coordinates, monitors, and performs semi-skilled to skilled mechanical maintenance and repair work related to City vehicles and equipment, including police, fire, parks and recreation, and public works vehicles and equipment; coordinates and schedules maintenance and repair of vehicle and equipment; and performs related work as required

**Senior Civil Engineer** – Reports to the Director of Public Works & City Engineer. Responsible for managing capital improvement projects. Develops plans and specifications for collection



system projects and provides construction management inspection services. Provides oversight to the development and implementation of the SSMP. Reviews private development applications and establishes requirements and recommendations for building permits.

**Administrative Aide** – Under general supervision, provides a variety of responsible office support activities to the Public Works Department, which may include word processing, data entry and organization, telephone and counter reception, accounts payable and receivable, record keeping, report preparation, and filing; provides information and assistance to the general public; and performs related work as required.

**Permit Technician** – Under general supervision, performs a variety of complex administrative and technical support duties related to the issuance of building permits, and in support of related services and activities of the Public Works Department; explains ordinances, requirements, and City codes and department procedures to building contractors, architects, engineers, builders and the general public pertaining to improvements, permit requests and concerns; and performs other related work as required.

In addition to City staff, the City utilizes outside resources and service contractors as described below to assist in implementation of the SSMP:

**Consultants:** Individuals, companies, corporations, and/or associations that assist the City of Sausalito with sanitary sewer rehabilitation planning, projects, and/or emergency SSO response. Provide assistance with the design, bid proposals, surveying, potholing for utilities, and other actions that promote the rehabilitation, repair, replacement, and/or installation of City-maintained sanitary sewer pump stations and wastewater collection system.

**Construction Contractors:** Construct, repair, rehabilitate, and/or replace sewer system improvements as per the Specifications and Plans set forth by the City of Sausalito. Contractors must work closely with the Director of Public Works & City Engineer, and Sewer Systems Coordinator on sewer projects and is accountable for associated subcontractors and material suppliers.

**Maintenance Contractors:** Conduct sewer cleaning and televising activities to supplement work performed by City staff. Perform supplemental services as requested by the City related to the SSMP. Services include, but are not limited, to emergency callout for overflows (separate from the Contract Responder), and field assistance on behalf of the City on sanitary sewer rehabilitation projects, and other duties as requested.

**Sausalito-Marin City Sanitary District:** Provides all operations, maintenance and emergency response for the City's four pump stations and force mains transmitting sewage to the SMCSO treatment plant for treatment and disposal.

The Public Works Director/City Engineer shall have the overall responsibility for, implementing, periodically auditing, and maintaining the City's SSMP. He/she may delegate these responsibilities to his/her staff.

City Staff responsible for developing, implementing, and maintaining specific elements of the City's SSMP, along with their job titles and contact information, are shown in **Table II – 1**.



**Table II – 1: Responsible Officials for SSMP Implementation and Maintenance**

SSMP Element	Legally Responsible Official	Name	Phone Number	Email Address
Introduction	Public Works Director/City Engineer	Kevin McGowan	415-289-4176	kmcgowan@sausalito.gov
I – Goals	City Manager	Adam Politzer	415-289-4166	apolitzer@sausalito.gov
II – Organization	Public Works Director/City Engineer	Kevin McGowan	415-289-4176	kmcgowan@sausalito.gov
III – Legal Authority	City Manager	Adam Politzer	415-289-4166	apolitzer@sausalito.gov
IV – O&M Program	Sewer System Coordinator	Pat Guasco	415-289-4192	pguasco@sausalito.gov
V – Design & Performance Provisions	Public Works Director/City Engineer	Kevin McGowan	415-289-4176	kmcgowan@sausalito.gov
VI – Overflow Emergency Response Program	Sewer System Coordinator	Pat Guasco	415-289-4192	pguasco@sausalito.gov
VII – FOG Control Program	Sewer System Coordinator	Pat Guasco	415-289-4192	pguasco@sausalito.gov
VIII – System Evaluation and Capacity Assurance Plan	Public Works Director/City Engineer	Kevin McGowan	415-289-4176	kmcgowan@sausalito.gov
IX – Monitoring, Measurement, and Program Modifications	Sewer System Coordinator	Pat Guasco	415-289-4192	pguasco@sausalito.gov

SSMP Element	Legally Responsible Official	Name	Phone Number	Email Address
X – SSMP Program Audits	Sewer System Coordinator	Pat Guasco	415-289-4192	pguasco@sausalito.gov
XI Communication	Public Works Director/City Engineer	Kevin McGowan	415-289-4176	kmcgowan@sausalito.gov
Appendix A – SSMP Adoption Documents	Sewer System Coordinator	Pat Guasco	415-289-4192	pguasco@sausalito.gov
Appendix B – SSMP Change Log	Sewer System Coordinator	Pat Guasco	415-289-4192	pguasco@sausalito.gov
Appendix C – SSMP Audit Reports	Public Works Director/City Engineer	Pat Guasco	415-289-4192	pguasco@sausalito.gov
Appendix D – Overflow Emergency Response Plan	Sewer System Coordinator	Pat Guasco	415-289-4192	pguasco@sausalito.gov
Appendix E – Water Quality Monitoring Plan	Sewer System Coordinator	Pat Guasco	415-289-4192	pguasco@sausalito.gov



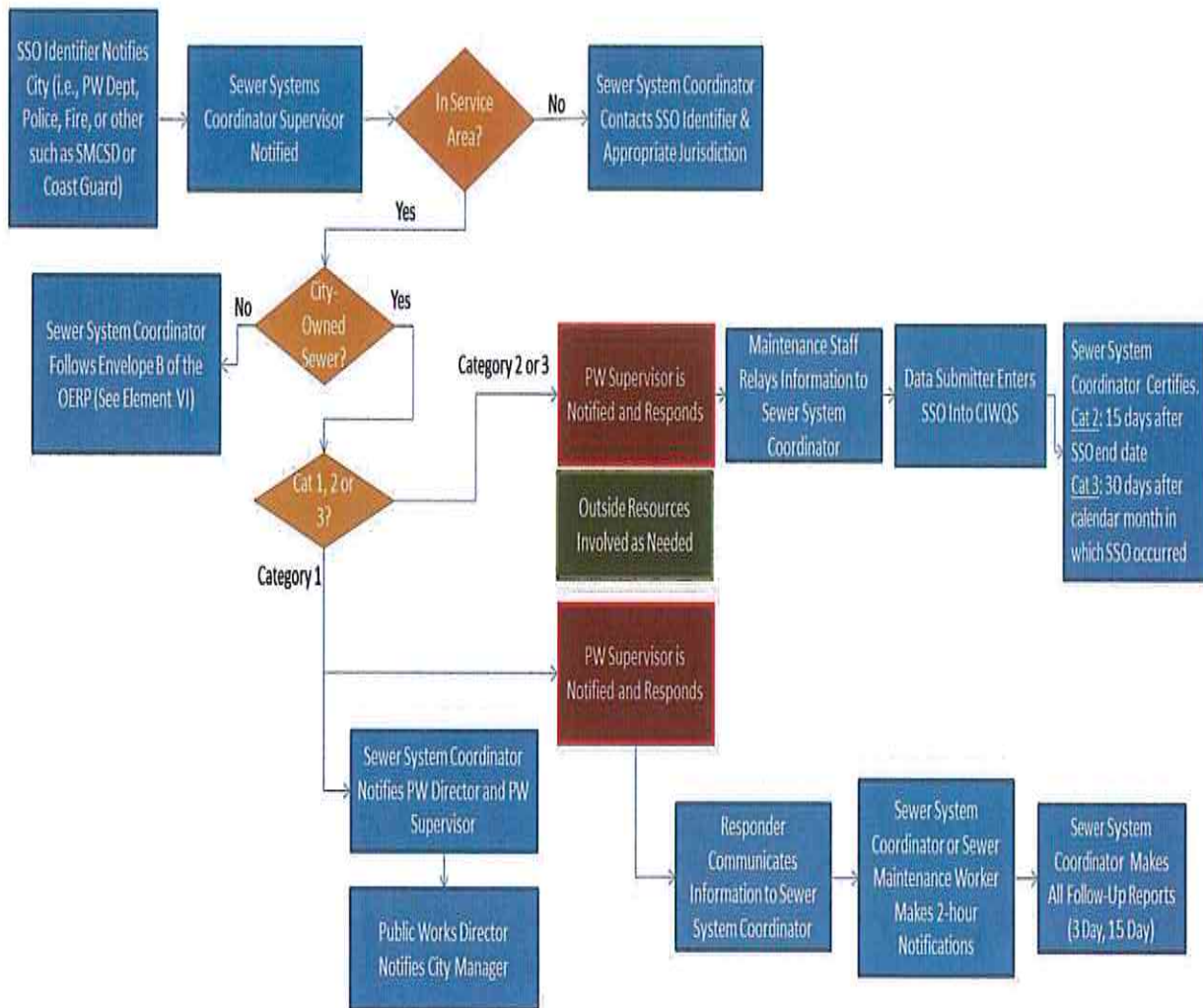
## II.4: SSO Reporting Chain of Communication

The SSO Reporting Chain of Command follows the Organization Chart shown above in

**Figure II – 1: Sausalito Public Works Collection Systems Organization Chart.**

The SSO reporting process and responsibilities are described in detail in the Overflow Emergency Response Plan.

**Figure II – 2: Overflow Emergency Response Plan Flowchart**



**Note: When Sewer System Coordinator is not Available, Public Works Supervisor Provides First Response and Public Works Director & City Engineer Makes Notifications**

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## II.5: Supplements

### II.5.1: Supplement 2-1: City Contact Information

#### SSMP RESPONSE STAFF

#### CONTACT NUMBERS

**City Council** The City Council members can be reached through the City Clerk's office.

Sergio Avila, City Clerk  
415.289.4134  
[savila@sausalito.gov](mailto:savila@sausalito.gov)

#### City Manager

Adam Politzer  
415.289.4166  
[apolitzer@sausalito.gov](mailto:apolitzer@sausalito.gov)

#### Director of Public Works & City Engineer (interim)

Kevin McGowan  
415.289.4176  
[kmcgowan@sausalito.gov](mailto:kmcgowan@sausalito.gov)

#### Public Works Maintenance Division Manager

Loren Umbertis  
415.289.4113  
[lumbertis@sausalito.gov](mailto:lumbertis@sausalito.gov)

#### Sewer Systems Coordinator

Pat Guasco  
415.289.4192  
415.987.1476 (personal cell)  
[pguasco@sausalito.gov](mailto:pguasco@sausalito.gov)

#### Public Works Supervisor

Kent Basso  
415.289.4193  
[kbasso@sausalito.gov](mailto:kbasso@sausalito.gov)

#### City of Sausalito Police (emergency after hours contact)

415.289.4170



## Element III: Legal Authority

### SWRCB Waste Discharge Requirement:

Each Enrollee must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:

Prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.);

Require that sewers and connections be properly designed and constructed;

Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;

Limit the discharge of fats, oils, and grease and other debris that may cause blockages, and enforce any violation of its sewer ordinances.

### III.1: Municipal Code

The Sausalito Municipal Code describes the City’s current legal authority required for compliance with the GWDR. That authority is specifically contained within the District Code Title 18 Public Services, Chapter 18.12, Sewers that are summarized below in Table III-1.

In addition, the City works cooperatively with SMCSO on all FOG Program elements and coordinates all FOG program requirements in conjunction with the SMCSO most current District Code. The critical references to the District Code provide additional authorities for the administration of the Program. The City will continue to coordinate with SMCSO to provide the legal authority to permit, inspect and enforce FOG producing facilities within the City’s service area.

**Table III – 1: Summary of Legal Authorities**

Requirements	Code References Sausalito Municipal Code (SMC) Sausalito=Marin CSD Code (DD)
<b>General</b>	
Prevent illicit discharges into the wastewater collection system	SMC 18.12.080;
Limit the discharge of fats, oils, and grease and other debris that may cause blockages	SMC 18.12.150

Requirements	Code References Sausalito Municipal Code (SMC) Sausalito=Marin CSD Code (DD)
Require that sewers and connections be properly designed and constructed	SMC 18.12.100; SMCSD Design Standards
Require proper installation, testing, and inspection of new and rehabilitated sewers	SMC 18.12.100; SMCSD Design Standards
<b>Laterals</b>	
Clearly define City responsibility	SMC 18.12.100
Ensure access for maintenance, inspection, or repairs for portions of the service lateral owned or maintained by the City	SMC 18.12.110
Control infiltration and inflow (I/I) from private laterals	SMC 18.12.100
<b>FOG Source Control</b>	
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	SMC 18.12.080; 46518.12.140
Authority to inspect grease producing facilities	
<b>Enforcement</b>	
Enforce any violation of its sewer ordinances	SMC 18.12.170 to 18.12.190

### III.2: Satellite Systems

The City does not collect wastewater from satellite systems, and therefore does not have any agreements with satellite sewer collection agencies at this time. The City is a satellite agency to SMCSD and has an agreement in place giving SMCSD the authority to regulate City discharges and to provide operations and maintenance of City owned pump stations and force mains.

### III.3: References

Reimbursement Agreement between the City of Sausalito and the Sausalito-Marín Sanitary District.



## Element IV: Operations and Maintenance Program

### WRCB Waste Discharge Requirement:

The Sewer System Management Plan (SSMP) must include those elements listed below that are appropriate and applicable to the Enrollee's system:

- a. Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities;
- b. 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 Preventive Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;
- c. 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;
- d. Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained; and provide equipment and replacement part inventories, including identification of critical replacement parts.

### IV.1: Collection System Mapping

The City currently uses a Geographic Information System (GIS) to create and maintain maps of its collection system facilities. The geodatabase includes pipe and manhole inventory information, including pipe and manhole IDs, manhole spatial coordinates, pipe length and diameter, the meter basin associated with each manhole, and manhole rim and invert elevations for the trunk sewers and some collector sewers. The GIS database also includes the cleaning method. Where manhole rim elevations are not known, ground surface elevations are included in the GIS database.

The GIS database references three City-owned pump stations and associated force mains: Whiskey Springs, Gate 5 Road, and Anchor Street pump station. These stations are maintained by Sausalito Marin City Sanitary District (SMCSD). SMCSD maintains system and maintenance information for these facilities. The City does not own or map private sewer laterals.



Maps are stored and accessible through the City's computerized maintenance management system, NexGen Asset Management. The NexGen software stores data and provides automated work order generation and tracking. The CMMS system is updated on a continual basis by City Public Works Department staff, with day-to-day entry by Sewer Maintenance Worker staff.

GIS updates and corrections are incorporated from record drawings, corrections from crews based on field observation and repairs, development plans, and CIP information/projects.

## **IV.2: Preventive Operation and Maintenance**

### **IV.2.1: Gravity Sewers**

The City sanitary sewer collection system of the Public Works Department is operated and maintained based upon the attached Organization Chart in Figure IV-1: City of Sausalito Organization Chart below. The City sewer crews clean sewers, respond to sewer related complains, coordinate the sewer lateral replacement program for the City and is directly responsible for compliance with the City EPA Administrative Order and compliance with the State of California Sanitary Sewer Water Discharge Requirements (WDR) including the reporting of all sanitary sewer overflows to the State SSO database.

The City of Sausalito cleans the gravity sewer mains on an annual cycle. Pipes with recurring maintenance issues, such as blockage-related SSOs or historical root/grease/debris accumulation, are defined as potential high frequency or "hot spots." The pipe segment is cleaned to remove any blockage, and then assigned to a more frequent cleaning schedule beginning with 6-months and moving to 3-months and then 1-month if issues persist. After the pipeline in question is rehabilitated, it moves back to the 12-month schedule.

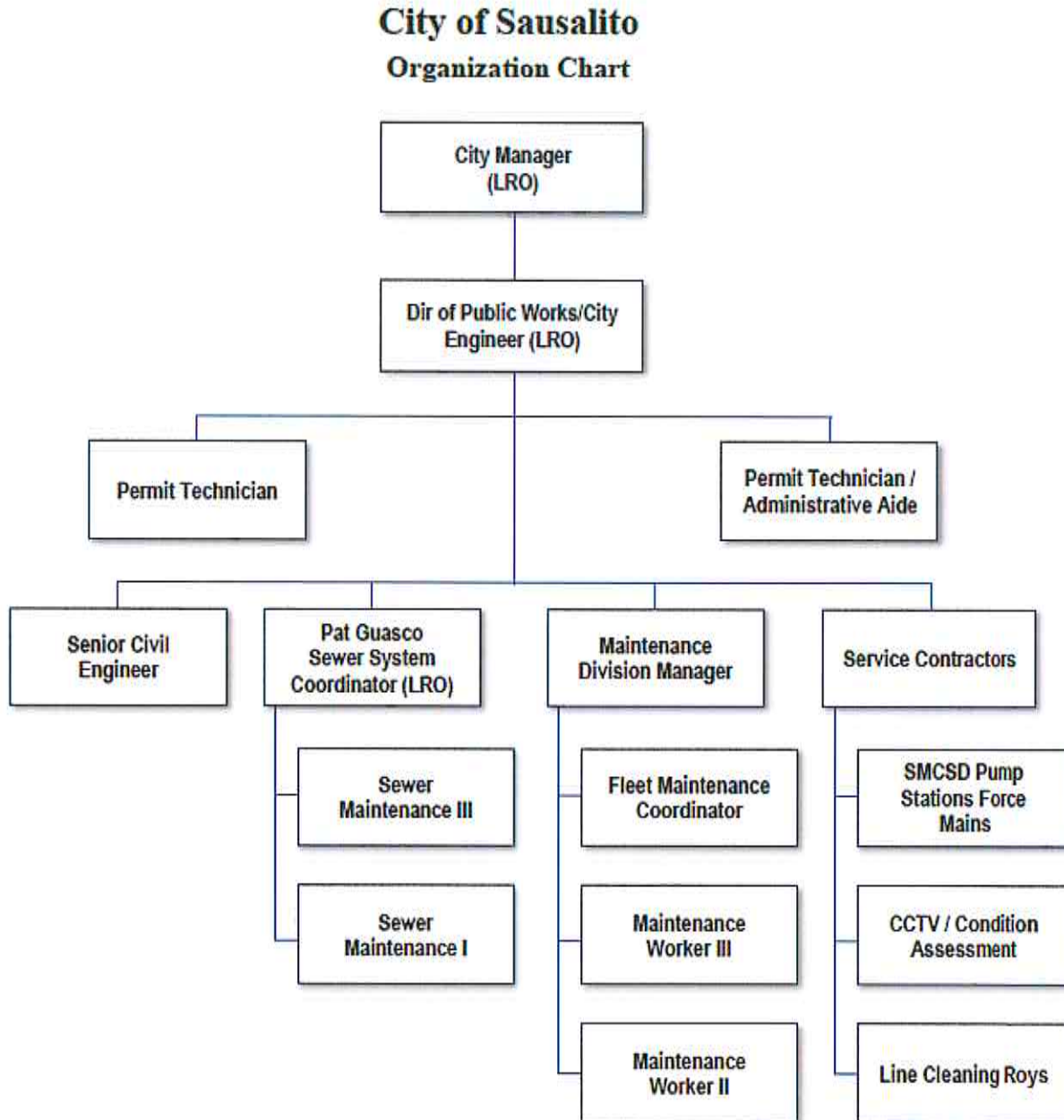
The City takes a proactive approach to cleaning and has placed all of the City's pipes in areas with known subsidence (generally within Bay Mud) on a 3-month cleaning schedule. The City is will be re-evaluating staffing availability and cleaning schedules. If feasible, there may also be an opportunity to move some pipes on the 6-month cleaning schedule to a more proactive 3-month schedule or even reduce frequencies one a new condition assessment of the high frequency lines is completed.

The City has 581 segments identified for cleaning. Of these pipes, 26 segments are on a 12-month cleaning schedule, 412 segments are on a 6-month cleaning schedule, and 143 segments are on a 3-month cleaning schedule.



**Figure IV – 1: City of Sausalito Organization Chart**

Table IV-1: High Frequency Cleaning, provides the pipe cleaning information of all pipes included in the program as of April 2019. Pipes are added to the hot spot cleaning program based upon results of the cleaning operations that have identified fats, oils, or grease as a problem, results of CCTV inspections, or as a result of an SSO that is caused by FOG.



**Table IV – 1: High Frequency Cleaning\***

High Frequency Lines Cleaning Frequency, months	Number of Pipe Segments	Total Length of Pipe per Frequency, linear feet	Total Annual Pipe Cleaning, Linear Feet
Quarterly	143	24,757	99,028
Semi Annual	412	80,218	160,436
Annual	25	4,251	4,251
<b>Totals</b>	<b>580</b>	<b>110,585</b>	<b>263,715</b>
<b>Total. miles</b>		<b>20.94</b>	<b>49.95</b>

\*Note: Data provided by V.H. Housen by email April 11, 2019

#### IV.2.2: Pump Stations and Force Mains

The pump station and force main asset information is shown in **Table IV – 2: Summary of Pump Stations** and

#### Table IV – 3: Summary of Force Main Assets

The City has contracted all pump station and force main operations and maintenance to the SMCS D. The SMCS D has a program of regularly scheduled inspections and maintenance for the pump stations that it operates and maintains on behalf of the City. The City and the District work jointly to develop and implement capital related costs and projects for these assets as needed. These capital related needs are discussed and scheduled between management of the agencies and with the Sewer Committee Working Group of elected members as needed.

The preventive maintenance program consists of weekly inspection and cleaning, annual wet well cleaning and major maintenance as determined by SMCS D during.

#### Table IV – 2: Summary of Pump Stations

Pump Station Name	Location	Date of Install	No. Pumps	Pump HP / each	Pump Manufacturer	Design Flow, gpm	Standby Generation, KW
Gate 5 Road	301 Gate 5 Ave	2002	2	10	Flygt	500	50
Whiskey Springs	SW Corner Coloma @ Bridgeway	1971	2	10	Gorman Rupp	465	150
Anchor	SE Corner Anchor @ Humboldt	2014	2	3	Flygt	200	None



Pump Station Name	Location	Date of Install	No. Pumps	Pump HP / each	Pump Manufacturer	Design Flow, gpm	Standby Generation, KW
Spinnaker Drive	100 Spinnaker Drive	2014	1	2	Flygt CP 3085	170	30kw Portable

**Table IV – 3: Summary of Force Main Assets**

Pump Station Name	Force Main Asset Information*			
	Installed Date	Length Linear Feet	Size Inches	Material
Gate 5 Road	2002?	834	6	DIP
Whiskey Springs	1971	97	6	DIP
Anchor	2014	230	6	DIP
Spinnaker Drive	2014	592' HDPE SDR 17 and 20' PVC SCH 80 at the PS headworks	4	Open ended force main construction material: 4-inch HDPE SDR 17 592-feet from MH 190006-190005-190004. AND 20-feet of 4-inch PVC SCH 80 from the two (2) Spinnaker pumps to MH 190006
<b>Total</b>		1773		

Note: City provided information in email dated 8/18/19

### **IV.2.3: Non-Routine Maintenance**

Non-routine maintenance activities include investigation and response to any complaints regarding a manhole overflow, missing or shifted manhole covers, manhole covers that are excessively noisy, residential plumbing troubles, pump station malfunction, unexpected sewer odor, etc. Sewer complaints received by the Public Works Department are investigated and appropriate actions are taken to resolve the source of the problem. All complaints are logged in the Nexgen system including the final disposition of the complaint as required by the WDR.

### **IV.2.4: Private Sewer Laterals**

The City has no responsibility for private sewer laterals unless it is found that they require maintenance or repair. If this occurs, the City informs the property owner and requires them to make the required improvements or repairs. The City has developed a sewer lateral repair and replacement program providing grant reimbursement providing 100% of the video inspection upon completion of a repair or replacement and up to 50% of the repair or replacement up to a maximum of \$1000.

### **IV.2.5: Root Control**

The City does not use chemical root control methods. All root control maintenance is accomplished during annual cleaning operations addressed in Section IV.2.1 above.

## **IV.3: Rehabilitation and Replacement Program**

The City has historically collected CCTV inspection data using a combination of City crews and CCTV contractors. Currently, CCTV data is collected in digital format with fully equipped CCTV vehicles, using pan-and-tilt cameras or, alternatively, using push cameras where large camera access is not possible.

The City and CCTV contractors uses the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) condition ratings. The City completed inspection of the entire gravity sewer system in 2010. Since then the City has contracted for specific condition assessments pipe segments of concern. The City intends to initiate a full system prioritized CCTV condition assessment program for up to two (2) miles of system pipes per year prior to the next Audit process. The program will utilize the Supplement IV-E Decision Matrix for CCTV Return Frequency based upon PACP Rating System

In addition to assigning individual structural and maintenance condition scores according to the NASSCO PACP methodology, the City also assigns a PACP “Quick Rating” for each pipe segment. The quick rating indicates the number of occurrences for the two highest severity grades for each pipe segment for either maintenance or structural defects.

The City has prioritized pipeline replacements based on CCTV inspection results, as well as other criteria such as addressing areas with high inflow and infiltration. Since pipeline condition changes over time, the City plans to reinspect and assess the entire system every the next 10 years.



#### IV.4: Training Program

##### IV.4.1: City Staff

The City uses a combination of in-house classes; equipment manufacturer training; on the job training; and conferences, seminars, and other training opportunities to train its wastewater collection system staff. Recurring training opportunities are shown on in the table below.

**Table IV – 4: Training Opportunities**

Sponsor	Event	Timeframe	References
<b>California Water Environment Association</b>	Northern Regional Training Conference	September	
	Northern Regional Safety Training	October	
	Bay Area Collection Systems Committee	Monthly/Quarterly	
	Specialty Conferences	Periodic	
<b>ABAG</b>	<b>Sewer Summit</b>	Annual	
<b>City of Sausalito</b>	SSMP and OERP Training with field exercises	Annual	Sausalito Sewer System Management Plan
<b>DKF Solutions, Inc.</b>	Volume Estimation; CIWQS Training for LRO and DS	As needed	
<b>City of Sausalito</b>	Tailgate and safety sessions and employee on the job mentoring.	As Needed	City of Sausalito

##### *IV.4.1-1: Training Resources (Materials)*

Annually the City conducts training for all collection system employees on the WDR and City SSMP including Element 6, Overflow Emergency Response Plan (Appendix D) and the City Water Quality Monitoring Plan (Appendix E). This training includes classroom training and/or field exercises on volume estimation and overflow containment procedures. Finally, the City

subsequent to a large SSO will conduct debriefings and training based upon the results and findings of the SSO debrief and failure analysis conducted.

The City requires its wastewater collection system employees in the position of Collection Systems Operator I or higher to be certified in Collection System Maintenance by the California Water Environment Association. The Sewer System Coordinator and the Acting Sewer Maintenance III currently holds a Grade IV Collection System Certification. The certification process requires employees to demonstrate that they have participated in 12 hours of training every two years in order to renew their certificates.

#### ***IV.4.1-2: Contractors for City Projects***

The City's contract language requires contractors working in or near the City sanitary sewer system to provide emergency response training for their employees. The City standard specifications will in the future require that contractors provide an acceptable emergency response plan or certify that their plan is at least as detailed as the City OERP. In addition, all preconstruction and monthly progress meetings with contractors include discussion of emergency response procedures and requirements.

#### **IV.5: Equipment and Replacement Parts**

The list of the major equipment the City uses in the operation and maintenance of its sewer system is included in Supplement 4-C.

The City has developed a Critical Replacement Parts List and a Replacement Parts Inventory procedure. The Critical Sewer System Replacement Parts Inventory is included as Supplement 4-D.

#### **IV.6: IV.2.8: References**

USEPA Amended Order for Compliance Docket No. CWA-309(a)-08-031, November 24, 2008



**IV.7: Element VI – Supplements**

**IV.7.1: Supplement 4-A Criteria for Rating Cleaning Results**

	<b>Clear</b>	<b>Light</b>	<b>Moderate</b>	<b>Heavy</b>
<b>Debris</b>	Code: <b>CL</b> <ul style="list-style-type: none"> <li>▪ No observable debris</li> </ul>	Code: <b>DL</b> <ul style="list-style-type: none"> <li>▪ Minor amount of debris</li> <li>▪ 15 minutes or less to clean</li> <li>▪ 1 pass</li> </ul>	Code: <b>DM</b> <ul style="list-style-type: none"> <li>▪ Less than 5 gallons of debris per line segment</li> <li>▪ 15-30 minutes to clean</li> <li>▪ 2-3 passes</li> </ul>	Code: <b>DH</b> <ul style="list-style-type: none"> <li>▪ More than 5 gallons of debris per line segment</li> <li>▪ More than 30 minutes to clean</li> <li>▪ More than 4 passes</li> <li>▪ Operator concern for future stoppage</li> </ul>
<b>Grease</b>	Code: <b>GL</b> <ul style="list-style-type: none"> <li>▪ No observable grease</li> </ul>	Code: <b>GL</b> <ul style="list-style-type: none"> <li>▪ Minor amount of grease</li> <li>▪ 15 minutes or less to clean</li> <li>▪ 1 pass</li> </ul>	Code: <b>GM</b> <ul style="list-style-type: none"> <li>▪ Small “chunks”</li> <li>▪ No “logs”</li> <li>▪ 15-30 minutes to clean</li> <li>▪ 2-3 passes</li> </ul>	Code: <b>GH</b> <ul style="list-style-type: none"> <li>▪ Big “chunks” or “logs”</li> <li>▪ More than 30 minutes to clean</li> <li>▪ More than 4 passes</li> <li>▪ Operator concern for future stoppage</li> </ul>
<b>Roots</b>	Code: <b>CL</b> <ul style="list-style-type: none"> <li>▪ No observable roots</li> </ul>	Code: <b>RL</b> <ul style="list-style-type: none"> <li>▪ Minor amount of roots</li> <li>▪ 15 minutes or less to clean</li> <li>▪ 1 pass</li> </ul>	Code: <b>RM</b> <ul style="list-style-type: none"> <li>▪ Thin stringy roots</li> <li>▪ No “clumps”</li> <li>▪ 15-30 minutes to clean</li> <li>▪ 2-3 passes</li> </ul>	Code: <b>RH</b> <ul style="list-style-type: none"> <li>▪ Thick roots</li> <li>▪ Large “clumps”</li> <li>▪ More than 30 minutes to clean</li> <li>▪ More than 4 passes</li> <li>▪ Operator concern for future stoppage</li> </ul>
<b>Other: Pipe wall fragments Soil / Dirt / Rock</b>	Code: <b>CL</b> <ul style="list-style-type: none"> <li>▪ No observable materials</li> </ul>	Code: <b>OL</b> <ul style="list-style-type: none"> <li>▪ Specify material (if possible)</li> <li>▪ Minor amount of material</li> </ul>	Code: <b>OM</b> <ul style="list-style-type: none"> <li>▪ Specify material</li> <li>▪ Less than 5 gallons of material per line segment</li> </ul>	Code: <b>OH</b> <ul style="list-style-type: none"> <li>▪ Specify material</li> <li>▪ More than 5 gallons of material per line segment</li> <li>▪ Operator concern for future stoppage</li> </ul>
<p>This table was adapted from <i>Best Practices Manual: Hydroflush Cleaning of Small Diameter Sewers</i>, California Collection System Collaborative Benchmarking Group, February 2001.</p>				

**IV.7.2: Supplement 4-B: Rehabilitation and Replacement Program**

Project Title	FY 19/20	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24
Annual Pipeline Replacement	550,000	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000
Whiskey Springs PS	1,500,000	0	0	0	0	0
Capital Reserve	150,000	150,000	150,000	150,000	150,000	150,000
<b>Total</b>	<b>2,200,000</b>	<b>1,250,000</b>	<b>1,250,000</b>	<b>1,250,000</b>	<b>1,250,000</b>	<b>1,250,000</b>

**IV.7.3: Supplement 4-C: Major Sewer System Equipment Inventory**

Inventory Date: April 2019

Inventory/Condition Checked by: Pat Guasco

Equipment Number	Major Equipment Type	Year Purchased
121	Continuous Rodder Machine with Ford F-650	2011
119	John Deere 310D Backhoe	1996
103	GMC 2500 Pickup	1993
106	International Dump Truck	1999
E-1	Ford Pickup 250 Camera Truck	1999
120	International 4000 Max Force DT Dura Star	2008
N/A	Push/Pull Color Sewer Camera	2011
N/A	Self-Propelled Color Sewer Camera	2011
N/A	Wacker	
N/A	Air Compressor	1997
N/A	Confined Space Entry Equipment	
N/A	Tri-pod	2006
N/A	Air Ventilator	2000
N/A	ISC MX2 4 Part Gas Detectors – lease Agreement (3 each)	Since 2011
N/A	Digital Color Camera	2005
N/A	Electronic Pipe Locator (2 each)	2000/2003



Equipment Number	Major Equipment Type	Year Purchased
N/A	Radio Detection Pipe Locator	2017
N/A	Metal Detector	2007
N/A	Color Training TV	2005
N/A	Computer System	2004
N/A	AutoCAD Programming	Annual
N/A	Videotape Capture	2005
N/A	CMOM Database	2001/Present
N/A	Safety Devices (at Corp Yard)	Annual
N/A	Nextel Phone System	Annual
N/A	SSO Response Equipment COS purchased with SMCSD 50/50	
N/A	SMCSD and COS bypass pumping appurtenances 400' X 4" lay flat hose 300' x 6" lay flat hose 80' Rigid suction side w/ camlocks Toolbox with required tools Adapters Additional 30' of 6" and 4"	
N/A	SMCSD and COS Godwin Dri-Prime Transfer Pump	2010
N/A	SSO Response Two Axle Trailer	2011

**IV.7.4: Supplement 4-D: Critical Sewer System Replacement Parts Inventory**

Inventory Date: August 18, 2019

Inventory/Condition Checked by: Pat Guasco

<b>Part Description</b> REPAIR PARTS: Couplings (Note: MRARC = Mission Rubber sheer band with 4 worm drive hose coupling), pipe and various fittings note: cl=clay, ci=cast iron, pl=plastic, ac=asbestos concrete, PVC=Poly Vinyl Chloride, SCH=Schedule (pipeline or fitting wall thickness), mechanical dresser Couplings=MDC, manhole frame and lid=MH, rodding inlet frame and lid=RH, precast concrete roadway grade rings=GR3 and GR6	<b>Quantity in Inventory</b>	<b>Location</b>
MR ARC 4-inch to 4-inch cl to ci or pl coupling	10	DPW Corp Yard
MR ARC 4-inch to 4-inch cl to ac coupling	3	DPW Corp Yard
MR ARC 4-inch to 4-inch ci or pl to ci or pl coupling	4	DPW Corp Yard
MR ARC 4-inch to 4-inch ac to ac coupling	1	DPW Corp Yard
MR ARC 6-inch to 6-inch cl to ac coupling	4	DPW Corp Yard
MR ARC 6-inch to 6-inch cl to ci coupling	1	DPW Corp Yard
MR ARC 6-inch to 6-inch ci/pl to ci/pl coupling	4	DPW Corp Yard
MR ARC 8-inch to 8-inch to ci/pl coupling	7	DPW Corp Yard
MR ARC 8-inch to 8-inch to ci/pl coupling	2	DPW Corp Yard
MR 8-inch to 8-inch clay to ci/ pl non-sheer band coupling	1	DPW Corp Yard
MR 6-inch to 6-inch clay to cl coupling non-sheer band	2	DPW Corp Yard



<b>Part Description REPAIR PARTS: Couplings</b> (Note: MRARC = Mission Rubber sheer band with 4 worm drive hose coupling), pipe and various fittings note: cl=clay, ci=cast iron, pl=plastic, ac=asbestos concrete, PVC=Poly Vinyl Chloride, SCH=Schedule (pipeline or fitting wall thickness), mechanical dresser Couplings=MDC, manhole frame and lid=MH, rodding inlet frame and lid=RH, precast concrete roadway grade rings=GR3 and GR6	Quantity in Inventory	Location
MR 3-inch to 4-inch transitional non-sheer band	1	DPW Corp Yard
4-inch ci 22° bend	14	DPW Corp Yard
4-inch ci 45° bends	6	DPW Corp Yard
4-inch ci 90° bend	1	DPW Corp Yard
3-inch ci 45° bend	1	DPW Corp Yard
6-inch to 4-inch ci wyes	2	DPW Corp Yard
6-inch to 6-inch ci combination wye	1	DPW Corp Yard
6-inch to 6-inch ci 22° bend	1	DPW Corp Yard
6-inch PVC SCH 80 "T"	1	DPW Corp Yard
6-inch SCH 80 90°bend	1	DPW Corp Yard
6-inch SCH 80 22°bends	2	DPW Corp Yard
6-inch to 6-inch MDC	4	DPW Corp Yard
4-inch to 4-inch MDC	4	DPW Corp Yard
6-inch PVC SCH 80 Pipe	15-feet	DPW Corp Yard
6-inch cast iron Pipe	7-feet	DPW Corp Yard
4-inch cast iron	10-feet	DPW Corp Yard
3-inch precast concrete roadway grade rings for installing manholes or raising buried manhole iron	6	DPW Corp Yard

<b>Part Description</b> REPAIR PARTS: Couplings (Note: MRARC = Mission Rubber sheer band with 4 worm drive hose coupling), pipe and various fittings note: cl=clay, ci=cast iron, pl=plastic, ac=asbestos concrete, PVC=Poly Vinyl Chloride, SCH=Schedule (pipeline or fitting wall thickness), mechanical dresser Couplings=MDC, manhole frame and lid=MH, rodding inlet frame and lid=RH, precast concrete roadway grade rings=GR3 and GR6	<b>Quantity in Inventory</b>	<b>Location</b>
6-inch precast concrete roadway grade rings for installing manholes or raising buried manhole iron	3	DPW Corp Yard
D&L Foundry H8026 Rodding Inlet cast iron frame and lids	4	DPW Corp Yard
D&L Foundry A1024 Manhole cast iron frame and lids	7	DPW Corp Yard



## Element V: Design and Performance Provisions

### SWRCB Waste Discharge Requirement:

- a. Design and construction standards and specifications for the installation of new sanitary sewer systems, lift stations, and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and
- b. Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

### V.1: Introduction

This section of the SSMP presents the City's Design and Construction Standards.

