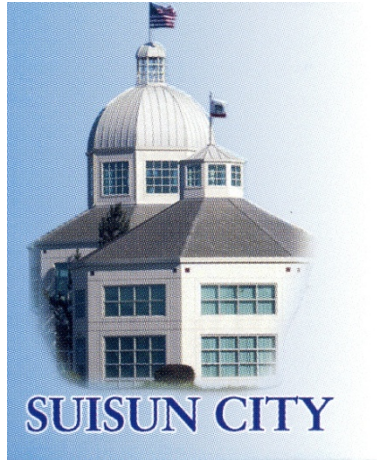




City of Suisun City

Sewer System Management Plan

FEBRUARY 2014

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List of Abbreviations

City	City of Suisun City
FSSD, District	Fairfield-Suisun Sewer District
RWQCB	Regional Water Quality Control Board
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board

INTRODUCTION

This Sewer System Management Plan (SSMP) has been prepared in compliance with requirements of the San Francisco Bay Regional Water Quality Control Board (RWQCB) pursuant to Section 13268 of the California Water Code, as described in the letter from the State Water Resources Control Board (SWRCB), Executive Director, Thomas Howard to the City of Suisun City (City) dated September 9, 2013, regarding the Monitoring and Reporting Program (MRP), State Water Resources Control Board, Order No. **WQ 2013-0058 EXEC**. The SWRCB letter mandates that the City update Sanitary Sewer Master Plan (SSMP) following the guidelines in the SSMP Development Guide prepared by the RWQCB in cooperation with the Bay Area Clean Water Agencies (BACWA). The City must also comply with RWQCB sanitary sewer overflow (SSO) electronic reporting requirements issued in November 2004.

More recently, the State Water Resources Control Board (SWRCB) acted at its meeting on September 9, 2013 to require all public wastewater collection system agencies in California with greater than one mile of sewers to be regulated under General Waste Discharge Requirements (GWDR). The SWRCB action, which will apply to the City, also mandates the development of a SSMP and the reporting of SSOs using an electronic reporting system. The SWRCB SSMP requirements are similar to those promulgated by the RWQCB but differ in organization and some details.

The City's SSMP was prepared by RMC Water and Environment, which entered into a contract with the Fairfield-Suisun Sewer District (FSSD) in November 2005 to prepare the District's SSMP in coordination with SSMPs for the Cities of Fairfield and Suisun City. Suisun City is using staff to update the SSMP to meet compliance with Order No. **WQ 2013-0058 EXEC**.

The intent of this SSMP is to meet the requirements of both the RWQCB and the Statewide GWDR. The organization of this document is consistent with the RWQCB guidelines, but the contents address both the RWQCB and SWRCB requirements. The SSMP includes eleven sections, as follows:

- I. Goals
- II. Organization
- III. Legal Authority
- IV. Operation & Maintenance Program
- V. Design & Performance Provisions
- VI. Overflow Emergency Response Plan
- VII. Fats, Oils and Grease Control Program
- VIII. System Evaluation and Capacity Assurance Plan
- IX. Monitoring, Measurement, and Program Modifications
- X. SSMP Program Audits
- XI. Communication Plan

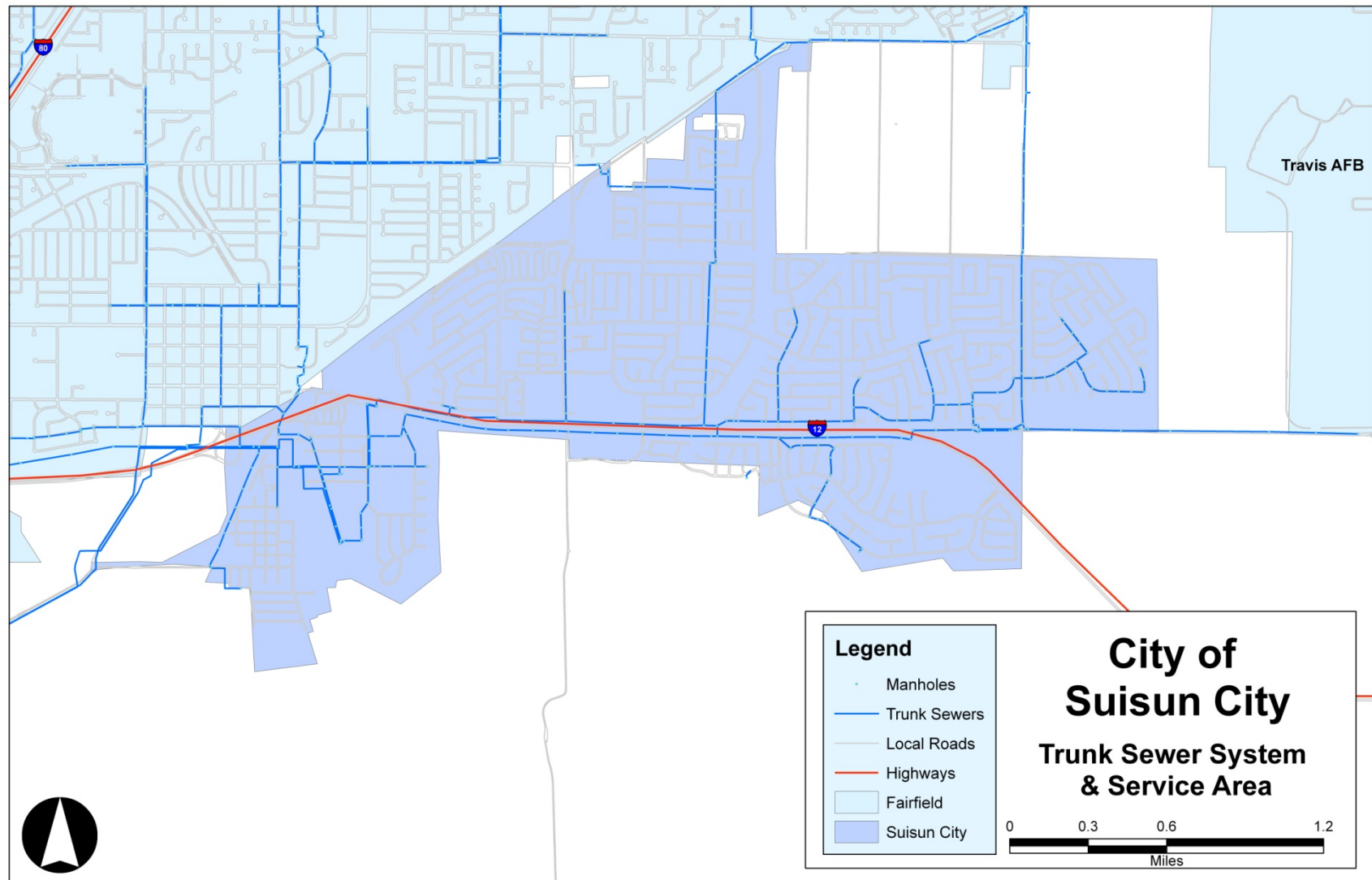
SYSTEM OVERVIEW

FSSD and the City of Suisun City jointly operate and maintain the wastewater collection system that serves the City. FSSD owns and operates the trunk sewer system, which includes all 12-inch and larger sewers and the major pump stations and force mains that convey wastewater to the District's wastewater treatment plant. FSSD also owns, operates and maintains all of the pump stations in the City's wastewater collection system. The City, along with the City of Fairfield and Travis Air Force Base, is a "satellite collection system" to FSSD, and owns and operates only those 10-inch and smaller gravity sewers within its service area.

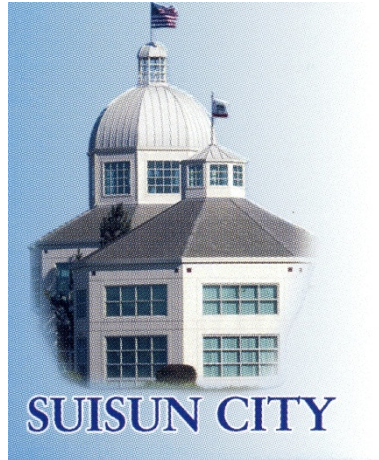
The City's portion of the system consists of approximately 74 miles of gravity sewer. The City does not own or operate any sanitary sewer pump stations or force mains.

Figure i shows the City's service area and FSSD trunk sewers that serve the City.

Figure i: Sewer System and Service Area



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City of Suisun City

Sewer System Management Plan

Element I: Goals

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List of Abbreviations

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FSSD, District	Fairfield-Suisun Sewer District
RWQCB	Regional Water Quality Control Board
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board
WWTP	Wastewater Treatment Plant

I. GOALS

1 Introduction

The intent of this section is to identify the goals that Suisun City has set for its SSMP. These goals are intended to provide focus for City staff to continue high-quality work and to implement improvements in the management of the City's wastewater collection system.

2 Regulatory Requirements for Goals Element

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

RWQCB Requirement:

The collection system agency must develop goals to manage, operate, and maintain all parts of its collection system. The goals should address the provision of adequate capacity to convey peak wastewater flows, as well as a reduction in the frequency of sanitary sewer overflows (SSOs) and the mitigation of their impacts.

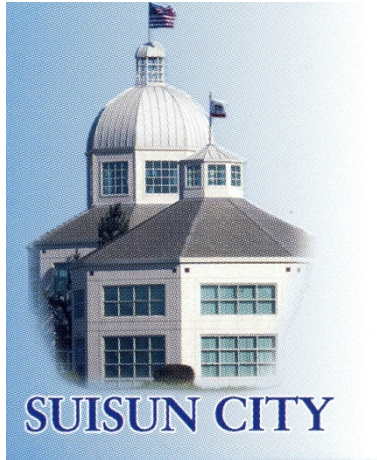
SWRCB Requirement:

The collection system agency must develop goals to properly manage, operate, and maintain all parts of its wastewater collection system in order to reduce and prevent SSOs, as well as to mitigate any SSOs that occur.

3 SSMP Goals

The goals of the Suisun City's SSMP are:

- To properly manage, operate, and maintain all portions of the City's wastewater collection system.
- To provide adequate capacity to convey peak wastewater flows to the District's trunk sewer system and WWTP.
- To plan for the appropriate renewal and replacement of wastewater collection system facilities to maintain their long-term structural integrity and reliability.
- To minimize the frequency of SSOs.
- To mitigate the impacts that are associated with SSOs.
- To meet all applicable regulatory notification and reporting requirements.



City of Suisun City

Sewer System Management Plan

Element II: Organization

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List of Abbreviations

City	City of Suisun City
FSSD, District	Fairfield-Suisun Sewer District
OES	Governor's Office of Emergency Services
RWQCB	Regional Water Quality Control Board
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board

II. ORGANIZATION

1 Introduction

The intent of this section of the SSMP is to identify City Staff who are responsible for implementing this SSMP, responding to SSO events, and meeting the SSO reporting requirements. This section also includes the designation of the Authorized Representative to meet SWRCB requirements for completing and certifying spill reports.

2 Regulatory Requirements for Organization Element

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

RWQCB Requirement:

The collection system agency's SSMP must identify staff (names and phone numbers) responsible for implementing measures outlined in the SSMP, including management, administration, and maintenance positions. Identify the chain of communication for reporting and responding to SSOs.