### V.2: GWDR Requirements for Design and Performance Provisions Element of SSMP

The City follows the Standard Specifications for Sausalito-Marin City Sanitary District (SMCSD) for the design and installation of sanitary sewer collection and conveyance facilities dated 2007.

The Standard Specifications provide detailed requirements for the installation of new sewer systems and for the rehabilitation and repair of existing sewer systems. The Specifications also address pump stations by noting that individual pump station needs vary and must be addressed through facility-specific preliminary designs.

### V.3: References

Sausalito-Marin City Sanitary District Standards and Specifications, 2007

<http://www.sausalitomarincitysanitarydistrict.com/permits-standards-and-specifications>

## Element VI: Overflow Emergency Response Plan

### SWRCB Waste Discharge Requirement:

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

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

### VI.1: Sanitary Sewer Overflow Emergency Response Plan

(ref. SWRCB Order No. 2006-0003-DWQ Element VI) (City of Sausalito Overflow Emergency Response Plan by DKF Solutions Group, LLC.).

The following sections in Element VI provide the basic City philosophy and policies for the handling of all emergency overflow activities. The full April 2019 OERP document is included in its entirety in Appendix D attached. In addition, the September 2013 MRP revisions requires the City to have an agency specific Water Quality Monitoring Program (WQMP) that established City procedures for the sampling and monitoring of all overflows greater than 50,000 gallons or more that are spilled to surface waters as identified in the City of Sausalito WQMP and Section 9.1 of the OERP. The complete WQMP is attached in Appendix E.



## **VI.2: Purpose**

The purpose of the City of Sausalito's Overflow Emergency Response Plan (OERP) is to support an orderly and effective response to Sanitary Sewer Overflows (SSOs). The OERP provides guidelines for City personnel to follow in responding to, cleaning up, and reporting SSOs that may occur within the City's service area. This OERP satisfies the SWRCB Statewide General Waste Discharge Requirements (GWDR), which require wastewater collection agencies to have an Overflow Emergency Response Plan.

## **VI.3: Policy**

The City's employees are required to report all wastewater overflows found and to take the appropriate action to secure the wastewater overflow area, properly report to the appropriate regulatory agencies, relieve the cause of the overflow, and ensure that the affected area is cleaned as soon as possible to minimize health hazards to the public and protect the environment. The City's goal is to respond to SSOs as soon as possible following notification. The City will follow reporting procedures in regard to sewer spills as set forth by the California State Water Resources Control Board (*SWRCB*).

## **VI.4: Goals**

The City's goals with respect to responding to SSOs are:

- Work safely;
- Respond quickly to minimize the volume of the SSO;
- Eliminate the cause of the SSO;
- Prevent sewage system overflows or leaks from entering the storm drain system or receiving waters to the maximum extent practicable;
- Contain the spilled wastewater to the extent feasible;
- Minimize public contact with the spilled wastewater;
- Mitigate the impact of the SSO/restore flows;
- Meet the regulatory reporting requirements;
- Evaluate the causes of failure related to certain SSOs; and
- Revise response procedures resulting from the debrief and failure analysis of certain SSOs.

## **VI.5: Authority**

- Health & Safety Code Sections 5410-5416
- CA Water Code Section 13271
- Fish & Wildlife Code Sections 5650-5656
- State Water Resources Control Board Order No. 2006-0003-DWQ
- State Water Resources Control Board Order 2013-009-DWQ effective September 9, 2013

**VI.6: References**

- Overflow Emergency Response Plan, 4/24/19, DKF Solutions Group, LLC
- Appendix A: Regulatory Notifications Packet
- Appendix B: Sanitary Sewer Backup Packet
- Appendix C: Sanitary Sewer Overflow Packet
- Appendix D: Field Sampling Kit
- Appendix E: Contractor Orientation



## Element VII: Fats, Oils, and Grease (FOG) Control Program

### SWRCB Waste Discharge Requirement:

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

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

### VII.1: Introduction

This section presents the FOG Control Program for the City of Sausalito. This FOG Control Program will be jointly managed, staffed, and administered by the City and supported by SMCSO.

### VII.2: Nature and Extent of FOG Problem

The City currently has approximately 40 food service establishments (FSEs) within the service area.



### **VII.2.1: Sausalito Sewer System**

#### **VII.2.2: Summary of FOG Data Analysis**

The analysis of the SSO, FSE, and high frequency maintenance lines shows that FOG can be factor in the City, but the current FOG Source Control Program and the preventive maintenance programs have been effective at reducing the frequency of SSOs in commercial areas (see **Figure IX-2 Number of Overflows by Cause**). The City has not experienced a FOG related SSO in the past five years. FOG Source Control Program & Inspections

The City will continue the current low-level FOG Source Control Program. .

#### **VII.3: Public Outreach Program**

The City has approximately 40 food service establishments (FSE) Since moving to annual cleaning of the sewer system FOG has been managed through routine maintenance and is not a major contributor to SSOs. However, in order to reduce maintenance needs for FOG-related high frequency spots, the City and SMCSO have implemented improved FOG education and outreach to the FSEs and the community on a case by case basis. The outreach communication on the SMCSO website includes information regarding FOG disposals the City's residents, and about minimizing FOG disposal into the sewer system. When City staff finds FOG substances during line cleaning, they will attempt to determine the source and will then provide information and education including door hangers, inspections or other education to assure that the discharges do not continue.

#### **VII.4: FOG Disposal Facilities**

A list of facilities in the San Francisco Bay Area that accept grease from grease haulers is included as Supplement VII-A. The list will be provided to commercial grease haulers regularly working within the service area. Lists of grease haulers approved by the East Bay Municipal Utility District (EBMUD) and the Sacramento Regional County Sanitation District (SRCSD) are included as Supplement VII-B and VII-C.

#### **VII.5: FOG Inspections**

The City does not currently provide permitting or regular inspections of FSE operations. Rather FOG issues result from the results of normal cleaning and maintenance. When the staff finds that FOG is an issue in and around restaurants, they reach out to the FSEs in the area to education best management practices and to resolve issues for FOG inn the sewer system.

##### **VII.5.1: FOG Legal Authority**

The City's Municipal Code provides the legal basis for the FOG Source Control Program as shown in Section 3 – Legal Authority.

##### **VII.5.2: Staffing**

The City provide the staffing required to administer and enforce the FOG program.



### **VII.5.3: Facility Inspections**

The City only provides inspections of an FSE based upon results of line cleaning where FOG has been determined to exist.

### **VII.5.4: Investigation and Enforcement**

The City can initiate enforcement action against FSEs that are determined to be in violation of the requirements of the FOG Control Program. Enforcement actions may include a verbal warning, a written warning, administrative orders (which may include fines), and possibly disconnection from the public sewer system. During the period from January 2012 through April 2019 no enforcement actions of the FOG Program regulations were found to be necessary.

### **VII.6: FOG Preventive Maintenance**

The City's preventive maintenance program currently focuses on the problematic sewer line segments with all lines cleaned at least annually.

The City will be evaluating the overall line maintenance program in the future along with the CCTV condition assessment program and expects to revise the line cleaning schedule based upon the results of both maintenance and the results of the CCTV evaluations. FOG related findings will be addressed as a priority. GRD Requirements

#### **VII.6.1: Design Standards, Plan Review, and Inspection**

The City has specifications for the installation and sizing of GRDs. The City is responsible for reviewing proposed development plans to ensure that they address the installation of GRDs. The City has in place processes to ensure the GRDs are properly installed during new construction and remodels as part of its duties.

#### **VII.6.2: Maintenance Standards and BMPs**

The City has standards for the proper maintenance of GRDs. FSEs that discharge significant quantities of grease will be dealt with upon findings of annual line cleaning.

#### **VII.6.3: Record Keeping and Reporting**

The City does not currently require FSEs to maintain records or report to the City unless it is determined there is a problem impacting pipeline maintenance.

### **VII.7: References**

City of Sausalito Municipal Code Section

**VII.8: Element VII – Supplements****VII.8.1: Supplement VII-A – FOG Disposal Sites**

The City understands that the following locations accept grease from liquid waste haulers in the San Francisco Bay Area:

Business Name	Location	Phone Number	Services
Blue Sky Bio-Fuel, Inc.	Oakland	(510) 436-6654 (415) 250-9114	Primarily yellow grease, some brown grease. Can accept 7,000 gallons/day.
East Bay Municipal Utility District (EBMUD)	Oakland	(510) 287-1632	Accepts grease.
Palo Alto Wastewater Treatment Plant	Palo Alto	(650) 329-2598	Accepts 5,000 to 6,000 gallons/day on first come first serve basis. They are in the process of increasing their ability to accept more (as of July 2008).
Sacramento Regional County Sanitation District	Sacramento	(916) 875-FATS	
Salinas Tallow	Salinas	(800) 621-9000	Will consider accepting grease from other reputable haulers. They purchase yellow grease and process the interceptor grease with residue going to landfill.
San Jose Tallow Company	San Jose	(408) 452-8777	They don't accept interceptor grease but would consider accepting from outside haulers if it wouldn't impact any of their grease hauling routes.
South Bayside Systems Authority	Redwood City	(650) 591-7121	Accepts grease.



**VII.8.2: Supplement VII-B: East Bay Municipal Utility District (EBMUD) Approved Grease Haulers**

## EBMUD Approved Grease Haulers

East Bay Municipal Utility District, Environmental Services Division

Telephone (510) 287-1651

Name	Phone Number
A-1 Septic Tank Service, Inc.	(510) 886-4455
A-1 – Little River	(707) 937-0496
Able Septic Tank Service	(408) 377-9990
All Valley Environmental, Inc.	(559) 498-8378 or (559) 217-5949
Ameriguard Maintenance Services	(800) 347-7876
Blue Sky Bio-Fuels	(510) 868-9229
Burr Plumbing and Pumping	(408) 287-2877
Coast Environmental	(800) 588-7762
Darling International, Inc.	(415) 647-4890
Ernie's Plumbing	(925) 228-5242
Joe's Farmers Septic and Grease Service	(707) 546-3236
Liquid Environmental Solutions of California	(866) 694-7327
North Coast Sanitary	(707) 884-1095
Pioneer Liquid Transport	(800) 366-6808
Portosan – Santa Rosa	(707) 566-2000
R & D Grease Trap Cleaning	(707) 632-5827
Roto Rooter Plumbing	(510) 483-2324
SRC Pumping Company	(916) 363-1342
Trap Recyclers	(800) 994-7867

**VII.8.3: Supplement VII-C: Sacramento Regional County Sanitation District Approved Grease Haulers**

Sacramento Regional County Sanitation District (SRCSD) (916) 875-FATS

Name	Address	Phone Number
A-1 Septic Service	P.O. Box 762 West Sacramento, CA 94591	(916) 371-4160
ABC Plumbing, Heating & Air Conditioning	205 22 <sup>nd</sup> Street, Sacramento, CA 95816	(916) 448-0801
Advanced Septic Service	6513 Auburn Blvd., Citrus Heights, CA 95621	(916) 726-5150
APS Environmental, Inc	6643 32 <sup>nd</sup> Street 103, North Highlands, CA 95660	(916) 454-2000
Cook's Portable Toilets & Septic	1402 Riosa Road, Lincoln CA 95648	(916) 645-8560
G & C Septic Tank Services	12851 Stockton Blvd., Galt, CA 95632	(916) 366-1111
Roto Rooter Plumbers	2551 Albatross Way, Sacramento, CA 95815	(916) 482-1422

Additional Grease Haulers can be found at [https://www.regionalsan.com/sites/main/files/file-attachments/regional\\_san\\_permitted\\_lwh.pdf](https://www.regionalsan.com/sites/main/files/file-attachments/regional_san_permitted_lwh.pdf)



## Element VIII: System Evaluation and Capacity Assurance Plan

### SWRCB Waste Discharge Requirement:

The Enrollee shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum, the plan must include:

- a. **Evaluation:** Actions needed to 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 overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events;
- b. **Design Criteria:** Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria; and
- c. **Capacity Enhancement Measures:** The steps needed to establish a short- and long-term 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.
- d. **Schedule:** The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a)-(c) above. This schedule shall be reviewed and updated consistent with the Sewer System Management Plan (SSMP) review and update requirements as described in Section D. 14.

### VIII.1: Introduction

This section of the SSMP presents the City's programs and activities to provide adequate capacity.

### VIII.2: Evaluation – System Evaluation and Capacity Assurance Plan

The City completed a Capacity Assurance Report as required by the EPA Order for compliance. The assessment included hydraulic modeling of the City's conveyance system and development of an associated Capital Improvement Plan (CIP). The Capacity Assurance Report was submitted to the EPA in October 2008 and is available from the City Public Works Department.

### **VIII.3: Design Criteria**

The City follows the Standard Specifications for Sausalito-Marin City Sanitary District (SMCSD) for the design and installation of sanitary sewer collection and conveyance facilities.

The Standard Specifications provide detailed requirements for the installation of new sewer systems and for the rehabilitation and repair of existing sewer systems. The Specifications also address pump stations by noting that individual pump station needs vary and must be addressed through facility-specific preliminary designs.

### **VIII.4: Capacity Enhancement Measures - Capital Improvement Program**

The City's capacity-related Capital Improvement budget and schedule were presented in the Capacity Assurance Report and is currently undergoing revisions based upon funding availability.

The City's pipeline capacity assessment needs were developed using a calibrated, fully dynamic sewer collection system hydraulic model. The model includes a representation of the City's conveyance system and key sewers, and also the City's three sewer pumping stations, which are operated and maintained by Sausalito Marin City Sanitary District (SMCSD), and four additional pumping stations that are both owned and operated by SMCSD.

In October 2010, West Yost Associates updated the Capacity Assessment and Assurance Plan Report. This report provided a ten-year capital improvement plan based upon the findings of the fully dynamic sewer collection system hydraulic model. However, in 2015 and 2018, due to a poor bidding environment, the City was required to completely review the proposed list of capital needs and has now created a new list of capital needs through 2024/25 as included in Element IV, Supplement IVB

### **VIII.5: References**

Capacity Assurance Report, October 2008

Capacity Assessment and Assurance Plan, West Yost Associates, October 2010

Appendix VIII-A: Capital Improvement Program Detailed Budget – see Supplement 4B



## Element IX: Monitoring, Measurement, and Program Modifications

SWRCB Waste Discharge Requirement:

The Enrollee shall:

- a. Maintain relevant information that can be used to establish and prioritize appropriate Sewer System Management Plan (SSMP) activities;
- b. Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;
- c. Assess the success of the preventive maintenance program;
- d. Update program elements, as appropriate, based on monitoring or performance evaluations; and
- e. Identify and illustrate SSO trends, including: frequency, location, and volume.

### IX.1: Introduction

This section of the SSMP presents the City's Monitoring, Measurement, and Program Modifications (MMPM).

### IX.2: GWDR Requirements for Monitoring, Measurement, and Program Modifications Element of SSMP

The requirements for the Monitoring, Measurement, and Program Modifications element of the SSMP are that the City shall:

- a. Maintain and update relevant information 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 preventive maintenance program;
- d. Update program elements, as appropriate, based on monitoring or performance evaluations; and
- e. Identify and illustrate SSO trends, including frequency, location, and volume.

### IX.3: Performance Measures

The indicators that the City uses to measure the performance of its wastewater collection system and the effectiveness of its SSMP are:

**Table IX – 1: Performance Measures**

Sewer Maintenance Success Factor*	Performance Metric Definition
Pipes Cleaned	Miles/Year
Pipes Inspected	Miles/Year
Manholes Inspected	Miles/Year
Hot Spots Cleared	Number by Underlying Cause
SSOs	Number by Underlying Cause per 100 miles and by SSO Category
FSE Inspections	#/Year
Laterals Replaced (LRGP)	#/Year
Pipe Replaced or Rehabilitated	Miles/Year

\*Provided by V.H. Housen email May 27, 2019

### IX.4: Baseline Performance

The baseline performance, which shows the performance of the City's wastewater collection system, is shown below in Figures IX-1 to IX-7.

### IX.5: Performance Monitoring and Program Changes

The City evaluates the performance of its wastewater collection system at least annually using the performance measures identified in Section IX.3 - Performance Measures. The City updates the data and analysis of performance measures at the time of the evaluation.

The City may use other performance measures in its evaluation. The City will prioritize its actions and initiate changes to this SSMP and the related programs based on the results of the evaluation.

### IX.6: References

None



Figure IX – 1: SSO Overflows by City Asset

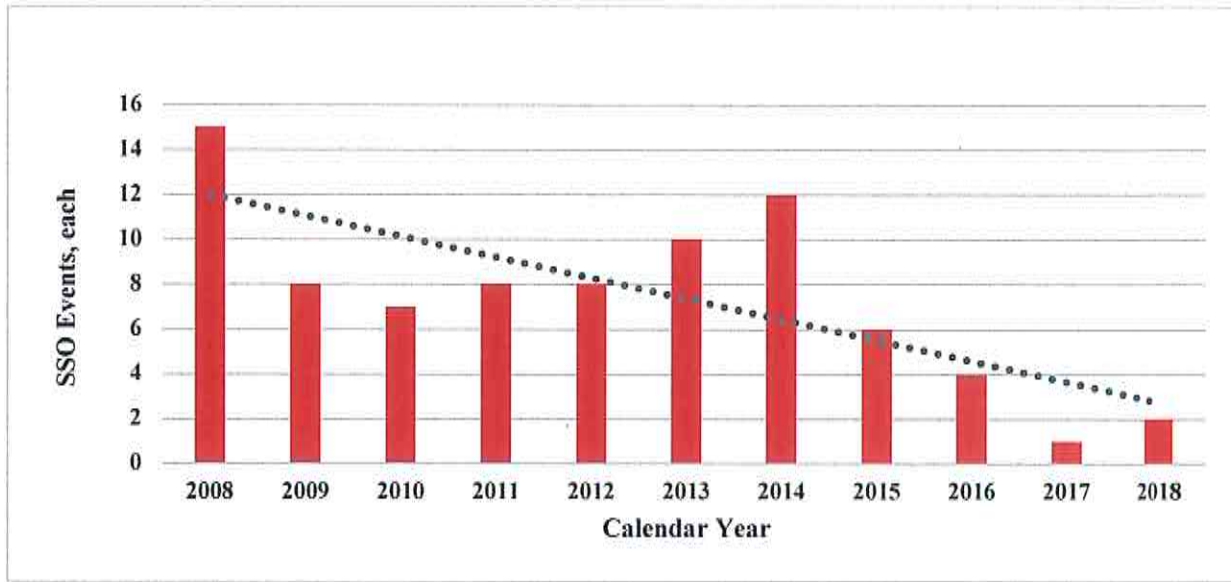


Figure IX – 2: Number of Overflows by Cause

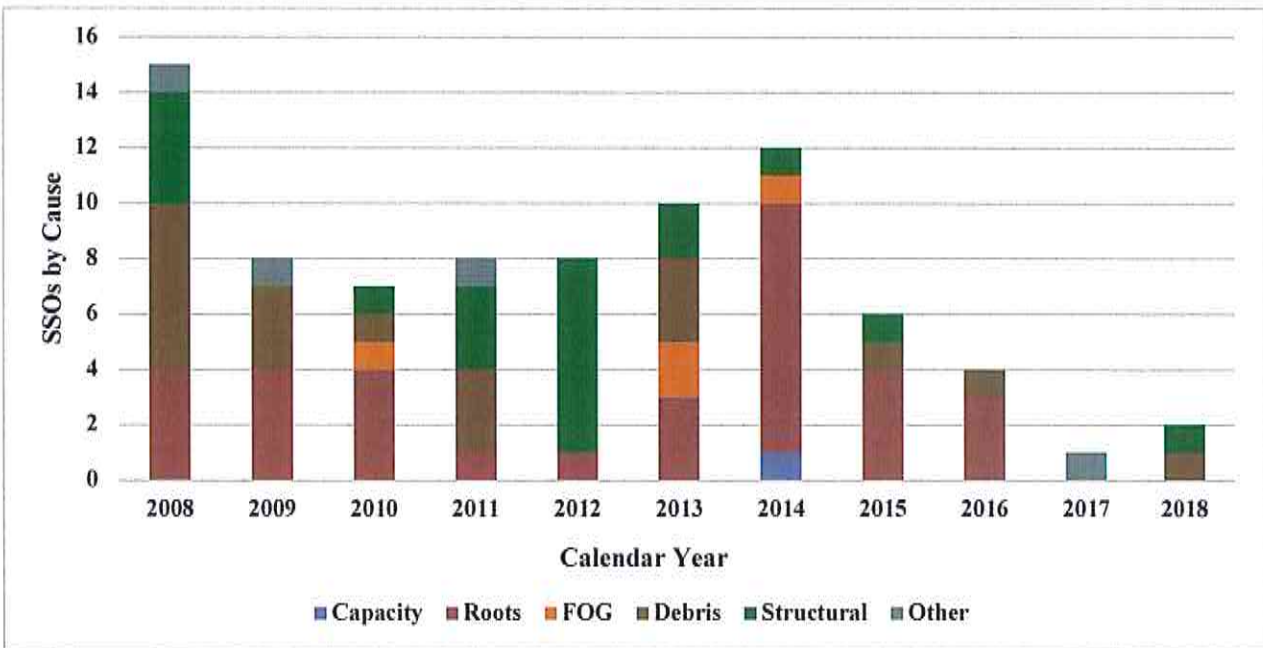


Figure IX – 3: Historical Calendar Year SSO Volumes

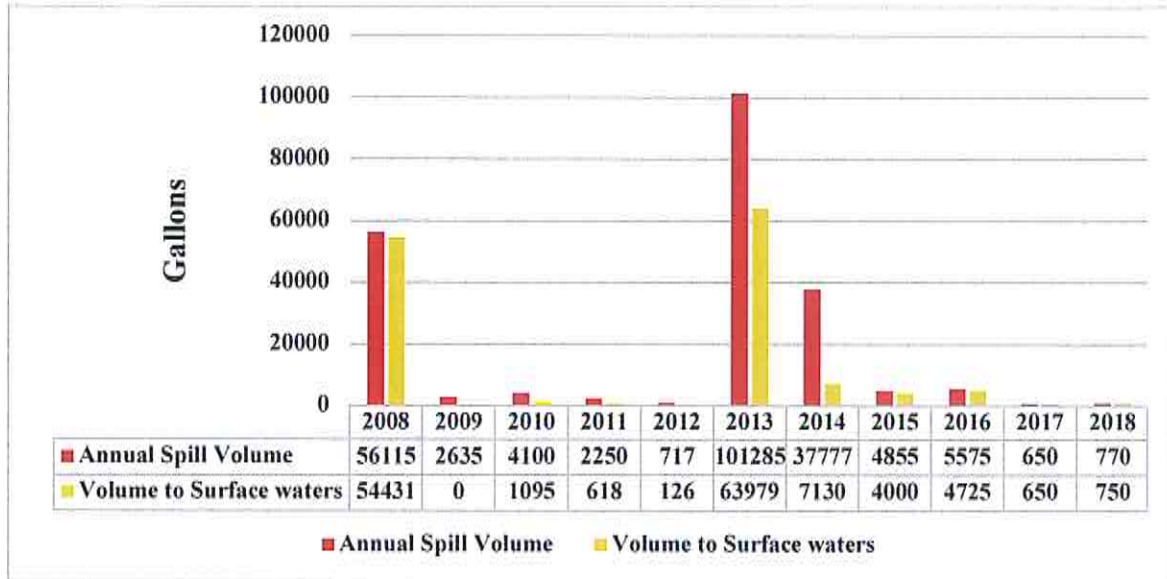


Figure IX – 4: Overflows Volumes Percent Recovered/Percent Reaching Surface Waters

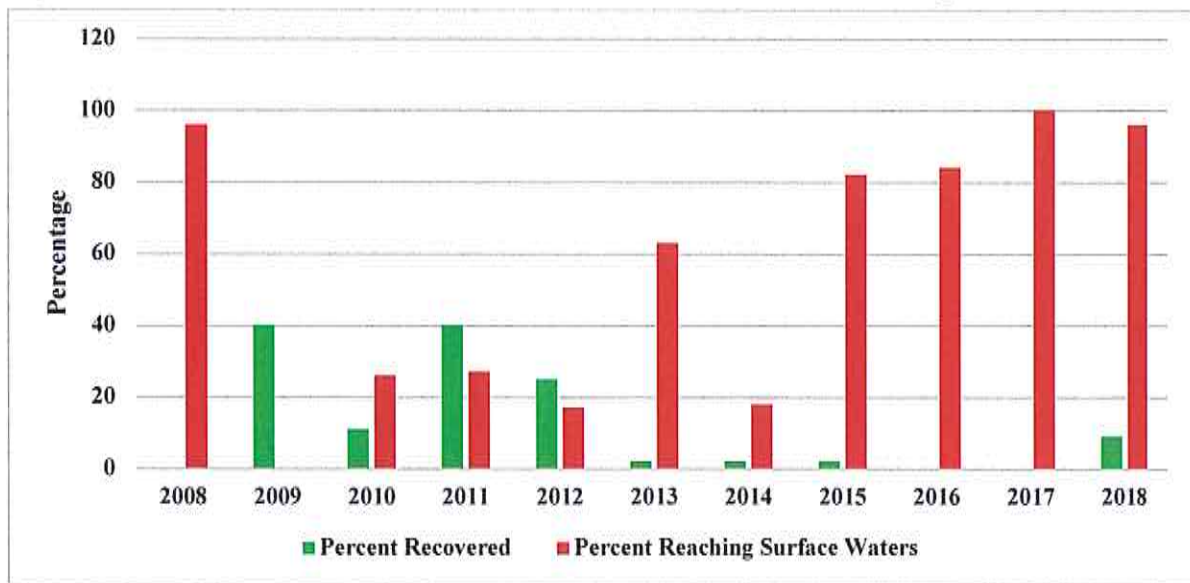




Figure IX – 5: Historical SSO Rates

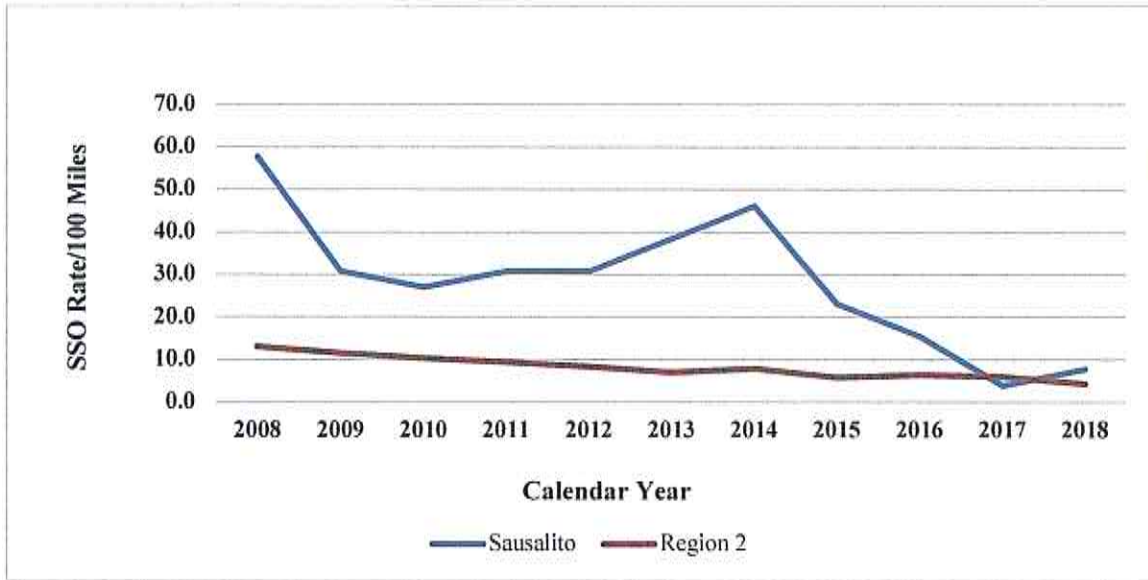


Figure IX – 6: Historical Line Cleaning by Calendar Year

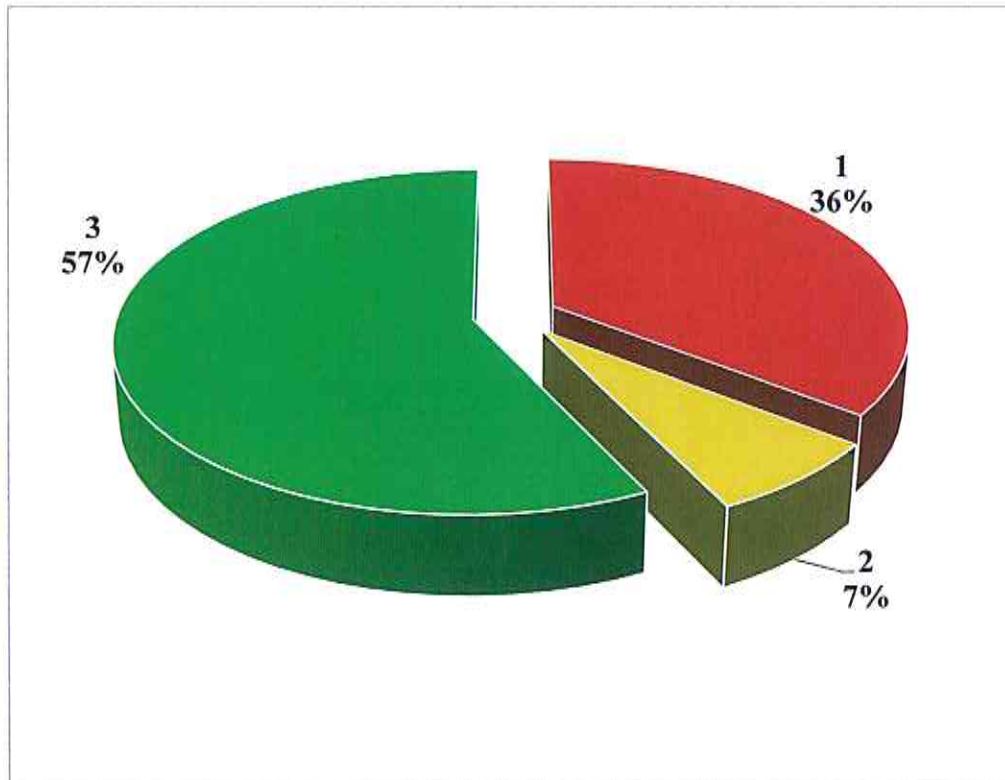
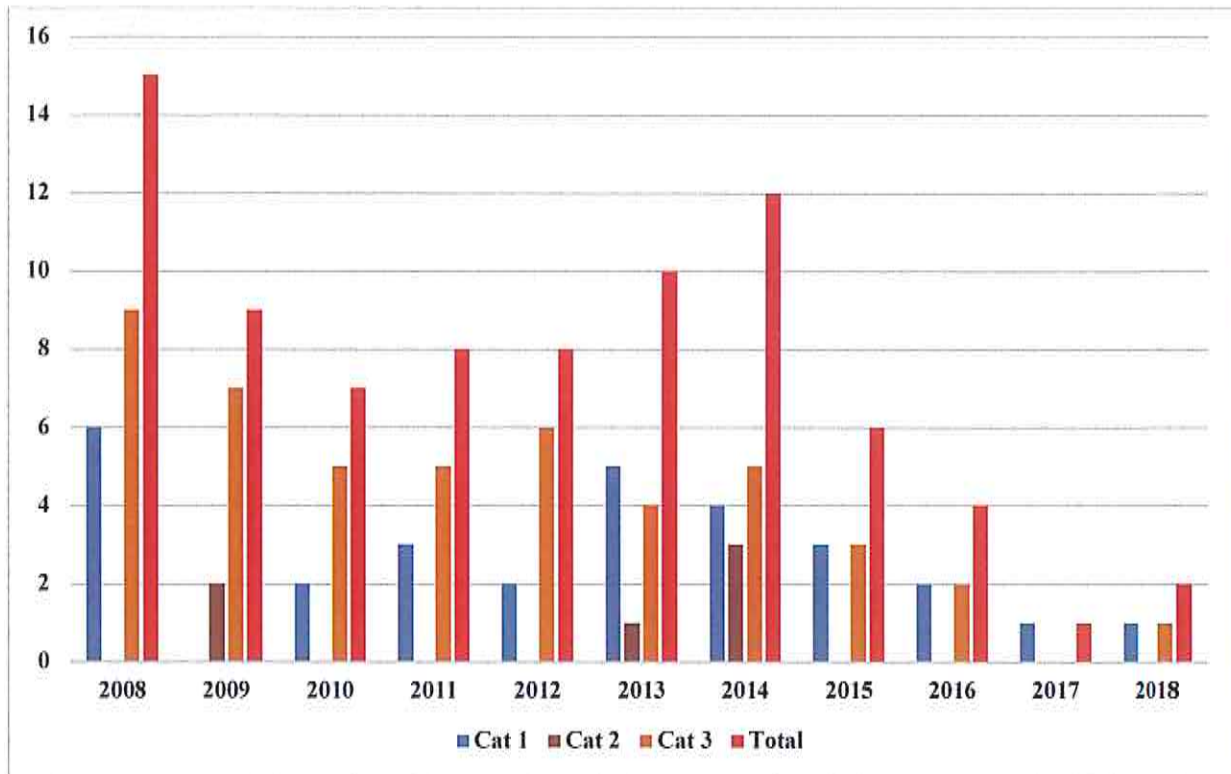


Figure IX – 7: SSOs by Category by Calendar Year





## Element X: SSMP Program Audits

### SWRCB Waste Discharge Requirement:

As part of the Sewer System Management Plan (SSMP), the Enrollee 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 Enrollee's compliance with the SSMP requirements identified in this subsection (D.13), including identification of any deficiencies in the SSMP and steps to correct them.

### X.1: Introduction

This section of the SSMP presents the process that the City will follow to audit its SSMP Program.

### X.2: GWDR Requirements for the SSMP Program Audits Element

The regulatory requirements for the SSMP include conducting 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 focuses on evaluating the effectiveness of the SSMP and the Enrollee's compliance with the SSMP requirements, including identification of any deficiencies in the SSMP and steps to correct them.

### X.3: SSMP Audits

The City is required to audit its SSMP at least biannually from the original SSMP adoption date in 2009. The audit determines whether the SSMP meets the current requirements of the GWDR, whether the SSMP reflects the City's current practices, and whether the City is following the SSMP and is showing continuous improvement in its sanitary sewer collection system programs. An audit team generally consisting of City Public Works Department staff. Audit teams may also include members from other areas of the City, outside agencies, and/or contractors. The most current audit report was completed in June 2019 and is attached in Appendix C.

The scope of the audit covers each of the sections of the SSMP including interviews of the responsible persons designated in Element II. The Audit Checklist, Supplement 10-A, based on the requirements in the GWDR, is used for the initial evaluation of programs status since the previous audit. The Audit Checklist is used to inform the interview process and to determine strengths and opportunities for improvement in the program. A final comprehensive Audit Report, certified by the City LRO, is required by the regulations.

The SSMP Audit Report focuses on the effectiveness of the SSMP Program, compliance with the GWDR requirements, and identification of any deficiencies in the SSMP. The SSMP Audit Report identifies revisions needed for a more effective program. Information collected as part of Element IX - Monitoring, Measurement, and Program Modifications are also used during the audits. Tables and figures or charts are used in the Audit Report to summarize trends in the

performance indicators. The Audit Report includes a list of any changes made to the SSMP resulting from the Audit findings and added to the SSMP Change Log as required. Copies of the bi-annual Audit Reports will be maintained by the City for five years and attached to the SSMP in Appendix C. The results of any audit report will be considered for public presentation to the City Council upon completion and certification by the LRO.

#### **X.4: SSMP Updates**

The City will update its SSMP and require City Council consideration and approval not later than every five years from the original date of adoption by the City Council. The City will determine the need to update its SSMP more frequently based on the results of audits and the performance of its sanitary sewer system using information from the Monitoring and Measuring Program Element. In the event that the City decides that an update is warranted, the process to complete the update will be identified at that time and a determination if “substantial changes” have occurred which require recertification by the City Council.

The City Staff will seek the approval from the City Council for any significant changes to the SSMP and at least every five (5) years. The authority for approval of minor or non-substantive changes, such as the modification of employee names and contact information, or procedural changes are delegated to the Public Works Director and will be documented in the SSMP Change Log in Appendix A.

#### **X.5: References**

SSMP Audit Report by V.W, Housen & Associates, October 28, 2016

SSMP Internal Audit Report by Causey Consulting, August 2019



**X.6: Supplements**

**X.6.1: Supplement 10-A: SSMP Audit Checklist**

**City of Sausalito  
SSMP Audit Checklist  
Report Form**

The purpose of the SSMP Audit is to evaluate the effectiveness of the City of Sausalito’s SSMP and to identify any needed for improvement. The information identified here will be used to inform the findings and necessary information to be evaluated during the biannual Internal Audit of the City SSMP.

**Directions:** Please rank each item below utilizing the following sufficiency ranking system and add any comments to explain the ranking to the Comment Section of each SSMP Element:

- *Complies (C) – complies with all WDR objectives*
- *Substantially Complies (SC) – complies mostly with all WDR objectives*
- *Partially Complies (PC) – complies with basic WDR objectives*
- *Marginal Compliance (MC) – complies minimally with basic objectives of the WDR*
- *Does Not Comply – does not comply with WDR objectives*

Element 0 – Introduction/Executive Summary	
A.	
B.	
C.	
D.	
Element I – Goals	Rating
A. Are the goals stated in the SSMP still appropriate and accurate?	
Discussion:	
Element II – Organization	Rating
A. Is the List of City Staff Responsible for SSMP Elements current?	
B. Is the Sanitary Sewer Overflow Responder List current?	
C. Is the City Organization Chart current?	

D. Are the Staff position descriptions an accurate portrayal of staff responsibilities?	
E. Is the Chain of Communication for Reporting and Responding to SSOs section/flow chart accurate and up to date?	
Discussion:	
<b>Element III – Legal Authority</b>	
<b>Rating</b>	
Does the SSMP contain current references to the Sausalito Municipal Code documenting the City's legal authority to:	
A. Prevent illicit discharges?	
B. Require proper design and construction of sewers and connections?	
C. Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the City?	
D. Limit discharges of fats, oils and grease?	
E. Enforce any violation of its sewer ordinances?	
F. Were any changes or modifications made in the past year to City Sewer Ordinances, Regulations or standards?	
Discussion:	
<b>Element IV – Operations &amp; Maintenance</b>	
<b>Collection System Maps</b>	
<b>Rating</b>	
A. Does the SSMP reference the current process and procedures for maintaining the City's wastewater collection system maps?	
B. Are the City's wastewater collection system maps complete, current and sufficiently detailed?	
C. Are storm drainage facilities identified on the collection system maps? If not, are SSO responders able to determine locations of storm drainage inlets and pipes for possible discharge to waters of the state?	
<b>Prioritized Preventive Maintenance</b>	
<b>Rating</b>	
D. Does the SSMO describe current preventive maintenance activities and the system for prioritizing the cleaning of sewers?	



E.	Based upon information in the Annual SSO Report, are the City's preventive maintenance activities sufficient and effective in minimizing SSOs and blockages?	
<b>Scheduled Inspections and Condition Assessments</b>		<b>Rating</b>
F.	Is there an ongoing condition assessment program sufficient to develop a capital improvement plan addressing the proper management and protection of infrastructure assets? Are the current components of this program documented in the SSMP?	
<b>Contingency Equipment and Replacement Inventory</b>		<b>Rating</b>
G.	Does the SSMP list the major equipment currently used in the operation and maintenance of the collection system and documents the procedures of inventory management?	
H.	Are contingency and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance?	
<b>Training</b>		<b>Rating</b>
I.	Does the SSMP document current training expectations and programs?	
<b>Outreach to Plumbers and Building Contractors</b>		<b>Rating</b>
J.	Does the SSMP document currently outreach efforts to plumbers and building contractors?	
Discussion:		
<b>Element V – Design and Performance Standards</b>		<b>Rating</b>
A.	Does the SSMP reference current design and construction standards for the installation for new sanitary sewer systems, pump stations and other appurtenances and for the rehabilitation and repair of existing sanitary sewer systems?	
B.	Does the SSMP document current procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and the rehabilitation and repair of existing sewer lines?	

Discussion:	
<b>Element VI – Overflow and Emergency Response Plan</b>	<b>Rating</b>
A. Does the City’s Sanitary Sewer Overflow Emergency Response Plan establish procedures for the emergency response, notification, and reporting of SSOs?	
B. Is City staff and contractor personnel appropriately trained on the procedures of the Sanitary Sewer Overflow Emergency Response Plan?	
C. Considering SSO performance data, is the Sanitary Sewer Overflow Emergency Response Plan effective in handling SSOs in order to safeguard public health and the environment?	
D. Are all SSO and claims reporting forms current or do they require revisions or additions?	
E. Does all SSO event recordkeeping meet the SSS GWDR requirements? Are all SSO event files complete and certified in the CIWQS system?	
F. Is all information in the CIWQS system current and correct? Have periodic reviews of the data been made during the year to assure compliance with SSS GWDR? Have all Technical Report and Water Quality Sampling requirements been met and uploaded to the CIWQS data management system?	
Discussion:	
<b>Element VII – Fats, Oils and Grease (FOG) Control Program</b>	<b>Rating</b>
A. Does the FOG Control Program include efforts to educate the public on proper handling and disposal of FOG?	
B. Does the FOG Control Program identify sections of the collection system subject to FOG blockages, establish a cleaning schedule and address source control measures to minimize these blockages?	
C. Are requirements for grease removal devices, best management practices (BMP), record keeping, and reporting established in the City’s FOG Control Program?	



D. Does the City have sufficient legal authority to implement and enforce the FOG Control Program?	
E. Is the current FOG program effective in minimizing blockages of sewer lines resulting from discharges of FOG to the system	
F. Was required training on SSMP and OERP completed and documented? Were field exercises with field staff on SSO volume estimation conducted and documented?	
G. Did all public improvement plans and specifications that could impact collection system operations include requirements for OERP training or were contractor OERP programs at least as stringent as the City OERP? Were regular items included in project meeting agendas to discuss emergency response procedures and communications?	
Discussion:	
<b>Element VIII – System Evaluation and Capacity Assurance Plan</b>	
<b>Rating</b>	
A. Does the City of Sausalito Sanitary Sewer Master Plan evaluate hydraulic deficiencies in the system, establish sufficient design criteria and recommend both short and long-term capacity enhancement and improvement projects?	
B. Does the City’s Capital Improvement Plan (CIP) establish a schedule of approximate completion dates for both short and long- term capacity improvements and is the schedule reviewed and updated to reflect current budgetary capabilities and activity completed?	
Discussion:	
<b>Element IX – Monitoring, Measurement and Program Modifications</b>	
<b>Rating</b>	
A. Does the SSMP accurately portray the methods of tracking and reporting selected performance indicators?	
B. Is the City able to sufficiently evaluate the effectiveness of the SSMP elements based on relevant information?	
C. Do the performance metrics properly support the Goals in Element 1?	

Discussion:	
<b>Element X – SSMP Audits</b>	<b>Rating</b>
A. Will the SSMP Audit be completed, reviewed and filed in Appendix B?	
B. Was the final Audit Report presented to the governing body at a publicly noticed meeting?	
Discussion:	
<b>Element XI – Community Program</b>	<b>Rating</b>
A. Does the City effectively communicate with the public and other agencies about the implementation of the SSMP and continue to address any feedback?	
B. Did the City Council receive and review the Annual Sewer System Report?	
Was the annual report uploaded to the City Sewer Section website and added to Appendix C?	
C. Did City staff conduct and document meetings with satellite collection systems?	
D. Are all agreements with satellite systems current or are changes necessary to these agreements?	
Discussion:	
<b>Change Log</b>	<b>Rating</b>
A. Is the SSMP Change Log current and up to date?	
Discussion:	



**Audit Team:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Prepared By:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Reviewed By:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Certified By:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Approved for Filing On**

**Date:** \_\_\_\_\_

## Element XI: Communication Program

### SWRCB Waste Discharge Requirement:

The Enrollee shall communicate on a regular basis with the public on the development, implementation, and performance of its Sewer System Management Plan (SSMP). The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented.

The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system.

### **XI.1: Introduction**

This section of the SSMP presents the process involved in communicating with interested members of the public regarding the development, implementation, and performance of this plan. This Communication Program also addresses communication between Sausalito, and SMCSO.

### **XI.2: Communication Regarding SSMP Implementation**

The City posted a notice on its website to inform interested members of the public that a copy of the SSMP and all references are available for review at the Public Works Department or on the City website.

#### **XI.2.1: City of Sausalito Sewer System Management Plan (SSMP)**

Pursuant to State Water Resources Control Board Order 2006-0003-DWQ, Statewide General Discharge Requirements of Sanitary Sewer Systems, the City of Sausalito has developed and implemented a Sewer System Management Plan (SSMP). The goal of the SSMP is to minimize the frequency and severity of sanitary sewer overflows. The SSMP covers the management, planning, design, and operation and maintenance of the agency's sanitary sewer system.

The SSMP is available for review at the Department of Public Works, 420 Litho Street, Sausalito, CA, during normal business hours. In addition, the SSMP is posted on the City website along with all references contained in the SSMP. Interested parties can contact the City at 415-289-4192 or by email at [pguasco@sausalito.gov](mailto:pguasco@sausalito.gov) for additional information.

### **XI.3: Communicating Sanitary Sewer System Performance**

The City reports SSOs electronically to the California Integrated Water Quality System (CIWQS). The electronic SSO data are available by agency or region at:

[www.waterboards.ca.gov/ciwqs/publicreports.html](http://www.waterboards.ca.gov/ciwqs/publicreports.html) and the City WDID is 2SSO10114.

#### **XI.3.1: Sanitary Sewer System Performance**

Effective August 2007, the City began reporting SSOs electronically to the California Integrated Water Quality System (CIWQS). The electronic SSO data, as well as information regarding regulatory actions, is available at: [www.waterboards.ca.gov/ciwqs/publicreports.html](http://www.waterboards.ca.gov/ciwqs/publicreports.html) using the Waste Discharge Identification (WDID) Number 2SSO10114.



The City provides various customer communications and education information on the City website, through brochures, newsletters and annual reports to the City Council of the activities and performance results of the collection system operations.

**XI.3.2: Communication with Tributary/Satellite Sanitary Sewer Systems**

The City is a satellite sanitary sewer system that discharges into the SMCSD conveyance system and wastewater treatment plant. The City and SMCSD work together to develop and implement their SSMPs. They also work closely with regard to the City pump stations and force mains and regularly communicate on these assets and their operations and maintenance. Further the two agencies have established a Sewer Committee Working Group composed of two (2) elected officials from each agency that meet as needed.

**XI.4: References**

None

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# Appendices



# Appendix A: SSMP Change Log

## Sewer System Management Plan Change Log

Date	SSMP Element/Sec tion	Description of Change/Revision Made	Change Authorized By:

## Appendix B: SSMP Adoption Documents

### RESOLUTION NO. 5442

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAUSALITO  
ADOPTING THE UPDATED CITY OF SAUSALITO SEWER SYSTEM  
MANAGEMENT PLAN (SSMP), AND AUTHORIZING THE DIRECTOR OF PUBLIC  
WORKS AND CITY ENGINEER TO SUBMIT THE ADOPTED SSMP TO THE  
SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD**

**WHEREAS**, on July 7, 2005, the San Francisco Bay Regional Water Quality Control Board ("RWQCB") issued a letter to sewer collection system agencies, including the City of Sausalito (the "City") requiring the preparation of a Sewer System Management Plan ("SSMP"); and

**WHEREAS**, the RWQCB simultaneously released an SSMP Development Guide prepared in cooperation with the Bay Area Clean Water Agencies ("BACWA") a Joint Powers Agency consisting of the Central Contra Costa Sanitary District, East Bay Dischargers Authority, East Bay Municipal Utility District, the City and County of San Francisco, and the City of San Jose; and

**WHEREAS**, the RWQCB at that time directed that the City must also comply with sanitary sewer overflow (SSO) electronic reporting requirements issued in November 2004; and

**WHEREAS**, on May 2, 2006, the State Water Resources Control Board ("SWRCB") issued Order No. 2006-0003-DWQ requiring all public wastewater collection system agencies in California with greater than one mile of sewers to be regulated under General Waste Discharge Requirements (the "Statewide WDR"); and

**WHEREAS**, portions of the Order establishing the Statewide WDR related to monitoring and reporting were amended by Order No. 2013-0058-EXEC, dated July 30, 2013 and effective on September 9, 2013 (the "Amended MRP"); and

**WHEREAS**, with Resolution No. 4891 of April 3, 2007 the City Council of the City of Sausalito adopted an SSMP dated April 2007; and

**WHEREAS**, the intent of the SSMP is to comply with the RWQCB requirements, the Statewide WDR, and the Amended MRP and an update has been prepared to document changes to policies and procedures employed by the City in the day-to-day operations of its wastewater enterprise since the adoption of the April, 2007 SSMP; and

**WHEREAS**, the importance of the City's compliance with these applicable and relevant regulations is such that adoption of the updated SSMP is respectfully requested by the City's Director of Public Works, City Engineer and ADA Coordinator.




**NOW, THEREFORE**, the City Council of the City of Sausalito does hereby resolve as follows:

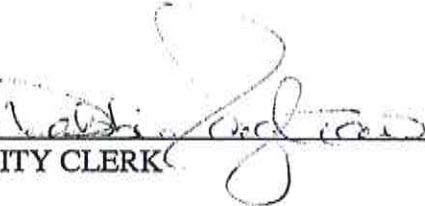
1. Adopts the attached updated City of Sausalito Sewer System Management Plan dated January 2014(the "updated SSMP").
2. Authorizes the Director of Public Works, City Engineer and ADA Coordinator to transmit the adopted updated SSMP to regulatory agencies as required.

**PASSED AND ADOPTED** at a regular meeting of the City Council of the City of Sausalito on this 11th day of February, 2014 by the following vote:

AYES:	Councilmembers:	Leone, Pfeifer, Theodores, Weiner, Mayor Withy
NOES:	Councilmembers:	None
ABSTAIN:	Councilmembers:	None
ABSENT:	Councilmembers:	None

  
\_\_\_\_\_  
MAYOR OF THE CITY OF SAUSALITO

ATTEST:

  
\_\_\_\_\_  
CITY CLERK

**RESOLUTION NO. 5863**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAUSALITO ACCEPTING THE 2019 INTERNAL AUDIT REPORT AND APPROVING AND ADOPTING THE AUGUST 2019 CITY OF SAUSALITO SANITARY SEWER SYSTEM MANAGEMENT PLAN INCLUDING THE OVERFLOW EMERGENCY RESPONSE PLAN AND WATER QUALITY MONITORING PROGRAM.**

**WHEREAS**, On May 2, 2006, the State Water Resources Control Board issued order No. 2006-0003-Dwq requiring all public wastewater collection system agencies in California with greater than one mile of sewers to and discharging to a publicly owned wastewater treatment plant be regulated under general waste discharge requirements; and

**WHEREAS**, the waste discharge requirements replaced similar regulations previously required of the City by the San Francisco Regional Water Quality Control Board; and

**WHEREAS**, portions of the order related to monitoring and reporting as established by the waste discharge requirements were amended by order No. 2013-0058-EXEC, Dated July 30, 2013 and effective on September 9, 2013 The Monitoring and Reporting Program; and

**WHEREAS**, With resolution No. 4891 of April 3, 2007 The City Council of the City of Sausalito adopted a Sewer System Management Plan dated April 2007; and

**WHEREAS**, the intent of the Sewer System Management Plan is to comply with the waste discharge requirements, and the Monitoring and Reporting Program and an update has been prepared to document changes to policies and procedures employed by the City in the day-to-day operations of its sanitary sewer enterprise since the adoption of the April 3, 2007 Sewer System Management Plan; and

**WHEREAS**, in October 2018 the City conducted an internal audit of the sewer system management plan which is required every two years based on waste discharge requirements; and

**WHEREAS**, the Statewide Waste Discharger Requirement requires the City Council to approve and adopt a Sewer System Management Plan at a minimum of every five years from the original adoption date; and

**WHEREAS**, the Waste Discharger Requirements stipulate that the City's Legally Responsible Official shall certify that the internal audit and the Sewer System Management Plan revisions were prepared under his/her direction and shall certify the required data is submitted to the State sanitary sewer database by the governing body immediately following public consideration and adoption; and



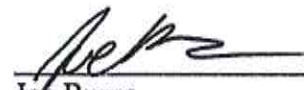
**WHEREAS**, the importance of the City's compliance with these applicable and relevant regulations is such that adoption of the updated Sewer System Management Plan is recommended by the City's Public Works Director / City Engineer.

**NOW, THEREFORE, THE CITY COUNCIL HEREBY RESOLVES:**

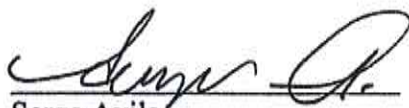
1. Accepts the Sewer System Management Plan 2019 internal audit report.
2. Approves and adopts the updated City of Sausalito Sewer System Management Plan including the revised Overflow Emergency Plan and Water Quality Mentoring Plan.
3. Authorizes the City's legally responsible official to certify the adopted updated Sewer System Management Plan to regulatory agencies as required and placed the revised documents and all references on the City website.

**RESOLUTION PASSED AND ADOPTED**, at the regular meeting of the Sausalito City Council on the 8th day of October, 2019, by the following vote:

<b>AYES:</b>	Councilmember:	Cox, Reilly, Withy, Cleveland-Knowles, Mayor Burns
<b>NOES:</b>	Councilmember:	None
<b>ABSENT:</b>	Councilmember:	None
<b>ABSTAIN:</b>	Councilmember:	None

  
\_\_\_\_\_  
Joe Burns  
Mayor

**ATTEST:**

  
\_\_\_\_\_  
Serge Avila  
Acting City Clerk

**EXHIBIT**

- A. City of Sausalito Sewer System Management Plan dated August 2018 and Internal Audit Report dated August 2019 including the Overflow Emergency Response Plan and Water Quality Monitoring Plan

## **Appendix C: SSMP Audit Reports**





**Sanitary Sewer Management Plan**

**Internal Audit Report**

**Audit Period: January 1, 2017 to December 31, 2018**

**WDID: 2SSO10114**

**August 2019**

**Prepared by:  
Causey Consulting  
Walnut Creek, CA 94598**

**CERTIFICATION**

I certify under penalty of law that this document and all attachments 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, 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



---

*Pat Guasco, Sewer System Coordinator, Legally Responsible Official*



**Acronym Listing Used in This Audit Report**

CIP	Capital Improvement Program
CIWQS	California Integrated Water Quality System
CMMS	Computerized Maintenance Management System
DS	Data Submitter
FOG	Fats, Oils and Grease
FSE	Food Services Establishment
LRO	Legally Responsible Official
MRP	Monitoring and Reporting Program
OERP	Overflow Emergency response plan
PS/FM	Pump Station/Force Main
RWQCB	Regional Water Quality Control Board
SMCSD	Sausalito-Marin City Sanitary District
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board
WDID	Waste Discharge Identification Number 2SSO10114
WDR	Sanitary Sewer Waste Discharge Requirements
WQMP	Water Quality Monitoring Plan

**City of Sausalito  
Internal Audit Report  
Sewer System Management Plan  
Causey Consulting  
August 2019**

**I. SSMP Audit**

This audit reviews the effectiveness of the City of Sausalito's (City) SSMP documentation and implementation for the period of calendar years 2017 and 2018. The audit is intended to meet State Water Resources Control Board (SWRCB) 2006 waste discharge requirements (WDR), State Water Board Order No. 2006-0003-DWQ, Section D13(x) for agencies that own or operate more than one mile of sanitary sewer collection systems discharging to a publicly owned treatment plant. Consequently, this audit assesses the current state of compliance with WDR provisions including effectiveness of program implementation, identifies "deficiencies" found in the SSMP and recommends corrective actions to remedy those deficiencies.

Causey Consulting (CC) performed this third party audit on behalf of the City through evaluation of SSMP documentation provided by the City, publicly available data sources such as the City website and California Integrated Water Quality System (CIWQS), and meetings and conversations with City staff, service providers and consultants involved in the implementation of the City SSMP and the City sanitary sewer collection system operations. The following table lists the audit participants.

<b>Participant</b>	<b>Role</b>	<b>Agency</b>
Paul Causey	Lead Auditor	Causey Consulting
Patrick Guasco	Sewer System Coordinator	City of Sausalito
Adam Politzer	City Manager/Legally Responsible Official	City of Sausalito
Eric Graham	Lead worker	City of Sausalito
Meghan Lockett	Permit Technician	City of Sausalito
SMCSD Pump Staff	City pump station and force main operation and maintenance program	Sausalito-Marin County Sanitary District
Vivian Housen	Consultant to City	V.W. Housen & Associates

**II. Audit Schedule**

This Internal Audit of the SSMP was authorized pursuant to an agreement between the City and Causey Consulting dated October 1, 2018. Internal audits of an agency SSMP must be conducted every two years from the original adoption date of the agency SSMP by the governing board. The original SSMP was adopted by the Sausalito City Council on February 10, 2009. The current audit report covers the period from January 1, 2017 to December 31, 2018. The



audit includes a review of the 2014 SSMP, the 2013 OERP and other ancillary documents provided by the Sewer System Coordinator as well as the preparation of the Internal Audit Checklist. The audit began with a document request to the City staff for relevant documents supporting the SSMP and the completion of the SSMP Internal Audit Checklist in January 2019 as an introduction to the current status of the City's implementation of the SSMP during the audit period. A copy of the completed Audit Checklist is attached as Appendix A. The checklist was used to inform the interviews conducted of the City staff and the Sausalito-Marin City Sanitary District (SMCSD).

Additionally, Causey Consulting also reviewed and provided a letter report on the recordkeeping documents that support the City's certified overflow reports in the California Water Quality System (CIWQS) under WDID 2SSO10114. The final letter report was submitted on March 3, 2019 and provided findings and recommendations for significant improvements to the City recordkeeping procedures. In general, the City was not utilizing the forms from the 2013 OERP nor was there sufficient documentation of the events during and following an overflow event specifically the documentation of start time and volume estimation (spill and recovered volumes), the use of sampling procedures and debrief and failure analysis of the event. Additional findings and recommendations on overflow recordkeeping can be found in Section IV below under OERP Element.

### III. SSMP Effectiveness

The City has very effectively reduced the number and volumes of sewage overflows since the implementation of the State sanitary sewer overflow database requirements. These changes have resulted from the increases in cleaning frequency and improvements to the collection system resulting from the Administrative Order and the dedication of the current City staff. However, in the past year or so there have been a number of retirements and employee resignations that are impacting the ability of the City to meet the annual cleaning schedules. In addition, recent significant increases in construction costs have required the capital improvement program to be reevaluated again and projects to be either reduced in scope, completely modified or pushed back until construction costs become more reasonable. These changes have resulted in a backlog of performance results and activities that must wait for a full complement of staff or other options to deal with the necessary work flow. In addition, due to a less than competitive compensation program, the City has experienced a high turnover rate of entry level employees once they are trained leaving for higher paying positions in the sanitary sewer profession.

The working relationship with the Sausalito-Marin City Sanitary District (SMCSD) has continued to be an effective relationship for the operation, maintenance, emergency response and replacement of pump station and force main assets. This relationship has been improved by the recent use of the Sewer Committee Working Group of elected officials from the two agencies. One element of the City's current Strategic Plan is a study of the consolidation of the sanitary sewer function with SMCSD. This could result in a positive enhancement to the overall sanitary sewer program as SMCSD is responsible for only sanitary sewer related programs and operations. This same relationship is not completely true at the staff level as communication generally occurs in the field on specific issues between the agencies and not for more complete and future issues. In addition, the parties should be discussing emergency response processes

and procedures following overflows that impact both agency collection system facilities. The staff level employees should consider and properly document regular meetings to discuss issues between the agencies, efficiency opportunities, operational procedures and responsibilities regarding and after emergency responses.

#### IV. SSMP Findings

The purpose of the SSMP Audit is to evaluate the compliance with and effectiveness of the City SSMP and collection system programs and to identify any needed for improvements. The Audit included review of the 2013 OERP, the 2014 SSMP and a small sampling of CIWQS supporting overflow files. The following General Findings provide observations on the entire SSMP and applies to all Elements of the SSMP.

##### A. General Findings and Recommendations

<b>General Finding</b>	<b>Recommendation</b>
F1. RWQCB References at beginning of each element no longer applicable	R1. Eliminate RWQCB from each element
F2. Not all WDR requirements included at the beginning of each Element	R2. Add all sub element requirements from WDR to each element
F3. Title Page missing basic information	R3. Add original/revision adoption date, Council resolution # and Agency WDID
F4. Not all references listed as required by MRP Sec. C. (iv) or included on City website	R4. Add new section at end of each element with reference listing; Consider hyperlinking references from SSMP and SSMP webpage and eliminate most appendices
F5. SSMP lacks sanitary sewer system asset info	R5. Add asset tables to the Executive Summary
F6. Audit Checklist form no longer acceptable	R6. Revise checklist to add element sufficiency ranking system
F7. Contact listings are outdated	R7. Add date of completion to all contact lists; update regularly
F8. SSMP is substantial and includes many reference documents can be removed or hyperlinked	R8. Streamline document by reducing narratives and hyperlinking many appendices
F9. Coordination at the field staff with SMCSO is limited	R9. Establish regularly scheduled meetings with agendas and minutes on issues impacting both systems in Elements IV and VI
F10. Audits and readoption of the SSMP should be based upon the original SSMP adoption date which is either 2007, 2009 or 2010	R10. Determine original adoption date and conform audit and SSMP readoption dates thereto.
F11. 2016/2017 Strategic Plan indicted the need for a consolidation study with SMCSO. It was delayed due to Council and staffing changes	R11. Complete the evaluation of consolidation with SMCSO.

##### B. Specific Findings and Recommendations by Element



The information presented below will be used to inform the effectiveness of the SSMP and the implementation of the sanitary sewer collection system program. They also provide information leading to the identification of program deficiencies that must be addressed either during revisions to the SSMP or prior to the next Audit period. Each of the 2014 SSMP Elements and the Executive Summary were ranked for sufficiency in meeting the WDR requirements utilizing the following ranking system and considers both the findings and the associated recommendations:

- *Complies (C)* – complies with all WDR objectives
- *Substantially Complies (SC)* – complies mostly with all WDR objectives
- *Partially Complies (PC)* – complies with basic WDR objectives
- *Marginal Compliance (MC)* – complies minimally with basic objectives of the WDR
- *Does Not Comply* – does not comply with WDR objectives

SSMP Element	Sufficiency Ranking	Finding	Recommendations
<b>Executive Summary</b>	PC	F12. Background section makes no reference to the current Administrative Order. F13. Administrative Order reports were completed as required. F14. Service area information dated F15. Mileage of gravity pipe not supported; not all assets in CMMS system. F16. SMCSO responsibilities for PS/FM missing F17. Objectives section not required	R12. Add information on requirements from Administrative Order R13. Update service area information to current R14. Conduct full evaluation of gravity pipe asset information; update CIWQS questionnaire. R15. Add statements about O&M by SMCSO R16. Eliminate Objectives Section
<b>I. Goals</b>		F18. Goals are five years old – still current?	R17. Review goals and revise as necessary
<b>II. Organization</b>		F19. Figure 2-1 outdated/Missing F20. LRO and DS in CIWQS are outdated F21. City Manager is listed as LRO – determine if still desired	R18. Revise org chart for additional positions and titles R19. Update CIWQS with addition or removal of either LRO or DS within 30 days.
<b>III. Legal Authority</b>	C	F22. Municipal Code Section 18.12 generally dates to 1971 with few revisions or changes. F23. No reference to the Uniform Plumbing Code	R20. Conduct a general review of Section 18.12. R21. Conduct reviews of Section 18.12 and document during SSMP Audits. R22. Add UPC to this Element.

<p><b>IV. O&amp;M Program</b></p>	<p>PC</p>	<p>F24. Current sewer system mapping system not current/complete                      F25. CMMS system conversion does not include all assets.                      F26. CMMS system conversion moving slowly.                      F27. Line cleaning performance results not all available in CMMS only on paper reports.                      F28. One additional pump station added in the system but asset information not available.                      F29. City has no defined CCTV or condition assessment program for collect lines since 2008                      F30. Major equipment and replacement parts missing from the SSMP.                      F31. Construction contractor emergency response training and procedures certification not tracked                      F32. 2015 Capital R&amp;R Program schedule not completed due poor construction bids.</p>	<p>R18. Complete full asset mapping and CMMS                      R23. Accelerate completion of CCMS conversion                      R24. Cleaning data should be in CMMS system                      R25. Develop and complete assessment of pipeline cleaning philosophy/frequency in the new CMMS system based upon performance results                      R26. Add development of sewer master plan to capital program projects.                      R27. Define City specific pipeline condition assessment program with defined return frequencies for assessment of pipes.                      R28. Complete asset information for Spinnaker PS and force main                      R29. Update/insert equipment &amp; replacement parts in SSMP revisions.                      R30. Create collection system training program description and schedule. Including WDR, SSMP, OERP and field exercises                      R31. Establish documentation for contractors emergency response training.                      R32. Capital program does not include long term needs.</p>
<p><b>V. Design</b></p>	<p>C</p>	<p>F33. Current SMCS standards still applicable.                      F34. Pump station/force main standards are handled by SMCS design and construction requirements</p>	<p>None</p>
<p><b>VI. OERP</b></p>	<p>PC</p>	<p>F35. OERP dated and not being followed.                      F36. OERP forms not being used as required.                      F37. Debrief/failure analysis not being conducted or documented                      F38. Overflow records do not include adequate</p>	<p>R32. Update OERP.                      R33. Assure all OERP forms are properly completed/filed for all overflow events or eliminate use of forms and procedures.                      R34. Conduct/document debrief/failure analysis &amp;</p>



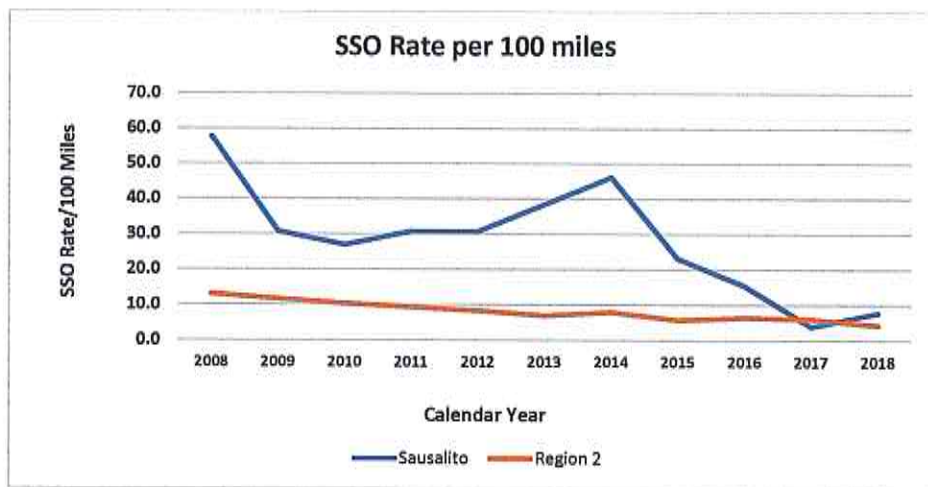
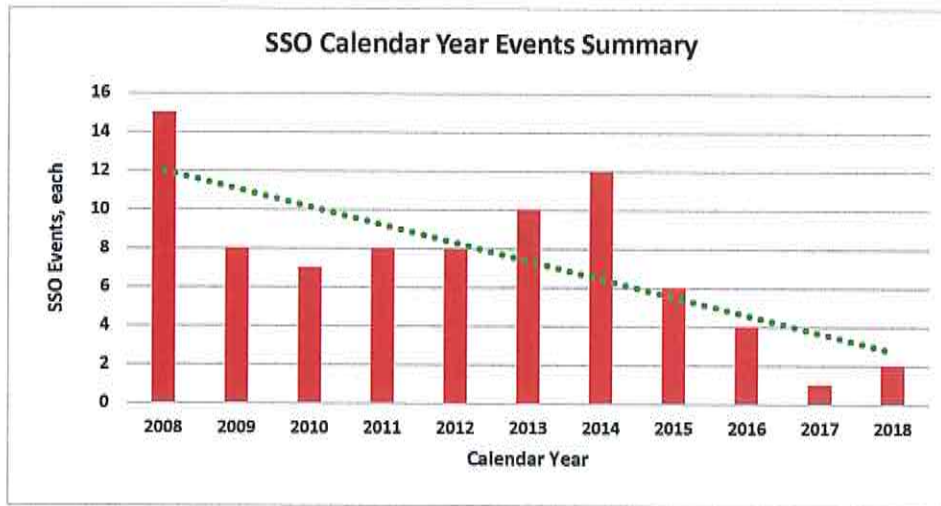
		<p>documentation of CIWQS overflow events.</p> <p>F39. Lack of annual training on SSMP, OERP and WQMP. No field exercises on emergency response.</p> <p>F40.</p> <p>F41. No recent training on overflow sampling in compliance with the WQMP.</p> <p>F42. No clear roles for PS/FM response activities – City relies on SMCSO.</p> <p>F43. No Spinnaker Pump Station Emergency Response Plan.</p> <p>F44. Current pump station emergency response plans do not include force main response procedures.</p>	<p>including all involved especially SMCSO if PS or FM assets involved.</p> <p>R35. Develop an annual sampling training program from the WQMP.</p> <p>R36. Establish emergency response procedures and roles with SMCSO for PS/FMs.</p> <p>R37. Prepare and implement Spinnaker Pump Station Emergency Response Plan.</p> <p>R38. Either add force main response plans to other three PS response plans or create separate force main response plan for all four force mains.</p>
<b>VII. FOG Program</b>	C	<p>F45. No FOG related overflows in past five years.</p> <p>F46. No FSE inspection or permitting program</p>	<p>R39. Consider development of an FSE permit program.</p> <p>R40. Establish annual inspections of all FSEs</p>
<b>VIII. SHECAP</b>	PC	<p>F47. Capital program experiencing poor bid environment</p> <p>F48. Most capital projects rescheduled and delayed for further evaluation &amp; funding</p> <p>F49. City lacks a defined capital planning process</p> <p>F50. No clear short or long term program definition during audit period.</p> <p>F51. Limited capital work completed due to funding issues.</p> <p>F52. No current sewer system master plan.</p>	<p>R41. Establish procedures for annual capital planning.</p> <p>R42. Establish priority based capacity related projects for short and long term and include in CIP table in Element IV.</p> <p>R43. Consider preparation of sewer master plan to include full system condition assessment. Update at least every five years.</p>
<b>IX. Monitoring</b>	NC	<p>F53. Stated performance metrics not being tracked as stated</p> <p>F54. No historical metrics tracked from list in Element IX.</p>	<p>R44. Review and define performance metrics that will be tracked supporting Element 1 Goals and SSMP effectiveness.</p> <p>R45. At least annually update Element 9 graphs and charts</p>
<b>X. Audit</b>	C	<p>F55. No audit report completed for 2015 thru 2016</p> <p>F56. Current Internal Audit Report no longer appropriate.</p> <p>F57. Audit Report not presented to City Council</p>	<p>R46. Conduct regular SSMP Audits every two years from original adoption date of SSMP.</p> <p>R47. Revise Audit Checklist by replacing</p>

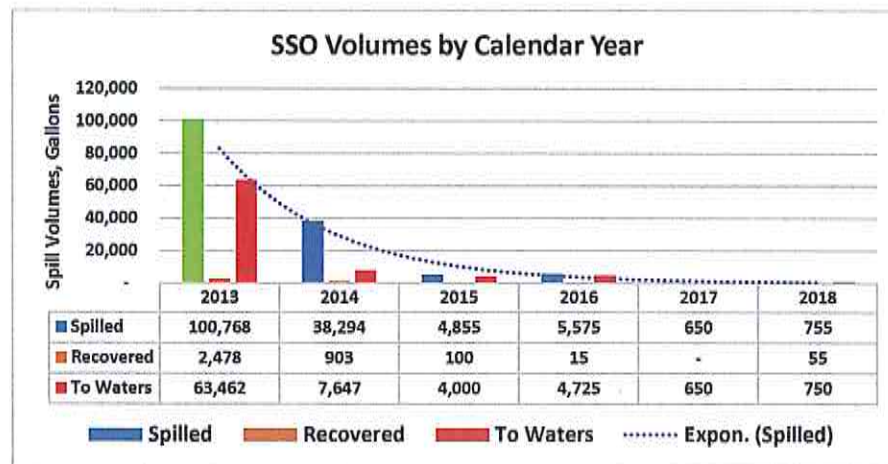
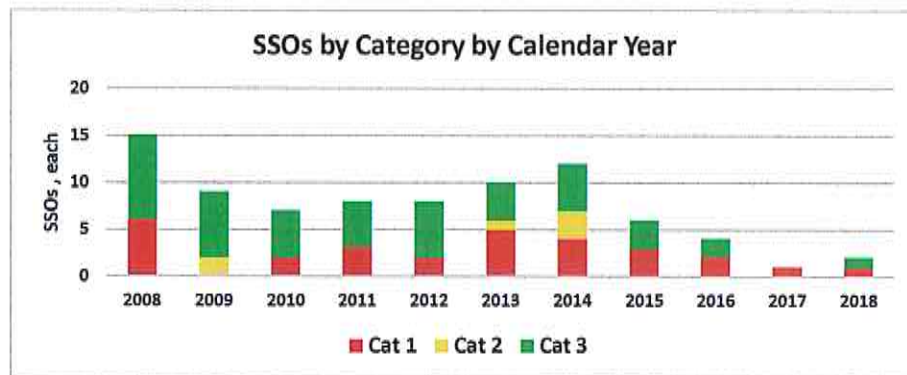
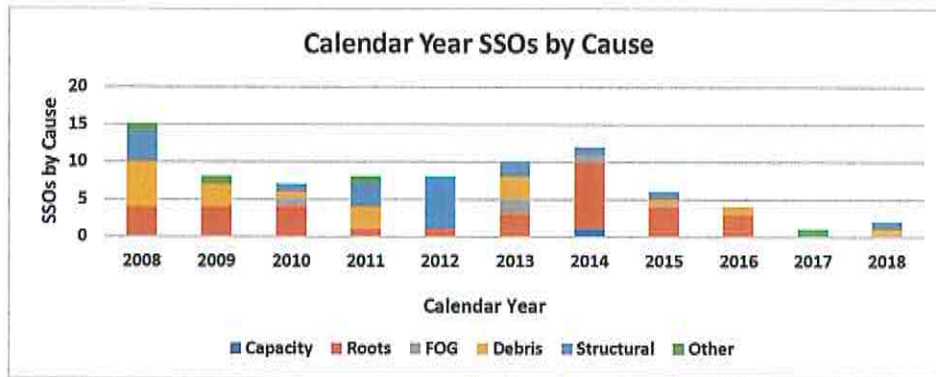
			yes/no columns with sufficiency rating values. R48. File certified Audit Report in SSMP appendix. R49. Present Audit Report to City Council upon completion.
<b>XI. Communications</b>	PC	F58. Sewer Committee Working Group reestablished between City and SMCSO. F59. No regular communications with SMCSO field staff on joint issues only as needed or field conditions demand F60. Communications limited with City Council. F61.	R50. Establish regularly scheduled meetings with agendas/minutes between City field staffs R51. Audit reports should be provided to Council on a regular agenda. R52. Consider development of an annual collection system report to Council after end of fiscal year.
<b>Change Log</b>	NC	F62. No Change Log or any program updates provided.	R53. Change Log must contain changes R54. At least annually update SSMP Change Log.
<b>Appendices</b>		F63. All supporting documents can be hyperlinked from SSMP webpage and eliminated from SSMP F64. Some information included in appendices is not required by WDR or MRP F65. Current regulations do not require operations and maintenance budget information. F66. SSMP Change Log contains no entries during the audit period as required by MRP Sec. E.3 by SSMP element Section.	R55. Consider elimination of information not specifically required by the WDR or MRP. R56. Reduce size of the SSMP by use of hyperlinks and list of reference materials in new section at the end of each SSMP Element. R57. Remove budget information or update annually and add to SSMP Change Log. R58. Regularly update change log for significant change.