SWRCB Requirement:

The collection system agency's SSMP must identify:

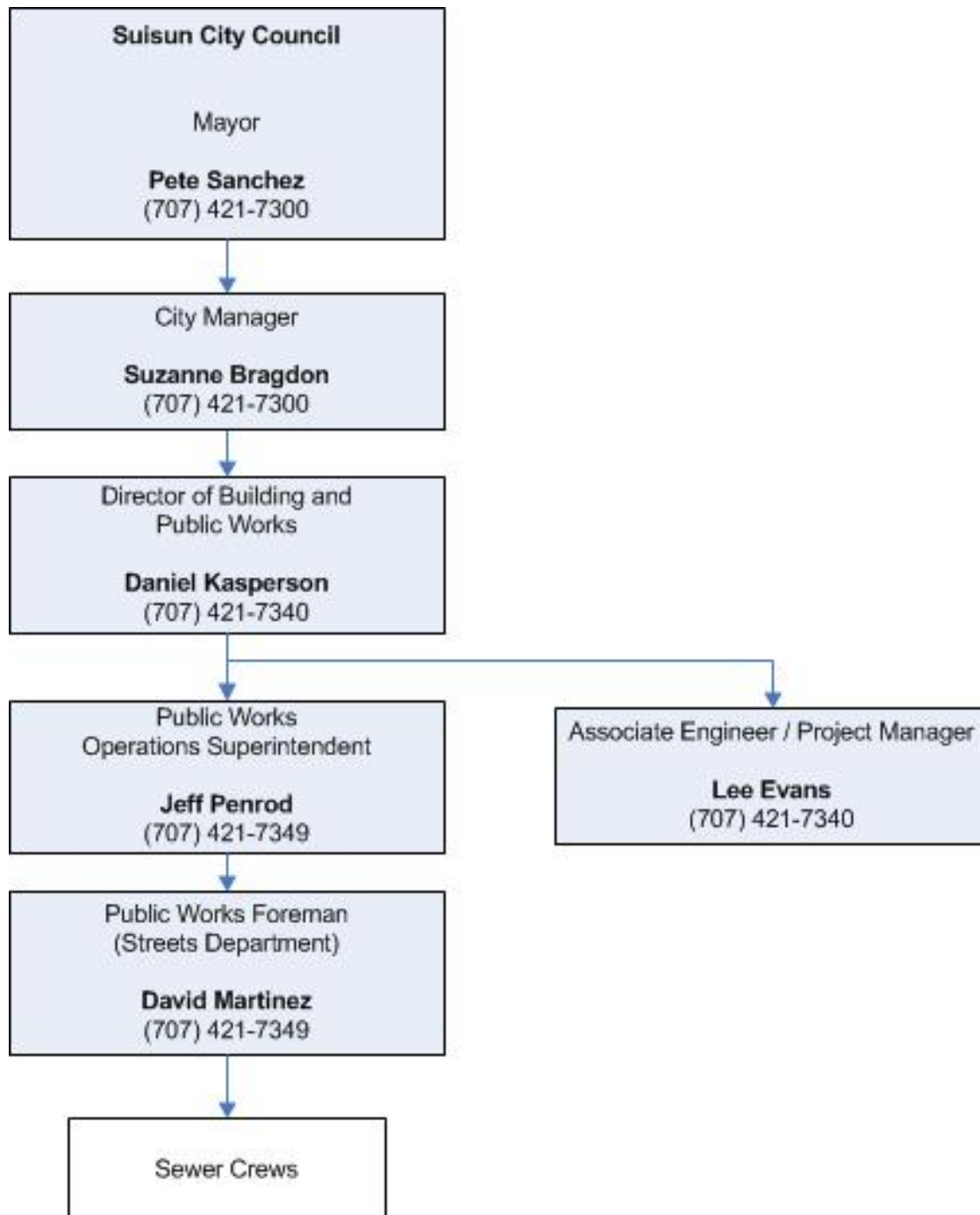
- The name of the responsible or authorized representative;
- The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. Include lines of authority as shown in an organization chart or similar document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

3 Organization

3.1 Organization Chart

The organization chart for the management, operation, and maintenance of the City's wastewater collection system is shown on **Figure 3-1**.

Figure 3-1: Organization Chart



3.2 Authorized Representative

The City's authorized representative in all wastewater collection system matters is **Jeff Penrod**, Public Works Operations Superintendent. Mr. Penrod is authorized to certify and submit electronic and non-electronic spill reports for the SWRCB and any other appropriate government agencies.

David Martinez, Public Works Foreman (Streets), is authorized to act in Mr. Penrod's absence. Mr. Martinez is also authorized to submit SSO reports to the appropriate government agencies.

Daniel Kasperson Director of Public Works, is also authorized to act in Mr. Penrod's absence. Mr. Penrod is also authorized to submit SSO reports to the appropriate government agencies.

The names, positions, and contact information for each of the City Staff responsible for implementing specific measures of this SSMP are included in **Appendix II-A**.

3.3 Responsibility for SSMP Implementation

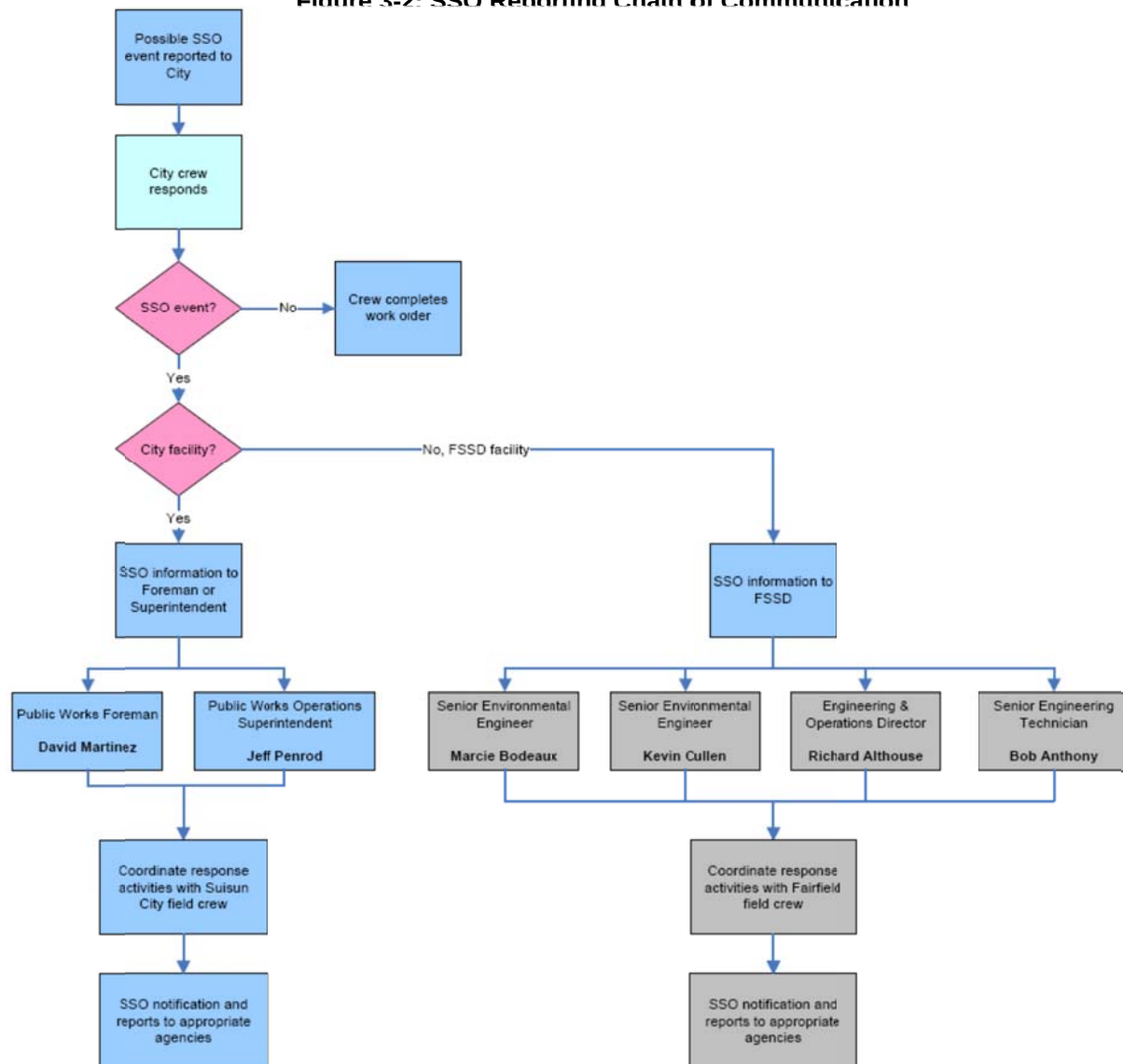
Mr. Penrod is responsible for developing, implementing, and maintaining the City's SSMP.

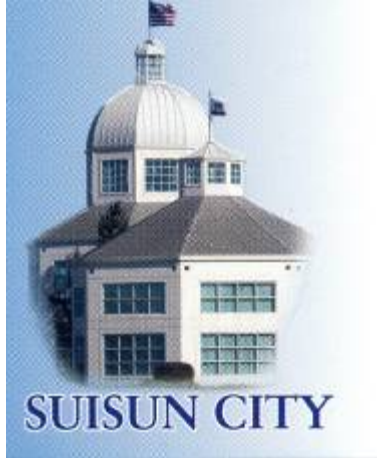
3.4 SSO Reporting Chain of Communication

The SSO Reporting Chain of Command is shown in Figure 3-2.

The SSO Reporting process is described in detail in Element VI - Overflow Emergency Response Plan.

Figure 3-2: SSO Reporting Chain of Communication





City of Suisun City

Sewer System Management Plan

Element III: Legal Authority

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List of Abbreviations

CCTV	Close Circuit Television
Cities	Cities of Fairfield and Suisun City
CY	Calendar Year
Design Standards	Fairfield-Suisun Sewer District Pump Station and Collection System Design Standards
FOG	Fats, Oils, and Grease
FSE	Food Service Establishment
FSSD, District	Fairfield-Suisun Sewer District
FY	Fiscal Year
GRD	Grease Removal Device
I/I	Infiltration and Inflow
Ordinance	Fairfield-Suisun Sewer District Wastewater Discharge Ordinance
PVC	Polyvinyl Chloride
RWQCB	Regional Water Quality Control Board
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board

III. LEGAL AUTHORITY

1 Introduction

This element of the SSMP discusses the City's Legal Authority. This section fulfills the Legal Authority requirements of both the RWQCB (Element 5) and the SWRCB (Element 3).

2 Regulatory Requirements for Legal Authority Element

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

RWQCB Requirement:

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

SWRCB Requirement:

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

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

Included below are several SWRCB legal authority requirements pertaining to the City's FOG source control program. Although these requirements are presented in the FOG Control element (Element IV) of this SSMP, they are included in this Legal Authority element in order to present all legal authority issues in one place. The City's FOG source control program shall include the following:

- The legal authority to prohibit [FOG] discharges to the system; and,
- General enforcement authority and the authority to inspect grease producing facilities.