**Performance Results**

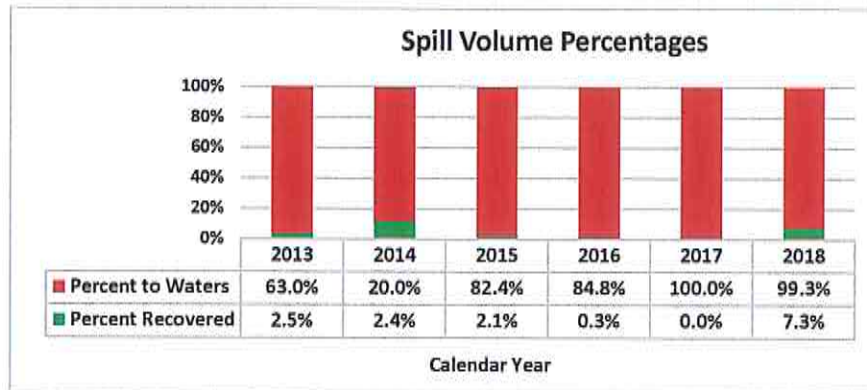
The following graphs and charts provide the historical performance of the City of Sausalito's sanitary sewer collection system operation. The data is taken from the City CIWQS certified reports found at the State Water Resources Control Board (SWRCB) under the Waste Discharge Identification (WDID) Number 2SSO10114. All information is reported by calendar years











#### V. City Sanitary Collection System Operational Strengths

During the progress of the audit several management and operational strengths were identified as follows:

- 1) City staff is very dedicated and very hard working and committed to a well managed and developed collection system program.
- 2) Both the number and volumes of overflows have continued to be significantly reduced.
- 3) The number of Category 1 overflows to surface waters continues to trend lower.
- 4) The SSO rate/ 100 miles per year for the last four years shows substantial improvement and in the recent year has matched the SWRCB Region 2 rate.
- 5) No FOG related overflows experienced in the past five years due to increase line cleaning maintenance.
- 6) Line cleaning program changes have resulted in significant reductions in overflows during the audit period.
- 7) City continues to allow for/support outside training opportunities for collection system employees.
- 8) City has generally provided all requested equipment for collection system maintenance.
- 9) Coordination between the City and SMCSO has improved at the management and elected officials level with the Sewer Committee Working Group.

- 10) The Gate 5 Road issues have been resolved to significantly reduce infiltration/inflow to the collection system including several manhole sealings in the Bridgeway Business District.
- 11) Working with SMCSO, the City has developed and is moving forward with important improvements to the Whiskey Springs Pumps Station on Coloma Street at Bridgeway
- 12) Spinnaker Pump Station installed to pump sewage through a fused 4-inch open-ended force main through an existing, failing 6-inch cast iron, gravity flow sewer system. The addition of a 2000 gallon gravity grease interceptor was installed upstream of the Spinnaker Pump Station to remediate significant fats, oils and grease (FOG) generated by the Spinnaker Restaurant.
- 13)
- 14) Updated sewer rate study and sewer service charges to fund both O&M and future capital replacement needs in the future has recently been completed and presented to City Council.
- 15) All required reports from the Administrative Order were submitted.
- 16) City relies by agreement completely on SMCSO for all pump station and force main activities and replacements.
- 17) Lateral replacement program continues to provide positive results annually.
- 18) Communications program is broad and effective with the public through newsletters.

#### VI. Deficiencies and Corrective Actions

- a. The 2014 SSMP includes references to old RWQCB Region 2 SSMP requirements dating back to before the WDR was adopted Statewide in 2006 and are no longer applicable or necessary.  
**Corrective Action Required:** During 2019 revisions to the SSMP remove all references to the Region 2 RWQCB requirements no longer applicable.
- b. The City has not maintained the performance metrics identified in Element 9.  
**Corrective Action Required:** Establish a shorter list of metrics in Element 9 supporting the Element 1 goals and develop proper tracking of the metrics regularly.
- c. The City has not provided any updates to the SSMP Change log during the audit period nor included Change Log changes with the SSMP.  
**Corrective Action Required:** Place Change Log in the 2019 SSMP in an appendix and regularly update and add changes to the Log at least annually or following debrief/failure analysis when emergency response procedures are modify or changed..
- d. The previous SSMP Audit was not conducted in 2018 as required by the regulations.



**Corrective Action Required:** Assure Audits and Audit Reports are completed every two years from the original SSMP adoption date; review and define original SSMP adoption date by City Council as currently there is confusion.

- e. Staffing vacancies during the audit period continue to impact the performance of the collection system operations.  
**Corrective Action Required:** Work with Human Resources to reduce the time necessary to recruit and fill vacant collection system positions.
- f. The City migration to the new CMMS system has progressed slowly and does not contain the full asset information or proper cleaning sequencing and schedules.  
**Corrective Action Required:** Establish a high priority for the completion of the migration to Cityworks; assure all City assets are included; review and establish cleaning frequency/sequencing based upon cleaning results.
- g. The City pipeline asset information is not complete nor do City maps contain all pipes and appurtenances.  
**Corrective Action Required:** Assure that all pipe segments and manholes are included in the asset database and on all City maps; update CIWQS Collection System Questionnaire when all pipe data and manhole data are complete.
- a. The City has no defined pipeline condition assessment program and have not utilized regular system CCTV assessments since 2008.  
**Corrective Action Required:** Define procedures for condition assessment of all pipes (gravity and pressure pipes) and pump stations in the collection system on a regular ongoing basis with a frequency of not more than ten (10) years.
- h. The MRP requires all document references in the SSMP to be available on the City website, hyperlinked from the document or transmitted to the SWRCB.  
**Corrective Action Required:** Update the City website to include hyperlinks to all references in the SSMP.
- i. The Audit Report Form in Appendix J is no longer acceptable and should be replaced with a Sausalito specific ranking criteria and comment sections for each element of the SSMP.  
**Corrective Action Required:** Update the Audit Report Form, retitle SSMP Audit Checklist and remove the yes/no columns and replace with sufficiency ranking of each element. Use this new Checklist only to inform the interviews during the biannual audits.
- j. A review of the supporting documentation for the CIWQS records found that the forms included in the 2014 OERP were not being used nor were files properly documenting and supporting the information found in CIWQS certified reports.  
**Corrective Action Required:** Assure that a complete and well documented overflow file supports each certified CIWQS SSO report and assure that all forms in the OERP are used appropriately or remove from the OERP if the forms are determined to not be used for event documentation.

- k. Currently City does limited inhouse training on SSMP, OERP but has not conducted training on the Water Quality Monitoring Plan or regular field exercises/simulations on emergency response including volume estimation of both spill and recovered volumes, overflow containment and traffic control and signing.  
**Corrective Action Required:** Conduct at least annually filed emergency response simulations in the field and conduct regular training on the Water Quality Monitoring Plan.
  
- l. The City and SMCSO collection system staffs do not meet regularly to discuss details of the two programs or to evaluate operational enhancements communications currently limited to necessary field discussions during incidents or issues.  
**Corrective Action Required:** Institute regular staff level meetings between the two agencies with agendas and minutes to discuss important operational and emergency response coordination actions and issues.
  
- m. The City has emergency response plans for three of the four pump station owned by the City. These plans do not include procedures for force main overflows.  
**Corrective Action Required:** Working with SMCSO, prepare a new emergency response plan for the Spinnaker Pump Station and force main; develop emergency response procedures for the other three pump station force mains either separately or as a single plan for all four force mains.

**VII. Past Audit Report Deficiencies**

The October 26, 2016 Audit Report identified several deficiencies that needed to be addressed by City staff. The following Table provides the status of those deficiencies as found during the 2019 Audit.

Table 1: Status of Deficiencies/Action Items from the October 2016 Audit Report

Action Item	Deficiency/Action Item from 10/26/2016 SSMP Audit Report	Current Status	Comments/2019 Actions
1	Staff have changed and contact/reporting information will be updated by December 31, 2016. Similarly, the organization chart will be updated during this time to reflect new staff.	Not completed	Update with 2019 revision.
2	The SSMP will be updated by December 31, 2016 to include a description of this work and associated findings	Not completed	2019 revision to include
3	Equipment inventory list will be updated by December 31, 2016.	Not completed	Update with 2019 revision.
4	The training record and expectations for the upcoming audit period will be updated by December 31, 2016.	Complete	
5	The CIP has changed from 2010. This discussion will be updated by 12/31/2016.	Partially completed	Poor bids received; reevaluation of CIP required will be included in 2019 revision.
6	The information provided will be updated to include SSO location.	Not completed	
7	This is the first audit conducted after the SSMP was updated in 2014. Results will be shared with City Council and added to the website.	Complete	
8	No changes have been made to the document since the Council adopted the document. Therefore, no items have been added to the Change Log.	Not completed	Log should identify changes since 2014 - none found



### **Appendices A – SSMP Internal Audit Checklist**

The following SSMP Internal Audit Checklist was used to establish a baseline for the audit interviews of City and SMCSD staff. The comments are based upon review of the 2014 Sanitary Sewer Management Plan prepared by V.W. Housen and Associates. The Audit Checklist was provided to City Staff on January 7, 2018 for comment and information leading to the interviews. The City provided no comments or requested changes to the Audit Checklist before, during or after the staff interviews.

**Appendix A  
City of Sausalito  
SSMP Internal Audit Checklist  
January 2014 Sausalito SSMP**

Audit Period Covered: January 1, 2017 to December 2018

General Observations:

1. Remove references to RWQCB in each Element as no longer applicable.
2. Add WDR Sub Elements at the beginning of each Element.
3. Hyperlink references rather than including them in the appendices.
4. Add basic information collection system to Title Page.
5. Streamline entire document for broader use as living document.
6. Place revised OERP in an appendix not in the SSMP.
7. Add separate "Element References" as a new section at the end of each Element.
8. Revise the Audit Checklist form by removing Yes/No with City defined ranking system for each element.
9. Consider adding dates of completion on all contact lists in the SSMP documents.
10. Add form number and dates to all forms to assure use of most current forms.

		Yes	No
<b>INTRODUCTION</b>			
A.	Is the current system description complete and up-to-date? Are infrastructure statistics current and complete?		X
Consider dropping List of Terms; revise CIWQS miles to 28 or reduce number in SSMP – resolve difference; delete the flow number not required; drop objectives; add three infrastructure tables for gravity lines; add customer classification list; add reference to SMCSO treatment plant as final discharge location; add information on length of lines in easements and backyards; service area map current? Create list of recommendations in objectives along with status in final audit report.			
<b>ELEMENT 1 - GOALS</b>			
A.	Are the goals stated in the SSMP still appropriate and accurate?	X	
Review and determine if still current; possibly reduce the number if no performance metrics defined for each goal.			
<b>ELEMENT 2 - ORGANIZATION</b>			
A.	Is the contact information current?		X
B.	Is the sanitary sewer overflow responder list current?	??	
C.	Is the Organization Chart in Figure 2-1 of the SSMP current?		X
D.	Are the position descriptions an accurate portrayal of staff responsibilities?		X



E.	Is the chain of communications for reporting and responding to SSOs accurate and up-to-date?		X
Table 2-1 required to include both phone and email contact information and single classification responsible for the Element; Figure 2-2 Technical Report requirement missing; Section 2.4 remove second bullet as not required; remove page 2-8?			

		YES	NO
<b>ELEMENT 3 – LEGAL AUTHORITY</b>			
Does the SSMP contain current references to the Sausalito Municipal Code documenting the City's legal authority to:			
A.	Prevent illicit discharges?	X	
B.	Require proper design and construction of sewers and connections	X	
C.	Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the City?	X	
D.	Limit discharges of fats, oils and grease?	X	
E.	Enforce any violation of its sewer ordinances?	X	
F.	Were any changes or modifications made in the past two years r since the last audit to City Sewer Ordinances, Regulations or standards?		X
Replace current narratives with table of specific municipal code sections that meet the requirement; add reference the uniform plumbing code for grease interceptor requirement in addition to sewer code sections; add section regarding any requirements that SMCSO places on the legal authorities especially related to progressive enforcement issues between two agencies; provide broader explanation of SMCSO authority to regulate City operations; add SMCSO to Element reference list			

<b>ELEMENT 4 – OPERATIONS AND MAINTENANCE</b>			
<b>Collection System Maps</b>			
A.	Does the SSMP reference the current process and procedures for maintaining the City's wastewater collection system maps?	X	
B.	Are the City's wastewater collection system maps complete, current and sufficiently detailed?	??	
<b>Prioritized Preventive Maintenance</b>			
C.	Does the SSMP describe current preventive maintenance activities and the system for prioritizing the cleaning of sewers?	X	
D.	Based upon the SSO information in CIWQS and the Annual SSO Report, are the City's preventive maintenance activities sufficient and effective in minimizing SSOs and blockages?	X	
<b>Rehabilitation and Replacement Program</b>			

E.	Is there an ongoing condition assessment program sufficient to rank the condition of sewer pipes and schedule rehabilitation? Are the current components of this program documented in the SSMP?	??	
F.	Does the rehabilitation and replacement plan include a capital improvement plan that addresses proper management and protection of the infrastructure assets? Does the plan 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?		^
<b>Contingency Equipment and Replacement Inventory</b>			
G.	Does the SSMP list the major equipment currently used in the operation and maintenance of the collection system?		X
H.	Are contingency and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance?		X
<b>Training</b>			
H.	Does the SSMP document current training expectations and programs?	X	
I.	Are training records current?		??
Remove all RWQCB references/requirements; place all WDR sub elements at start of Element; Add discussion of storm mapping; Remove 4.2 Resources & Budget; add collection system organization chart; add historical performance results; add Tables and discussion of lift stations and force mains and siphons; add discussion and table of hot spots program; update Section 4.3.3; discuss and lengths of pipe in the subsidence area; update the short and long term CIP; add frequencies of cleaning and CCTV; update and expand Section 4.5.3; add training on SSMP and WDR regulations and field exercises on emergency response; update equipment and replacement inventories to current;			
<b>ELEMENT 5 - DESIGN AND PERFORMANCE STADARDS</b>			
A.	Does the SSMP reference current design and construction standards for the installation for new sanitary sewer systems, pump stations and other appurtenances and for the rehabilitation and repair of existing sanitary sewer systems?	X	
B.	Does the SSMP reference current procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and the rehabilitation and repair of existing sewer lines?	X	
No changes noted.			



		Yes	No
<b>ELEMENT 6 – OVERFLOW AND EMERGENCY RESPONSE PLAN</b>			
A.	Does the City’s Sanitary Sewer Overflow Emergency Response Plan (OERP) contain proper notification procedures so that primary responders and regulatory agencies are informed of all sanitary sewer overflows (SSOs) as required by the WDR and MRP?	X	
B.	Does the OERP have a program to ensure an appropriate response to all overflows?	X	
C.	Does the OERP contain procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities of all SSOs that potentially affect public health or reach waters of the State in accordance with the MRP? Does the SSMP identify the officials who will receive immediate notification of such SSOs?	X	
D.	Are staff and contractor personnel aware of and appropriately trained on the procedures of the OERP?	X	
E.	Does the OERP contain procedures to address emergency operations such as traffic and crowd control and other necessary response activities?		X
F.	Does the OERP ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge?	X	
G.	Considering the SSO Performance data, is the OERP effective in handling SSOs in order to safeguard public health and the environment?	X	
H.	Is the water quality monitoring plan current and has it been trained on and practiced by staff that would be involved in an SSO of large volume?	X	??
I.	Was sampling performed within 48 hours for all SSOs greater than 50,000 gallons and were results entered for these SSOs through the CIWQS website?	NA	
	Has the City prepared a Technical Report for all SSOs larger than 50,000 gallons? Have all Technical Reports been filed on the CIWQS website as required?	NA	

Streamline Element 6 and place OERP (2016 DKF) in separate appendices so it can be removed and stand alone for field crews; update SWRCB and RWQCB contact information; add additional details on traffic and crowd control in a separate section of the OERP; update WQMP and add information on the certified laboratory to be used for testing; revise sampling distances in Sampling Procedures section; add section numbering to WQMP; assure consistent title of WQMP as stated in WDR; where is sampling equipment located; add chain of custody form to WQMP; add training requirement to WQMP		
		Yes    No
<b>ELEMENT 7 – FATS, OILS AND GREASE (FOG) CONTROL PROGRAM</b>		
A.	Does the FOG Control Program include a description of public education and outreach efforts that promote proper handling and disposal of FOG?	X
B.	Does the FOG Program include a plan for the disposal of FOG generated within the sanitary sewer system service area?	X
C.	Does the City have sufficient legal authority to prohibit discharges to the system and identify measure to prevent SSOs and blockages caused by FOG?	X
D.	Are there requirements to install grease removal devices (such as traps or interceptors), best management practice (BMPs) requirements, record keeping, maintenance requirements and reporting requirements in the City's FOG Control Program?	X
E.	Does the City have the authority to inspect grease producing facilities, enforcement authorities, and have sufficient staff to inspect and enforce the FOG ordinance?	X
F.	Does the FOG control program identify sections of the collection system sections subject to FOG blockages, establish a cleaning schedule and address source control measures to minimize these blockages?	X
G.	Does the FOG control program implementation of source control measures for all sources of FOG discharged to the collection system?	X
H.	Is the current FOG program effective in minimizing blockages of sewer lines resulting from discharges of FOG to the system?	X
No FOG related SSOs in last four years – consider no FOG control program; update Section 7.2 with the current number of FSEs discharging to system; add reference to UPC SMC 8.16 and enforcement 8.02.010 and .020; if no program rewrite or eliminate 7.4 and 7.5; add list of Bay are FOG disposal location;		
<b>ELEMENT 8 - SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN</b>		
A.	Does the System Evaluation and Capacity Assurance Plan evaluate hydraulic deficiencies in the system and provide estimates of peak flows associated with condition similar to those causing overflow events, if applicable?	??



B.	Does the City's Capital Improvement Plan (CIP) establish a schedule of approximate completion dates for both short and long- term improvements and is the schedule reviewed and updated to reflect current budgetary capabilities and activity accomplishment?		X
C.	Does the City take steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules? Are repair and replacement projects developed based upon condition assessment and/or field maintenance results?		^
No clear what the short and long term CIP projects are included in City budget – only 2018 to 2020 current. Could not find a separate CIP. What is the current sewer CIP process? 20125 presentation by Vivian found but not in current budget. None listed under Current Capital Projects in Public Works Department. Need direction and input here.			
		Y e	N
<b>ELEMENT 9 - MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS</b>			
A.	Does the City maintain relevant information that can be used to establish and prioritize appropriate SSMP activities?	??	X
B.	Does the City monitor implementation and, where appropriate, measure the effectiveness of each element of the SSMP?		X
C.	Does the City assess the success of the preventive maintenance program?		X
D.	Does the City update program elements, as appropriate, based on monitoring or performance evaluations		X
E.	Does the City identify and illustrate SSO trends, including frequency, location and volume of SSO??		X
None of the success factors and metrics in Element 9, Table 9-1 provided. Table 9-2 outdated and requires updating. No updates to the SSMP Change Log to evidence program updating from performance evaluations. Update metrics to ones that can be tracked regularly or track stated in SSMP.			
<b>ELEMENT 10 – SSMP AUDITS</b>			
A.	Does the audit focus on evaluating the effectiveness of the SSMP? If not, what needs to be changed to increase the effectiveness of the overall collection system program?		X
B.	Were the audit results shared with the City Council? And the public. Via the website?		X
C.	Will the SSMP Audit be completed, reviewed, and filed as an appendix to the SSMP on a biannual basis?		X
D.	Do any proposed changes to the SSMP require Council approval as they have a substantial change in the policies and procedures for collection system operations and maintenance?		X

Last audit covered 1/1/2014 to 12/31/2016 but none of deficiencies completed. Audit schedule now uses original adoption date (4/3/2007) as the date from which the two year audit requirement must be timed based upon RWQCB letter dated \_\_\_\_\_. Therefore, next audit due April 2019 for period April 2017 to April 2019. Does not appear that previous audit was presented to the City Council nor placed on the City sewer webpage nor inserted into Appendix I of the SSMP.

	<b>Yes</b>	<b>No</b>
--	------------	-----------

**ELEMENT 11 – COMMUNICATION PROGRAM**

A.	Does the City communicate with the public on a regular basis about the implementation and performance of the SSMP, and provide the public and opportunity for input? feedback?		X
B.	Did City staff communicate regularly with SMCSO? Are all agreements with SMCSO current or are changes necessary to these agreements?	??	

2014 SSMP available on the City Sewer webpage along with the current sanitary sewer rate study. Was the audit report presented to the City Council upon completion? Consider preparation of annual collection system report shortly following end of the fiscal year.

	<b>YES</b>	<b>NO</b>
--	------------	-----------

**SSMP Change Log**

A.	Is the SSMP Change Log, current and up to date?		X
	Nothing added since the 10/28/16 Audit completion nor since the requirement in September 2013.		

Prepared By: Paul H. Causey, Causey Consulting



## **Appendix D: Overflow Emergency Response Plan – April 24, 2019**

# City of Sausalito

## Overflow Emergency Response Plan



Effective Date: 08 Jan 2009  
Revised Date: 6/26/12, 6/23/14, 4/24/19  
Approved by: David Bracken, Int. Dir. of P.W.  
Signature: David Bracken  
Date: 5/24/19

Prepared by David Patzer, DKF Solutions Group  
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City of Sausalito: Overflow Emergency Response Plan

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(ref. SWRCB Order No. 2006-0003-DWQ Element VI)

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6. Sanitary Sewer Overflow (SSO) Detection and Notification
7. SSO Response Procedures
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City of Sausalito: Overflow Emergency Response Plan

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Collection System Failure Analysis Form .....	-6
Regulatory Notifications Packet .....	See contents list above
Sewer Spill Reference Guide .....	pamphlet
Public Posting .....	n/a
Door Hanger .....	n/a

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**Appendix E: Contractor Orientation**



## Sanitary Sewer Overflow Emergency Response Plan

(ref. SWRCB Order No. 2006-0003-DWQ Element VI)

### 1. Purpose

The purpose of the City of Sausalito's Overflow Emergency Response Plan (OERP) is to support an orderly and effective response to Sanitary Sewer Overflows (SSOs). The OERP provides guidelines for City personnel to follow in responding to, cleaning up, and reporting SSOs that may occur within the City's service area. This OERP satisfies the SWRCB Statewide General Waste Discharge Requirements (GWDR), which require wastewater collection agencies to have an Overflow Emergency Response Plan.

### 2. Policy

The City's employees are required to report all wastewater overflows found and to take the appropriate action to secure the wastewater overflow area, properly report to the appropriate regulatory agencies, relieve the cause of the overflow, and ensure that the affected area is cleaned as soon as possible to minimize health hazards to the public and protect the environment. The City's goal is to respond to sewer system overflows as soon as possible following notification. The City will follow reporting procedures in regards to sewer spills as set forth by the San Francisco Regional Water Quality Control Board (SFRWQCB) and the California State Water Resources Control Board (SWRCB).

### 3. Definitions As Used In This OERP

**CALIFORNIA INTEGRATED WATER QUALITY SYSTEM (CIWQS):** Refers to the State Water Resources Control Board online electronic reporting system that is used to report SSOs, certify completion of the SSMP, and provide information on the sanitary sewer system.

**FOG – Fats, Oils, and Grease:** FOG refers to fats, oils, and grease typically associated with food preparation and cooking activities that can cause blockages in the sanitary sewer system.

**GROUNDWATER:** Groundwater is the water found underground in the cracks and spaces in soil, sand and rock. It is stored in and moves slowly through geologic formations of soil, sand and rocks called aquifers.

**LEGALLY RESPONSIBLE OFFICIAL (LRO):** Refers to an individual who has the authority to certify reports and other actions that are submitted through CIWQS.

**MAINLINE SEWER:** Refers to City wastewater collection system piping that is not a private lateral connection to a user.

**MAINTENANCE HOLE OR MANHOLE:** Refers to an engineered structure that is intended to provide access to a sanitary sewer for maintenance and inspection.

**NOTIFICATION OF AN SSO:** Refers to the time at which the City becomes aware of an SSO event through observation or notification by the public or other source.

**NUISANCE - California Water Code section 13050, subdivision (m),** defines nuisance as anything that meets all of the following requirements:

- a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.

- b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
- c. Occurs during, or as a result of, the treatment or disposal of wastes.

**PREVENTATIVE MAINTENANCE:** Refers to maintenance activities intended to prevent failures of the wastewater collection system facilities (e.g. cleaning, CCTV, inspection).

**PRIVATE LATERAL SEWAGE DISCHARGES** – Sewage discharges that are caused by blockages or other problems within a privately owned lateral.

**SANITARY SEWER OVERFLOW (SSO)** - Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:

- (i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;
- (ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and
- (iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

SSOs that include multiple appearance points resulting from a single cause will be considered one SSO for documentation and reporting purposes in CIWQS.

**NOTE:** Wastewater backups into buildings caused by a blockage or other malfunction of a building lateral that is privately owned are not SSOs.

**SSO Categories:**

**Category 1:** Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either:

- Reaches surface water and/or drainage channel tributary to a surface water; or
- Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.

**Category 2:** Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either:

- Does not reach surface water, a drainage channel, or an MS4, or
- The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.

**Category 3:** All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition.

**SANITARY SEWER SYSTEM:** Any publicly-owned system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to the publicly owned treatment facility.



**SENSITIVE AREA:** Refers to areas where an SSO could result in a fish kill or pose an imminent or substantial danger to human health (e.g. parks, aquatic habitats, etc.)

**SEWER SERVICE LATERAL:** Refers to the piping that conveys sewage from the building to the City's wastewater collection system.

**SURFACE WATERS:** The water on the Earth's surface. Surface water occurs as streams, lakes, and wetlands, as well as bays and oceans. Surface water also includes the solid forms of water-- snow and ice.

**UNTREATED OR PARTIALLY TREATED WASTEWATER:** Any volume of waste discharged from the sanitary sewer system upstream of a wastewater treatment plant headworks.

#### **4. State Regulatory Requirements for Element 6, Overflow Emergency Response Plan**

##### GWDR Requirement

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

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

The Sewer System Management Plan and critical supporting documents are available to the public at [www.ci.sausalito.ca.us/index.aspx?page=677](http://www.ci.sausalito.ca.us/index.aspx?page=677).

#### **5. Goals**

The City's goals with respect to responding to SSOs are:

- Work safely;
- Respond quickly to minimize the volume of the SSO;
- Eliminate the cause of the SSO;
- Prevent sewage system overflows or leaks from entering the storm drain system or receiving waters to the maximum extent practicable;
- Contain the spilled wastewater to the extent feasible;
- Minimize public contact with the spilled wastewater;

- Mitigate the impact of the SSO;
- Meet the regulatory reporting requirements;
- Evaluate the causes of failure related to certain SSOs; and
- Revise response procedures resulting from the debrief and failure analysis of certain SSOs.

## 6. SSO Detection and Notification

ref. SWRCB Order No. 2006-0003-DWQ VI(a)

The processes that are employed to notify the City of the occurrence of an SSO include: observation by the public, receipt of an alarm, or observation by City staff or other public employees during the normal course of their work.

### 6.1 PUBLIC OBSERVATION

Public observation is the most common way that the City is notified of blockages and spills. Contact numbers and information for reporting sewer spills and backups are in the phone book and on the City's website: <http://www.ci.sausalito.ca.us>. For sewer related emergencies or illicit discharges Monday-Friday 7:30am - 3:00pm customers should contact the Department of Public Works' Engineering Division at (415) 289-4106. If they reach the automated voicemail, or are calling after hours, they should contact the Police Department.

#### Normal Work Hours

When a report of a sewer spill or backup is made during normal work hours, the Service Call Request arrives at Public Works. The callers name, address and phone are recorded. This information is forwarded to Sewer System Coordinator or designee. Sewer System Coordinator will notify the Department of Public Works Supervisor or crews directly with the Service Call Request. The Sewer Maintenance crew will respond to the Service Call Request and complete the Service Call Request form (either using a hardcopy or directly into the Computerized Maintenance Management System using the field laptop). The hardcopy Service Call Request form is forwarded to the Sewer System Coordinator.

#### After Hours

After hours callers reach a message instructing them to call Police dispatch at (415) 289-4170, which receives the call, takes the information from the caller, pages the on call crew, and communicates the necessary information to the on-call crew.

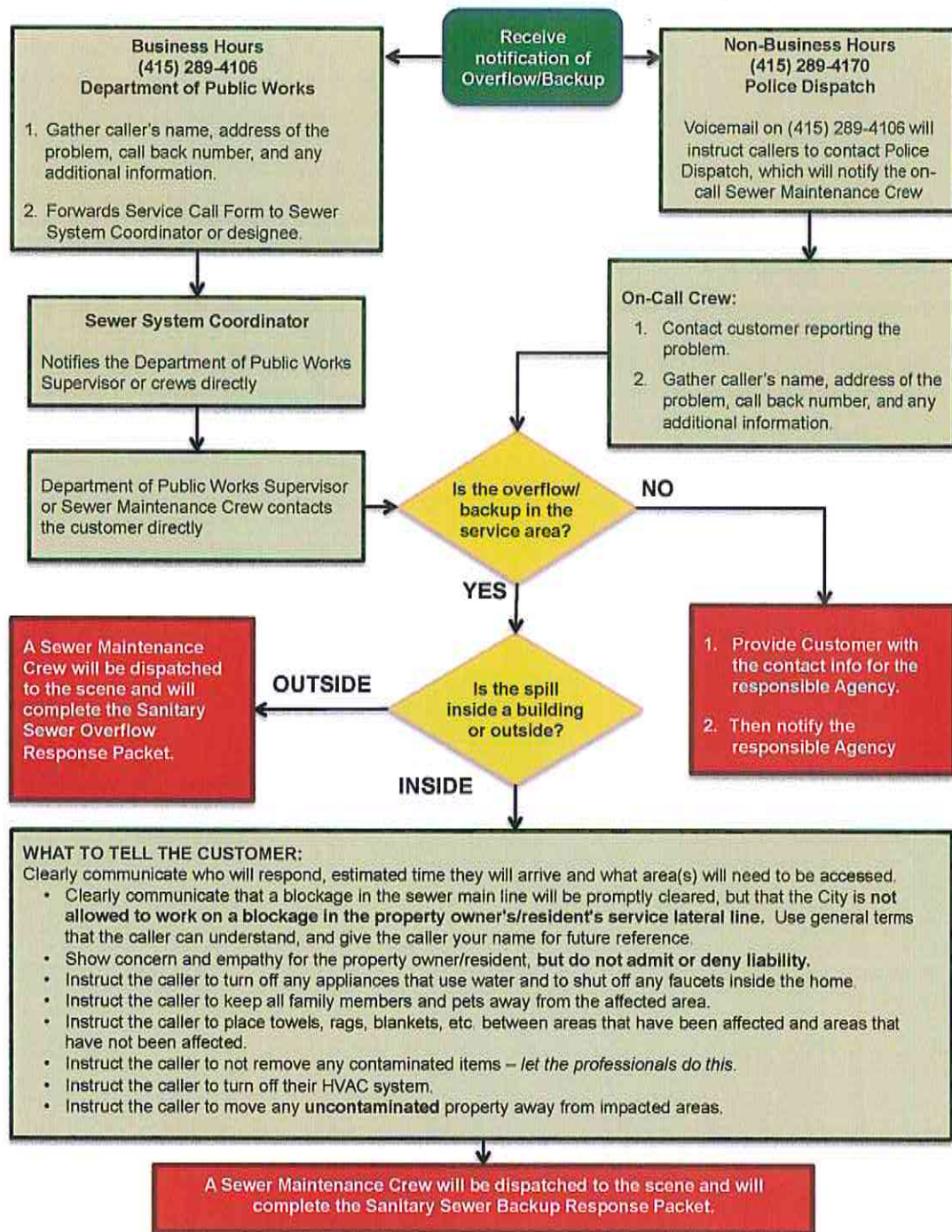
When calls are received, either during normal work hours or after hours, the individual receiving the call will collect the following information:

- Time and date of call
- Specific location of potential overflow or incident
- Nature of call
- In case of SSO, estimated start time of overflow and how long it has been occurring
- Caller's name, telephone number, and address
- Caller's observations (e.g., odor, duration, location on property, known impacts, indication if surface water impacted, appearance at cleanout or manhole)
- Other relevant information

The following (Figure 6.1) is an overview of receiving a sewage overflow or backup report (*see next page*):



Figure 6.1 Overview of Receiving a Sewage Overflow or Backup Report Procedure



## 6.2 CITY STAFF OBSERVATION

City staff conducts periodic inspections of its sewer system facilities as part of their routine activities. Any problems noted with the sewer system facilities are reported to appropriate City staff that, in turn, responds to emergency situations. Work orders are issued to correct non-emergency conditions.

## 6.3 CONTRACTOR OBSERVATION

The following procedures are to be followed in the event that a contractor causes or witnesses a Sanitary Sewer Overflow. If the contractor causes or witnesses an SSO they will:

1. Immediately notify the City by calling (415) 289-4106
2. Protect storm drains
3. Protect the public
4. Provide information to City Sewer Maintenance Crew such as start time, appearance point(s), suspected cause, weather conditions, etc.
5. Direct ALL media and public relations requests to the Public Works Director at (415) 289-4176.

Appendix E includes a handout for Contractors with a flowchart of the above procedures.



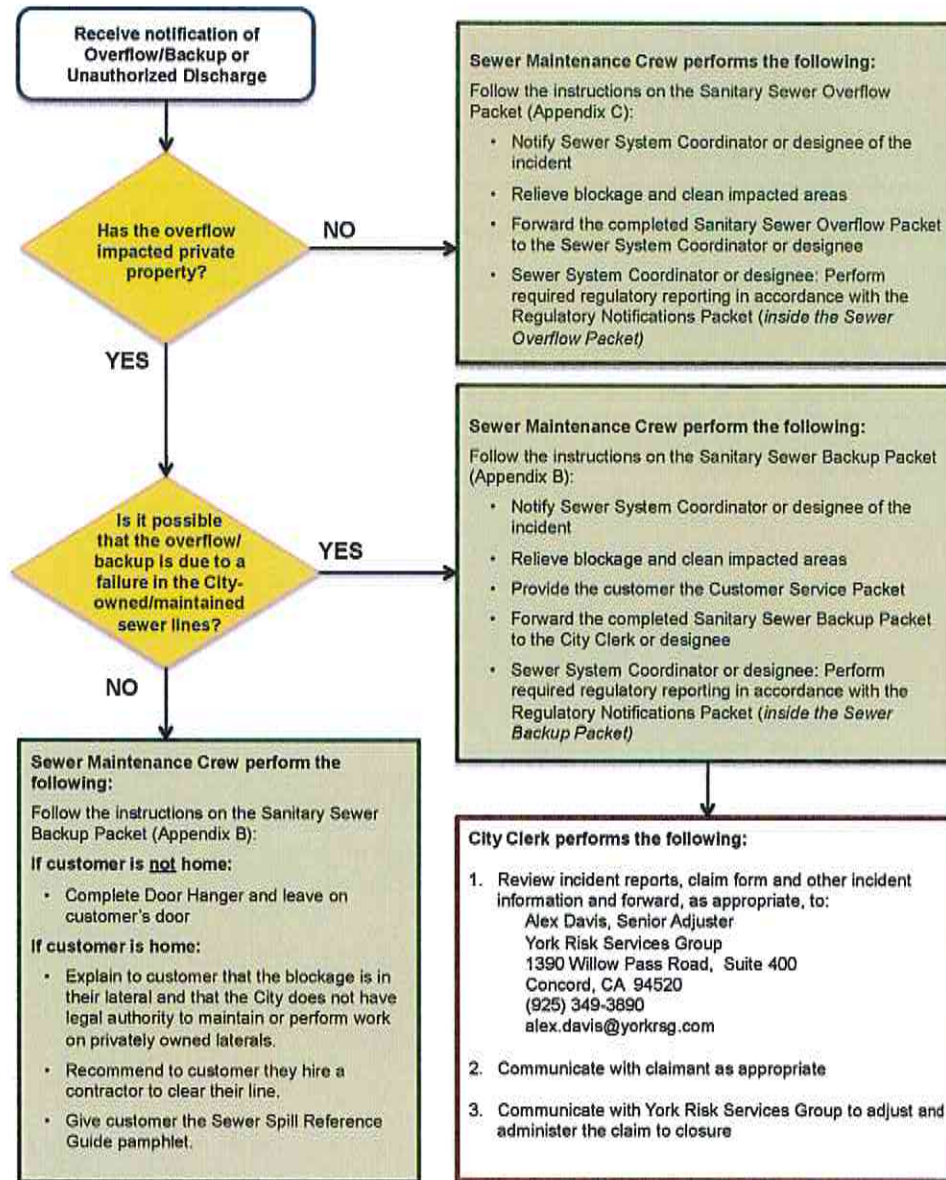
## 7. SSO Response Procedures

ref. SWRCB Order No. 2006-0003-DWQ Element 6(b)

### 7.1 Sewer Overflow/Backup Response Summary

The City will respond to SSOs as soon as feasible following notification of an overflow/backup or unauthorized discharge. The following (Figure 7.1) is an overview of the response activities.

Figure 7.1 Overview of SSO/Backup Response



## 7.2 First Responder Priorities

The first responder's priorities are:

- To follow safe work practices.
- To respond promptly with the appropriate and necessary equipment.
- To contain the spill wherever feasible.
- To restore the flow as soon as practicable.
- To minimize public access to and/or contact with the spilled sewage.
- To promptly notify the Sewer System Coordinator in event of major SSO.
- To return the spilled sewage to the sewer system.
- To restore the area to its original condition (or as close as possible).
- To photograph and document affected and unaffected areas from a spill.

## 7.3 Safety

The first responder is responsible for following safety procedures at all times. Special safety precautions must be observed when performing sewer work. There may be times when City personnel responding to a sewer system event are not familiar with potential safety hazards peculiar to sewer work. In such cases it is appropriate to take the time to discuss safety issues, consider the order of work, and check safety equipment before starting the job. This includes use of gas monitoring detectors for air quality in manholes and traffic controls at the site.

## 7.4 Initial Response

The first responder must respond to the reporting party/problem site and visually check for potential sewer stoppages or overflows.

The first responder will:

- Note arrival time at the site of the overflow/backup.
- Verify the existence of a public sewer system spill or backup.
- Determine if the overflow or blockage is from a public or private sewer.
- Identify and assess the affected area and extent of spill.
- Contact caller if time permits.
- If the spill is large or in a sensitive area, document conditions upon arrival with photographs. Decide whether to proceed with clearing the blockage to restore the flow or to initiate containment measures. The guidance for this decision is:
  - Small spills (i.e., spills that are easily contained) – proceed with clearing the blockage.
  - Moderate or large spill where containment is anticipated to be simple – proceed with the containment measures.
  - Moderate or large spills where containment is anticipated to be difficult – proceed with clearing the blockage; however, whenever deemed necessary, call for additional assistance and implement containment measures.
- Take steps to contain the SSO. For detailed procedures refer to Appendix B: Sanitary Sewer Backup Procedures, and Appendix C: Sanitary Sewer Overflow Packet.

## 7.5 Initiate Spill Containment Measures

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

- Determine the immediate destination of the overflowing sewage.



- Plug storm drains using air plugs, sandbags, and/or plastic mats to contain the spill, whenever appropriate. If spilled sewage has made contact with the storm drainage system, attempt to contain the spilled sewage by plugging downstream storm drainage facilities.
- Contain/direct the spilled sewage using dike/dam or sandbags.
- Pump around the blockage/pipe failure.

For detailed procedures refer to Appendix C: Sanitary Sewer Overflow Packet.

#### 7.6 Restore Flow

Using the appropriate cleaning equipment, set up downstream of the blockage and hydro-clean upstream from a clear manhole. Attempt to remove the blockage from the system and observe the flows to ensure that the blockage does not reoccur downstream. If the blockage cannot be cleared within a reasonable time from arrival, or sewer requires construction repairs to restore flow, then initiate containment and/or bypass pumping. If assistance is required, immediately contact other employees, contractors, and equipment suppliers. For detailed procedures refer to Appendix C: Sanitary Sewer Overflow Packet.

#### 7.7 Equipment

This section provides a list of specialized equipment that is required to support this Overflow Emergency Response Plan. Standard Operating Procedures are stored at the Corp Yard and on the City Intranet.

- *Closed Circuit Television (CCTV) Inspection Unit* – A CCTV Inspection Unit is required to determine the root cause for all SSOs from gravity sewers.
- *Camera* – A digital or disposable camera is required to record the conditions upon arrival, during clean up, and upon departure.
- *Emergency Response Trucks* -- A utility body pickup truck, or open bed is required to store and transport the equipment needed to effectively respond to sewer emergencies. The equipment and tools will include containment and clean up materials.
- *Portable Generators, Portable Pumps, Piping, and Hoses* – Equipment used to bypass pump, divert, or power equipment to mitigate an SSO.
- *Combination Sewer Cleaning Trucks* -- Combination high velocity sewer cleaning trucks with vacuum tanks are required to clear blockages in gravity sewers, vacuum spilled sewage, and wash down the impacted area following the SSO event.
- *Air plugs, sandbags and plastic mats*
- *SSO Sampling Kits*
- *Portable Lights*

### 8. Recovery and Cleanup

ref. SWRCB Order No. 2006-0003-DWQ Element 6(e)

The recovery and cleanup phase begins immediately after the flow has been restored and the spilled sewage has been contained to the extent possible. The SSO recovery and cleanup procedures are:

### 8.1 Estimate the Volume of Spilled Sewage

Use the methods outlined in the Sanitary Sewer Backup Packet (Appendix B), Sanitary Sewer Overflow Packet (Appendix C), and/or the Field Guide to estimate the volume of the spilled sewage. Wherever possible, document the estimate using photos and/or video of the SSO site before and during the recovery operation.

### 8.2 Recovery of Spilled Sewage

Vacuum up and/or pump the spilled sewage and rinse water, and discharge it back into the sanitary sewer system.

### 8.3 Clean-up and Disinfection

Clean up and disinfection procedures will be implemented to reduce the potential for human health issues and adverse environmental impacts that are associated with an SSO event. The procedures described are for dry weather conditions and will be modified as required for wet weather conditions. Where cleanup is beyond the capabilities of City staff, a cleanup contractor will be used.

#### *Private Property*

City crews are responsible for the cleanup when the property damage is minor in nature and is outside of private building dwellings, such as in front, side and backyards, easements, etc. In all other cases, affected property owners can call a water damage restoration contractor to complete the cleanup and restoration. If the overflow into property is the definite cause of City system failure, the property owner can call out a water damage restoration contractor to complete the cleanup and restoration. In both cases, City claim forms may be issued if requested by the property owners.

#### *Hard Surface Areas*

Collect all signs of sewage solids and sewage-related material either by protected hand or with the use of rakes and brooms. Wash down the affected area with clean water and/or deozyme or similar non-toxic biodegradable surface disinfectant until the water runs clear. The flushing volume will be approximately three times the estimated volume of the spill. Take reasonable steps to contain and vacuum up the wastewater. Allow area to dry. Repeat the process if additional cleaning is required.

#### *Landscaped and Unimproved Natural Vegetation*

Collect all signs of sewage solids and sewage-related material either by protected hand or with the use of rakes and brooms. Wash down the affected area with clean water until the water runs clear. The flushing volume will be approximately three times the estimated volume of the spill. Either contain or vacuum up the wash water so that none is released. Allow the area to dry. Repeat the process if additional cleaning is required.

#### *Natural Waterways*

The Department of Fish and Wildlife will be notified by CalOES for SSOs greater than or equal to 1,000 gallons.

#### *Wet Weather Modifications*

Omit flushing and sampling during heavy storm events (i.e., sheet of rainwater across paved surfaces) with heavy runoff where flushing is not required and sampling would not provide meaningful results.



#### **8.4 Public Notification**

Signs will be posted and barricades put in place to keep vehicles and pedestrians away from contact with spilled sewage. County Environmental Health instructions and directions regarding placement and language of public warnings will be followed when directed. Additionally, the Sewer System Coordinator or designee will use his/her best judgment regarding supplemental sign placement in order to protect the public and local environment. Signs will not be removed until directed by County Environmental Health, Sewer System Coordinator, or designee.

Creeks, streams and beaches that have been contaminated as a result of an SSO will be posted at visible access locations until the risk of contamination has subsided to acceptable background bacteria levels. The warning signs, once posted, will be checked at least every day to ensure that they are still in place. Photographs of sign placement will be taken.

In the event that an overflow occurs at night, the location will be inspected first thing the following day. The field crew will look for any signs of sewage solids and sewage-related material that may warrant additional cleanup activities.

When contact with the local media is deemed necessary, the Public Works Director or their designee will provide the media with all relevant information.

### **9. Water Quality**

*ref. SWRCB Order No. 2006-0003-DWQ Element 6(f)*

#### **9.1 Water Quality Sampling and Testing**

Water quality sampling and testing is conducted whenever spilled sewage enters a water body and is performed to determine the extent and impact of the SSO. The water quality sampling procedures must be implemented within 48 hours and include the following:

- The City Sewer Maintenance Crew will collect samples as soon as possible after the discovery and mitigation of the SSO event.
- The water quality samples will be collected from upstream of the spill, from the spill area, and downstream of the spill in flowing water (e.g. creeks). The water quality samples will be collected near the point of entry of the spilled sewage.
- The samples shall then be brought to the Napa/Solano/Yolo/Marin Public Health Laboratory.

In accordance with Marin County Environmental Health Services (EHS) requirements, daily water quality sampling will be conducted until compliance is achieved if there is a Category 1 discharge of 1,000 gallons or greater and spills into surface water. If a discharge occurs over the weekend, EHS will be consulted before sampling. Depending on the circumstances, EHS may approve delaying testing until Monday.

#### **9.2 Water Quality Monitoring Plan**

The City Water Quality Monitoring Plan will be implemented immediately upon discovery of any Category 1 SSO of 50,000 gallons or more in order to assess impacts from SSOs to surface waters. The SSO Water Quality Monitoring Program will:

1. Contain protocols for water quality monitoring.
2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g. safety, access restrictions, etc.)

3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.
4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.
5. Within 48 hours of the City becoming aware of the SSO, require water quality sampling for ammonia and total and fecal coliform.
6. Observe proper chain of custody procedures.

### 9.3 SSO Technical Report

The City will submit an SSO Technical Report to the CIWQS Online SSO Database within 45 calendar days of the SSO end date for any SSO in which 50,000 gallons or greater are spilled to surface waters. The Sewer System Coordinator will supervise the preparation of this report and will certify this report. This report, which does not preclude the Water Boards from requiring more detailed analyses if requested, shall include at a minimum, the following:

#### Causes and Circumstances of the SSO:

- Complete and detailed explanation of how and when the SSO was discovered.
- Diagram showing the SSO failure point, appearance point(s), and final destination(s).
- Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.
- Detailed description of the cause(s) of the SSO.
- Copies of original field crew records used to document the SSO.
- Historical maintenance records for the failure location.

#### City's Response to SSO:

- Chronological narrative description of all actions taken by the City to terminate the spill.
- Explanation of how the SSMP Overflow Emergency Response Plan was implemented to respond to and mitigate the SSO.
- Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

#### Water Quality Monitoring:

- Description of all water quality sampling activities conducted including analytical results and evaluation of the results.
- Detailed location map illustrating all water quality sampling points.

## 10. Sewer Backup Into/Onto Private Property Claims Handling Policy

It is the policy of the City that a claims form shall be offered to anyone wishing to file a claim. The following procedures will be observed for all sewer overflows/backups into/onto private property:

- City staff will offer a City claim form irrespective of fault whenever it is possible that the sanitary sewer backup may have resulted from an apparent blockage in the City-owned sewer lines or whenever a City customer requests a claim form. The claim may later be rejected if subsequent investigations into the cause of the loss indicate the City was not at fault.



- It is the responsibility of the Sewer Maintenance Crew to gather information regarding the incident and notify the Sewer System Coordinator or his/her designee.
- It is the responsibility of the City Clerk to review all claims and to oversee the adjustment and administration of the claim to closure.

## **11. Notification, Reporting, Monitoring and Recordkeeping Requirements**

*ref. SWRCB Order No. 2006-0003-DWQ Element 6(c)*

In accordance with the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SSS GWDRs), the City of Sausalito maintains records for each sanitary sewer overflow. Records include:

- Documentation of response steps and/or remedial actions
- Photographic evidence to document the extent of the SSO, field crew response operations, and site conditions after field crew SSO response operations have been completed. The date, time, location, and direction of photographs taken will be documented.
- Documentation of how any estimations of the volume of discharged and/or recovered volumes were calculated including all assumptions made.

Regulator required notifications are outlined in Section 11.1 on the following page.

11.1 Regulator Required Notifications

ELEMENT	REQUIREMENT	METHOD
NOTIFICATION	Within two hours of becoming aware of any Category 1 SSO greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water, the City will notify the California Office of Emergency Services (CalOES) and obtain a notification control number.	Call Cal OES at: <b>(800) 852-7550</b>
SWRCB REPORTING	<ul style="list-style-type: none"> <li>Category 1 SSO: The City will submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date.</li> <li>Category 2 SSO: The City will submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date.</li> <li>Category 3 SSO: The City will submit certified report within 30 calendar days of the end of month in which SSO the occurred.</li> <li>SSO Technical Report: The City will submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters.</li> <li>"No Spill" Certification: The City will certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred.</li> <li>Collection System Questionnaire: The City will update and certify every 12 months</li> </ul>	Enter data into the CIWQS Online SSO Database <sup>1</sup> <a href="http://ciwqs.waterboards.ca.gov/">(http://ciwqs.waterboards.ca.gov/)</a> certified by the Legally Responsible Official(s) <sup>2</sup> .  All information required by CIWQS will be captured in the Sanitary Sewer Overflow Report. Certified SSO reports may be updated by amending the report or adding an attachment to the SSO report within 120 calendar days after the SSO end date. After 120 days, the State SSO Program Manager must be contacted to request to amend an SSO report along with a justification for why the additional information was not available prior to the end of the 120 days.
COUNTY HEALTH DEPARTMENT REPORTING	<ul style="list-style-type: none"> <li>Category 1 SSO: The City will report to County of Marin Environmental Health Services (CMEHS) within 2 hours of becoming aware of the SSO. The City will follow up with a full report to CMEHS.</li> <li>Category 2 SSO: SSO must be reported to County of Marin Environmental Health CMEHS</li> </ul>	Complete the CHEHS Unauthorized Discharge of Waste Report Form.
WATER QUALITY MONITORING	The City will conduct water quality sampling within 48 hours after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.	Water quality results will be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.

Continued on following page

<sup>1</sup> In the event that the CIWQS online SSO database is not available, the Sewer System Coordinator will notify SWRCB by phone and will fax or e-mail all required information to the RWQCB office at (510) 622-2460 in accordance with the time schedules identified above. In such an event, the City will submit the appropriate reports using the CIWQS online SSO database when the database becomes available. A copy of all documents that certify the submittal in fulfillment of this section shall be retained in the SSO file.

<sup>2</sup> The City always has at least one LRO. Any change in the LRO(s) including deactivation or a change to contact information, will be submitted to the SWRCB within 30 days of the change by calling (866) 792-4977 or emailing help@ciwqs.waterboards.ca.gov.



*Regulator Required Notifications continued*

<p><b>RECORD KEEPING</b></p>	<p>The City will maintain the following records:</p> <ul style="list-style-type: none"> <li>• SSO event records.</li> <li>• Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP.</li> <li>• Records to document Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters.</li> <li>• Collection system telemetry records if relied upon to document and/or estimate SSO Volume.</li> </ul>	<p>Self-maintained records shall be available during inspections or upon request.</p>
------------------------------	---	---

For reporting purposes, if one SSO event of whatever category results in multiple appearance points in a sewer system, a single SSO report is required in CIWQS that includes the GPS coordinates for the location of the SSO appearance point closest to the failure point, blockage or location of the flow condition that cause the SSO, and descriptions of the locations of all other discharge points associated with the single SSO event.

**11.2 Complaint Records**

The City maintains records of all complaints received whether or not they result in sanitary sewer overflows. These complaint records include:

- Date, time, and method of notification
- Date and time the complainant or informant first noticed the SSO or occurrence related to the call
- Narrative description describing the complaint
- A statement from the complainant or informant, if they know, of whether or not the potential SSO may have reached waters of the state
- Name, address, and contact telephone number of the complainant or informant reporting the potential SSO (if not reported anonymously)
- Follow-up return contact information for each complaint received (if not reported anonymously)
- Final resolution of the complaint with the original complainant
- Work service request information used to document all feasible and remedial actions taken

All complaint records will be maintained for a minimum of five years whether or not they result in an SSO. SSO records are stored in the City Computerized Maintenance Management System (CMMS) at the Department of Public Works.

**12. Post SSO Event Debriefing**

*ref. SWRCB Order No. 2006-0003-DWQ Element 6(d)*

Every SSO event is an opportunity to evaluate the City response and reporting procedures. Each overflow event is unique, with its own elements and challenges including volume, cause, location, terrain, climate, and other parameters.

As soon as possible after Category 1 and Category 2 SSO events, all of the participants, from the person who received the call to the last person to leave the site, will meet to review the procedures used and to discuss

what worked and where improvements could be made in preventing or responding to and mitigating future SSO events. The results of the debriefing will be documented and tracked to ensure the action items are completed as scheduled.

### **13. Failure Analysis Investigation**

*ref. SWRCB Order No. 2006-0003-DWQ Element 6(d)*

The objective of the failure analysis investigation is to determine the "root cause" of the SSO and to identify corrective action(s) needed that will reduce or eliminate future potential for the SSO to recur or for other SSOs to occur.

The investigation will include reviewing all relevant data to determine appropriate corrective action(s) for the line segment. The investigation will include:

- Reviewing and completing the Sanitary Sewer Overflow Report and any other documents related to the incident
- Reviewing the incident timeline and other documentation regarding the incident
- Reviewing communications with the reporting party and witness
- Reviewing volume estimate, volume recovered estimate, volume estimation assumptions and associated drawings
- Reviewing available photographs
- Interviewing staff that responded to the spill
- Reviewing past maintenance records
- Reviewing past CCTV records,
- Conducting a CCTV inspection to determine the condition of all line segments immediately following the SSO and reviewing the video and logs,
- Reviewing any Fats, Oils and Grease (FOG) related information or results
- Post SSO debrief records
- Interviews with the public at the SSO location

The product of the failure analysis investigation will be the determination of the root cause and the identification and scheduling of the corrective actions. The Collection System Failure Analysis Form will be used to document the investigation.

### **14. SSO Response Training**

*ref. SWRCB Order No. 2006-0003-DWQ Element 6(d)*

This section provides information on the training that is required to support this Overflow Emergency Response Plan.

#### **14.1 Initial and Annual Refresher Training**

All City personnel who may have a role in responding to, reporting, and/or mitigating a sewer system overflow will receive training on the contents of this OERP. All new employees will receive training before they are placed in a position where they may have to respond. Current employees will receive annual refresher training on this plan and the procedures to be followed. The City will document all training.

Affected employees will receive annual training on the following topics by knowledgeable trainers:

- The City's Overflow Emergency Response Plan and Sanitary Sewer Management Plan



- Sanitary Sewer Overflow Volume Estimation Techniques
- Researching and documenting Sanitary Sewer Overflow Start Times
- Impacted Surface Waters: Response Procedures
- State Water Resources Control Board Employee Knowledge Expectations
- Employee Core Competency Evaluations on Sanitary Sewer Operations
- Water Quality Sampling Plan

The City will verify that annual safety training requirements are current for each employee, and that employees are competent in the performance of all core competencies. This will be verified through testing, interviews and observations. The City will address, through additional training/instruction, any identified gaps in required core competencies.

Through SWRCB Employee Knowledge Expectations training the employee will be able to answer the following:

1. Please briefly describe your name and job title.
2. Please describe for us approximately when you started in this field and how long you have worked for your agency.
3. Please expand on your current position duties and role in responding in the field to any SSO complaints.
4. Please describe your SOPs used to respond/mitigate SSOs when they occur.
5. Describe any training your agency provides or sends you to for conducting spill volume estimates.
6. We are interested in learning more about how your historical SSO response activities have worked in the field. We understand from discussions with management earlier that you use the OERP from the SSMP. Please elaborate on how you implement and utilize the procedures in the plan.
7. Historically, before any recent changes, can you please walk us through how you would typically receive and respond to any SSO complaints in the field?
8. Can you tell us who is responsible for estimating SSO volumes discharged? If it is you, please describe how you go about estimating the SSO volume that you record on the work order/service request forms?
9. What other information do you collect or record other than what is written on the work order form?
10. Describe if and when you ever talk with people that call in SSOs (either onsite or via telephone) to further check out when the SSO might have occurred based on what they or others know? If you do this, can you tell us where this information is recorded?
11. We understand you may be instructed to take pictures of some sewer spills/backups into structures. Other than these SSOs, when else would you typically take any pictures of an SSO?
12. Please walk us through anything else you'd like to add to help us better understand how your field crews respond and mitigate SSO complaints.

#### 14.2 SSO Response Drills

Periodic training drills or field exercises will be held to ensure that employees are up to date on these procedures, equipment is in working order, and the required materials are readily available. The training drills will cover scenarios typically observed during sewer related emergencies (e.g. mainline blockage, mainline failure, and lateral blockage). The results and the observations during the drills will be recorded and action items will be tracked to ensure completion.

### 14.3 SSO Training Record Keeping

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

### 14.4 Contractors Working On City Sewer Facilities

All construction contractors working on City sewer facilities will be required to develop a project-specific OERP, will provide project personnel with training regarding the content of the contractor's OERP and their role in the event of an SSO, and to follow that OERP in the event that they cause or observe an SSO. Emergency response procedures shall be discussed at project pre-construction meetings, regular project meetings and after any contractor involved incidents.

All service contractors will be provided, and required to observe contractor procedures. See Appendix E: Contractor Orientation.

## 15. Authority

- Health & Safety Code Sections 5410-5416
- CA Water Code Section 13271
- Fish & Wildlife Code Sections 5650-5656
- State Water Resources Control Board Order No. 2006-0003-DWQ
- State Water Resources Control Board Order 2013-009-DWQ effective September 9, 2013

## 16. References

- Sanitary Sewer Overflow and Backup Response Field Guide, 2013-2014, DKF Solutions Group, LLC
- Appendix A: Regulatory Notifications Packet
- Appendix B: Sanitary Sewer Backup Packet
- Appendix C: Sanitary Sewer Overflow Packet
- Appendix D: Field Sampling Kit
- Appendix E: Contractor Orientation



**Appendix A**  
**REGULATORY NOTIFICATIONS PACKET**

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**City of Sausalito: Overflow Emergency Response Plan**

**Regulatory Notifications Packet**

**Instructions:**

1. Receive call from on-site crew reporting a Sanitary Sewer Overflow.
2. Open this packet.
3. Refer to the Regulatory Reporting Guide (A-1) for instructions.
4. Use the SSO Reporting Checklist for the appropriate category of spill (A-2a or A-2b) to document that all notifications are made according to the reporting schedule.

**Contents:**

<u>Form</u>	<u>Page Number</u>
Regulatory Reporting Guide.....	A-1
Reporting Checklist: Category 1 .....	-2a
Reporting Checklist: Categories 2 and 3 .....	-2b
RWQCB Notification Fax.....	-3
Unauthorized Discharge of Waste Report.....	-4

Print on 6"x9" envelope

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City of Sausalito: Overflow Emergency Response Plan	A-1 Side A
<b>Regulatory Notifications Packet Regulatory Reporting Guide</b>	

Reporting Instructions				
Deadline	See reverse side for definitions of the categories of spills of untreated or partially treated wastewater from publically owned sanitary sewer system			Spill from Private Lateral
	Category 1	Category 2	Category 3	
2 hours after awareness of SSO	<ul style="list-style-type: none"> <li>If the SSO is greater than or equal to 1,000 gallons, call CalOES at (800) 852-7550</li> <li>Notify Marin County Environmental Health Services using form A-4</li> <li>Make City email notifications as appropriate (see Side B)</li> </ul>	<ul style="list-style-type: none"> <li>Notify Marin County Environmental Health Services using form A-4</li> <li>Make City of Sausalito notifications as appropriate (see Side B)</li> </ul>	-	-
48 Hours after awareness of SSO	If 50,000 gal or more will likely reach receiving waters, begin water quality sampling and initiate impact assessment	-	-	-
3 Days after awareness of SSO	Submit Draft Spill Report in the CIWQS* database	Submit Draft Spill Report in the CIWQS* database	-	-
15 Days after response conclusion	Certify Spill Report in CIWQS*. Update as needed until 120 days after SSO end time	Certify Spill Report in the CIWQS* database. Update as needed until 120 days after SSO end time	-	-
30 Days after end of calendar month in which SSO occurred	-	-	Certify Spill Report in the CIWQS* database. Update as needed until 120 days after SSO end time	Certify Spill Report in the CIWQS* database. Update as needed until 120 days after SSO end time
45 days after SSO end time	If 50,000 gal or more were not recovered, submit SSO Technical Report using CIWQS*	-	-	-

\* In the event that the CIWQS online SSO database is not available, do the following until the CIWQS online SSO database becomes available: (See contact information on Side B)

1. Make required notifications to the San Francisco Regional Water Quality Control Board (SFRWQCB office) using A-3, and
2. Notify the State Water Resources Control Board (SWRCB) by phone or email

**Note:** For reporting purposes, if one SSO event results in multiple appearance points, complete one SSO report in the CIWQS SSO Online Database, and report the location of the SSO failure point, blockage or location of the flow condition that caused the SSO, in the CIWQS SSO Online Database, including all the discharge points associated with the SSO event.

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City of Sausalito: Overflow Emergency Response Plan	A-1 Side B
<b>Regulatory Notifications Packet Regulatory Reporting Guide</b>	

Contact	Telephone/Fax/Email
CalOES	(800) 852-7550
Marin County Environmental Health Services (EHS)	
During business hours:	Telephone: (415) 473-6907      Fax: (415) 473-4120 David Smali: (415) 473-6916      dsmali@marincounty.org Rebecca Ng: (415) 473-6919      rng@marincounty.org Armando Alegria: (415) 473-6915      aalegria@marincounty.org
Evenings and weekends:	Sheriff Communication Center: (415) 479-2311 They will contact the EHS on-call person
San Francisco Regional Water Quality Control Board (SFRWQCB):	Telephone: (510) 622-2369 Fax: (510) 622-2460
State Water Resources Control Board (SWRCB):	
Russell Norman, P.E.	(916) 323-5598      Russell.Norman@waterboards.ca.gov
Victor Lopez, Water Resources Control Engineer	(916) 323-5511      Victor.Lopez@waterboards.ca.gov

**City of Sausalito Email Notifications**

- DPW Director Jonathon Goldman      jgoldman@ci.sausalito.ca.us
- City Manager Adam Politzer      apolitzer@ci.sausalito.ca.us
- Mayor Ray Withy      rwithy@ci.sausalito.ca.us
- Vice Mayor Thomas Theodores      ttheodores@ci.sausalito.ca.us
- Councilmember Jonathon Leone      jleone@ci.sausalito.ca.us
- Councilmember Linda Pfeifer      lpfeifer@ci.sausalito.ca.us
- Councilmember Herb Weiner      hweiner@ci.sausalito.ca.us

**Authorized Personnel**

Members of the Sewer Maintenance Crew are authorized to make regulatory notifications following an overflow or backup. The City's Legally Responsible Officials (LROs) are authorized to perform regulatory reporting and to electronically sign and certify SSO reports in CIWQS. The City's LROs are:

Name	Title	Office	Cell
Pat Guasco	Sewer System Coordinator	(415) 289-4192	(415) 726-1653
Jonathon Goldman	Public Works Director	(415) 289-4176	(415) 233-1579
Adam Politzer	City Manager	(415) 289-4166	

**Definitions of SSO Categories**

The response crew will complete the SSO Report form in the SSO Packet to document how the category was determined.

Category	Definition
<b>Category 1:</b>	Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either: <ul style="list-style-type: none"> <li>• Reaches surface water and/or drainage channel tributary to a surface water; or</li> <li>• Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.</li> </ul>
<b>Category 2:</b>	Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either: <ul style="list-style-type: none"> <li>• Does not reach surface water, a drainage channel, or an MS4, or</li> <li>• The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.</li> </ul>
<b>Category 3:</b>	All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition

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City of Sausalito: Overflow Emergency Response Plan	
<b>Regulatory Notifications Packet Category 1 SSO Reporting Checklist</b>	A-2a

**Use this Checklist for Category 1 SSOs only**

**STEP 1: Receive call from crew.**

- If the SSO is greater than or equal to 1,000 gallons, confirm whether or not they have notified CalOES. If not, proceed to Step 2. If so, complete the information in Step 2 and continue to Step 3.

**STEP 2: 2-hour Notification.** If the SSO is greater than or equal to 1,000 gallons, notify CalOES within 2 hours of the time the City was notified of the SSO.

- Notify CalOES at (800) 852-7550:

Date Called:	Time called: _____ : _____ <input type="checkbox"/> AM <input type="checkbox"/> PM
CalOES Control number:	Individual spoken to at CalOES:
City personnel who called CalOES: <i>Name:</i> _____ <i>Title:</i> _____	

- Notify Marin County Environmental Health Services Division by telephone and using the CMEHD Unauthorized Discharge of Waste Report. See A-1 Side B for contact information. Make sure to maintain the report in PDF interactive format and hard copy.

- Make City of Sausalito email notifications, as appropriate:

DPW Director Jonathon Goldman jgoldman@ci.sausalito.ca.us	Vice Mayor Thomas Theodores theodores@ci.sausalito.ca.us	Councilmember Linda Pfeifer LPfeifer@ci.sausalito.ca.us
City Manager Adam Politzer Apolitzer@ci.sausalito.ca.us	Councilmember Jonathon Leone Jleone@ci.sausalito.ca.us	Councilmember Herb Weiner HWeiner@ci.sausalito.ca.us
Mayor Ray Withy rwithy@ci.sausalito.ca.us		

**STEP 3: Within 48-Hours after awareness of SSO**

- Only if 50,000 gallons or more was not recovered, implement Water Quality Monitoring Plan.

**STEP 4: Within 3 Days after awareness of SSO**

- Submit a Draft Spill Report using the CIWQS online reporting database.

**STEP 5: Within 15 Days after response conclusion**

- LRO must certify the Spill Report using the CIWQS online reporting database. Amendments to the Spill Report may be made for up to 120 days following the conclusion of the SSO Response.

**STEP 6: Within 45 Days after SSO end date**

- Within 45 days after the SSO end date, submit an SSO Technical Report using the CIWQS online reporting database only if 50,000 gallons or more was spilled to surface waters.

This form completed by: \_\_\_\_\_  
*Name*
*Title*
*Date*

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City of Sausalito: Overflow Emergency Response Plan	
<b>Regulatory Notifications Packet Category 2 &amp; 3 SSO Reporting Checklist</b>	A-2b

**Use this Checklist for Category 2 and 3 SSOs only**

**STEP 1: Receive call from crew.**

**STEP 2: 2-hour Notification. (Category 2 only)**  
If the SSO is greater than or equal to 1,000 gallons, notify CalOES within 2 hours of the time the City was notified of the SSO.

- Notify Marin County Environmental Health Services Division by telephone and using the CMEHD Unauthorized Discharge of Waste Report. See A-1 Side B for contact information. Make sure to maintain the report in PDF interactive format and hard copy.
- Make City of Sausalito email notifications, as appropriate:
 

DPW Director Jonathon Goldman jgoldman@ci.sausalito.ca.us	Vice Mayor Thomas Theodores theodores@ci.sausalito.ca.us	Councilmember Linda Pfeifer LPfeifer@ci.sausalito.ca.us
City Manager Adam Polltzer Apolltzer@ci.sausalito.ca.us	Councilmember Jonathon Leone Jleone@ci.sausalito.ca.us	Councilmember Herb Weiner HWeiner@ci.sausalito.ca.us
Mayor Ray Withy rwithy@ci.sausalito.ca.us		

**STEP 3: Submit Draft Spill Report (Category 2 only)**

- Submit a Draft Spill Report using the CIWQS online reporting database within 3 days after awareness of Category 2 SSO.

**STEP 4: Certify Spill Report**

- Certify the Spill Report using the CIWQS online reporting database:
  - Category 2 SSO: Within 15 days after the conclusion of the response
  - Category 3 SSO: Within 30 days after the end of the calendar month in which the SSO occurred
- Updates to the Spill Report may be made for up to 120 days following the conclusion of the SSO Response.

This form completed by: \_\_\_\_\_  
Name
Title
Date

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City of Sausalito: Overflow Emergency Response Plan	
<b>Regulatory Notifications Packet</b> <b>Regional Water Quality Control Board Notification Fax</b>	A-3

*NOTE TO City of Sausalito Staff: Only use this form in the event that the CIWQS online SSO database is not available*

FAX TO: San Francisco Regional Water Quality Control Board      Date: \_\_\_\_\_  
 Fax Number: (510) 622-2460      # Pages: \_\_\_\_\_

FROM: City of Sausalito  
 Telephone: (415) 289-4106

Address of SSO: \_\_\_\_\_ City: \_\_\_\_\_

County: \_\_\_\_\_ Date/Time: \_\_\_\_\_

SSO Start Time: \_\_\_\_\_ SSO Stop Time: \_\_\_\_\_

Volume of SSO: \_\_\_\_\_ Volume Recovered: \_\_\_\_\_

Final Disposition: \_\_\_\_\_  
 \_\_\_\_\_

Affected Water Body: \_\_\_\_\_

Samples Collected?  YES  NO

Taken to: \_\_\_\_\_

Crew Members: \_\_\_\_\_

<u>Agencies Notified</u>	<u>Number(s)</u>	<input type="checkbox"/> YES <input type="checkbox"/> NO	<u>Contact</u>	<u>Time</u>	<u>Date</u>
CalOES	(800) 852-7550	<input type="checkbox"/> YES <input type="checkbox"/> NO	_____	_____	_____
CIQWS		<input type="checkbox"/> YES <input type="checkbox"/> NO	_____	_____	_____
OTHER:	_____				
	_____				

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**INSERT UNAUTHORIZED DISCHARGE OF WASTE REPORT HERE**

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**Appendix B**  
**SANITARY SEWER BACKUP RESPONSE PACKET**

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City of Sausalito: Overflow Emergency Response Plan

**Sanitary Sewer Backup Response Packet**  
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<b>Customer Service Packet</b>	
Instructions .....	packet envelope
Customer Information .....	CS-1
Claim Form .....	-2
Sewer Spill Reference Guide.....	pamphlet
<b>Regulatory Notifications Packet</b>	
Instructions .....	envelope
Regulatory Reporting Guide .....	A-1
Category 1 SSO Reporting Checklist .....	-2a
Category 2 & 3 SSO Reporting Checklist .....	-2b
RWQCB Notification Fax .....	-3
Door Hanger.....	n/a

For pre-assembled packets contact DKF Solutions Group at (707) 373-9709 or [losscontrol@sbcglobal.net](mailto:losscontrol@sbcglobal.net)

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**In the event of a Sewer Backup into a home/business  
READ THIS FIRST**



**If this is a Category 1 SSO greater than or equal to 1,000 gallons:  
contact CalOES at (800) 852-7550**

Notifications Trigger:	Contact Immediately:	Telephone:
For all backups into/onto private property possibly due to problems in the public sewer	Sewer System Coordinator	Office: (415) 289-4192 Cell: (415) 726-1653
For any media requests	Public Works Director	(415) 289-4176

**Procedures**

Don't forget photos!