3 Wastewater Discharge Ordinance

Ordinance 282 (Ordinance) of the *Suisun City Code, 1983* (City Code) describes the City's current regulations with respect to wastewater discharge. The regulations provided in the Ordinance that address the specific requirements for this SSMP are summarized below. The City plans to consider revisions to its City Code in the future, in order to include additional ordinances and/or measures required by this SSMP.

The existing Ordinance is included in its entirety as **Appendix**.

3.1 Prevention of Illicit Discharges

Measures prohibiting illicit discharges are included in paragraph 2 of the City's Ordinance, and are summarized below. Refer to **Appendix** for the complete text. Additional measures that the City plans to consider in the future are also noted below.

3.1.1 Infiltration and Inflow

A prohibition against discharge of extraneous groundwater and storm water is not specifically included in the City's current Ordinance. Therefore, the City plans to add language to its Ordinance prohibiting storm water, groundwater, rainwater, street drainage, subsurface drainage or yard drainage to be discharged through direct or indirect connections to a community sewer unless a permit is issued by the City. The City plans to work with FSSD, through sewer system flow monitoring, master planning, and hydraulic modeling, to assess the magnitude of I/I in its collection system, and to determine if adequate capacity exists to handle the I/I. If the City determines that I/I is a problem (i.e., causes risk of SSOs), the City will evaluate the need to enforce the I/I prohibitions for its service connections. Updated and/or additional language addressing infiltration and inflow, which the City will consider including in its Ordinance, is included in **Table III-1**.

3.1.2 Fats, Oils, and Grease

Paragraph 1, section B of the City's Ordinance prohibits the discharge of any water or waste which may contain more than 100 parts per million, by weight, of fat, oil, or grease (FOG). Section E of the same paragraph prohibits the discharge of any substance capable of causing a flow obstruction or any other interference with the proper operation of the sewage works. Further, paragraphs 2 and 3 of the Ordinance describe the conditions for which grease, oil and sand interceptors are required, and how they must be maintained.

3.1.3 Other Discharges

Other discharges prohibited by the Ordinance include discharges over 100 degrees Fahrenheit in temperature; flammable liquids, solids, or gas; garbage that has not been properly shredded; solid or viscous materials capable of causing an obstruction to flow; water or waste having a pH under 5.5 or above 9.0; other hazardous wastes; waste containing excessive suspended solids or dissolved matter; noxious or malodorous gases capable of causing public nuisance; and septic tank sludge.

3.1.4 Inspection

Paragraph 10 of the Ordinance provides that the sewer inspector of the Fairfield-Suisun Sewer District shall be the ex officio inspector for the City. In the future, the City will consider including measures providing the authority to inspect the premises of any discharger to document compliance with its ordinance(s). Potential language addressing inspection authority is included in **Table III-1**.

3.2 FOG and Debris Discharge Limitations

As discussed above, paragraph 2 of the City's Ordinance prohibits discharges containing more than 100 parts per million, by weight, of FOG; additionally, paragraphs 2 and 3 address the necessity and maintenance of grease, oil and sand interceptors.

While paragraph 2 provides limits to the nature of discharged FOG, the City will consider developing additional language that addresses FOG discharge and grease disposal in the sewer system in greater detail. Updated and/or additional language addressing FOG and grease removal, which the District will consider including in its Ordinance, is included in **Table III-1**. The City plans to evaluate the necessity of additional language in the future.

3.3 Enforcement Measures

Under Title 1 of the City Code, different enforcement mechanisms are provided in order to achieve a maximum degree of compliance. The enforcement mechanisms set forth range from written compliance orders to formal criminal prosecution.

3.4 Lateral Maintenance Responsibility

The City's current practice of maintaining and rehabilitating, as necessary, the portion of service laterals located in the public right-of-way, if they have a cleanout at the property line, is undocumented. The City

plans to include in its revised City Code a measure that addresses this practice, provided that applicable design and construction standards are met. Language addressing lateral maintenance responsibility, which the District will consider including in its Ordinance, is included in **Table III-1**. The City plans to evaluate the necessity of additional language in the future.

Table III-1: Potential Updates/Additions to Legal Authority Language

Topic	Updated and/or Additional Language to be Considered
Definitions	“FOG” – Fats, Oils, and Grease, including fats, oils, grease, waxes or other related constituents. FOG may be of vegetable or animal origin, including butter, lard, margarine, vegetable fats and oils, and fats in meats, cereals, seeds, nuts, and certain fruits. FOG may also be of mineral origin, including kerosenes, lubricating oil, and road oil. FOG in the wastewater collection system is generally present as, but need not be, a floatable solid, a liquid, a colloid, an emulsion, or in a solution.
	“Inflow/Infiltration or I/I” – Waters other than sewage, including groundwater and stormwater, which enter into building and/or community sewers, either at points of direct connection to the system or through defects, including cracks, offset joints and so forth, in the sewer pipes.
Prohibition of Discharges	FOG Disposal Prohibited. No User shall dispose of any FOG, or cause any FOG to be disposed, by discharge into any drainage piping, by discharge into any community or lateral sewer, by discharge into any storm drainage system, or by discharge to any land, street, public way, river, stream, or other waterway, which causes the User's discharge to exceed the local limits set forth in Section 3.09. FOG from GRDs shall not be discharged into any community or lateral sewer.
	Prohibitions on Unpolluted Water, Storm Drainage, Ground Water, and Inflow or Infiltration. Storm water, ground water, rain water, street drainage, subsurface drainage or yard drainage, or any other I/I or extraneous water shall not be discharged through direct or indirect connections to a community or lateral sewer unless a permit is issued by the City or the Fairfield-Suisun Sewer District. Unpolluted water, including but not limited to cooling water, process water or blow-down from cooling towers or evaporative coolers, or diatomaceous earth filter backwash shall not be discharged through direct or indirect connection to a community sewer unless a permit is issued by the City or the Fairfield-Suisun Sewer District. The City or the Fairfield-Suisun Sewer District may approve such discharge only when no reasonable alternative is available, where such water is determined to cause a pollution hazard if not discharged to the sewer, or when such alternative, in the determination of the City or the Fairfield-Suisun Sewer District, is unacceptable.
Authority to Inspect	The City and its designated agents shall have the authority to inspect the premises of any person discharging waste to the City's wastewater collection system, including, but not limited to, lateral sewers, any areas or points of sampling, discharge, process, storage, and/or any other areas as deemed reasonable and necessary by the City to document the person's compliance with the requirements of this Wastewater Discharge Ordinance.

Topic	Updated and/or Additional Language to be Considered
Maintenance Responsibility	Maintenance of Lateral Sewers, Cleanouts and Connections. All lateral sewers from the building wall to the connection to the community sewer are the property of the owner of the connected building. All property owners whose properties are connected to a community sewer by a lateral sewer, and whose lateral sewer is equipped with a cleanout located at or near the property line, shall at their own expense maintain the upper lateral sewer in a fully functioning condition and ensure the lateral sewer is free of cracks, leaks, inflow or infiltration of extraneous water, root intrusion or open joints. All property owners whose properties are connected to a community sewer by a lateral sewer, but whose lateral sewer is not equipped with a cleanout at or near the property line, shall at their own expense maintain the entire lateral sewer in similar fully functioning condition. Property owners shall ensure that laterals drain freely to the between the building and the community sewer, including the cleanout where applicable, without excessive sags that collect grease and sediment. A cleanout and an overflow device approved by the director of public works shall be installed and maintained, at the sole expense of the property owner, on all new lateral sewers, or existing lateral sewers found, by the sole interpretation of the City, to have a blockage history or accelerated line maintenance. The cleanout shall be located within the City right-of-way in conformance with City Standard Details.

4 Design and Construction of Sewers and Connections

The City's legal authority to regulate the design and construction of sewers and connections is provided under *Ordinance 456* of its City Code, which states that "the design and type of improvements shall conform to the city standard details and specifications approved and in use by the city for streets and facilities." Standards pertaining to the design, construction, and inspection of gravity sewer systems, sewer force mains, and other facilities to be operated and maintained by the City are included in the *City of Suisun City Design Standards, Standard Specifications, and Details, 1996* (Standards). The Standards have been developed by the City to be used by developers, consultants, and others to provide the City with consistent, functional, reliable, and user-friendly facilities. The City standards with respect to sewer rehabilitation are indirectly addressed under Section 5.02 of the Standards, which requires that the design of special or unusual features or structures requires individual study and approval by the City Engineer and the Fairfield-Suisun Sewer District Engineer. The City's design and construction standards are discussed in further detail in Element V of the City's SSMP.

4.1 Engineering Design Standards

Section 5 of the Standards addresses the design of gravity sewers (10 inches in diameter or smaller) and force mains. The City does not own or operate any gravity sewers greater than 10 inches in diameter. The Standards address sizing; flows; capacity; laterals; appurtenances; and unusual design, including force mains. Sewers 12 inches in diameter or larger must be designed in accordance with FSSD standards.

4.2 Specific Provisions

Section 11 of the Standards addresses the construction of gravity sewers and force mains. The provisions address materials and installation, including inspection and testing.

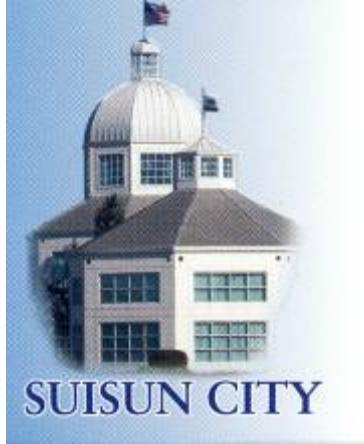
4.3 Lateral Maintenance Access

Section 5 of the Standards requires the provision of a back-of-sidewalk cleanout for all service laterals. The location of the required cleanout is in the City's right-of-way.

5 Agreements with Other Agencies

Per the *Fairfield-Suisun Sewer District Act*, amended September 2002, the District consists “of the territory in Solano County now contained within the Cities of Fairfield and Suisun City. Any territory hereafter annexed to either city shall be a part of the district upon annexation.” This document serves as the basis for the District’s provision of trunk sewer conveyance and wastewater treatment and disposal for the City’s wastewater. The District is also considering legally formalizing the ownership, operation, and maintenance of *specific* collection system facilities, including community pump stations located within the City. The City does not currently serve any satellite collection systems.

The *Fairfield-Suisun Sewer District Act* is included in its entirety as **Appendix**.



City of Suisun City

Sewer System Management Plan

Element IV: Operations & Maintenance Program

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List of Abbreviations

BACWA	Bay Area Clean Water Association
CAD	Computer Aided Design
CCTV	Closed Circuit Television
City	City of Suisun City
CMMS	Computerized Maintenance Management System
FOG	Fats, Oils, and Grease
FSSD, District	Fairfield-Suisun Sewer District
FY	Fiscal Year
GIS	Geographical Information System
NASSCO	National Association of Sewer Companies
RWQCB	Regional Water Quality Control Board
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board
TVI	Television Inspection

IV. OPERATIONS AND MAINTENANCE PROGRAM

1 Introduction

This element of the SSMP discusses the City's sanitary sewer collection system Measures & Activities. This section fulfills the Measures and Activities requirement of the RWQCB (Element 6) and the Operation and Maintenance Program requirements of the SWRCB GWDR (Element 4).

2 Regulatory Requirements for Operations & Maintenance

The summarized requirements for the Operations and Maintenance Program element of the SSMP are:

RWQCB Requirement:

- a) The City must maintain up-to-date maps of its wastewater collection system facilities
- b) The City shall allocate adequate resources for the operations, maintenance and repair of its collection system
- c) The City shall prioritize its preventive maintenance activities
- d) The City shall identify and prioritize structural deficiencies and implement a program of short-term and long-term actions to address them
- e) The City shall provide contingency equipment to handle emergencies, and spare/replacement parts intended to minimize equipment/facility downtime
- f) The City shall provide training on a regular basis for its staff in collection system operations, maintenance, and monitoring
- g) The City must implement an outreach program to educate commercial entities involved in sewer construction or maintenance about the proper practices for preventing blockages in private laterals. This requirement can be met by participating in a region-wide outreach program.

SWRCB Requirement:

The City's SSMP must include those elements listed below that are appropriate and applicable to the City's system:

- a) Maintain up-to-date maps of its wastewater collection system facilities, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater 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 works 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 system for ranking the conditions 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
- e) Provide equipment and replacement part inventories, including identification of critical replacement parts.

3 Collection System Mapping

3.1 Current Mapping System

The City currently uses a set of 11-inch by 17-inch paper sewer maps that show collection system assets (gravity sewers, manholes, pipe diameter, and flow direction). There is one master set and several working copies of the sewer maps. The City has no sewage force mains or pump stations. The City plans to add the applicable storm drain pump stations to its maps. The paper maps are created using CAD software (Microstation), and are based on aerial orthophotography conducted by the District in. As such, the locations of the facilities included on the maps are considered to be accurate. Currently, 30 sheets (map grids) are required to cover the City's collection system. The map grids utilize the same grid numbering system as the District and the City of Fairfield. Although District manhole numbers and pipe sizes are shown, the City's manholes are not numbered on the maps. The City is currently implementing a manhole numbering system.

The City is nearing completion of implementing a Geographical Information System (GIS) to replace its paper collection system maps and ensure that all collection system assets are accurately represented; the City has already acquired a license for ArcGIS software for this purpose. At a minimum, the City's GIS will include pipe diameters, flow direction, and manhole numbers; additional information from record drawings will be incorporated as resources allow. The City may elect to create its GIS-based maps by contracting with the District (which already has adequate expertise and a number of the base layers that would be required for the City's GIS), or with an outside contractor. Alternatively, the City may elect to hire additional personnel to create the GIS maps. If this approach is chosen, the City will coordinate with FSSD and the Solano Irrigation District to obtain base layers.

Table IV-1 lists the information currently included on the City's maps, as well as the information that will be included in the City's future GIS. **Figure IV-1** and **Figure IV-2** provide examples of the updated mapping maintained by the City.

Table IV-1: Map and GIS Information

Asset Type	Information Included on Existing Maps	Information Included in GIS
Gravity Sewer	Diameter Flow Direction Location, with reference to streets	Diameter
		Flow Direction
		Stoppage History
		Location, with reference to streets
		Slope
		Installation Date
Manhole	Location, with reference to streets	Manhole number
		Location, with reference to streets
		Rim Elevation
		Invert Elevations
		Installation Date
		Overflow History

Figure IV-1: Example Updated Sewer Map

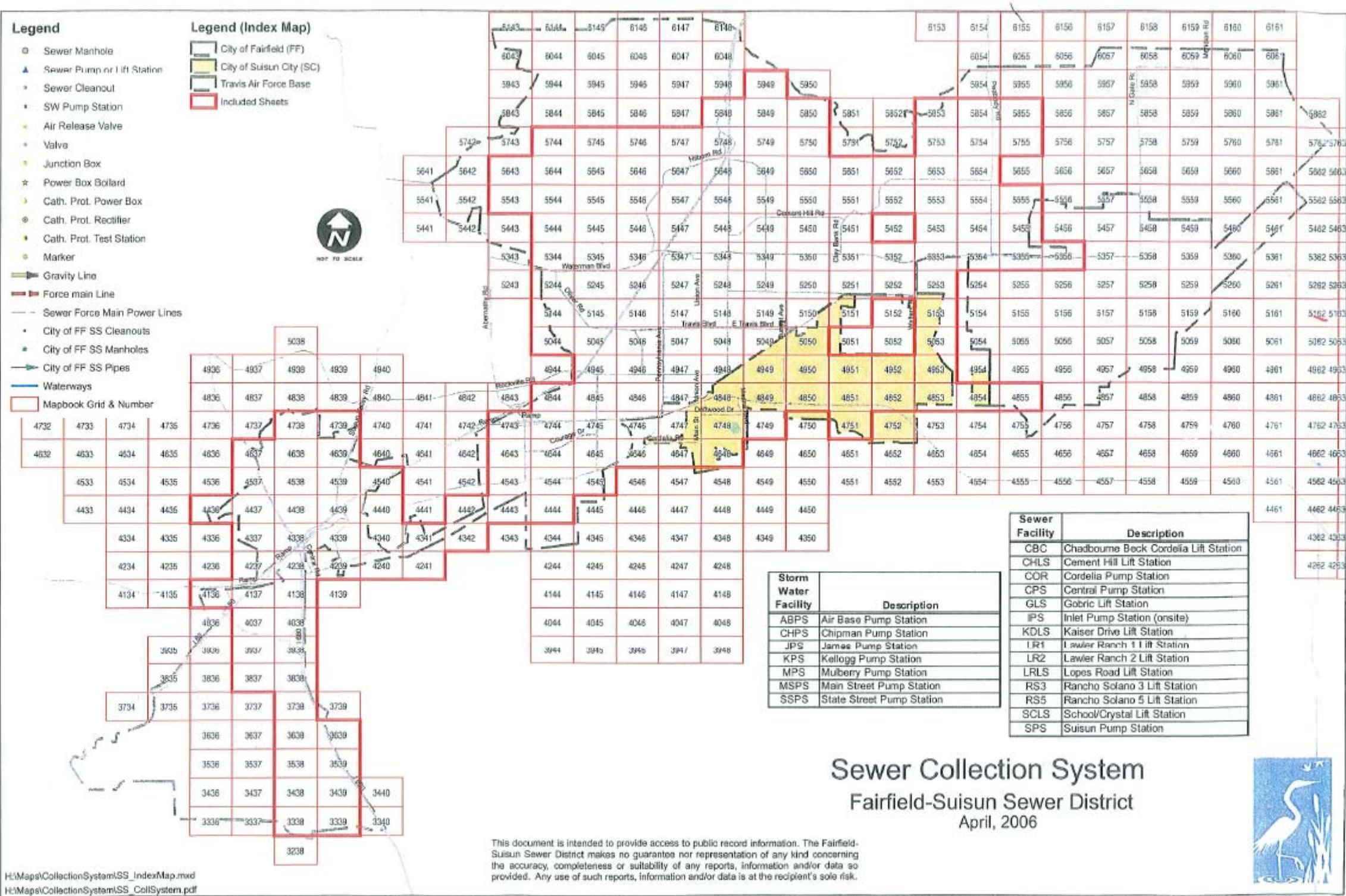


Figure IV-2: Example Updated Sewer Map (zoomed)



3.2 Procedures for Maintaining and Updating Maps

Currently, corrections and additions are manually noted on the master set and working copies of the paper maps.

To formalize the process for map corrections, the City will immediately implement the following procedures:

1. A discrepancy between field conditions and the sewer maps is observed in the field.
2. Field crew marks up the appropriate sheet(s) of the working copy of the sewer map, and notes the date the markup was made.
3. A copy of the marked-up sewer map sheet(s) is inserted into all working sets of the sewer maps.
4. The original marked-up sewer map is filed into a “Sewer Map Corrections” folder that is kept with the master set of the sewer maps.
5. Corrections will be made quarterly (to CAD-based mapping, and ultimately to GIS-based mapping).
6. Updated sewer maps are inserted into all working sets of the sewer maps.

In the future, the City will develop a procedure to ensure that all existing and future development is included in the GIS. To meet this goal, the City may elect to require developers to provide electronic files of as-built CAD drawings of new development to facilitate their inclusion in the GIS.

4 Prioritized Preventive Maintenance

4.1 Frequency of Sewer Cleaning & Prioritization

The City’s long-term goal is to proactively clean all of its sewers on a 3-year cycle. Currently, the City cleans selected ‘hot spot’ sewers. The primary basis of selection for these sewers was the historical presence of fats, oils, and grease (FOG). Based on the performance of the collection system during FY 05/06, and the results of planned CCTV inspections described below, the City plans to expand and refine the list of sewers to be cleaned to include sewers outside of ‘hot-spot’ areas, as well as refine the cleaning frequencies for ‘hot spot’ areas. The City will also consider implementing procedures for recording the nature of debris (e.g., Light, Medium, or Heavy) removed during sewer cleaning, in order to provide feedback to cleaning crews and to help refine cleaning frequencies.

4.2 Tools & Procedures

City field crews generally perform sewer cleaning with hydroflushing equipment. The City also uses outside contractors to perform sewer cleaning on an as-needed basis. The City will consider using “proofing” techniques (i.e., using a root-saw to verify that sewers have been adequately cleaned) to provide immediate feedback to sewer field crews.

4.3 Scheduling & Documentation

The City currently uses a combination of paper forms, Excel spreadsheets and maps to schedule and record all collection system maintenance. Maintenance history information includes the lengths and locations of the work performed.

In the future, the City plans to implement a computerized maintenance management system (CMMS) to schedule and track collection system preventive maintenance activities based on manhole-to-manhole segments. The City’s CMMS will be capable of generating work orders, interfacing with the City’s GIS,

and storing, organizing and prioritizing CCTV inspection data. The City will need to hire additional personnel to support the CMMS or, alternatively, the City may elect to hire a consultant to host and/or manage the CMMS.

5 Scheduled Inspections & Condition Assessment

5.1 Inspection Frequency

Prior to 2008, CCTV inspection was limited to following SSOs and other sewer problems. In 2002, approximately 20,000 feet (5.1%) of the City's sewers in areas with the highest level of maintenance problems were CCTV inspected.

In order to implement a consistent, system-wide CCTV inspection program, the District agreed to purchase and operate CCTV equipment on behalf of all three agencies. The District purchased the CCTV equipment and began operating them in FY 07/08. The District, on behalf of the City, has begun by inspecting approximately 20 percent (or approximately 78,000 feet) of the City's uninspected sewers in FY 07/08. Following the initial year's inspection, the District will continue by inspecting approximately 20 percent of the City's remaining uninspected sewers each fiscal year until all sewers have been inspected. Sewers will be prioritized for inspection based on pipe age, material, location, criticality, and maintenance history. An example inspection report is included in **Appendix**.