<p><b>Sewer Maintenance Crew:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Follow the instructions on the Sewer Backup Response Flowchart (B-1). Note: If multiple dwelling units are affected, use one packet per unit and check here: <input type="checkbox"/></li> <li><input type="checkbox"/> If indicated on the flowchart, give the customer the Bubbled Toilets Letter and/or the Customer Service Packet and have them initial here: <i>Customer acknowledgement of receipt of Bubbled Toilets Letter:</i> _____ <i>Customer acknowledgement of receipt of Customer Service Packet:</i> _____</li> <li><input type="checkbox"/> Place completed forms in this envelope, complete the Chain of Custody record (right) and forward this packet to the Sewer System Coordinator.</li> </ul>	<p>Print Name: _____</p> <p>Initial: _____</p> <p>Date: _____</p> <p>Time: _____</p>
--	--

<p><b>Sewer System Coordinator:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Review the enclosed forms.</li> <li><input type="checkbox"/> Complete the Regulatory Notifications Packet.</li> <li><input type="checkbox"/> Complete the Claims Submittal Checklist.</li> <li><input type="checkbox"/> Complete the Chain of Custody record (right) and forward this packet to the City Clerk.</li> </ul>	<p>Print Name: _____</p> <p>Initial: _____</p> <p>Date: _____</p> <p>Time: _____</p>
--	--

<p><b>City Clerk:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Refer to the Claims Submittal Checklist.</li> </ul>
---

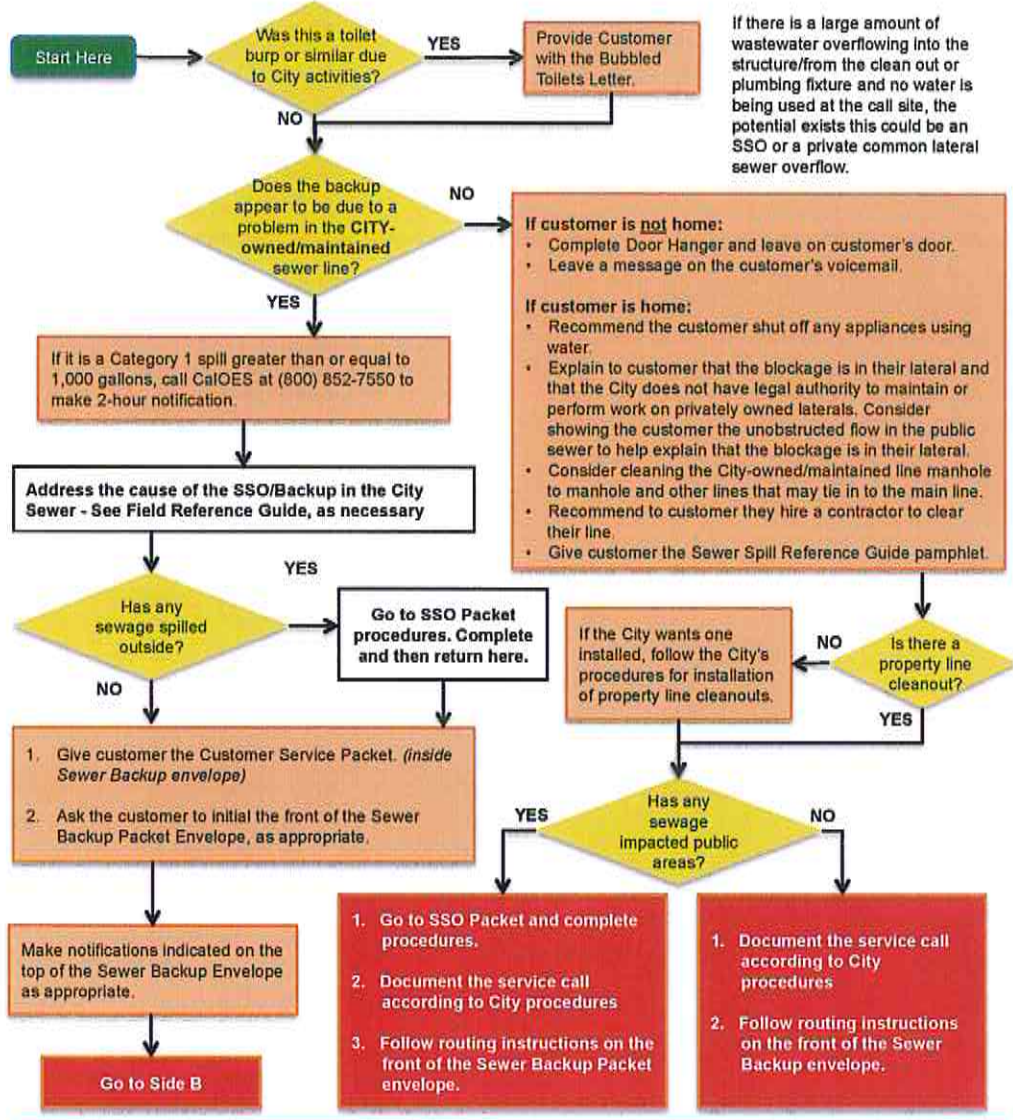
**City of Sausalito Overflow Emergency Response Plan: Sanitary Sewer Backup Packet**

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**City of Sausalito: Overflow Emergency Response Plan**

**Sanitary Sewer Backup Response Packet**  
**Backup Response Flowchart**

**B-1**  
**Side A**



If there is a large amount of wastewater overflowing into the structure/from the clean out or plumbing fixture and no water is being used at the call site, the potential exists this could be an SSO or a private common lateral sewer overflow.

**If customer is not home:**

- Complete Door Hanger and leave on customer's door.
- Leave a message on the customer's voicemail.

**If customer is home:**

- Recommend the customer shut off any appliances using water.
- Explain to customer that the blockage is in their lateral and that the City does not have legal authority to maintain or perform work on privately owned laterals. Consider showing the customer the unobstructed flow in the public sewer to help explain that the blockage is in their lateral.
- Consider cleaning the City-owned/maintained line manhole to manhole and other lines that may tie in to the main line.
- Recommend to customer they hire a contractor to clear their line.
- Give customer the Sewer Spill Reference Guide pamphlet.

**MEDIA AND PUBLIC RELATIONS GUIDELINES:**

Exercise caution in contacts with the public or media when you respond to a spill. Any information you provide or statements you make may become pertinent in the event of possible court action, it is important to **AVOID THE FOLLOWING**:

- Giving out the wrong information,
- Making accusations against customers, businesses or other agencies
- Speculating about the situation you are responding to
- Providing incorrect facts about a company or other agency

Be courteous and attempt to provide accurate information to questions within the limits above. In some cases, it may be appropriate to say that we do not have any information, or to delay answering a question and then to say when an answer might be available.

In most cases, refer media requests to the media coordinator indicated on the front of the Sewer Overflow Packet envelope.

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City of Sausalito: Overflow Emergency Response Plan <b>Sanitary Sewer Backup Response Packet                  Backup Response Flowchart</b>	<b>B-1                  Side B</b>
--	--

Continue Here From Side A

Remove the following forms from the Sewer Backup Packet envelope: First Responder form, SSO Report, Start Time Determination form, Volume Estimation forms.

- Complete the First Responder Form
- Complete the SSO Report as completely as possible, including determination of start time and volume estimation

If it is possible, safe and allowed by City policy, look for a backwater prevention device or cleanout for the house/property.

Ask for permission to photograph the backwater prevention device or cleanout and photograph, if allowed.

Can you locate a backwater prevention device (BPD) or cleanout on the affected building?

1. Complete a City work order to have lateral televised as soon as possible  
2. Complete Lateral TV Report (inside the Sewer Backup Packet envelope)

Do you want the lateral televised? (if applicable)

Complete a City work order to have City sewer(s) involved in the backup televised as soon as possible following corrective action(s).

1. Document the Sanitary Sewer Overflow if not already documented as part of the SSO Packet:
  - Sanitary Sewer Overflow Report     Start Time Determination Form     Volume Estimation Form(s)
2. Document the service call according to City procedures.
3. Complete the remaining instructions in the Sewer Maintenance Crew box on the front of the Sewer Backup Packet envelope.
4. Put everything back in the Sewer Backup Envelope (completed forms and camera if used)
5. Follow routing instructions as indicated on the front of the Sewer Backup Packet envelope.

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Dear City of Sausalito Customer,

Thank you for informing us that your toilet bubbled while our crews were working in proximity of your property. We apologize for the inconvenience and hope that this letter will answer some of your questions about bubbling toilets.

**1. Is this a health risk?**

The water that came out of your toilet is potable water from the toilet bowl. Unless your toilet was in use when this occurred, this water is no different than that encountered while cleaning your toilet.

**2. What is the City doing in the street?**

In order to insure reliable sewer service, the City inspects, cleans, and repairs its sewer system on a continuous basis.

**3. How does sewer cleaning cause my toilet to bubble?**

Typical industry cleaning equipment uses high-pressure water to clean sewers. The first step is to use the high-pressure water jets to propel the hose and cleaning nozzle upstream as far as 800 feet. During this process, air within the main pipe is displaced and sometimes goes up the private lateral pipe and releases through the toilet. This can also happen during the cleaning phase, when high-pressure water is pulled downstream to the cleaning truck.

**4. What causes the air to come from my toilet?**

Over the years, City crews have found that the bubbling of toilets have many causes, some of which are:

- Obstructed vent pipes;
- Vent pipes that are positioned too far from the toilet;
- Lateral pipes that may be in use as the crew is cleaning (e.g. draining washing machine, draining bathtub, etc.);
- Lateral pipes that may have obstructions that are causing them to hold water (e.g. roots, grease, etc.).

**5. What does City staff do, once informed of a bubbling toilet?**

Once notified of a bubbling toilet, the crew leader explains to the customer what has happened, and checks to see if there is a clean-out in the customer's yard that could be opened in the future during cleaning. The crew leader then makes notes and completes paperwork that puts the address on the City's computerized notification list. In the future, crews will notice that this address was "bubbled" at one time, and, before commencing the cleaning, they will notify the occupant of the possibility of bubbling toilets. In the event the occupant is not present when the cleaning begins, the crews will attempt to open clean-outs and/or lower water pressure to avoid bubbling.

**6. What can I do to prevent my toilet from bubbling?**

When a sewer begins to drain slowly, it may be a sign that it needs to be cleaned or repaired. Trees and shrubs may have root structures that are entering the lateral pipe. The homeowner needs to make sure to have a clean-out for accessing the line. It is the homeowner's responsibility to keep the sewer lateral pipe in good working condition.

It is always a good idea to keep the toilet lid down when not in use, and not install carpets in the bathroom unless they can be easily removed and cleaned. For more information please call the Sewer System Coordinator at (415) 289-4192.

Sincerely,

City of Sausalito

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City of Sausalito: Overflow Emergency Response Plan

**Sanitary Sewer Backup Response Packet  
Carta de Inodoros Burbujeados**

**B-2  
Spanish**

Estimado Cliente de la Ciudad de Sausalito:

Gracias por habernos informado que su lavabo burbujeó mientras que nuestros empleados estaban trabajando en proximidad a su propiedad. Le pedimos perdón por la inconveniencia y esperamos que esta carta le contestará algunas de sus preguntas acerca de inodoros burbujeantes.

**1. ¿Es riesgo de salud esto?**

El agua que salió de su inodoro es agua potable de la taza del inodoro. Menos que su inodoro estaba en uso cuando esto ocurrió, esa agua no es diferente de aquella encontrada mientras que limpia su inodoro.

**2. ¿Qué está haciendo la Ciudad en la calle?**

Para asegurar servicio de alcantarilla confiable, la Ciudad inspecciona, limpia, and repara su Sistema de alcantarillado en una forma continua.

**3. ¿Cómo causa la limpieza de la alcantarilla que burbujee mi inodoro?**

El equipamiento industrial de limpieza típico usa agua de alta presión para limpiar alcantarillas. La primer medida es de usar chorros de agua de alta presión para propulsar a la manguera y a la boquilla de limpieza contracorriente tan lejos como ochocientos (800) pies. Durante este proceso, el aire dentro la tubería principal es desplazada y a veces camina para arriba de la tubería lateral privada y se libera por el inodoro. Esto también puede ocurrir durante la fase de limpieza, cuando agua de alta presión es jalada corriente abajo al camión de limpieza.

**4. ¿Qué causa al aire que venga de mi inodoro?**

A lo largo de los años, los empleados de la Ciudad han encontrado que el burbujeo de inodoros tiene muchas causas, algunas de cuales son:

- Tubería de ventilación obstruida;
- Tubería de ventilación que está posicionada muy lejos del inodoro;
- Tubería lateral que pueda estar en uso mientras que los empleados estén limpiando (por ej., vaciando la máquina de lavar, vaciando el baño, etcétera);
- Tubería lateral que podrá tener obstrucciones que estén causándola a contener agua (por ej., raíces, grasa, etcétera).

**5. ¿Qué hace el personal de la Ciudad, una vez informados de un inodoro burbujeante?**

Una vez notificado de un inodoro burbujeante, el líder de nuestros empleados le explica al cliente lo que ha ocurrido, y hace un chequeo para ver si hay una limpieza general en el patio del cliente que se pudiera abrir en el futuro durante la limpieza. El líder de personal luego toma apuntes y completa papeleo que pone a la dirección en la lista de notificación computarizada de la Ciudad. En el futuro, los empleados tomarán nota que hubo un tiempo en que esta dirección fue «burbujeada», y, antes de empezar la limpieza, ellos le avisarán al ocupante de la posibilidad de inodoros burbujeantes. En el evento que el ocupante no esté presente cuando la limpieza empiece, los empleados tratarán de abrir las limpiezas generales y/o rebajar la presión del agua para impedir la ocurrencia de burbujeo.

**6. ¿Qué puede hacer para impedir a mi inodoro de burbujeando?**

Cuando una alcantarilla empieza a desaguar lentamente, puede que sea un indicio que se necesita limpiar o reparar. Puede que los árboles y arbustos tengan estructuras de raíces que estén entrando a la tubería lateral. El dueño/la dueña de casa necesita asegurar de tener una limpieza general para acceder la línea. Es la responsabilidad del dueño/la dueña de mantener la tubería de alcantarilla lateral en buena condición operativa.

Siempre es buena idea de mantener la tapa del inodoro bajada cuando no esté el inodoro en uso, y no instalar alfombra en el cuarto de baño menos que esa se pueda quitar y limpiar. Para más información, por favor llame del Coordinador del Sistema de Alcantarillado por medio del número de teléfono (415) 289-4192.

Atentamente,  
La Ciudad de Sausalito

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City of Sausalito: Overflow Emergency Response Plan	B-3 Side A
<b>Sanitary Sewer Backup Response Packet First Responder Form</b>	

Fill out this form as completely as possible.  
Ask customer if you may enter the home. If so, take photos of all damaged and undamaged areas.

PERSON COMPLETING THIS FORM:		PHONE:
Name: _____		DATE:
Title: _____		TIME:
TIME STAFF ARRIVED ON-SITE:		
DID CUSTOMER CALL CLEANING CONTRACTOR? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, name of contractor:		
RESIDENT NAME: <input type="checkbox"/> Owner <input type="checkbox"/> Renter	IF RENT, PROPERTY MANAGER(S): OWNER:	
STREET ADDRESS:  CITY, STATE AND ZIP:  PHONE:	STREET ADDRESS:  CITY, STATE AND ZIP:  PHONE:	
Is nearest upstream manhole visibly higher than the drain/fixture that overflowed? <input type="checkbox"/> Yes <input type="checkbox"/> No		
# OF PEOPLE LIVING AT RESIDENCE:		
Approximate Age of Home:	# of Bathrooms:	# of Rooms Affected:
Approximate Amount of Spill (gallons):	Approximate Time Sewage Has Been Sitting (hrs/days):	
Numbers of Photographs or Videos Taken: <input type="checkbox"/> Photographs <input type="checkbox"/> Video	Where are photos/video stored?	
Does property have a Property Line Cleanout or BPD?		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Unknown
If yes, was the Property Line Cleanout/BPD operational at the time of the overflow?		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Unknown
Have there ever been any previous spills at this location?		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Unknown
Has the resident had any plumbing work done recently? <i>If YES, please describe:</i>		<input type="checkbox"/> YES <input type="checkbox"/> NO

**GO TO SIDE B**

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City of Sausalito: Overflow Emergency Response Plan		B-3 Side B
<b>SANITARY SEWER LINE BLOCKAGE LOCATION</b>		
<b>PLEASE CHECK THE BOXES THAT DESCRIBE YOUR OBSERVATIONS:</b>		On the diagram below, indicate the location of the sewer line and where the problem occurred.
<b>Customer Cleanout Was:</b> <input type="checkbox"/> Non-Existent <input type="checkbox"/> Full <input type="checkbox"/> Empty	<b>Public Cleanout was:</b> <input type="checkbox"/> Non-Existent <input type="checkbox"/> Full <input type="checkbox"/> Empty	<div style="display: flex; justify-content: space-around; align-items: center;"><div style="border: 1px solid black; padding: 10px; text-align: center; width: 150px; height: 60px;">Affected House</div><div style="border: 1px solid black; padding: 10px; text-align: center; width: 150px; height: 60px;">Upstream House</div></div>
<b>Recommended Follow-Up Action(s):</b>		
<div style="border: 1px solid black; padding: 5px; display: inline-block;">Did sewage go under buildings? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure</div>		
Place completed form in Sewer Backup Envelope and follow routing instructions		
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City of Sausalito: Overflow Emergency Response Plan	B-4 Side A
<b>Sanitary Sewer Backup Response Packet</b> <b>Sanitary Sewer Overflow Report</b>	

**INSTRUCTIONS: Complete all items EXCEPT those that are shaded gray**

SSO Category (check one):

- Category 1: Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either (1) Reaches surface water and/or drainage channel tributary to a surface water; OR (2) Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.
- Category 2: Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either (1) Does not reach surface water, a drainage channel, or an MS4, OR (2) The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.
- Category 3: All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition
- Spill from Private Lateral (specify):  Single Family Home  Multi-Family Home  High Density Residential (5+ units)  
 Food Service Establishment (FSE)  Mixed Use Property  Industrial Property  Commercial Property  
 Public quasi-public institution (hospital, schools, fire department, etc.)

**IMMEDIATE NOTIFICATION: If this is a Category 1 SSO  $\geq$  1,000 gallons, contact CalOES within 2 hours at (800) 852-7550.**

<b>A. SSO LOCATION</b>	
SSO Location Name:	
Latitude Coordinates*:	Longitude Coordinates:
Street Name and Number:	
Nearest Cross Street:	City: Zip Code:
County:	SSO Location Description:
<b>B. SSO OCCURRING TIME (complete Start Time Determination Form and then complete information below)</b>	
Estimated SSO start date:	Estimated SSO start time:
Date SSO reported to sewer crew:	Time SSO reported to sewer crew:
Date sewer crew arrived:	Time sewer crew arrived:
Who was interviewed to help determine start time?	
Estimated SSO end date:	Estimated SSO end time:
<b>C. SSO DESCRIPTION (Complete Volume Estimation Worksheets and/or refer to Field Guide as needed for estimations.)</b>	
SSO Appearance Point (check one or more): <input type="checkbox"/> Combined Sewer D.I. (Combined CS Only) <input type="checkbox"/> Force Main <input type="checkbox"/> Gravity Mainline <input type="checkbox"/> Lateral Cleanout (Private) <input type="checkbox"/> Lateral Cleanout (Public) <input type="checkbox"/> Inside Building or Structure <input type="checkbox"/> Manhole <input type="checkbox"/> Pump Station <input type="checkbox"/> Lower Lateral (Private) <input type="checkbox"/> Lower Lateral (Public) <input type="checkbox"/> Upper Lateral (Private) <input type="checkbox"/> Upper Lateral (Public) <input type="checkbox"/> Other Sewer System Structure (specify):	
Were there multiple appearance points? <input type="checkbox"/> No <input type="checkbox"/> Yes, number of appearance points:	
Did the SSO reach a drainage channel and/or surface water? <input type="checkbox"/> Yes (Category 1) <input type="checkbox"/> No	
If the SSO reached a storm sewer, was it fully captured and returned to the Sanitary Sewer? <input type="checkbox"/> Yes <input type="checkbox"/> No (Category 1)	
Was this spill from a private lateral? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, name of responsible party:	
Final Spill Destination: <input type="checkbox"/> Ocean/ocean beach* <input type="checkbox"/> Surface waters other than ocean <input type="checkbox"/> Drainage channel <input type="checkbox"/> Building/structure <input type="checkbox"/> Separate Storm drain <input type="checkbox"/> Combined storm drain <input type="checkbox"/> Paved surface <input type="checkbox"/> Unpaved surface <input type="checkbox"/> Street/curb/gutter <input type="checkbox"/> Other:	
*Provide name(s) of affected drainage channels, beach, etc.:	
Total Estimated SSO volume (in gallons – 1,000gal or more = Category 1): <span style="float: right;">gallons</span>	
Est. volume that reached a separate storm drain that flows to a surface water body:	gal Recovered: gal
Est. volume that reached a drainage channel that flows to a surface water body:	gal Recovered: gal
Est. volume discharged directly to a surface water body:	gal Recovered: gal
Est. volume discharged to land:	gal Recovered: gal
Calc. Methods: <input type="checkbox"/> Eyeball <input type="checkbox"/> Photo Comparison <input type="checkbox"/> Upstream Lat. Connections <input type="checkbox"/> Area/Volume (include sketch/photo with dimensions) <input type="checkbox"/> Other (describe):	

\* If multiple appearance points, use the GPS coordinates for the location of the SSO appearance point closest to the failure point/blockage.  
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City of Sausalito: Overflow Emergency Response Plan	B-4 Side B
<b>Sanitary Sewer Backup Response Packet</b> <b>Sanitary Sewer Overflow Report</b>	

**D. CAUSE OF SSO**

Where did failure occur? (Check all that apply):  Air Relief or Blow-Off Valve  Force Main  Gravity Mainline  Siphon  
 Lower Lateral (public)  Lower Lateral (private)  Manhole  Pump Station (specify):  Controls  Mechanical  Power  
 Upper Lateral (public)  Upper Lateral (private) Other:

SSO cause (check all that apply):  Air Relief or Blow-Off Valve Failure  Construction Diversion Failure  CS Maintenance  
 Damage by others  Debris (specify):  From Construction  From Lateral  General  Rags  Flow Exceeded Capacity  
 FOG (Fats, oil, grease)  Inappropriate Discharge  Natural Disaster  Operator Error  Root Intrusion  
 Pipe Structural Problem/Failure  Pipe Structural Problem/Failure (Installation)  Rainfall Exceeded Design  
 Pump Station Failure (specify):  Controls  Mechanical  Power  Siphon Failure  Vandalism  
 Surcharged Pipe  Non - Dispersible Wipes  Other (specify):

Diameter (in inches) of pipe at point of blockage/spill cause (if applicable):

Sewer pipe material at point of blockage/spill cause (if applicable):

Estimated age of sewer asset at the point of blockage or failure (if applicable):

Description of terrain surrounding point of blockage/spill cause:  Flat  Mixed  Steep

**E. SSO RESPONSE**

SSO response activities (check all that apply):  Cleaned-Up  Mitigated Effects of Spill  Contained All or Portion of Spill  
 Restored Flow  Returned All Spill to Sanitary Sewer System  Returned Portion of Spill to Sanitary Sewer System  
 Property Owner Notified  Other Enforcement Agency Notified (specify)  Other (specify):

SSO response completed (date & time):

Visual inspection result of impacted waters (if applicable):

Any fish killed?  Yes  No      Any ongoing investigation?  Yes  No

Were health warnings posted?  Yes  No      If yes, provide health warning/beach closure posting/details:

Was there a beach closure?  Yes  No      If yes, name of closed beach(es):

Were samples of impacted waters collected?  Yes  No  
 If YES, select the analyses:  DO  Ammonia  Bacteria  pH  Temperature  Other:

Recommended corrective actions: (check all that apply and provide detail)  
 Add sewer to preventive maintenance program  
 Adjust schedule/method of preventive maintenance  
 Enforcement action against FOG source  
 Inspect Sewer Using CCTV to Determine Cause  
 Plan rehabilitation or replacement of sewer  
 Repair Facilities or Replace Defect  
 Other (specify)

What major equipment was used in the response?

List all City personnel involved in the response including name, title and their role in the response:

**F. NOTES**

**G. NOTIFICATION DETAILS**

CalOES contacted date and time (if applicable):

CalOES Control Number (if applicable):      Spoke to:

This form prepared by: NAME:	TITLE:	DATE:
This form reviewed by: NAME:	TITLE:	DATE:

Place completed form in Sewer Backup Envelope and follow routing instructions.  
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City of Sausalito: Overflow Emergency Response Plan	B-5
<b>Sanitary Sewer Backup Response Packet Start Time Determination Form</b>	

SSO Start Date: \_\_\_\_\_ Location: \_\_\_\_\_

Accurate start time determination is an essential part of SSO volume estimation. Depending on the flow rate, being even one minute off can have a huge impact on the volume estimation. Be as precise as possible. Do not round to quarter hour increments. Start time must be based on all available information (interviews with neighbors, emergency responders, etc.)

What time was the City notified of the SSO? \_\_\_\_\_  AM  PM

Who notified the City? \_\_\_\_\_

Did they indicate what time they noticed the SSO?  YES  NO If yes, what time? \_\_\_\_\_  AM  PM

Who at the City received the notification? \_\_\_\_\_

What time did the crew arrive at the site of the SSO? \_\_\_\_\_  AM  PM

Who was interviewed regarding the start time of the SSO? Include their name, contact information, and the statement they provided:

Name	Contact Information	Statement
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Describe in detail how you determined the start time for this particular SSO:

SSO Start Date: \_\_\_\_\_ SSO Start Time: \_\_\_\_\_  AM  PM

SSO End Date: \_\_\_\_\_ SSO End Time: \_\_\_\_\_  AM  PM

SSO Duration: \_\_\_\_\_ minutes

This form completed by:

Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Job Title: \_\_\_\_\_ Date: \_\_\_\_\_

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City of Sausalito: Overflow Emergency Response Plan	B-6a
<b>Sanitary Sewer Backup Response Packet</b> <b>Volume Estimation: Eyeball Estimation Method</b>	

*Use this method only for small SSOs of less than 200 gallons.*

SSO Date: \_\_\_\_\_ Location: \_\_\_\_\_

- STEP 1:** Position yourself so that you have a vantage point where you can see the entire SSO.
- STEP 2:** Imagine one or more buckets or barrels of water tipped over. Depending on the size of the SSO, select a bucket or barrel size as a frame of reference. It may be necessary to use more than one bucket/barrel size.
- STEP 3:** Estimate how many of each size bucket or barrel it would take to make an equivalent spill. Enter those numbers in Column A of the row in the table below that corresponds to the bucket/barrel sizes you are using as a frame of reference.
- STEP 4:** Multiply the number in Column A by the multiplier in Column B. Enter the result in Column C.

	A	B	C
Size of bucket(s) or barrel(s)	How many of this size?	Multiplier	Estimated SSO Volume (gallons)
1 gallon water jug		x 1 gallons	
5 gallon bucket		x 5 gallons	
32 gallon trash can		x 32 gallons	
55 gallon drum		x 55 gallons	
Other: _____ gallons		x _____ gallons	
<b>Estimated Total SSO Volume:</b>			

**STEP 5:** Is rainfall a factor in the SSO?  Yes  No  
 If yes, what volume of the observed spill volume do you estimate is rainfall? \_\_\_\_\_ gallons  
 If yes, describe how you determined the amount of rainfall in the observed spill?

**STEP 6:** Calculate the estimated SSO volume by subtracting the rainfall from the SSO volume:  
 \_\_\_\_\_ gallons – \_\_\_\_\_ gallons = \_\_\_\_\_ gallons  
 Estimated SSO Volume                  Rainfall                  **Total Estimated SSO Volume**

Do you believe that this method has estimated the entire SSO?  Yes  No  
 If no, you **MUST** use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:  
 Name: \_\_\_\_\_ Signature: \_\_\_\_\_  
 Job Title: \_\_\_\_\_ Date: \_\_\_\_\_

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City of Sausalito: Overflow Emergency Response Plan	B-6b Side 1
<b>Sanitary Sewer Backup Response Packet</b>	
<b>Volume Estimation: Duration and Flow Rate Comparison Method</b>	

SSO Date: \_\_\_\_\_ Location: \_\_\_\_\_

STEP 1: Compare the SSO to reference images on Side 2 to estimate flow rate of the current overflow. Describe which reference photo(s) were used and any additional factors that influenced applying the reference photo data to the actual SSO:

Flow Rate Based on Photo Comparison: \_\_\_\_\_ gallons per minute (gpm)

STEP 2: Complete the **Start Time Determination Form** to provide a detailed description of how start time was determined. Copy the SSO Duration from the Start Time Determination Form here:

SSO Duration: \_\_\_\_\_ minutes

STEP 3: Multiply the flow rate by the SSO duration to calculate the estimated SSO volume.

$$\frac{\text{_____ gpm}}{\text{Flow Rate}} \times \frac{\text{_____ minutes}}{\text{SSO Duration}} = \frac{\text{_____ gallons}}{\text{Estimated SSO Volume}}$$

STEP 4: Did the SSO occur during a period of consistent flow in this portion of the system?  Yes  No

If no, explain how, based on this portion of the collection system and its users, you believe it may have impacted the estimated SSO volume:

By what percentage are you adjusting the estimation?  increase  decrease \_\_\_\_\_ %

Translate the percentage into gallons: \_\_\_\_\_ gallons

STEP 5: Calculate the adjusted SSO volume estimate:

$$\frac{\text{_____ gallons}}{\text{Estimated SSO Volume}} + \text{ or - } \frac{\text{_____ gallons}}{\text{Adjustment}} = \frac{\text{_____ gallons}}{\text{Estimated SSO volume}}$$

Do you believe that this method has estimated the entire SSO?  Yes  No

If no, you MUST use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:

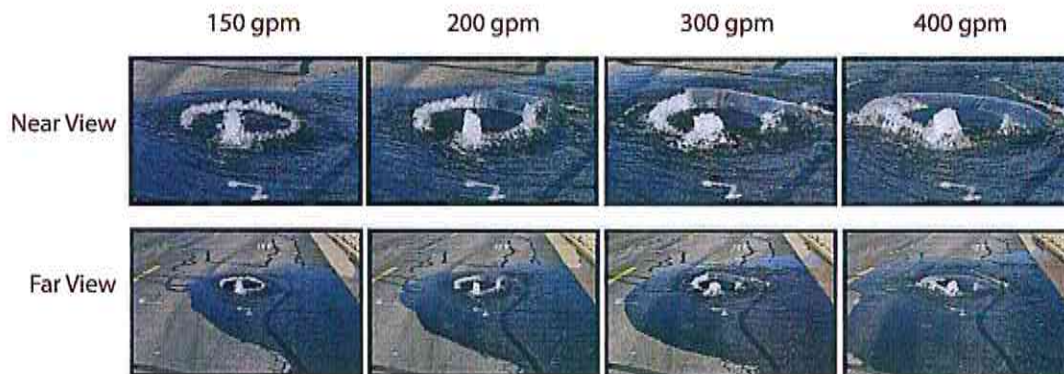
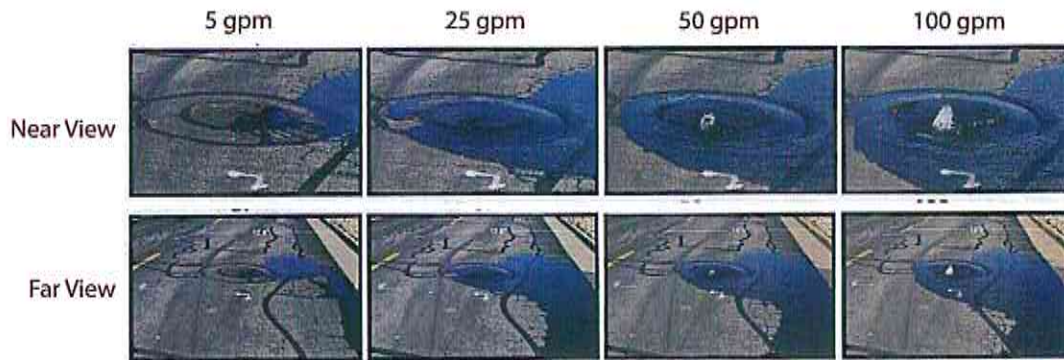
Name: \_\_\_\_\_ Signature: \_\_\_\_\_  
 Job Title: \_\_\_\_\_ Date: \_\_\_\_\_



City of Sausalito: Overflow Emergency Response Plan	<b>B-6b</b> <b>Side 2</b>
<b>Sanitary Sewer Backup Response Packet</b> <b>Volume Estimation: Duration and Flow Rate Comparison Method</b>	

**IMPORTANT NOTE:**  
These photographs are provided as examples only and will change with many factors.

**SSCSC Manhole Overflow Gauge**  
CWEA Southern Section Collections Systems Committee  
Overflow Simulation courtesy of Eastern Municipal Water District



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City of Sausalito: Overflow Emergency Response Plan	B-6c
<b>Sanitary Sewer Backup Response Packet</b> <b>Volume Estimation: Upstream Lateral Connections Method</b>	

SSO Date: \_\_\_\_\_ Location: \_\_\_\_\_

STEP 1: Determine the number of Equivalent Dwelling Units (EDUs) for this SSO: \_\_\_\_\_ EDUs  
 NOTE: A single-family residential home = 1 EDU. For commercial buildings, refer to City documentation.

STEP 2: This volume estimation method utilizes daily usage data based on flow rate studies of several jurisdictions in California. Column A shows how an average daily of usage of 180 gallons per day is distributed during each 6-hour period. Adjust the table as necessary to accurately represent the actual data.

Complete Column E by entering the number of minutes the SSO was active during each 6-hour time period. Multiply column D times Column E to calculate the gallons spilled during each time period. Add the numbers in Column F together for the Total Estimated SSO Volume per EDU.

Time Period	Flow Rate Per EDU				SSO	
	A	B	C	D	E	F
	Gallons per Period	Hours per period	A ÷ B = Gallons per Hour	C ÷ 60 = Gallons per Hour	Minutes SSO was active during period	D × E = Gallons spilled per period
6am-noon	72	6	12	0.20		
noon-6pm	36	6	6	0.10		
6pm-midnight	54	6	9	0.15		
midnight-6am	18	6	3	0.05		
<b>Total Estimated SSO Volume per EDU:</b>						

STEP 3: Multiply the Estimated SSO Volume per EDU from Step 2 by the number of EDUs from Step 1.  

$$\frac{\text{gallons}}{\text{Volume per EDU}} \times \frac{\text{# of EDUs}}{\text{# of EDUs}} = \frac{\text{gallons}}{\text{Estimated SSO Volume}}$$

STEP 4: Adjust SSO volume as necessary considering other factors, such as activity that would cause a fluctuating flow rate (doing laundry, taking showers, etc.). Explain rationale below and indicate adjusted SSO estimate (attach a separate page if necessary):

Estimated SSO Volume: \_\_\_\_\_ gallons

Do you believe that this method has estimated the entire SSO?  Yes  No

If no, you MUST use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:

Name: \_\_\_\_\_ Signature: \_\_\_\_\_  
 Job Title: \_\_\_\_\_ Date: \_\_\_\_\_





City of Sausalito: Overflow Emergency Response Plan	<b>B-8</b>
<b>Sanitary Sewer Backup Response Packet Claims Submittal Checklist</b>	

### Sewer System Coordinator

1. Complete the following information:

Title: \_\_\_\_\_  
Name: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Today's Date: \_\_\_\_\_

2. Copy the items listed below and retain originals for internal archiving purposes.
3. Place the copies in the Backup Response Envelope and forward to the City Clerk's office:

- Form B-3: First Responder Form
- Form B-4: Sanitary Sewer Overflow Report
- Form B-5: Start Time Determination Form
- Form B-6: Volume Estimation Forms (a, b and/or c)
- Form B-7: Sewer Lateral CCTV Report
- Form B-8: Claims Submittal Checklist (*this form*)
- All photos taken: Check here if digital photographs will be forwarded separately
- Any other information you feel is important in this claim

4. Go to Regulatory Notifications Packet and make all appropriate notifications.
5. Complete Form BP-9: Collection System Failure Analysis

### City Clerk's Office

1. Verify claims packet is complete.
2. Notify: Alex Davis, Senior Adjuster  
York Risk Services Group  
1390 Willow Pass Road, Suite 400  
Concord, CA 94520  
(925) 349-3890  
alex.davis@yorkrsg.com

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City of Sausalito: Overflow Emergency Response Plan	<b>B-9 Side A</b>
<b>Sanitary Sewer Backup Response Packet Collection System Failure Analysis</b>	

**To be completed by the Sewer System Coordinator**

Incident Report #		Prepared By	
<b>SSO/Backup Information</b>			
Event Date/Time		Address	
Volume Spilled		Volume Recovered	
Cause			
<b>Summary of Historical SSOs/Backups/Service Calls/Other Problems</b>			
Date	Cause	Date Last Cleaned	Crew
Records Reviewed By:		Record Review Date:	
<b>Summary of CCTV Information</b>			
CCTV Inspection Date		Tape Name/Number	
CCTV Tape Reviewed By		CCTV Review Date	
Observations			

Go to Side B

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City of Sausalito: Overflow Emergency Response Plan	<b>B-9</b> <b>Side B</b>
<b>Sanitary Sewer Backup Response Packet</b> <b>Collection System Failure Analysis</b>	

<b>Recommendations</b>					
	Type	Specific Actions	Who is Responsible?	Completion Deadline	Who Will Verify Completion?
	No Changes or Repairs Required	n/a	n/a	n/a	n/a
	Repair(s)				
	Construction				
	Capital Improvement(s)				
	Change(s) to Maintenance Procedures				
	Change(s) to Overflow Response Procedures				
	Training				
	Misc.				
Comments/Notes:					
Review Date:					

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**City of Sausalito CA**  
**Overflow Emergency Response Plan**

## Customer Service Packet

**Contents:**

<u>Form</u>	<u>Form Number</u>
Customer Information Letter.....	CS-1
Claim Form.....	-2
Sewer Spill Reference Guide .....	pamphlet

**Instructions:**

1. Review the Customer Information letter to determine actions that need to be taken immediately.
2. See the Customer Information letter for information about filing a claim.
3. Review the Sewer Spill Reference Guide pamphlet.

**If you have any questions contact:**

Regarding Sewer Issues: Sewer System Coordinator at (415) 289-4192  
 Regarding Submitting a Claim for Damages: City Clerk at (415) 289-4165

**This packet provided by:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

## Paquete de Servicio de Atención al Cliente

**Contenido:**

<u>Formulario</u>	<u>Número de formulario</u>
Carta de Información al Cliente.....	CS-1
Formulario de Demanda.....	-2
Guía de Referencia para Derrame de Alcantarilla .....	Folleto

**Instrucciones:**

1. Repasé la Carta de Información al Cliente para determinar las acciones que se necesitan que llevar a cabo inmediatamente.
2. Lea la Carta de Información para el Cliente que explica como presentar una demanda.
3. Repasé el Folleto-Guía de Referencia para Derrame de Alcantarilla.

**Si usted tiene cualquier pregunta, llame:**

- Acerca de Asuntos de Alcantarillado:  
 Coordinador del Sistema de Alcantarillado al número (415) 289-4192
- Acerca de Presentando una Demanda para Daños y Perjuicios:  
 Secretaria Municipal de la Ciudad al número (415) 289-4165

Print on 6" x 9" envelope  
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## City of Sausalito: Overflow Emergency Response Plan

**Sanitary Sewer Backup Response Packet  
Customer Information Regarding Sewer Backup Claims**
**CS-1**

Dear Property Owner:

We recognize that sewer back flow incidents can be stressful. The City has prepared this brief set of instructions to help you minimize the impact of the loss by responding promptly to the situation.

The City is not responsible for clean up charges or damages caused by blockages in the property owner's sewer line or caused by code violations. At this time, the City is investigating the cause of the loss and does not assume liability for damages. However, if our investigation determines the City is responsible for this incident, the costs you incur for reasonable and necessary clean up will be included in the settlement of your claim. Regardless of whether you or the City is responsible for the loss, it is up to you to arrange for the repair of your property and to present a claim for consideration.