Following the baseline inspection, the frequency of subsequent inspections will be based on the condition of the sewer during the initial CCTV inspection. The CCTV program will also include the inspection of sewers shortly after a blockage/stoppage event, in order to determine the primary cause of the blockage/stoppage so that appropriate action can be taken.

In conjunction with CCTV inspection and cleaning work, the City will conduct inspections of all manholes. Similar to sewer inspections, the frequency of subsequent manhole inspections will be determined following an evaluation of the initial inspection results.

5.2 Television Inspection Codes

In participation with the District, the City will use a standard set of observation and pipe material codes to identify the defects and materials observed during CCTV inspection of its collection system. The City and the District plan to use the NAASCO PACP codes for this purpose. Future CCTV inspection records (inspection logs, video, and still photos) will also be reviewed by City staff to verify the observed defects and material classifications. Upon development/adoption, the City's observation and pipe material codes will be included in **Appendix**.

5.3 Manhole Inspection Form

In participation with the District, the City uses a standard manhole inspection procedure for identifying the condition and defects in manholes, as well as a form to record the observations. The City and the District use the NAASCO MACP codes and procedures for this purpose. An example of the City's Manhole Inspection Form is included in **Appendix**.

5.4 Rehabilitation & Replacement Program Development

The City's rehabilitation and replacement program is currently based on the results of CCTV inspections that were conducted in 2002, as well as subsequent inspections conducted following SSOs and other sewer problems.

The City will use the results of the baseline CCTV inspection program described above to develop its future rehabilitation and replacement program. As additional CCTV inspection data are gathered during

subsequent fiscal years, the program will continue to be refined to address the highest priority sewers first.

5.5 CIP Development, Implementation, & Financing

Sewer condition and capacity data are used during the preparation of the City's annual Capital Improvement Budget and its multi-year CIP. The City's current CIP includes recommended projects developed based on review of the 2002 CCTV inspections. Additional projects identified during subsequent CCTV inspections are also included. To reflect similar refinements to the City's rehabilitation and replacement program, the City's CIP will be refined annually following the first year of the City's baseline CCTV inspection program. In addition to rehabilitation and replacement projects, the City's CIP addresses capacity improvement projects, which are discussed in detail in Element VIII (Capacity Management) of this SSMP.

6 Contingency Equipment & Replacement Inventories

In order to enhance the City's response during overflows and other emergencies, the City will develop and maintain a list of contingency equipment and replacement parts for its collection system. In addition to the items kept on hand by the City, the inventory will also include available parts and equipment owned by and available for use from the Fairfield-Suisun Sewer District, the City of Fairfield, or by local contractors. The inventory will include manhole lids, spare pipe, bypass pumps, bypass piping and other items, and will described the quantities and locations of the items listed.

7 Training

7.1 Training Program for City Personnel

The City employs a combination of in-house and/or on-the-job-training, conferences, seminars, and other opportunities to train its collection system operations and maintenance personnel. After a training event is concluded, a description of the event and the amount of hours is recorded in a personnel database.

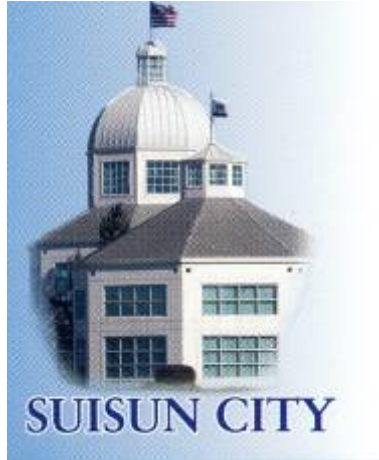
7.2 Training Requirements for Contractors

The City will develop contract language in order to require contractors working on City sewer facilities (e.g., RotoRooter) to be adequately trained for sanitary sewer collection system work. All contractor personnel will be required to receive training. Contract language may include requirements that contractors provide training certificates, or that contractors be "self-certified." The City may also elect to require certification of CCTV operators (e.g., NASSCO certification).

8 Outreach to Plumbers & Contractors

The Bay Area Clean Water Association (BACWA) has developed outreach materials for an outreach program for plumbers and contractors. The City is participating in BACWA's outreach program.

The City's outreach materials are included as **Appendix**.



City of Suisun City

Sewer System Management Plan

Element V: Design and Performance Provisions

FEBRUARY 2014

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List of Abbreviations

City	City of Suisun City
Standards	City of Suisun City Design Standards, Standard Specifications, and Details, 1996
FSSD, District	Fairfield-Suisun Sewer District
GWDR	General Waste Discharge Requirement
RWQCB	Regional Water Quality Control Board
SSMP	Sewer System Management Plan
SWRCB	State Water Resources Control Board

V. DESIGN AND PERFORMANCE PROVISIONS

1 Introduction

This element of the SSMP discusses the City's Design and Construction Standards. This section fulfills the Design and Construction Standards requirements of both the RWQCB (Element 7) and the SWRCB GWDR (Element 5).

2 Regulatory Requirements for Design and Construction Standards

The summarized requirements for the Design and Construction Standards element of the SSMP are:

RWQCB Requirement:

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

The City shall identify procedures and standards for inspecting and testing the installation of new sewers, pump stations, and other appurtenances; and for rehabilitation and repair projects. As with design and construction standards, the SSMP should refer to existing documentation if standards for inspection and testing are already in place.

SWRCB Requirement:

The City must have design and construction standards and specifications for the installation of new sewer systems and for the rehabilitation and repair of existing sewer systems. The City must also have procedures and standards for inspecting and testing the installation of new sewers, pump stations, and other appurtenances; and for rehabilitation and repair projects.

3 Standards for Design, Construction, Inspection and Testing

The City's existing standards pertaining to the design, construction, and inspection of gravity sewer systems, sewer force mains, and other facilities to be operated and maintained by the City are included in the *City of Suisun City Design Standards, Standard Specifications, and Details, 1996* (Standards). The intent of the Standards is to provide certain minimum standards for the design, construction, repair and alterations of sewerage facilities and all appurtenances thereunto, within the City of Suisun City, where any portion of such improvement is to be transferred over to the City of Suisun City for operation and/or maintenance. Any items which are not included in the Standards must be designed and constructed as directed by the City Engineer.

Section 5 of the Standards addresses the design of gravity sewers (10 inches in diameter or smaller) and force mains. The City does not own or operate any gravity sewers greater than 10 inches in diameter. The Standards address sizing; flows; capacity; laterals; appurtenances; and unusual design, including force mains. Sewers 12 inches in diameter or larger must be designed in accordance with FSSD standards.

Section 13 of the “Specific Provisions” section of the Standards addresses the construction of gravity sewers and force mains. The provisions address materials and installation, including inspection and testing.

While standards with respect to sewer rehabilitation are indirectly addressed under Section 5.02 of the Standards, which requires that the design of special or unusual features or structures requires individual study and approval by the City Engineer and the Fairfield-Suisun Sewer District Engineer, the City will consider developing additional standards addressing sewer repair and rehabilitation in the future. To this end, the City will consider adopting standards for sewer rehabilitation similar to those prepared as for the District’s annual Sewer Repair Project (e.g., the *Fairfield-Suisun Sewer District 2005 Sewer Repair Project Contract Documents, August 2005*).

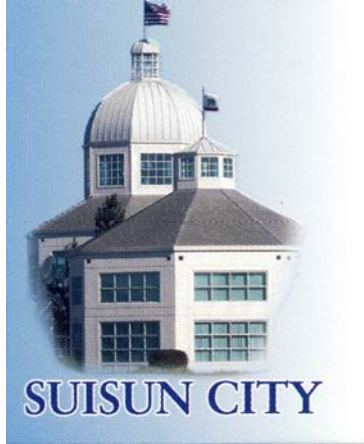
4 Updates and/or Improvements to Standards

In the future, the City will consider updating and/or improving its existing standards for design, construction, inspection and testing of its wastewater collection system facilities. The updates and/or improvements to be considered are summarized in **Table V-1**.

Table V-1: Potential Updates/Improvements to Standards

Topic	Category	Update/Improvement To Be Considered
Gravity Sewers	Details	Require specific PVC installation specification (instead of just manufacturer’s recommendation).
Gravity Sewers	Inspection	Require results of the CCTV inspection to be recorded on DVD. Reference District’s CCTV codes and format.
Gravity Sewers	Testing	Address the required increase in air pressure when using the low-pressure air test to test sewers that are below the level of the groundwater (to compensate for the outside water pressure).
Lateral Connections	Design	Address lateral connections that are not constructed as part of a sewer main project.
Lateral Connections	Design	Require a backflow prevention device on laterals connecting to house with a finish floor elevation less than 12-inches above the rim of the closest upstream manhole.
Laterals	Construction	Increase robustness of specification for temporary cap/plug on lateral end (the part that gets extended to the house).
Laterals	Details	Require cap and a cover box on cleanout risers. (If a car drives over the cleanout, the load should not be transferred to the riser and lateral.)
Manholes	Details	Clarify detail/specification to indicate that pickholes should not go all the way through the lid (infiltration potential). Do not allow vent holes.
Manholes	Details	Require eccentric cone on manholes to be rotated with "straight" portion over the outgoing pipe. (This orientation facilitates CCTV inspection.)
Manholes	Details	Require a pre-formed plastic sealing gasket (conforming to Federal Specification SS-S 00210) between precast manhole barrel segments. Require wrapping manhole joints with infiltration product (e.g., Infi-Shield) in addition to currently specified grout.
Manholes	Details	Delete the weep hole detail (or move it to storm drain detail SD-3). Require heavier base if necessary to resist uplift.

Topic	Category	Update/Improvement To Be Considered
Manholes	Details	Increase robustness of poured manhole base specification/detail for areas with high groundwater (to increase protection against infiltration).
Manholes	Details	Add "Sewer" to sewer lid detail.
Manholes	Testing	Add vacuum testing procedure for manholes.
Rehab/Repair	Design	Add standards for major rehab methods such as CIPP lining, crown spraying, pipebursting, chemical grouting, and root control.
Rehab/Repair	Construction	In flow control specification, require the contractor to have an overflow response plan or to take the kind of precautions that should be required to prevent an overflow in the event of a pump around system failure.
Rehab/Repair	Design	Specify the contractor license required for chemical root control (license should be for pesticide/herbicide application issued by the California Department of Pesticide Regulation). Update specification to cover the use of chemical root controls without grouting.



City of Suisun City

Sewer System Management Plan

Element VI: Overflow Emergency Response Plan

FEBRUARY 2014

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List of Abbreviations

BOD	Biochemical Oxygen Demand
CCTV	Closed Circuit Television
City	City of Suisun City
FSSD, District	Fairfield-Suisun Sewer District
GPS	Geographical Positioning System
OERP	Overflow Emergency Response Plan
OES	Office of Environmental Services
RWQCB	Regional Water Quality Control Board
SCADA	Supervisory Control And Data Acquisition
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SSOBRP	Sanitary Sewer Overflow and Backup Response Plan
SWRCB	State Water Resources Control Board
WWTP	Wastewater Treatment Plant

VI. OVERFLOW EMERGENCY RESPONSE PLAN

Introduction

The purpose of the Overflow Emergency Response Plan is to support an orderly and effective response to Sanitary Sewer Overflows (SSOs). This plan provides guidelines for City of Suisun City personnel and other parties working on their behalf to follow in responding to, cleaning up, and reporting SSOs that may occur in the District's wastewater collection system.

This Overflow Emergency Response Plan addresses the procedures to be followed in responding to a gravity sewer SSO event and the procedures to be followed in responding to a pump station/force main SSO event.

This OERP meets the SSMP requirements of the RWQCB (Element 3), SWRCB GWDR (Element 6) and the requirements of State's Amended Monitoring and Reporting Program Order No. WQ 2013-0058-EXEC.

Regulatory Requirements for OERP Element

The summarized requirements for the OERP element of the SSMP are:

RWQCB Requirement:

Each wastewater collection system agency shall develop an overflow emergency response plan with the following elements:

- Notification – Provide SSO notification procedures.
- Response – Develop and implement a plan to respond to SSOs.
- Reporting – Develop procedures to report and notify SSOs per SSO Monitoring and Reporting Program.
- Impact Mitigation – Develop steps to contain wastewater, to prevent overflows from reaching surface waters, and to minimize or correct any adverse impact from SSOs.

SWRCB 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 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.

1 Responsibilities

1.1 Gravity Sewers

The City of Suisun City is responsible for responding to service calls and SSO events for City gravity sewers. The City of Fairfield acts as first responder for SSO events associated Fairfield-Suisun Sewer District (District) gravity sewers; however, the City of Suisun City also provides initial response to Fairfield-Suisun Sewer District events within Suisun City as necessary.

Note that in the event of an SSO from Fairfield-Suisun Sewer District sewers, the City of Suisun City should always contact the Fairfield-Suisun Sewer District to dispatch the City of Fairfield staff for SSO response.

1.2 Pump Stations and Force Mains

The City of Suisun City does not own or operate any pump stations or force mains. For service calls, alarms, and SSO events that are occasioned by failure of a Fairfield-Suisun Sewer District pump station or force main, the Fairfield-Suisun Sewer District's Operations and Maintenance (O&M) technicians will respond. The City of Suisun City, in addition to the City of Fairfield, will provide support to Fairfield-Suisun Sewer District O&M technicians during these events as necessary for containment and mitigation.

Note that in the event of an SSO from Fairfield-Suisun Sewer District pump stations or force mains, the City of Suisun City should always contact the Fairfield-Suisun Sewer District to dispatch the City of Fairfield staff for SSO response.

2 Spill Detection

2.1 Public Observation

Public observation is the most common way that the City is notified of blockages, spills, and private sewage system failures. The City contact number for reporting sewer system overflows or blockages (707-421-7340) is included on the City's website (<http://www.ci.suisun-city.ca.us/Government/PublicWorks/HelpfulContacts.html>) under "Public Works Helpful Contacts." In the SBC Telephone Directory, numbers for Suisun City Police and Fire emergencies (707-421-6622) and general emergencies (911) are listed under "Suisun City, City of."

A flowchart illustrating the spill detection, notification, and response communication processes for Fairfield, Suisun City, and the Fairfield-Suisun Sewer District (FSSD) is shown in **Figure VI- 1**. Phone numbers shown in the flowchart are for internal use to contact or notify the cities. Descriptions of Suisun City's spill detection and notification processes are included in the paragraphs below.

2.1.1 Normal Working Hours

The regular working hours for the Public Works Operations and Maintenance Division, which includes the City's Public Works Service Center, are Monday through Thursday from 6:30 a.m. to 4:00 p.m., and Friday from 6:30 a.m. to 3:00 p.m., except holidays. The public can call the Public Works Service Center at (707) 421-7349 or the Public Works Department at (707) 421-7340 during regular work hours.

When a report of a sewer spill or backup is received, the receptionist takes the information and fills out the Complaint Form, and communicates the spill details to Public Works Staff and it to the field crew

using the City's Nextel cell phone system. The field crew is contacted and confirms receipt of the message via cell phone. If the field crew does not confirm receipt within five minutes, then the receptionist notifies the Public Works Foreman or Superintendent.

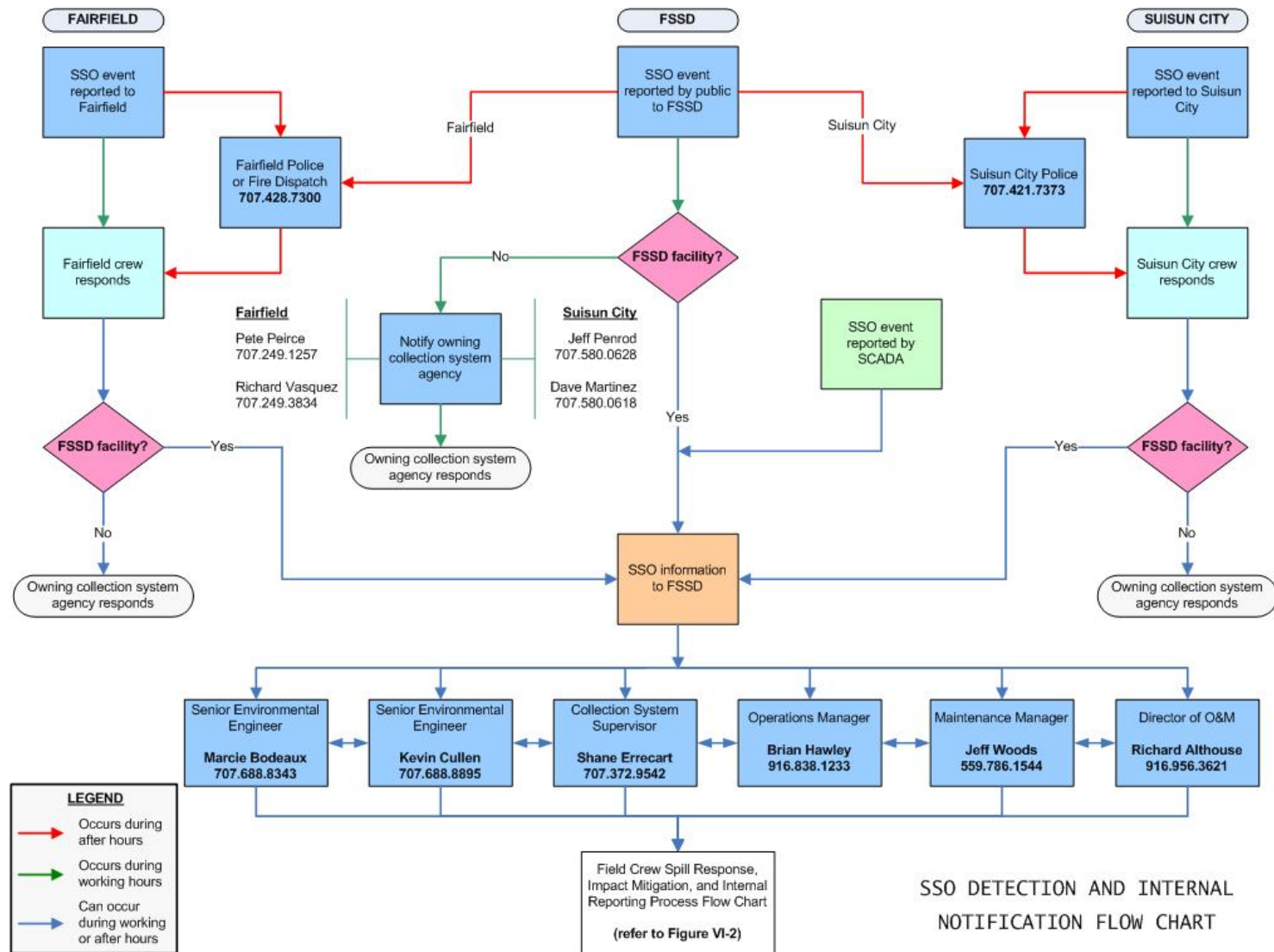
If the spill is related to an Fairfield-Suisun Sewer District gravity sewer, pump station or force main, the City begins containment and mitigation and contacts the District at (707) 429-8930 during their regular working hours (Monday through Friday, 8:00 a.m. to noon and 1:00 p.m. to 5:00 p.m.).

2.1.2 After Hours

After-hours messages for the Public Works Department and the Public Works Service Center direct callers to the Suisun City Police Department at (707) 421-7373 and to 911, respectively, to report sewer spills, backups, and/or other emergencies. The police dispatcher notifies the on-call personnel using the list provided to the police dispatcher by the City for that week (Thursday to Thursday). In the event that callers contact the Solano County Sheriff rather than local police, the Sheriff is similarly equipped to notify City on-call personnel. In any event, the field crew is contacted via Nextel cell phone. The call is escalated to the Foreman or the Superintendent in the event that the on-call personnel have not been contacted.

If the spill is related to an Fairfield-Suisun Sewer District facility, the City contacts the District (Shane Errecart, Jeff Woods, Marcie Bodeaux or Kevin Cullen) and initiates containment and mitigation efforts as necessary until FSSD crews arrive. See **Appendix** for District personnel contact information.

Figure VI- 1: Spill Detection and Notification Procedures



2.2 Alarms

The City of Suisun City does not own or operate any lift stations, and is therefore not responsible for responding to lift station alarms.

2.3 Staff Observation

Suisun City Staff conduct periodic inspections of its sewer system facilities as part of their routine preventive maintenance program. Any problems noted with the sewer system facilities are reported via radio to the Public Works Services Center. Public Works Crews are dispatched via radio or cell phone to any emergency situations, and work orders are issued to correct non-emergency conditions.

3 Spill Response

The goal of the City of Suisun City is to mitigate the impact of SSOs by employing procedures to ensure a prompt and effective response to every sewer system event. Sewer calls are considered high priority calls that demand a prompt response to the location of the problem. The City's goal is to respond to sewer system events within 30 minutes.

The response procedure flow chart is shown in **Figure VI- 2**.