You or the property owner should immediately contact a firm for clean-up of the affected areas. If you do not know of a company to call for service, the following 24-hour emergency restoration companies are available to respond: \*

Restoration Firm	Account Manager	24-hr Telephone	Fax	Email	Address
Restoration Management Company	Steve Drake	(510) 315-5400 (510) 340-0045 cell	(510) 324-8016	sdrake@rmc.com	4142 Pint Eden Way Hayward, CA 94545
Paul Davis Restoration	Dave Osborne	(866) 220-9900 (707) 337-7878 cell	(707) 206-9144	help@pdrnorthbay.com DaveOz@pdrnorthway.com	355 Sutton Place Santa Rosa, CA 95407
Ideal Restoration	Dan Richards	(415) 418-2420	(415) 963-3470	service@idealsf.com	1499 Evans Ave. San Francisco, CA 94124
SERVPRO	Michael Jervan	(415) 763-2080 (707) 974-3948 cell	(707) 588-8227	Mjervan_servpro@yahoo.com	444 Yolanda Ave. Santa Rosa, CA 95404
Service Master Restore	Andy Dobbs	(800) 480-8439 (925) 288-0479 (415) 336-6258 cell	(925) 288-1570	adobbs@smrestore.net	2121 Diamond Blvd. Concord, CA 94520

\*This list is provided as a resource only. The City does not require or endorse the use of any of these firms. This list is not to be construed as exclusive, comprehensive or limiting in any way. Qualified contractors can be found in the Yellow Pages under "Water Damage Restoration" or "Fire & Water Damage Restoration". However, be sure you hire a firm with experience in sewer backups and enough resources to get the job done quickly.

---

**What you need to do now:**


---

The City has prepared this brief set of instructions to help you minimize the impact of the loss by responding promptly to the situation.

- Do not attempt to clean the area yourself; let the cleaning and restoration company handle this.
- Keep people and pets away from the affected area(s).
- Turn off all appliances that use water.
- Turn off heating/air conditioning systems.
- Do not remove items from the area – the cleaning and restoration company will handle this.
- If you had recent plumbing work, contact your plumber or contractor and inform them of this incident.
- If you intend to file a claim, do so as soon as practical in order to have your claim considered. To obtain a claim form, contact the City Clerk at (415) 289-4165.
  - **Please Note:** The general provisions for the filing of claims against public entities are contained in Part 3 (commencing at Section 900) of Division 3.6 of the Government code. Certain claims are not governed by these provisions, including tax and assessment matters, liens, employee compensations, workers' compensation, unemployment compensation, welfare, securities, and others.
  - The form and contents of a claim are specified by Section 910, et seq. A claim relating to a cause of action for death or for injury to person or to personal property or growing crops shall be presented not later than six months after accrual of the cause of action; other claims shall be presented within one year (Section 911.2).
  - Claims are to be presented by delivery or mailing to City Clerk, 420 Litho Street, Sausalito, CA 94965 (Section 915).
  - It is suggested that the claimant refer to claims law and be fully advised with respect to the exceptions and further provisions contained therein.



**Important Legal Notice:** For your protection, read carefully, obtain a reliable translation, and/or consult your attorney.

Ciudad de Sausalito: Desbordamiento plan de respuesta de emergencia	<b>CS-1</b> Spanish
<b>Paquete de Respuesta a Desbordamiento de Alcantarilla Sanitaria</b> <b>Información de Cliente Acerca de Demandas de Desbordamiento de Alcantarilla</b>	

Estimado propietario:

Reconocemos que incidentes de alcantarilla de reflujo pueden ser estresantes. La ciudad ha preparado esta breve conjunto de instrucciones para ayudar a minimizar el impacto de la pérdida por responder con prontitud a la situación.

La ciudad no es responsable de limpiar los cargos o daños causados por los bloqueos en alcantarilla del dueño la línea o causaron por violaciones al código. En este momento, la ciudad está investigando la causa de la pérdida y no asume responsabilidad por daños y perjuicios. Sin embargo, si la investigación determina que la ciudad es responsable de este incidente, los costos que usted incurra por razonable y necesario limpiar se incluirán en la liquidación de su reclamación. Independientemente de si usted o la ciudad es responsable por la pérdida, depende de usted para solicitar la reparación de su propiedad y para presentar un reclamo para su consideración.

Usted o el propietario del inmueble debe contactar inmediatamente a una empresa para la limpieza de las zonas afectadas. Si no conoces de una empresa para solicitar servicio, las siguientes empresas de restauración emergencia 24 horas están disponibles para responder: \*

Empresa de Restauración	Gerente de Cuentas	Telefónico de 24 Horas	Fax	Correo Electrónico	Dirección
Restoration Management Company	Steve Drake	(510) 315-5400 (510) 340-0045 cell	(510) 324-8016	sdrake@rmc.com	4142 Pint Eden Way Hayward, CA 94545
Paul Davis Restoration	Dave Osborne	(866) 220-9900 (707) 337-7878 cell	(707) 206-9144	help@pdrnorthbay.com DaveOz@pdrnorthway.com	355 Sutton Place Santa Rosa, CA 95407
Ideal Restoration	Dan Richards	(415) 418-2420	(415) 963-3470	service@idealsf.com	1499 Evans Ave. San Francisco, CA 94124
SERVPRO	Michael Jervan	(415) 763-2080 (707) 974-3948 cell	(707) 588-8227	Mjervan_servpro@yahoo.com	444 Yolanda Ave. Santa Rosa, CA 95404
Service Master Restore	Andy Dobbs	(800) 480-8439 (925) 288-0479 (415) 336-6258 cell	(925) 288-1570	adobbs@smrestore.net	2121 Diamond Blvd. Concord, CA 94520

\*Esta lista se ofrece como un recurso solamente. La ciudad no requiere ni avala el uso de cualquiera de estas empresas. Esta lista no es para interpretarse como exclusivo, integral o limitando de alguna manera. Contratistas calificados pueden encontrarse en las páginas amarillas bajo "Restauración de daños de agua" o "Fuego & agua daños restauración" ("Water Damage Restoration" or "Fire & Water Damage Restoration"). Sin embargo, asegúrese de que contratar una empresa con experiencia en alcantarillado backups y recursos suficientes para hacer el trabajo rápidamente.

**Lo Que Usted Necesita Hacer Inmediatamente:**

La Ciudad ha preparado este juego de instrucciones breve para ayudarle a usted a minimizar el efecto de la pérdida por medio de respondiendo rápidamente a la situación.

- No intenta de limpiar el área usted mismo; permita que la compañía de limpieza y restauración maneje esto.
- Mantenga a las personas y a las mascotas lejos de la(s) área(s) afectada(s).ú
- Apagüé todos los electrodomésticos que usan agua.
- Apagüé todos los sistemas de calefacción y aire acondicionado.
- No remueva artículos del área—la compañía de limpieza y restauración manejará esto.
- Si usted ha tenido trabajo de plomería llevado a cabo recientemente, póngase en contacto con su plomero u contratista para avisarles de este incidente.
- Si usted tiene la intención de presentar una demanda, hágalo tan pronto como sea práctico para que se le considere su demanda. Para obtener un formulario de demanda, póngase en contacto con la Secretaria Municipal por medio del número de teléfono (415) 289-4165.
  - o Favor de Notar: Las provisiones generales para presentar demandas contra entidades públicas están contenidas en la Parte 3 (empezando en la Sección 900) de la División 3.6 del Código de Gobierno. Ciertas demandas no son gobernadas por estas provisiones, incluyendo asuntos de impuestos y valoraciones, gravámenes, compensación de empleados, compensación de trabajadores, subsidio por incapacidad laboral, beneficios sociales, títulos valores, y otros.
  - o La forma y el contenido de una demanda son especificados por la Sección 910 y subsiguientes. Una demanda relacionada a un derecho de acción por muerte o por lesión a persona u a propiedad privada, o cosechas en pie será presentada no más tarde que seis (6) meses después de acrecimiento de la causa de acción; otras demandas serán presentadas dentro de un (1) año (Sección 911.2).
  - o Las demandas serán presentadas por medio de entrega o correo a la Secretaria Municipal, 420 Litho Street, Sausalito, CA 94965. (Sección 915).

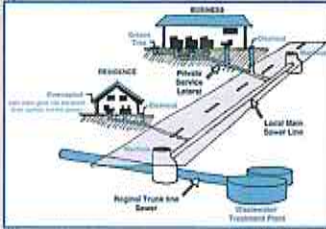
- o Se recomienda que el demandante se refiera a las leyes de demandas y que sea completamente aconsejado con respecto a las excepciones y estipulaciones adicionales contenidas dentro de esas.

**INSERT SAUSALITO CLAIM FORM**



**How a Sewer System Works**

A property owner's sewer pipes are called **service laterals** and are connected to larger local main and regional trunk lines. Service laterals run from the connection at the home to the connection with the public sewer. These laterals are the responsibility of the property owner and must be maintained by the property owner.



**Is my home required to have a backflow prevention device?**

Section 10.1 of the Uniform Plumbing Code (U.P.C.) states: **Drainage piping serving fixtures which have flood levels located below the elevation of the next upstream manhole over a private sewer serving such drainage piping shall be protected from backflow of sewage by installing an approved type of backwater valve.** The intent of Section 10.1 is to protect the building interior from main line sewer overflows or surcharges.

Additionally, U.P.C. 10.6 states: **Backwater valves shall be located where they will be accessible for inspection and repair at all times and, unless continuously exposed, shall be enclosed in a masonry pit fitted with an adequately sized removable cover.**



**If you have a sewage spill from your private sewer line that impacts storm drains, waterways or public property, contact:**

**City of Sausalito**  
(415) 289-4113

**Marin County Environmental Health Services Division**  
(415) 73-6907

California Health and Safety Code, Sections 5410-5416 requires:

- ( No person shall discharge raw or treated sewage or other waste in a manner that results in contamination, pollution, or nuisance.)
- ( Any person who causes or permits a sewage discharge to any state waters:
  - o Must immediately notify the local health agency of the discharge.
  - o Shall reimburse the local health agency for services that protect the public's health and safety.
  - o Who fails to provide the required notice to the local health agency is guilty of a misdemeanor and shall be punished by fine between \$500 - \$1,000 and/or imprisonment for less than one year.

**San Francisco Regional Water Quality Control Board**

(510) 522-2300

Requires the prevention, mitigation, response, and reporting of sewage spills.

**California Governor's Office of Emergency Services (CalOES)**  
(800) 52-7550

California Water Code, Article 9, Chapter 9, Sections 13268-13271; California Code of Regulations, Title 23, Division 9, Chapter 2, Article 2, Sections 2250-2260 requires:

- ( Any person who causes or permits a sewage discharge in excess of 0.000 gallons to be discharged to state waters shall immediately notify the Office of Emergency Services.)
- ( Any person who fails to provide the notice required by this section is guilty of a misdemeanor and shall be punished by fine less than \$20,000 and/or imprisonment for not more than one year.)

**Sewer Spill Reference Guide**

**Your Responsibilities as a Private Property Owner**

Provided to you by:

**City of Sausalito**

420 Litho Street  
Sausalito, CA 94965

(415) 289-4113

[www.ci.sausalito.ca.us](http://www.ci.sausalito.ca.us)

How do Sewage Spills happen?

Sewage spills occur when the wastewater in underground pipes overflows through a manhole, a cleanout, or a broken pipe. Most spills are relatively small and can be stopped and cleaned up quickly, but if left unattended they can cause health hazards, damage to homes and businesses, and threaten the environment, local waterways, and beaches.

**CAUTION!**

When trying to locate a sewer problem, never open manholes or other public sewer structures. Only our crews are allowed to open and inspect these structures.

Common Causes of Sewage Spills

- < Grease build-up
- < Tree roots
- < Broken/cracked pipes
- < Missing or broken cleanout caps
- < Undersized sewers
- < Groundwater/rainwater entering the sewer system through pipe defects and illegal connections

Prevent most sewage backups with a Backflow Prevention Device

This type of device can help prevent sewage backups into homes and businesses. If you don't already have a backflow prevention device, contact a professional plumber or contractor to install one as soon as possible.

Protect the environment!

If you see sewage from your property discharge into a gutter or storm drain, you may be subject to penalties and/or out-of-pocket costs for clean-up and enforcement efforts. Your property owner may be charged for costs incurred by agencies responding to spills from private properties.

What to look for:

- < Sewage spills can be very noticeable if you see water from a manhole or low water leak that may take time to be noticed. Don't dismiss unaccounted-for wet areas. Look for:
  - < Drain backups inside the building
  - < Wet ground and/or water leaking around manhole lids onto your street
  - < Leaking water from cleanouts or outside rains
  - < Unusual ororous wet areas, sidewalks, external walls, ground/landscape around building

The following are indicators of possible obstruction in your sewer line:

- < Water comes up in or drains, showers or toilets
- < Toilets, showers or floor drains clog or drain very slowly

What to do if there is a spill: Immediately notify the City of Sausalito. Our crews locate the blockage and determine if it is the public sewer. If it is the public sewer, we will schedule a cleanup. If it is the private sewer, we will provide you with information on how to arrange for a private service contractor. You are required to immediately:

- < Control and minimize the spill by shutting off the water
- < Keep sewage out of the storm drain system using sandbags, dirt and/or plastic sheeting
- < Call a plumbing professional to clear blockages and make repairs as needed. Look for the yellow pages under "Plumbing Drain and Sewer Cleaning" or "Sewer Contractors."
- < Always notify your sewer/public works department or public sewer district of sewage spills.

Spill Cleanup Inside the home:

For large cleanups, a professional cleaning firm should be contacted to clean impacted areas. You can locate local firms by looking in the yellow pages under "Water Damage" or "Fire Damage." If you are the contractor, the recommended quote estimates more than one company. Sometimes, the homeowner's insurance will pay for the necessary cleaning due to sewer backups. Not all policies have this coverage, so check with your agent.

If you decide to clean up a small spill inside your home, protect yourself from contamination by observing the following safety measures. Those persons whose resistance to infection is compromised should not attempt this type of cleanup.

Other Tips:

- < Keep children and pets out of the affected area until cleanup has been completed
- < Turn off heating/air conditioning systems
- < Wear rubber boots, rubber gloves, and goggles during cleanup of the affected area
- < Discard items that cannot be washed and disinfected (such as mattresses, rugs, cosmetics, baby toys, etc.)
- < Remove and discard drywall and insulation that has been contaminated with sewage or floodwaters.

- < Thoroughly clean hard surfaces such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks and the plumbing fixtures) with hot water before washing your hands
- < Help the drying process with fans, air conditioning units, and dehumidifiers
- < After completing cleanup, wash your hands with soap and water. Use water that has been boiled for 30 minutes (allow the water to cool before washing your hands) or use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use 1/2 teaspoon of household bleach per 1 gallon of water
- < Wash clothes worn during cleanup in hot water and detergent (wash part from contaminated clothes)
- < Wash clothes contaminated with sewage in hot water and detergent. Consider rinsing laundry in your onsite wastewater system if it has been professionally inspected and serviced
- < Seek immediate attention if you become injured or ill

Spill Cleanup Outside the home:

- < Keep children and pets out of the affected area until cleanup has been completed
- < Wear rubber boots, rubber gloves, and goggles during cleanup of the affected area
- < Clean up sewage solids (fecal material) and place in properly functioning toilet or double bag and place in garbage container
- < On hard surfaces (such as asphalt or concrete), it is safe to use 1% bleach solutions, or 1/2 cup of bleach in 5 gallons of water, but not 1/8 low in each storm drain as the bleach can harm the environment
- < After cleanup, wash hands with soap and water. Use water that has been boiled for 30 minutes (allow the water to cool before washing your hands) or use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use 1/2 teaspoon of household bleach per 1 gallon of water
- < Wash clothes worn during cleanup in hot water and detergent (wash part from contaminated clothes)
- < Wash clothes contaminated with sewage in hot water and detergent. Consider rinsing laundry in your onsite wastewater system if it has been professionally inspected and serviced
- < Seek immediate attention if you become injured/ill



**INSERT DOOR HANGER HERE**

**Appendix C**  
**SANITARY SEWER OVERFLOW RESPONSE PACKET**

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City of Sausalito: Overflow Emergency Response Plan

**Sanitary Sewer Overflow Response Packet**

**Table of Contents**

<u>Form</u>	<u>Form Number</u>
Instructions and Chain of Custody .....	envelope label
Responding to a Sanitary Sewer Overflow .....	C-1
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Start Time Determination Form .....	-3
Volume Estimation Forms .....	-4a, -4b, -4c
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Category 2 & 3 SSO Reporting Checklist.....	-2b
RWQCB Notification Fax .....	-3
Public Posting .....	n/a
Door Hanger.....	n/a
Pamphlet.....	n/a

For pre-assembled packets contact DKF Solutions Group at (707) 373-9709 or [kpatzer@dkfsolutions.com](mailto:kpatzer@dkfsolutions.com)

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**In the event of a Sanitary Sewer Overflow  
READ THIS FIRST**



- If this is a Category 1 SSO greater than or equal to 1,000 gallons contact CalOES at (800) 852-7550.
- Check here if you believe that fats, oils and/grease (FOG) caused or contributed to the SSO.
- Contact the Public Works Director at (415) 289-4176 for any media requests.

**Instructions**

Don't forget photos!



**Sewer Maintenance Crew:**

- Follow the instructions on the Sewer Overflow Response Flowchart (C-1).
- Contact the following:
  - o Sewer System Coordinator at (415) 289-4192 or (415) 726-1653 (cell)
  - o Public Works Director at (415) 289-4176
- Refer to the Field Guide as necessary.
- Place completed forms in this envelope, complete the Chain of Custody record (right) and forward this packet to the Sewer System Coordinator.

Print Name: \_\_\_\_\_

Initial: \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

**Sewer System Coordinator:**

- Review the enclosed forms.
- Complete the Regulatory Notifications Packet.
- Archive this packet and all other information regarding this overflow incident according to City policy.
- Debrief using the Collection System Failure Analysis Form.

Print Name: \_\_\_\_\_

Initial: \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

**City of Sausalito Overflow Emergency Response Plan: Sanitary Sewer Overflow Packet**

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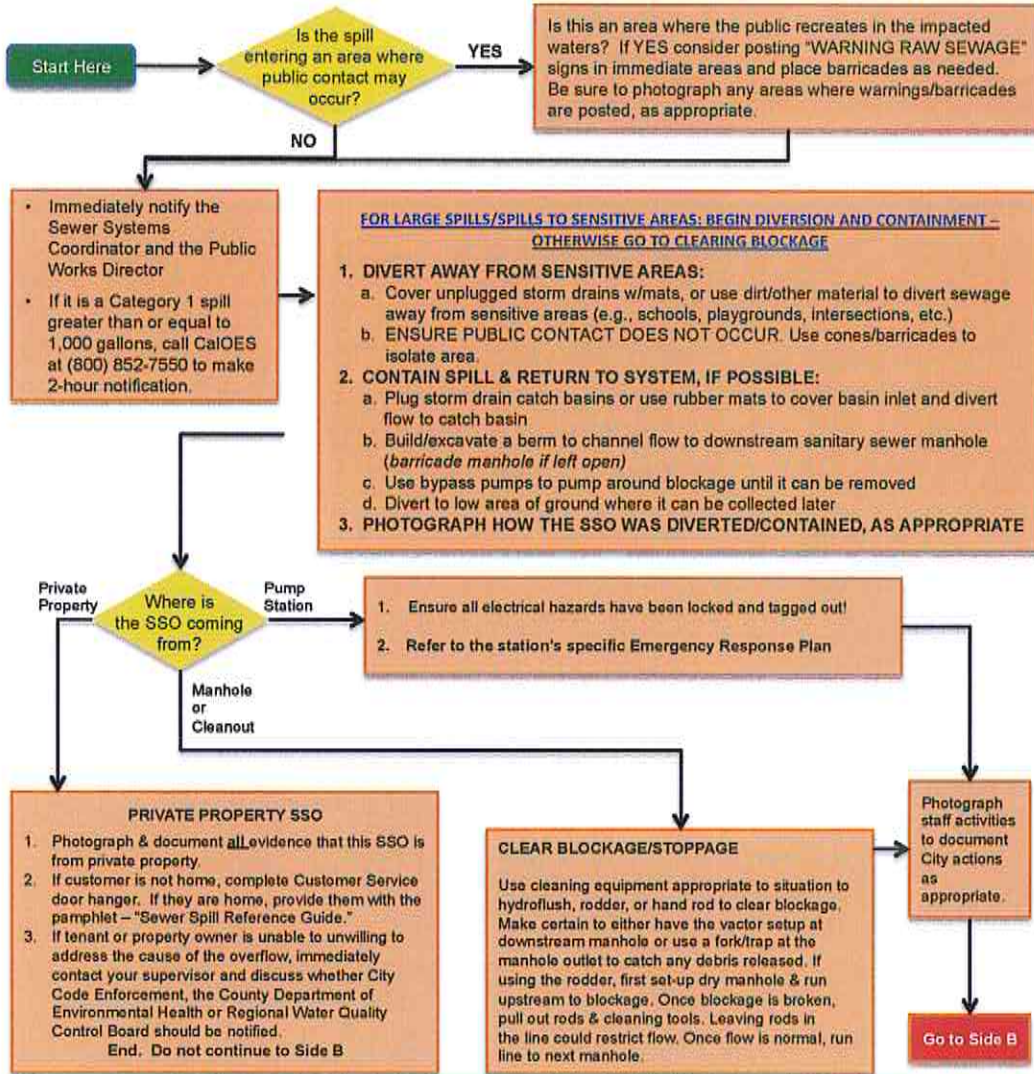


**City of Sausalito: Overflow Emergency Response Plan**

**Sanitary Sewer Overflow Response Packet**

**Overflow Response Flowchart**

**C-1**  
**Side A**



**MEDIA AND PUBLIC RELATIONS GUIDELINES:**

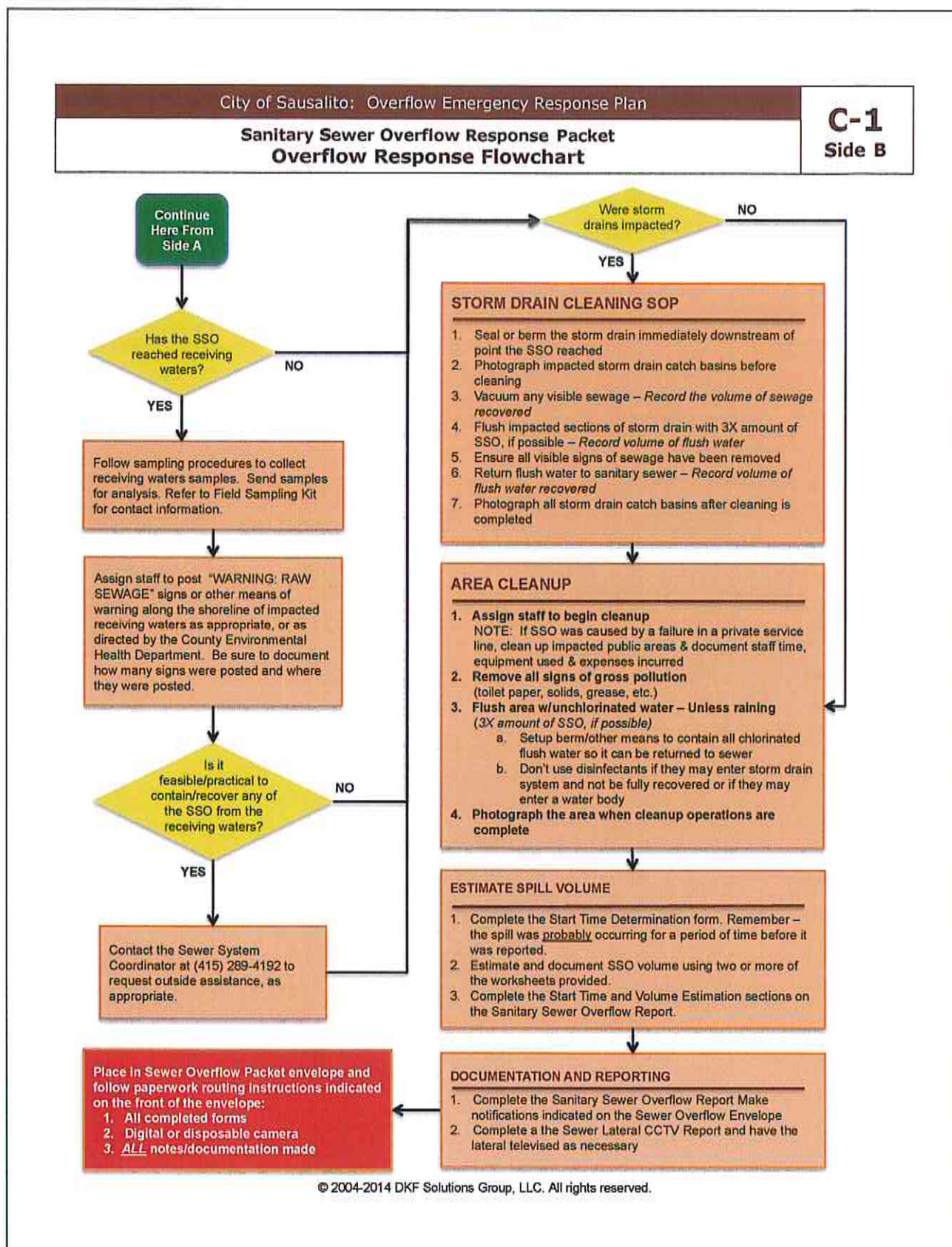
Exercise caution in contacts with the public or media when you respond to a spill. Any information you provide or statements you make may become pertinent in the event of possible court action, it is important to **AVOID THE FOLLOWING**:

- Giving out the wrong information including providing incorrect facts about a company or other agency
- Making accusations against customers, businesses or other agencies
- Speculating about the situation you are responding to

Be courteous and attempt to provide accurate information to questions within the limits above. In some cases, it may be appropriate to say that we do not have any information, or to delay answering a question and then to say when an answer might be available.

In most cases, refer media requests to the media coordinator indicated on the front of the Sewer Overflow Packet envelope.

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City of Sausalito: Overflow Emergency Response Plan	C-2 Side A
<b>Sanitary Sewer Overflow Response Packet</b> <b>Sanitary Sewer Overflow Report</b>	

**INSTRUCTIONS: Complete all items EXCEPT those that are shaded gray**

SSO Category (check one):

- Category 1: Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either (1) Reaches surface water and/or drainage channel tributary to a surface water; OR (2) Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.
- Category 2: Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either (1) Does not reach surface water, a drainage channel, or an MS4, OR (2) The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.
- Category 3: All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition
- Spill from Private Lateral (specify):  Single Family Home  Multi-Family Home  High Density Residential (5+ units)  
 Food Service Establishment (FSE)  Mixed Use Property  Industrial Property  Commercial Property  
 Public quasi-public institution (hospital, schools, fire department, etc.)

**IMMEDIATE NOTIFICATION: If this is a Category 1 SSO ≥1,000 gallons, contact CalOES within 2 hours at (800) 852-7550.**

<b>A. SSO LOCATION</b>	
SSO Location Name:	
Latitude Coordinates*:	Longitude Coordinates:
Street Name and Number:	
Nearest Cross Street:	City: Zip Code:
County:	SSO Location Description:
<b>B. SSO OCCURRING TIME (complete Start Time Determination Form and then complete information below)</b>	
Estimated SSO start date:	Estimated SSO start time:
Date SSO reported to sewer crew:	Time SSO reported to sewer crew:
Date sewer crew arrived:	Time sewer crew arrived:
Who was interviewed to help determine start time?	
Estimated SSO end date:	Estimated SSO end time:
<b>C. SSO DESCRIPTION (Complete Volume Estimation Worksheets and/or refer to Field Guide as needed for estimations.)</b>	
SSO Appearance Point (check one or more): <input type="checkbox"/> Combined Sewer D.I. (Combined CS Only) <input type="checkbox"/> Force Main <input type="checkbox"/> Gravity Mainline <input type="checkbox"/> Lateral Cleanout (Private) <input type="checkbox"/> Lateral Cleanout (Public) <input type="checkbox"/> Inside Building or Structure <input type="checkbox"/> Manhole <input type="checkbox"/> Pump Station <input type="checkbox"/> Lower Lateral (Private) <input type="checkbox"/> Lower Lateral (Public) <input type="checkbox"/> Upper Lateral (Private) <input type="checkbox"/> Upper Lateral (Public) <input type="checkbox"/> Other Sewer System Structure (specify):	
Were there multiple appearance points? <input type="checkbox"/> No <input type="checkbox"/> Yes, number of appearance points:	
Did the SSO reach a drainage channel and/or surface water? <input type="checkbox"/> Yes (Category 1) <input type="checkbox"/> No	
If the SSO reached a storm sewer, was it fully captured and returned to the Sanitary Sewer? <input type="checkbox"/> Yes <input type="checkbox"/> No (Category 1)	
Was this spill from a private lateral? <input type="checkbox"/> Yes <input type="checkbox"/> No If YES, name of responsible party:	
Final Spill Destination: <input type="checkbox"/> Ocean/ocean beach* <input type="checkbox"/> Surface waters other than ocean <input type="checkbox"/> Drainage channel <input type="checkbox"/> Building/structure <input type="checkbox"/> Separate Storm drain <input type="checkbox"/> Combined storm drain <input type="checkbox"/> Paved surface <input type="checkbox"/> Unpaved surface <input type="checkbox"/> Street/curb/gutter <input type="checkbox"/> Other: *Provide name(s) of affected drainage channels, beach, etc.:	
Total Estimated SSO volume (in gallons – 1,000gal or more = Category 1): <span style="float: right;">gallons</span>	
Est. volume that reached a separate storm drain that flows to a surface water body:	gal Recovered: gal
Est. volume that reached a drainage channel that flows to a surface water body:	gal Recovered: gal
Est. volume discharged directly to a surface water body:	gal Recovered: gal
Est. volume discharged to land:	gal Recovered: gal
Calc. Methods: <input type="checkbox"/> Eyeball <input type="checkbox"/> Photo Comparison <input type="checkbox"/> Upstream Lat. Connections <input type="checkbox"/> Area/Volume (include sketch/photo with dimensions) <input type="checkbox"/> Other (describe):	

\* If multiple appearance points, use the GPS coordinates for the location of the SSO appearance point closest to the failure point/blockage.  
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City of Sausalito: Overflow Emergency Response Plan	C-2
<b>Sanitary Sewer Overflow Response Packet</b>	Side B
<b>Sanitary Sewer Overflow Report</b>	

**D. CAUSE OF SSO**

Where did failure occur? (Check all that apply):  Air Relief or Blow-Off Valve  Force Main  Gravity Mainline  Siphon  
 Lower Lateral (public)  Lower Lateral (private)  Manhole  Pump Station (specify):  Controls  Mechanical  Power  
 Upper Lateral (public)  Upper Lateral (private) Other:

SSO cause (check all that apply):  Air Relief or Blow-Off Valve Failure  Construction Diversion Failure  CS Maintenance  
 Damage by others  Debris (specify):  From Construction  From Lateral  General  Rags  Flow Exceeded Capacity  
 FOG (Fats, oil, grease)  Inappropriate Discharge  Natural Disaster  Operator Error  Root Intrusion  
 Pipe Structural Problem/Failure  Pipe Structural Problem/Failure (Installation)  Rainfall Exceeded Design  
 Pump Station Failure (specify):  Controls  Mechanical  Power  Siphon Failure  Vandalism  
 Surcharged Pipe  Non - Dispersible Wipes  Other (specify):

Diameter (in inches) of pipe at point of blockage/spill cause (if applicable):

Sewer pipe material at point of blockage/spill cause (if applicable):

Estimated age of sewer asset at the point of blockage or failure (if applicable):

Description of terrain surrounding point of blockage/spill cause:  Flat  Mixed  Steep

**E. SSO RESPONSE**

SSO response activities (check all that apply):  Cleaned-Up  Mitigated Effects of Spill  Contained All or Portion of Spill  
 Restored Flow  Returned All Spill to Sanitary Sewer System  Returned Portion of Spill to Sanitary Sewer System  
 Property Owner Notified  Other Enforcement Agency Notified (specify)  Other (specify):

SSO response completed (date & time):

Visual inspection result of impacted waters (if applicable):

Any fish killed?  Yes  No      Any ongoing investigation?  Yes  No

Were health warnings posted?  Yes  No      If yes, provide health warning/beach closure posting/details:

Was there a beach closure?  Yes  No      If yes, name of closed beach(es):

Were samples of impacted waters collected?  Yes  No  
 If YES, select the analyses:  DO  Ammonia  Bacteria  pH  Temperature  Other:

Recommended corrective actions: (check all that apply and provide detail)  
 Add sewer to preventive maintenance program  
 Adjust schedule/method of preventive maintenance  
 Enforcement action against FOG source  
 Inspect Sewer Using CCTV to Determine Cause  
 Plan rehabilitation or replacement of sewer  
 Repair Facilities or Replace Defect  
 Other (specify)

What major equipment was used in the response?

List all City personnel involved in the response including name, title and their role in the response:

**F. NOTES**

**G. NOTIFICATION DETAILS**

CalOES contacted date and time (if applicable):

CalOES Control Number (if applicable):      Spoke to:

This form prepared by: NAME:	TITLE:	DATE:
This form reviewed by: NAME:	TITLE:	DATE:

Place completed form in Sewer Backup Envelope and follow routing instructions.  
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City of Sausalito: Overflow Emergency Response Plan	C-3
<b>Sanitary Sewer Overflow Response Packet Start Time Determination Form</b>	

SSO Start Date: \_\_\_\_\_ Location: \_\_\_\_\_

Accurate start time determination is an essential part of SSO volume estimation. Depending on the flow rate, being even one minute off can have a huge impact on the volume estimation. Be as precise as possible. Do not round to quarter hour increments. Start time must be based on all available information (interviews with neighbors, emergency responders, etc.)

What time was the City notified of the SSO? \_\_\_\_\_  AM  PM

Who notified the City? \_\_\_\_\_

Did they indicate what time they noticed the SSO?  YES  NO If yes, what time? \_\_\_\_\_  AM  PM

Who at the City received the notification? \_\_\_\_\_

What time did the crew arrive at the site of the SSO? \_\_\_\_\_  AM  PM

Who was interviewed regarding the start time of the SSO? Include their name, contact information, and the statement they provided:

Name	Contact Information	Statement
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Describe in detail how you determined the start time for this particular SSO:

SSO Start Date: \_\_\_\_\_ SSO Start Time: \_\_\_\_\_  AM  PM

SSO End Date: \_\_\_\_\_ SSO End Time: \_\_\_\_\_  AM  PM

SSO Duration: \_\_\_\_\_ minutes

This form completed by:

Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Job Title: \_\_\_\_\_ Date: \_\_\_\_\_

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City of Sausalito: Overflow Emergency Response Plan	
<b>Sanitary Sewer Overflow Response Packet</b> <b>Volume Estimation: Eyeball Estimation Method</b>	C-4a

*Use this method only for small SSOs of less than 200 gallons.*

SSO Date: \_\_\_\_\_ Location: \_\_\_\_\_

- STEP 1: Position yourself so that you have a vantage point where you can see the entire SSO.
- STEP 2: Imagine one or more buckets or barrels of water tipped over. Depending on the size of the SSO, select a bucket or barrel size as a frame of reference. It may be necessary to use more than one bucket/barrel size.
- STEP 3: Estimate how many of each size bucket or barrel it would take to make an equivalent spill. Enter those numbers in Column A of the row in the table below that corresponds to the bucket/barrel sizes you are using as a frame of reference.
- STEP 4: Multiply the number in Column A by the multiplier in Column B. Enter the result in Column C.

	A	B	C
Size of bucket(s) or barrel(s)	How many of this size?	Multiplier	Estimated SSO Volume (gallons)
1 gallon water jug		x 1 gallons	
5 gallon bucket		x 5 gallons	
32 gallon trash can		x 32 gallons	
55 gallon drum		x 55 gallons	
Other: _____ gallons		x _____ gallons	
<b>Estimated Total SSO Volume:</b>			

STEP 5: Is rainfall a factor in the SSO?  Yes  No  
 If yes, what volume of the observed spill volume do you estimate is rainfall? \_\_\_\_\_ gallons  
 If yes, describe how you determined the amount of rainfall in the observed spill?