3.1 Spill Response Priorities

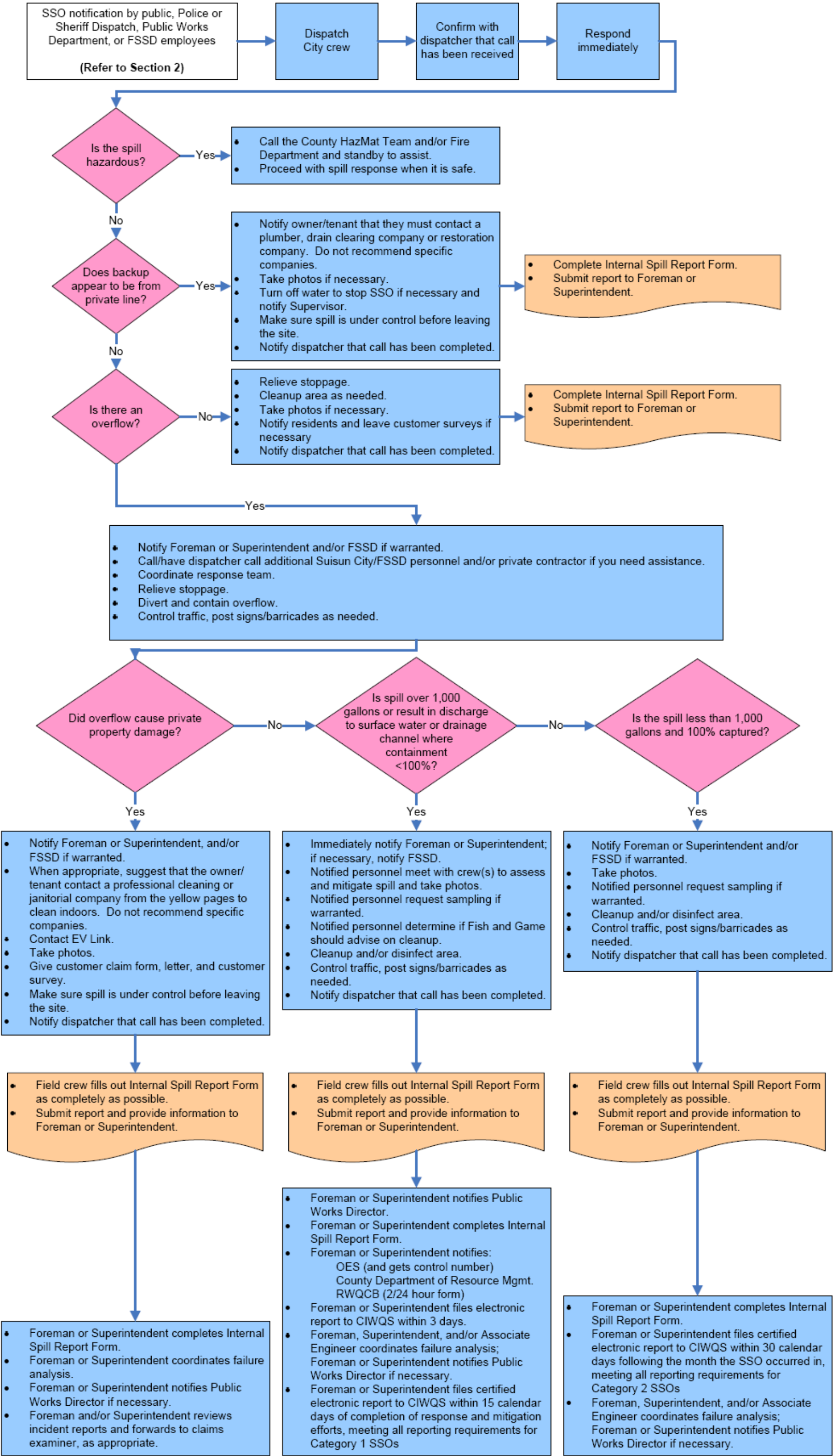
The first responder's priorities are:

- To follow safe work practices (including hazardous material procedures).
- To respond promptly with the appropriate 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 Public Works Service Center (during normal hours), other on-call personnel (during or after hours) or the District (in the event of pump station or force main emergencies) of preliminary spill information, need for additional help, and potential impacts.
- To return the spilled sewage to the sewer system.
- To restore the area to its original condition (or as close as possible).
- To document all stages of spill and the efforts for all of the above.

3.2 Safety

The initial responder is responsible for following safety procedures on all jobs. Special safety precautions must be observed when performing sewer work.

Figure VI- 2: Field Crew Spill Response Process Flow Chart



3.3 Sewer Complaint/Spill Response Procedure

3.3.1 Initial Response

The initial responder must respond to the reported sewer or lift station site and visually check for potential sewer stoppages or overflows. All sewer system calls (including lift station alarms and reports of sewer backups, stoppages, overflows, odors, and loose or noisy manhole covers) require a response to the reported location of the event. Sewer system calls should never be handled without an on-site response.

The first responder should:

- Note arrival time, document conditions with photographs, contact caller if time permits.
- Verify the existence of a sewer system spill or backup.
- If the spill is anything other than sewage, call the County HazMat Team and/or the Fire Department. The first responder should not participate in hazardous material spill cleanup other than for traffic/perimeter control, blocking off drains, or removal of low quantity/low hazard materials.
- Identify and assess the affected area and extent of spill.
- If additional help is needed, call for backup crew(s) as appropriate. See **Appendix** for personnel contact information for each of the agencies.
- Notify FSSD if the spill is on a FSSD line or potentially due to a backup at a FSSD-owned pump station.
 - Note that City staff should contact FSSD staff. FSSD is then responsible for contacting the City of Fairfield for SSO response. Continue to support FSSD or City of Fairfield staff as needed.
- Notify the Foreman or Superintendent if the spill appears to be large, in a sensitive area, or there is doubt regarding the extent, impact, or how to proceed.
- 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 – 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, call for additional assistance after 15 minutes without clearing the blockage and implement containment measures.

3.3.2 Initiation of Spill Containment Measures

The first responder should attempt to contain the spilled sewage using the following steps.

- Determine the immediate destination of the overflowing sewage.
- Review sewer atlas maps for possible temporary upstream flow diversion bypassing.
- Divert spill away from storm drains and surface water by building small berm to change direction of spill or plug storm drains using air plugs, sandbags, and/or plastic to contain the spill, whenever appropriate.
- Divert spill by building a small berm to change direction of flow back to sewer. Use boom on duty truck, dirt, and/or sandbags.
- Divert spill by pumping around overflow and return to sewer, if appropriate.
- Dike/dam (or sandbag) spill by building a temporary berm to collect spill.

- Contain the spilled sewage by building a temporary berm, or dam using sand bags, plastic sheeting, and/or soil.
- If overflowing sewage has made contact with the storm drainage system, attempt to contain the spilled sewage by plugging the next downstream storm drainage inlet.

3.3.3 Troubleshooting and Clearing Sewer Stoppages

Sewer Backup into House or Building

Refer to the City's SSOBRP in **Appendix** for response and mitigation procedures for SSOs and backups on private property.

Mainline and Building Lateral Stoppage

Refer to the City's SSOBRP in **Appendix** for procedures for clearing sewer line blockages (Tab 4A) and the operation of hydro-flushing equipment (Tab 6).

4 Recovery and Clean Up

The recovery and clean up phase begins when the flow has been restored and the overflow of sewage has been stopped. The SSO recovery and clean up procedures are:

4.1 Estimate the Volume of Spilled Sewage

Use the methods outlined in **Appendix VI-E** to estimate the volume of the spilled sewage. Additional methods are included in the City's SSOBRP (Tabs 5C through 5F) in **Appendix**. Wherever possible, document the estimate using photos of the SSO site before the recovery operation.

4.2 Recovery of Spilled Sewage

Wash, pump, or vacuum the spilled sewage and discharge it back into the sanitary sewer system, if possible.

If the spilled sewage cannot be washed back into the sanitary sewer system (e.g., it is trapped in a low area or storm drain) then vacuum spilled sewage into a combination unit or pump it to a sanitary sewer manhole.

4.3 Clean Up and Disinfection

Clean up and disinfection procedures should be implemented to reduce the potential for human health issues and adverse environmental impacts that are associated with a SSO event. The procedures described are for dry weather conditions and should be modified as required for wet weather conditions.

4.3.1 Hard Surface Areas

Collect all signs of sewage solids and sewage-related material either by hand or with the use of rakes and brooms.

Wash down the affected area with clean water until the water runs clear. Take reasonable steps to contain and vacuum up the wastewater.

Disinfect all surfaces that were contaminated by sewage using a disinfectant solution. Apply minimal amounts of the disinfectant solution using a hand sprayer. Document the volume and application method of disinfectant that was employed.

Allow area to dry. Inspect area for any remaining signs of sewage contamination. Repeat the process if additional cleaning is warranted.

4.3.2 Landscaped and Unimproved Natural Vegetation

Collect all signs of sewage solids and sewage-related material either by hand or with the use of rakes and brooms.

Wash down the affected area with clean water. The flushing volume should 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. Inspect area for any remaining signs of sewage contamination. Repeat the process if additional cleaning is warranted.

4.3.3 Natural Waterways

The Department of Fish and Game should be notified (via Foreman or Superintendent) in the event an SSO impacts any natural waterways or habitat. Fish and Game will provide the professional guidance

needed to effectively clean up spills that occur in these sensitive environments. Fish and Game can be contacted by calling (916) 358-1300.

Clean up should proceed quickly in order to minimize negative impact. Sewage causes depletion of dissolved oxygen which will kill aquatic life.

Any water that is used in the clean up should be de-chlorinated prior to use (chlorine compounds are toxic to aquatic life).

5 Public Notification

The public that may be at risk of coming into contact with sewage or sewage contaminated water from an SSO shall be warned. The notification methods are described in the following section. A sample warning sign is included as **Appendix**.

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

Posting signs and placing barricades may be necessary to keep vehicles and pedestrians away from spilled sewage. Posting should be done at the direction of the Foreman or Superintendent. Post the warning signs and block access to the contaminated water areas with “Yellow Caution Tape” and barricades. Do not remove these until directed.

In the event that an overflow occurs at night, the location should also be inspected the following day. The inspector should look for any signs of sewage solids and sewage-related material that may warrant additional clean up activities.

Major spills may warrant broader public notice. Local media should be notified by the Foreman or Superintendent when significant areas may have been contaminated by sewage. The Foreman and Superintendent will maintain the contact information for local media.

Cal OES notifies other agencies of a reported spill, including Solano County Environmental Health. The local health officer and the director of environmental health have been charged by State law (California Water Code Section 13271) to determine whether notification of the public is required to safeguard public health and safety. The local health officer and director of environmental health are best qualified to determine the need and method of public notification and safeguard in the event of a sewage spill. The District has prepared a sewage spill warning sign. The District will follow the direction of the local health officer in assisting with public notification or may post warning signs. Spill Reporting

The District’s spill reporting procedures ensure that primary responders and regulatory agencies are informed of all SSOs in a timely manner

5.1 Internal Notifications

City public works staff are provided with a call list with Fairfield-Suisun Sewer District contacts for normal business hours and after-hours, **Appendix**.

Once notified, David Martinez or Jeff Penrod will report the SSO event to Daniel Kasperson, Public Works Director. The Director of Public Works would inform the City Manager Suzanne Bragdon and she may notify the Suisun City Council and the media, as determined on a case by case basis. Contact information for the Fairfield Suisun City Sewer District(FSSD), Fairfield, and City of Suisun City internal reporting and notifications is listed below.

FSSD	Fairfield	Suisun City
Marcie Bodeaux	Peter Peirce	Jeff Penrod
(707) 428-9139	(707) 428-7054	(707) 421-7349
mbodeaux@fssd.com	ppeirce@fairfield.ca.gov	jpenrod@suisun.com

5.2 External SSO Notification and Reporting

The external SSO reporting procedures described below are intended to meet the requirements of both the RWQCB the SWRCB.