STEP 6: Calculate the estimated SSO volume by subtracting the rainfall from the SSO volume:  
 \_\_\_\_\_ gallons – \_\_\_\_\_ gallons = \_\_\_\_\_ gallons  
 Estimated SSO Volume                  Rainfall                  **Total Estimated SSO Volume**

Do you believe that this method has estimated the entire SSO?  Yes  No  
 If no, you MUST use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:  
 Name: \_\_\_\_\_ Signature: \_\_\_\_\_



Job Title: \_\_\_\_\_ Date: \_\_\_\_\_

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City of Sausalito: Overflow Emergency Response Plan	C-4b Side 1
<b>Sanitary Sewer Overflow Response Packet</b>	
<b>Volume Estimation: Duration and Flow Rate Comparison Method</b>	

SSO Date: \_\_\_\_\_ Location: \_\_\_\_\_

STEP 1: Compare the SSO to reference images on Side 2 to estimate flow rate of the current overflow. Describe which reference photo(s) were used and any additional factors that influenced applying the reference photo data to the actual SSO:

Flow Rate Based on Photo Comparison: \_\_\_\_\_gallons per minute (gpm)

STEP 2: Complete the **Start Time Determination Form** to provide a detailed description of how start time was determined. Copy the SSO Duration from the Start Time Determination Form here:

SSO Duration: \_\_\_\_\_minutes

STEP 3: Multiply the flow rate by the SSO duration to calculate the estimated SSO volume.

$$\frac{\text{_____ gpm}}{\text{Flow Rate}} \times \frac{\text{_____ minutes}}{\text{SSO Duration}} = \frac{\text{_____ gallons}}{\text{Estimated SSO Volume}}$$

STEP 4: Did the SSO occur during a period of consistent flow in this portion of the system?  Yes  No

If no, explain how, based on this portion of the collection system and its users, you believe it may have impacted the estimated SSO volume:

By what percentage are you adjusting the estimation?  increase  decrease \_\_\_\_\_%

Translate the percentage into gallons: \_\_\_\_\_gallons

STEP 5: Calculate the adjusted SSO volume estimate:

$$\frac{\text{_____ gallons}}{\text{Estimated SSO Volume}} + \text{ or } - \frac{\text{_____ gallons}}{\text{Adjustment}} = \frac{\text{_____ gallons}}{\text{Estimated SSO volume}}$$

Do you believe that this method has estimated the entire SSO?  Yes  No

If no, you MUST use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:

Name: \_\_\_\_\_ Signature: \_\_\_\_\_  
 Job Title: \_\_\_\_\_ Date: \_\_\_\_\_



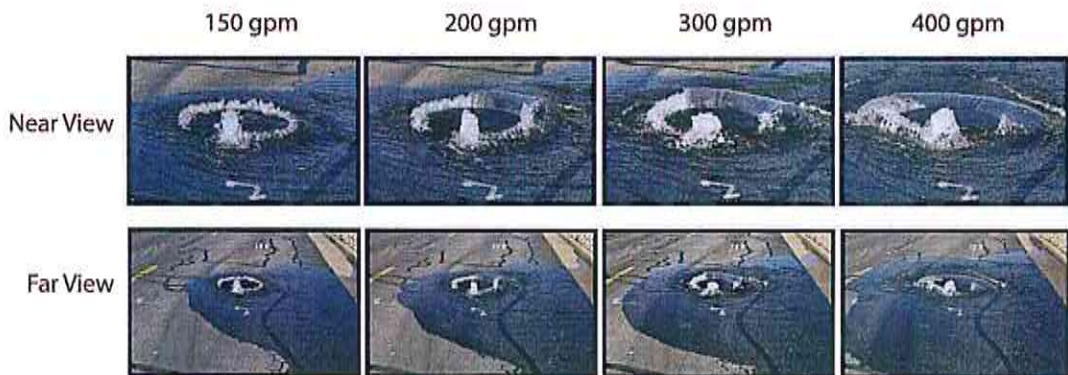
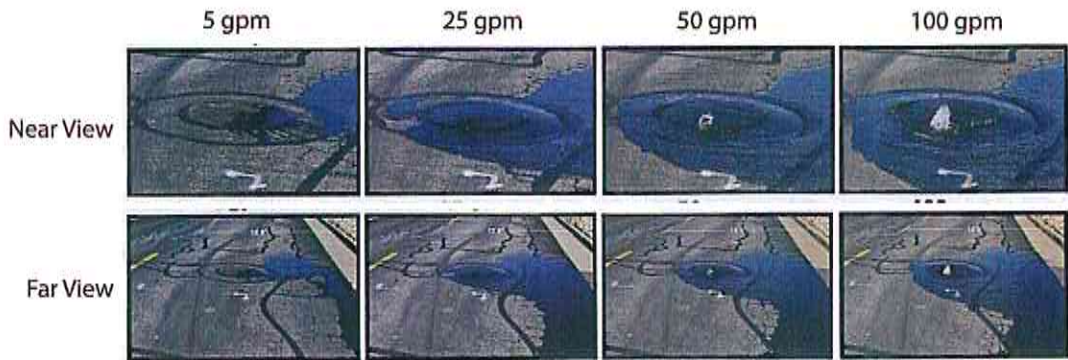
City of Sausalito: Overflow Emergency Response Plan	<b>C-4b</b>
<b>Sanitary Sewer Overflow Response Packet</b> <b>Volume Estimation: Duration and Flow Rate Comparison Method</b>	<b>Side 2</b>

**IMPORTANT NOTE:**

These photographs are provided as examples only and will change with many factors.

**SSCSC Manhole Overflow Gauge**

CWEA Southern Section Collections Systems Committee  
Overflow Simulation courtesy of Eastern Municipal Water District



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City of Sausalito: Overflow Emergency Response Plan	C-4c
<b>Sanitary Sewer Overflow Response Packet</b> <b>Volume Estimation: Upstream Lateral Connections Method</b>	

SSO Date: \_\_\_\_\_ Location: \_\_\_\_\_

STEP 1: Determine the number of Equivalent Dwelling Units (EDUs) for this SSO: \_\_\_\_\_ EDUs  
 NOTE: A single-family residential home = 1 EDU. For commercial buildings, refer to City documentation.

STEP 2: This volume estimation method utilizes daily usage data based on flow rate studies of several jurisdictions in California. Column A shows how an average daily of usage of 180 gallons per day is distributed during each 6-hour period. Adjust the table as necessary to accurately represent the actual data.

Complete Column E by entering the number of minutes the SSO was active during each 6-hour time period. Multiply column D times Column E to calculate the gallons spilled during each time period. Add the numbers in Column F together for the Total Estimated SSO Volume per EDU.

Time Period	Flow Rate Per EDU				SSO	
	A	B	C	D	E	F
	Gallons per Period	Hours per period	A ÷ B = Gallons per Hour	C ÷ 60 = Gallons per Hour	Minutes SSO was active during period	D × E = Gallons spilled per period
6am-noon	72	6	12	0.20		
noon-6pm	36	6	6	0.10		
6pm-midnight	54	6	9	0.15		
midnight-6am	18	6	3	0.05		
<b>Total Estimated SSO Volume per EDU:</b>						

STEP 3: Multiply the Estimated SSO Volume per EDU from Step 2 by the number of EDUs from Step 1.  

$$\frac{\text{gallons}}{\text{Volume per EDU}} \times \frac{\text{\# of EDUs}}{\text{\# of EDUs}} = \frac{\text{gallons}}{\text{Estimated SSO Volume}}$$

STEP 4: Adjust SSO volume as necessary considering other factors, such as activity that would cause a fluctuating flow rate (doing laundry, taking showers, etc.). Explain rationale below and indicate adjusted SSO estimate (attach a separate page if necessary):

Estimated SSO Volume: \_\_\_\_\_ gallons

Do you believe that this method has estimated the entire SSO?  Yes  No

If no, you MUST use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:

Name: \_\_\_\_\_ Signature: \_\_\_\_\_  
 Job Title: \_\_\_\_\_ Date: \_\_\_\_\_





City of Sausalito: Overflow Emergency Response Plan	<b>C-6 Side A</b>
<b>Sanitary Sewer Overflow Response Packet Collection System Failure Analysis</b>	

**To be completed by the Sewer System Coordinator**

Incident Report #		Prepared By	
<b>SSO/Backup Information</b>			
Event Date/Time		Address	
Volume Spilled		Volume Recovered	
Cause			
<b>Summary of Historical SSOs/Backups/Service Calls/Other Problems</b>			
Date	Cause	Date Last Cleaned	Crew
Records Reviewed By:		Record Review Date:	
<b>Summary of CCTV Information</b>			
CCTV Inspection Date		Tape Name/Number	
CCTV Tape Reviewed By		CCTV Review Date	
Observations			

Go to Side B

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City of Sausalito: Overflow Emergency Response Plan	<b>C-6 Side B</b>
<b>Sanitary Sewer Overflow Response Packet Collection System Failure Analysis</b>	

<b>Recommendations</b>					
	Type	Specific Actions	Who is Responsible?	Completion Deadline	Who Will Verify Completion?
	No Changes or Repairs Required	n/a	n/a	n/a	n/a
	Repair(s)				
	Construction				
	Capital Improvement(s)				
	Change(s) to Maintenance Procedures				
	Change(s) to Overflow Response Procedures				
	Training				
	Misc.				
Comments/Notes:					
Review Date:					

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**Overflow Emergency Response Plan  
Public Posting**

# **DANGER**

**RAW SEWAGE • AVOID CONTACT**



# **PELIGRO**

**AGUA CONTAMINADA • EVITE TODO CONTACTO**

**City of Sausalito**

**Business hours: 7:30am-3:00pm  
(415) 289-4106**

**After hours or if you reach the City's voicemail:  
(415) 289-4170 or 9-1-1**

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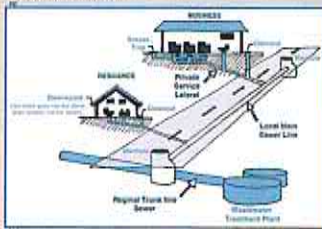


**INSERT DOOR HANGER HERE**

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**How a Sewer System Works**

A property owner's sewer pipes are called **service laterals** and are connected to larger local main and regional trunk lines. Service laterals run from the connection at the home to the connection with the public sewer. These laterals are the responsibility of the property owner and must be maintained by the property owner.



**Is my home required to have a backflow prevention device?**

Section 10.1 of the Uniform Plumbing Code (U.P.C.) states: **Drainage piping serving fixtures which have flood level installed below the elevation of the next upstream manhole cover or private sewer serving such drainage piping shall be protected from backflow of sewage by installing an approved type of backwater valve.** The intent of Section 10.1 is to protect the building interior from mainline sewer overflows or surcharges.

Additionally, U.P.C. 10.6 states: **Backwater valves shall be located where they will be accessible for inspection and repair at all times and, unless continuously exposed, shall be enclosed in a masonry pit fitted with an adequately sized removable cover.**



**If you have a sewage spill from your private sewer line that impacts storm drains, waterways or public property, contact:**

**City of Sausalito**  
(415) 289-4113

**Marin County Environmental Health Services Division**  
(415) 73-6907

California Health and Safety Code, Sections 5410-5416 requires:

- < No person shall discharge law or treated sewage or other waste in a manner that results in contamination, pollution, or nuisance.
- < Any person who causes or permits sewage discharge to any state waters:
  - o Must immediately notify the local health agency of the discharge.
  - o Shall reimburse the local health agency for services that protect the public's health and safety.
  - o Who fails to provide the required notice to the local health agency is guilty of a misdemeanor and shall be punished by a fine between \$500-\$1,000 and/or imprisonment for less than one year.

**San Francisco Regional Water Quality Control Board**

(510) 522-2300  
Requires the prevention, mitigation, response to, and reporting of sewage spills.

**California Governor's Office of Emergency Services (CalOES)**  
(800) 852-7550

California Water Code, Article 3, Chapter 3, Sections 13268-13271 of California Code of Regulations, Title 3, Division 3, Chapter 3.2, Article 2, Sections 2250-2260 require:

- < Any person who causes or permits sewage in excess of 3,000 gallons to be discharged to state waters shall immediately notify the office of Emergency Services.
- < Any person who fails to provide the notice required by this section is guilty of a misdemeanor and shall be punished by a fine less than \$20,000 and/or imprisonment for not more than one year.

**Sewer Spill Reference Guide**

**Your Responsibilities as a Private Property Owner**

Provided to you by:

**City of Sausalito**

420 Litho Street  
Sausalito, CA 94965

(415) 289-4113

[www.ci.sausalito.ca.us](http://www.ci.sausalito.ca.us)

**How do sewage spills happen?**

Sewage spills occur when the wastewater in underground pipes overflows through a manhole, cleanout, or broken pipe. Most spills are relatively small and can be stopped and cleaned up quickly, but if not attended they can cause health hazards, damage to homes and businesses, and threaten the environment, local waterways, and beaches.

**CAUTION!**

When trying to locate a sewer problem, **never** open manholes or other public sewer structures. Only our crews are allowed to open & inspect these structures.

**Common causes of sewage spills:**

- ( Grease build-up
- ( Tree roots
- ( Broken/cracked pipes
- ( Missing or broken cleanout caps
- ( Undersized sewers
- ( Groundwater/rainwater entering the sewer system through pipe defects and illegal connections

**Prevent most sewage backups with a Backflow Prevention Device.**

This type of device can help prevent sewage backups into homes and businesses. If you don't already have a backflow prevention device, contact a professional plumber or contractor to install one as soon as possible.

**Protect the environment.**

If you get sewage from your property is charge of gutter or storm drain, you may be subject to penalties and/or out-of-pocket costs for clean-up and enforcement efforts. The property owner may be charged for costs incurred by agencies responding to spills from private properties.

**What to look for:**

- Sewage spills can be very noticeable if you see water from a manhole or low water level that may take time to be noticed. Don't miss it or account for it in areas. Look for:
- ( Drain backups inside the building
  - ( Wet ground and/or water leaking around manhole lids onto your street
  - ( Leaking water from cleanouts or outside drains
  - ( Unusual odors in areas: sidewalks, external walls, ground/landscape around building

**The following are indicators of possible obstruction in your sewer line:**

- ( Water comes up in floor drains, showers or toilets.
- ( Toilets, showers or floor drains below ground level drain very slowly.

**What to do if there is a spill:**

- ( Immediately notify the City of Sausalito. Our crews locate the blockage and determine if it is a public sewer. If it is a sewer, we move the blockage and arrange for cleanup. If the backup is from your private plumbing, we will call a private service lateral. You are required to immediately:
  - ( Control and minimize the spill by shutting off the water
  - ( Keep sewage out of the storm drain system using sandbags, dirt and/or plastic sheeting
  - ( Call a plumbing professional to repair blockages and make repairs as needed. Look for the yellow pages under "Plumbing/Drain Sewer/Leaking" or "Sewer Contractors."
  - ( Always call your sewer/public works department or public sewer district if sewage spills.

**Spill cleanup inside the home:**

For large spills, a professional cleaning firm should be contacted to clean up impacted areas. You can locate local firms by looking in the Yellow Pages under "Water Damage" or "Fire Damage." Ask your contractor, or the recommended estimator from the insurance company. Sometimes, the owner's insurance will pay for the necessary cleaning used to prevent sewer backups. Not all policies have this coverage, so check with your agent.

If you decide to clean up small spills inside your home, protect yourself from contamination by wearing the following safety measures. These persons should not attempt this type of cleanup.

**Other tips:**

- ( Keep children and pets out of the affected area until cleanup has been completed.
- ( Turn off heating/air conditioning systems
- ( Wear rubber boots, rubber gloves, and goggles during cleanup of the affected area.
- ( Discard items that cannot be washed and disinfected (such as: mattresses, rugs, cosmetics, baby toys, etc.)
- ( Remove and discard drywall and insulation that has been contaminated with sewage or floodwaters.

- ( Thoroughly clean hard surfaces such as flooring, concrete, holding, wood and other furniture, countertops, appliances, sinks and other plumbing fixtures) with hot water and laundry dish detergent.
- ( Help the drying process with fans, air conditioning units, and dehumidifiers.
- ( After completing cleanup, wash your hands with soap and water. Use water that has been boiled for 30 minutes (allow the water to cool before washing your hands) or use water that has been disinfected (solution of 1/8 teaspoon household bleach per gallon of water). Let it stand for 30 min. Water is cloudy, use 1/2 teaspoon household bleach per gallon of water.
- ( Wash clothes worn during cleanup in hot water and detergent (wash part from contaminated clothes).
- ( Wash clothes contaminated with sewage in hot water and detergent. Consider using laundry detergent in our onsite wastewater system has been professionally inspected and serviced.
- ( Seek immediate attention if you become injured or ill.

**Spill cleanup outside the home:**

- ( Keep children and pets out of the affected area until cleanup has been completed.
- ( Wear rubber boots, rubber gloves, and goggles during cleanup of the affected area.
- ( Clean up sewage solids (fecal material) and place in properly functioning toilet or public bag and place in garbage container.
- ( On hard surfaces (areas such as asphalt or concrete, use safe dilute bleach solutions, 1/2 cup of bleach to 2 gallons of water, but don't allow the bleach to storm rain as the bleach can harm the environment.
- ( After cleanup, wash hands with soap and water, use water that has been boiled for 30 minutes (allow to cool before washing your hands) or use water that has been disinfected (solution of 1/8 teaspoon household bleach per gallon of water). Let it stand for 30 min. If water is cloudy, use 1/2 teaspoon household bleach per gallon of water.
- ( Wash clothes worn during cleanup in hot water and detergent (wash part from contaminated clothes).
- ( Wash clothes contaminated with sewage in hot water and detergent. Consider using laundry detergent in our onsite wastewater system has been professionally inspected and serviced.
- ( Seek immediate attention if you become injured/ill.



**Appendix D**  
**FIELD SAMPLING KIT**

City of Sausalito: Overflow Emergency Response Plan

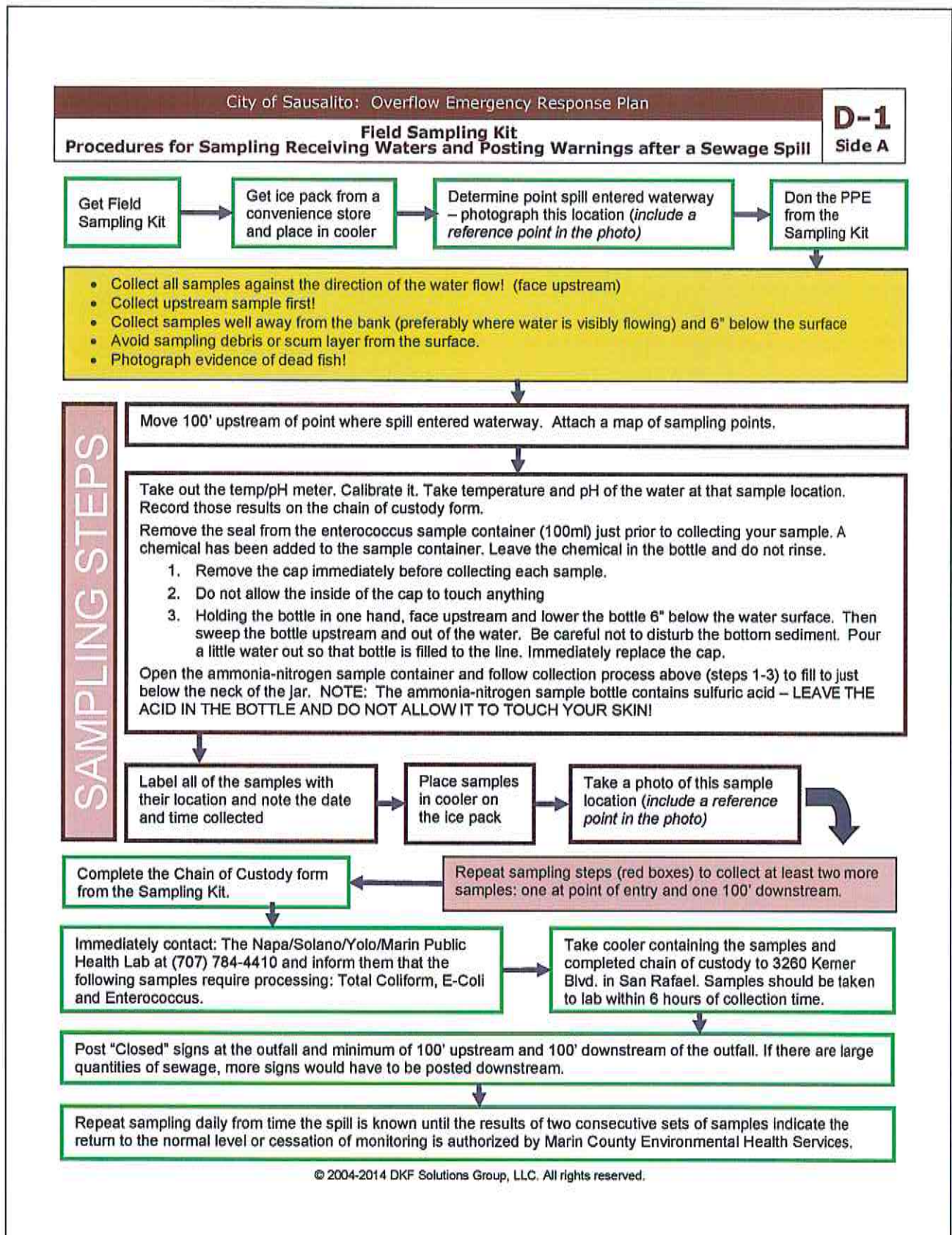
**Field Sampling Kit  
Table of Contents**

<u>Form</u>	<u>Form Number</u>
Procedures for Sampling Receiving Waters and Posting Warnings after a Sewage Spill .....	FS-1
Sample Collection Chain of Custody Record .....	-2

**The Field Sample Kit contains:**

- Cooler w/ice pack
- Latex gloves
- Safety glasses
- 2 ammonia-nitrogen sample bottles (1pt bottle w/H<sub>2</sub>SO<sub>4</sub>)
- 20 Sample bottle labels
- Waterproof Pen (i.e. Sharpie®)
- 10 Enterococcus sample bottles (100ml sterilized bottle)
- Combination temperature/pH meter
- Extra batteries for temperature/pH meter
- Chain of Custody form

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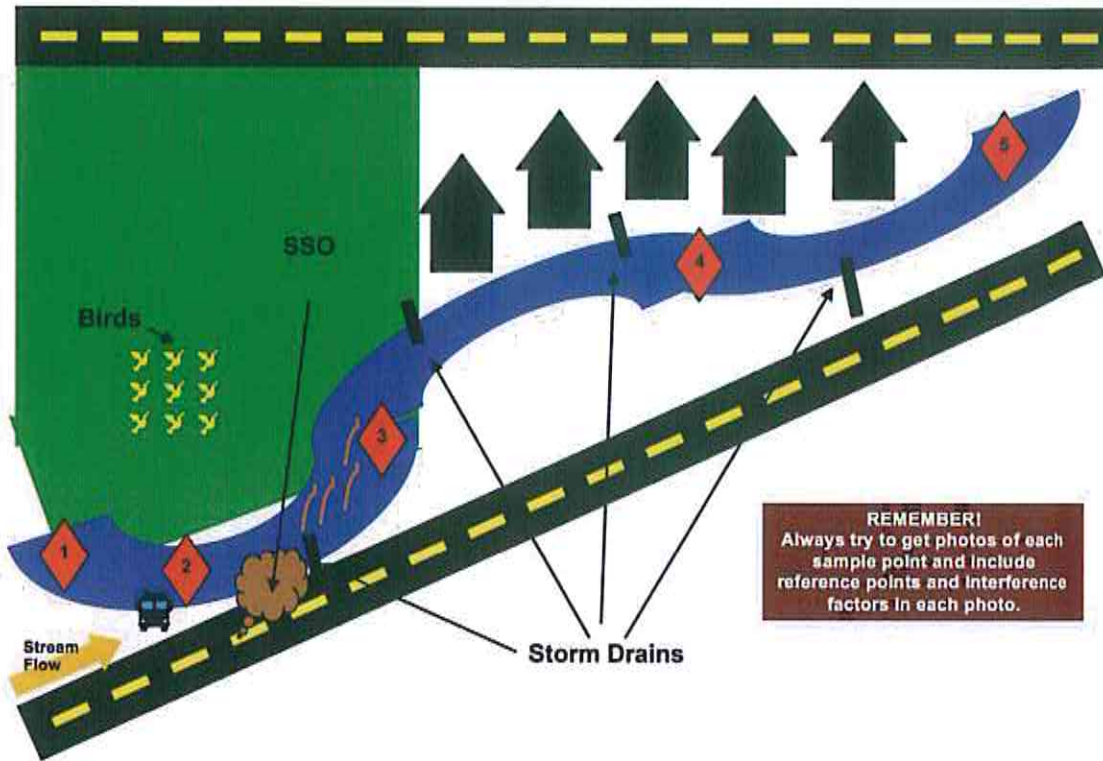


City of Sausalito: Overflow Emergency Response Plan

**Field Sampling Kit**

**Procedures for Sampling Receiving Waters and Posting Warnings after a Sewage Spill**

**D-1**  
Side B



- 1 Sample Location 1: Baseline Sample, no observable interference from birds, animals, runoff, etc
- 2 Sample Location 2: Baseline Sample, observable interference from birds, animals, runoff, etc  
*NOTE:* Only collect this sample if you observe any possible interfering factors upstream from the spill location
- 3 Sample Location 3: Immediately downstream of SSO entry point
- 4 Sample Location 4: Further downstream of SSO entry point – note any possible interfering factors
- 5 Sample Location 5: Further downstream of SSO entry point – note any possible interfering factors

**NOTE:** This example is provided for illustrative purposes only! Base each sampling event on the geography, drainage and interference factors (i.e. birds, animals, runoff, etc.) of the area impacted.

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City of Sausalito: Overflow Emergency Response Plan	<b>D-2</b>
<b>Field Sampling Kit Sample Collection Chain of Custody Record</b>	

<b>Customer Name</b>		<input type="checkbox"/> <b>Hazardous Waste</b>	<b>PO#</b>
<b>Customer Address</b>		<input type="checkbox"/> <b>Unknown Material</b>	<b>WO#</b>
<b>Customer Telephone</b>	<b>Mail Code</b>	<b>CONTRACT LAB INFORMATION</b>	
<b>Program Name</b>		<b>Turnaround Requirement</b>	
<b>Lab Program Coordinator</b>	<b>Phone #</b>	Ship to:	<input type="checkbox"/> Normal (21 days)
<b>Sampled By</b>		Ship Date:	<input type="checkbox"/> Rush:
		Courier:	<input type="checkbox"/> Other:

LIMS# (Issued by Lab)	SAMPLE COLLECTION INFORMATION							Analysis Requested				QA/QC Requirements		Remarks/Notes			
	Date	Time	Type		Sample Location	Field pH	Field Temp	#Containers	Matrix*	Total Coliform	E-coli	Enterococcus				<input checked="" type="checkbox"/> Lab Standard	<input type="checkbox"/> Special (see attached)
			Composite	Grab												<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	Upstream			2	A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	Entry Point			2	A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
			<input type="checkbox"/>	<input checked="" type="checkbox"/>	Downstream			2	A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
			<input type="checkbox"/>	<input type="checkbox"/>				2		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
			<input type="checkbox"/>	<input type="checkbox"/>				2		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
			<input type="checkbox"/>	<input type="checkbox"/>				2		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
			<input type="checkbox"/>	<input type="checkbox"/>				2		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

\*Matrix: P = Potable Water, W = Wastewater, A = Ambient Water, G = Groundwater, S = Soil, B = Biosolids, I = Industrial, O = Other (specify in remarks)

Relinquished	Date	Time

Relinquished to	Date	Time

Transport/Shipping Information		
<input type="checkbox"/> USPS	<input type="checkbox"/> UPS	<input type="checkbox"/> FedEx
Tracing #:		
<input type="checkbox"/> Other:		

**Sample Receiving Documentation**

Container intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	Correct container? <input type="checkbox"/> Yes <input type="checkbox"/> No	Field preserved? <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody tape intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Cooled? <input type="checkbox"/> Yes <input type="checkbox"/> No	Temp. Blank? <input type="checkbox"/> Yes <input type="checkbox"/> No ( °C)	Comments:	
Sample distribution: <input type="checkbox"/> Lab bench <input type="checkbox"/> Ice chest <input type="checkbox"/> Walk-in cooler shelf #		Disposal Date:	Disposed by: (inits.)
C-O-C Distribution	Date: By:	<input type="checkbox"/> Lab Admin File	<input type="checkbox"/> Prog/proj Mgr. <input type="checkbox"/> Lab Prog. Coord. <input type="checkbox"/> Delivery courier <input type="checkbox"/> Pick-up courier

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**Appendix E**  
**CONTRACTOR ORIENTATION**

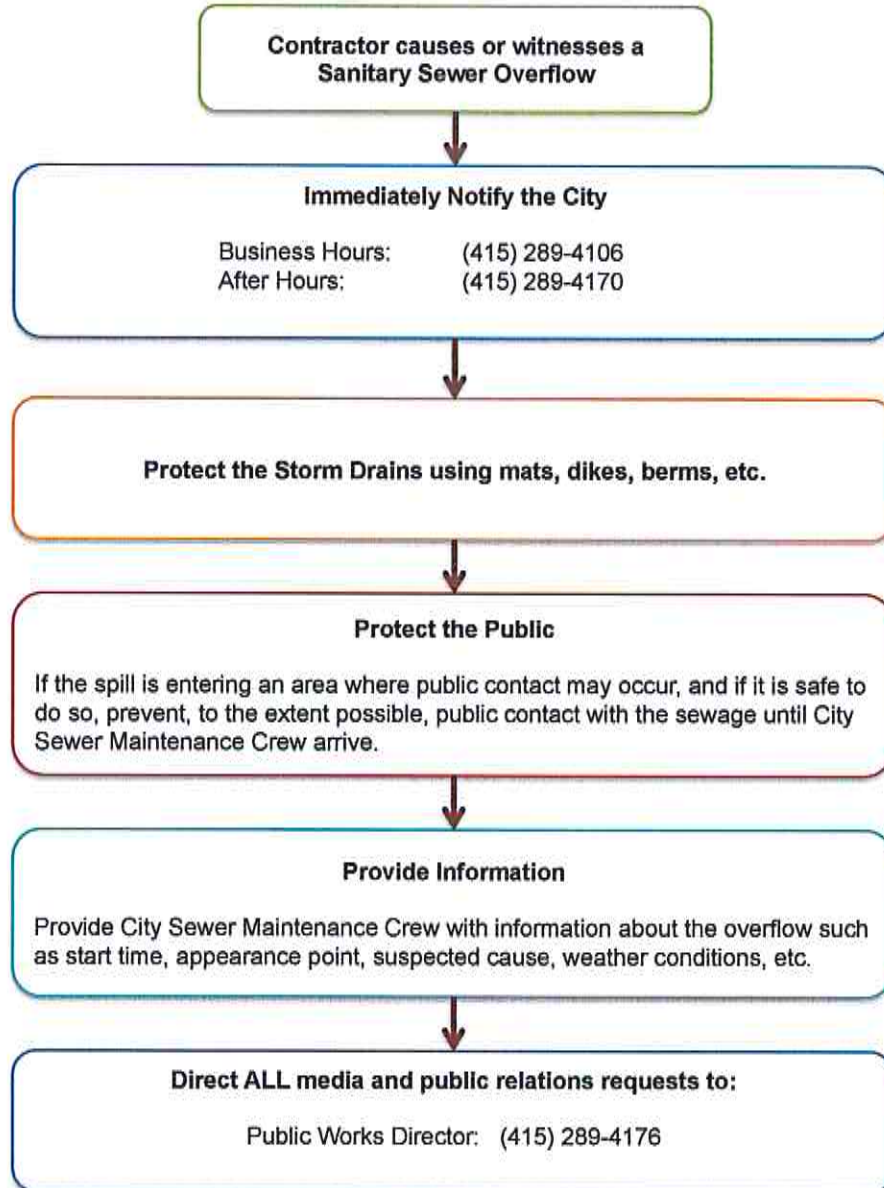
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City of Sausalito: Overflow Emergency Response Plan

**CONTRACTOR ORIENTATION**

The following procedures are to be followed in the event that you cause or witness a Sanitary Sewer Overflow.



## Sanitary Sewer Overflows

How to avoid them and what to do if you don't

**What?** A sanitary sewer overflow (SSO) is a discharge of untreated human and industrial waste before it reaches the wastewater treatment facility.

**Where?** SSOs usually occur through manholes, plumbing fixtures and service cleanouts.

**Why?** SSOs are usually caused by grease, debris, root balls, or personal hygiene products blocking the sewer lines, or by unusually high flow volume.

### How to prevent SSOs:

#### ...when clearing plugged sewer laterals:

- Remove root balls, grease blockages and any other debris from the sewer
- If you can't prevent root balls, grease or debris from entering the sewer main, call us at (415) 289-4106, so we can work with you to remove the blockage and prevent blockages further downstream
- Use plenty of water to flush lines.

#### ...when constructing or repairing sewer laterals:

- Contact the Sewer System Coordinator at (415) 289-4192 for a permit and lateral specifications.
- Check your work area. Make sure there is no debris left in the sewer line before you backfill.
- Avoid offset joints, which may make sewer lines vulnerable to root intrusion and grease or debris accumulation. Properly bed your joints and don't hammer tap.

If you cause or witness an SSO, immediately contact:

**City of Sausalito**

**(415) 289-4106**

*After hours, contact Police Dispatch  
(415) 289-4170*

City of Sausalito

420 Litho Street  
Sausalito, California 94965

[www.ci.sausalito.ca.us](http://www.ci.sausalito.ca.us)

## **Appendix E: Water Quality Monitoring Plan**



**CITY OF SAUSALITO  
WATER QUALITY MONITORING PROGRAM  
2013**

**INTRODUCTION**

This Water Quality Monitoring Program provides the City's response activities and standard operating procedures to be utilized in the OERP, in the event a sanitary sewer overflow (SSO) exceeds 50,000 gallons. This program is reviewed periodically and may be updated as necessary.

State Water Resources Control Board Order No. WQ 2013-0058-EXEC, Amending Monitoring And Reporting Program For Statewide General Waste Discharge Requirements For Sanitary Sewer Systems (Effective September 9, 2013), requires the following:

**SSO WDR Section D. Water Quality Monitoring Requirements**

To comply with subsection D.7(v) of the SSS WDRs, the enrollee shall develop and implement an SSO Water Quality Monitoring Program to assess impacts from SSOs to surface waters in which 50,000 gallons or greater are spilled to surface waters. The SSO Water Quality Monitoring Program, shall, at a minimum:

1. Contain protocols for water quality monitoring.
2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g. safety, access restrictions, etc.).
3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.
4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.
5. Within 48 hours of the enrollee becoming aware of the SSO, require water quality sampling for, at a minimum, the following constituents:
  - i. Ammonia
  - ii. Appropriate Bacterial indicator(s) per the applicable Basin Plan water quality objective or Regional Board direction which may include total and fecal coliform, enterococcus, and e-coli.

Additionally, for spills greater than 50,000 gallons, an SSO Technical Report is required and must be submitted within 45 calendar days from the SSO end date. The SSO Technical Report requirements are described in Element VI of the OERP.

## **SAFETY**

Be aware of safety issues and do not subject personnel to unsafe conditions in order to comply with this Water Quality Monitoring Plan. Scenarios where monitoring may not be possible may include, but are not limited to, heavy rain/storm events where access points have been compromised, flooding around low level areas, or fast-moving water. Employ the buddy system as required to maximize employee safety when sample collection is required.

## **ESTIMATION OF SPILL TRAVEL TIME**

The follow methods are recommended to estimate spill travel time and direction:

- Method-1; use a velocity probe if available to determine the rate of flow in the surface water or
- Method-2; take visual ft/sec measurement from above, based on floating debris, to estimate the number of feet the debris has traveled in seconds.

Either method will provide a means to estimate the distance traveled and identify where the SSO may be headed within the waterway.

## **WATER QUALITY SAMPLING PROCEDURES**

- In the event an SSO reaches a surface water or (flowing) drainage channel tributary, take samples for spills less than 50,000 gallons as appropriate and within 48 hours for spills greater than 50,000 gallons. The purpose of water quality sampling is to determine the nature and extent of the impact of the SSO.
- When sampling an SSO, take a minimum of three separate sample sets as conditions allow. Water quality sampling should not be given precedence over stopping the spill or protection of public health. One sample shall be located 500' upstream of the discharge location. The second sample shall be taken at the discharge location. A third sample shall be taken 1000' downstream of the discharge location.
- Sample for Total and Fecal Coliform, eColi, and Ammonia as a minimum. Conduct additional sampling for BOD and pH if practical.
- Additional follow-up samples are recommended to confirm the extent that the impact reverts back to baseline levels. Follow-up samples may be used to determine if posting of warning signs should be discontinued (if signs were posted).
- Collaboration with the County Health Department should continue until closure is obtained.
- Do not forget to take into account Spill Travel Time.

## **WATER QUALITY SAMPLING EQUIPMENT**

The following list describes equipment that should be stocked and readily available for each water quality sampling event.

- Personnel protective equipment including latex/nitrile gloves and eye protection



- 3 – 100 mL sterile plastic containers for coliform analysis.
- 3 – 1 Liter Poly containers for BOD.
- 3 – 500 mL Poly containers preserved with H<sub>2</sub>SO<sub>4</sub> for Ammonia analysis.
- 3 – sterile funnels
- 1 – Sample Collection Container
- Cooler with ice packs
- Chain of Custody forms

Ensure that there are adequate quantities of sample containers-kits if there are more than three sample locations.

### **WATER QUALITY SAMPLING PROCEDURE**

1. Put on all required protective equipment including latex/nitrile gloves and eye protection
2. Use the 100 mL sterile container for coliform, 1-liter poly container for BOD and 500mL poly container for ammonia. Ammonia sample requires preservation with H<sub>2</sub>SO<sub>4</sub>.
3. Collect three sets of samples for each incident:
  - a. 500 feet upstream
  - b. At the SSO entry point
  - c. 1000 feet downstream
4. Collect all grab samples approximately 3' - 6" below the surface (or if shallower, as close as possible to this depth) to avoid sampling debris or scum from the surface.
5. Collect the sample in a safe manner in the middle of the flow, against the direction of water flow.
6. Rinse the sample collection container.
7. Collect sample in sample collection container and photo-document the locations.
8. Transfer sample from sample collection container to individual sample bottle(s).
9. Leave approximately one inch of head space in individual sample bottles. Do not overfill.
10. Once the lid is opened for the individual sample bottle, do not touch the inside surface of the bottle or lid.
11. For the sample bottles that contain a preservative, take care to keep the preservation material in the container.
12. Immediately place all sample bottles on ice.
13. Complete Chain of Custody form and take samples to contracted environmental laboratory as described in the OERP.

Following are allowable hold times for the sample bottles:

- Ammonia - 28 days (preserved and cooled)
- Bacterial Indicator (enterococcus or fecal/total coliform) - 8 hours (preserved and cooled)
- Biochemical Oxygen Demand - 48 hours (cooled)
- pH Field Test - Immediate