5.2.1 RWQCB Reporting Requirements

In response to the State Water Board's Order No. WQ 2008-0002 EXEC the Regional Board issued a letter on May 1, 2008 including new 2-hour Category 1 spill notification requirements for collection system enrollees. The 2-hour Category 1 spill notification requirements were modified by the Regional Board in an email dated July 1, 2011 which eliminated direct reporting to the Regional Board.

In October of 2012 the SF Regional Board issued a letter canceling the requirement to submit annual SSO and internal Audit Reports to the Regional Board.

In the event that the CIWQS Online SSO Database is not available, FSSD will fax all required information to the RWQCB (510) 622-2460 in accordance with the MRP time schedules. In such event, FSSD will also enter all required information into the CIWQS Online SSO Database when the database becomes available.

5.2.2 2-Hour Notification Category 1 Spill $\geq 1,000$ Gallons

For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water or spilled in a location where it probably will be discharged to surface water, either directly or by way of a drainage channel or MS4, David Martinez or Jeff Penrod will, as soon as possible, but not later than two (2) hours after (A) City has knowledge of the discharge, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures, notify the Cal OES and obtain a notification control number.

David Martinez or Jeff Penrod will provide the information requested by Cal OES before receiving a control number. Cal-OES will issue a Spill Control Number and notify the Regional Board, Solano County Environmental Health and other agencies as noted in Table VI-1. The District will record the Spill Control Number for use in spill documentation and reporting. Spill information requested by Cal OES may include:

1. Name of person notifying Cal OES and direct return phone number.
2. Estimated SSO volume discharged (gallons).
3. If ongoing, estimated SSO discharge rate (gallons per minute).
4. SSO Incident Description:
 - a. Brief narrative.
 - b. On-scene point of contact for additional information (name and cell phone number).
 - c. Date and time enrollee became aware of the SSO.
 - d. Name of sanitary sewer system agency causing the SSO.
 - e. SSO cause (if known).
5. Indication of whether the SSO has been contained.

6. Indication of whether surface water is impacted.
7. Name of surface water impacted by the SSO, if applicable.
8. Indication of whether a drinking water supply is or may be impacted by the SSO.
9. Any other known SSO impacts.
10. SSO incident location (address, city, state, and zip code).

Following the initial notification to Cal OES and until such time that an enrollee certifies the SSO report in the CIWQS Online SSO Database, David Martinez or Jeff Penrod will provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s).

5.2.3 SSO Categories

Category 1 – Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee’s sanitary sewer system failure or flow condition that:

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

Category 2 – Discharges of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from an enrollee’s sanitary sewer system failure or flow condition that does not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.

Category 3 – All other discharges of untreated or partially treated wastewater resulting from an enrollee’s sanitary sewer system failure or flow condition.

5.2.4 Sanitary Sewer Overflow Reporting to CIWQS - Timeframes

David Martinez or Jeff Penrod will submit SSO reports and “No Spill” Certifications in the CIWQS Online SSO Database.

Category 1 and Category 2 SSOs – All SSOs that meet the above criteria for Category 1 or Category 2 SSOs shall be reported to the CIWQS Online SSO Database:

- a. Draft reports for Category 1 and Category 2 SSOs shall be submitted to the CIWQS Online SSO Database within three (3) business days of the enrollee becoming aware of the SSO. A final Category 1 or Category 2 SSO report shall be certified through the CIWQS Online SSO Database within 15 calendar days of the end date of the SSO.

Category 3 SSOs – All SSOs that meet the above criteria for Category 3 SSOs shall be reported to the CIWQS Online SSO Database and certified within 30 calendar days after the end of the calendar month in which the SSO occurs (e.g., all Category 3 SSOs occurring in the month of February shall be entered into the database and certified by March 30). If no SSOs have occurred in a given month, David Martinez or Jeff Penrod will report a no-spill certification to the CIWQS SSO database.

“No Spill” Certification – If there are no SSOs during the calendar month, the enrollee shall either 1) certify, within 30 calendar days after the end of each calendar month, a “No Spill” certification statement in the CIWQS Online SSO Database certifying that there were no SSOs for the designated month, or 2)

certify, quarterly within 30 calendar days after the end of each quarter, “No Spill” certification statements in the CIWQS Online SSO Database certifying that there were no SSOs for each month in the quarter being reported on. For quarterly reporting, the quarters are Q1 - January/ February/ March, Q2 - April/May/June, Q3 - July/August/September, and Q4 - October/November/December. PLSDs do not count.

Amended SSO Reports – FSSD may update or add additional information to a certified SSO report within 120 calendar days after the SSO end date by amending the report or by adding an attachment to the SSO report in the CIWQS Online SSO Database. SSO reports certified in the CIWQS Online SSO Database prior to September 9, 2013 may only be amended up to 120 days after the effective date of this MRP, or January 7, 2014. After 120 days, the enrollee may contact the SSO Program Manager to request to amend an SSO report if the enrollee also submits justification for why the additional information was not available prior to the end of the 120 days.

5.2.5 SSO Technical Report

The City will submit an SSO Technical Report in 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. 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:

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

Suisun City Response to SSO:

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

Water Quality Monitoring:

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

5.2.6 Private Lateral Sewage Discharges

Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately owned sewer lateral connected to the enrollee’s sanitary sewer system or from other private sanitary sewer system assets may be voluntarily reported to the CIWQS Online SSO Database. The District does not report private spills to the CIWQS SSO database.

5.3 External SSO Reporting Contact Information

External SSO reporting is the responsibility of David Martinez or Jeff Penrod. **Table VI-2** summarizes the contact information for each of the agencies requiring external reporting.

Table VI-2: External SSO Reporting Contact Information

SWRCB	
SSOs will be reported electronically to the SSO Online Database (CIWQS). In the event that the online database is unavailable, fax required information to RWQCB.	Website: http://www.ciwqs.waterboards.ca.gov Need login and password If CIWQS is down, fax report to: (510) 622-2460
Solano County Department of Resource Management / Environmental Health Division	
The Solano County Department of Resource Management, which includes the Environmental Health Division, will post public notices at parks, or beaches when necessary if discharges reach the public lands, creeks or bay waters.	Telephone: (707) 784-6765 (Business Hrs.) Fax: (707) 784-4805 Pager: (707) 429-6650 Sheriff dispatch (707) 421-7090 (after hours)
California Emergency Management Agency (Cal OES)	
The Cal OES operator will provide a Control Number and will notify other agencies of the spill. The Cal OES notification list includes RWQCB/Region 2, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Solano County Environmental Health, Department of Toxic Substance Control and U.S. Environmental Protection Agency.	Telephone: (800) 852-7550 or (916) 262-1621

6 Water Quality Sampling and Testing

Water quality sampling and testing is required whenever 100 gallons or more of spilled sewage enters a water body to determine the extent and impact of the SSO. The water quality sampling procedures are:

- The first responder should obtain field samples if field kits are available. Otherwise, Fairfield-Suisun Sewer District, FSSD should be notified to collect samples. Samples should be collected as soon as possible after the discovery of the SSO event. Procedures for collecting field samples using field kits are provided on Tab 5B of the City's SSOBRP in **Appendix**.
- The first responder should request assistance from additional Public Works Operations and Maintenance Division personnel if needed to take samples in situations where there is difficult terrain, inclement weather, heavy equipment and/or safety equipment is needed to access the area, or as the situation warrants.
- The water quality samples should be collected from upstream of spill, from the spill area, and downstream of the spill in flowing water (e.g., creeks). The water quality samples should be collected near the point of entry of the spilled sewage and every 100 feet along the shore on impoundments (e.g., ponds).
- The samples will be analyzed by the Fairfield-Suisun Sewer District, FSSD laboratory to determine the nature and impact of the discharge. Additional samples should be taken to determine when posting of warning signs can be discontinued. The basic analyses should include total coliform, fecal coliform, biochemical oxygen demand (BOD), dissolved oxygen, and ammonia.
- The Foreman or Superintendent will make follow-up calls to affected agencies until posting has been discontinued.

6 Spill Documentation

David Martinez or Jeff Penrod will complete the Suisun City Spill Report Form and will make the final determination of spill volume, unless otherwise instructed by the General Manager. For spills to surface waters equal or greater than 50,000 gallons, the Public Works Director may prepare or designate staff to prepare the required Technical Report.

A separate file will be prepared for each individual SSO including the following items:

- Sewer Complaint Form
- Spill Report Form
- Calculations for spill volume estimate.
- Water quality sampling and test results, when performed.
- Technical Report, when required.

7 Spill Investigation and Documentation

All SSOs should be thoroughly investigated and documented for use in managing the sewer system and meeting established reporting requirements. The procedures for investigating and documenting SSOs are:

7.1 Failure Analysis Investigation

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.

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

- Reviewing and completing the City’s Internal Spill Report Form;
- Reviewing past maintenance records;
- Reviewing available photographs;
- Conducting a CCTV inspection to determine the condition of the line segment immediately following the SSO and reviewing the video and logs; and
- Interviewing staff who responded to the spill.

The product of the failure analysis investigation should be the determination of the root cause and the completion of the corrective action section of the Internal Spill Report Form.

7.2 Post Spill Event Debriefing

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

As soon as possible after major SSO events, all of the participants, from the person who received the call to the last person to leave the site, should meet to review the procedures used and to discuss what worked and where improvements could be made in responding to and mitigating future SSO events. The results of the debriefing should be recorded and tracked to ensure the action items are completed.

8 Spill Reporting

8.1 Internal Reporting

8.1.1 SSOs Less than 100 gallons

The field crew should fill out the Internal Spill Report Form as completely as possible, indicate an SSO of less than 100 gallons, and turn it in to the Foreman.

The Internal Spill Report Form should be entered and recorded in the appropriate database as a record of the SSO event.

8.1.2 SSOs More than 100 gallons, but Less than 1,000 gallons

The field crew will fill out the Internal Spill Report Form as completely as possible and notify the Foreman and/or Superintendent of the SSO event.

The Foreman and/or Superintendent will fill out the remainder of the Internal Spill Report Form and will note the OES sewer overflow report number.

The Foreman, Superintendent, and/or Associate Engineer will review the Internal Spill Report Form and complete the failure analysis investigation within 10 days of the date of the SSO event.

8.1.3 SSOs More than 1,000 Gallons, Occurring In Sensitive Areas, or Causing Fish Kill or Imminent or Substantial Danger to Human Health

The field crew will notify the Foreman and the Foreman, in turn, will immediately notify the Superintendent.

The Foreman and/or Superintendent will meet with field crew(s) at the site of the SSO event to assess the situation, document the conditions with digital photos, and to direct the recovery and clean up activities.

The field crew should fill out the Internal Spill Report Form as completely as possible and turn it in to the Foreman and/or Superintendent as soon as they have completed the cleanup.

The Foreman and/or Superintendent will fill out the remainder of the Internal Spill Report Form upon receipt from the field crew and will note the OES sewer overflow report number.

In the event of a very large overflow or an overflow in a sensitive area, the Foreman and/or Superintendent should contact the Public Works Director, who in turn may notify the Assistant City Manager and/or City Manager.

Internal Reporting Contact Information

Internal Reporting Contact Information can be found in **Appendix**.

8.2 External SSO Reporting

The external SSO reporting procedures described below are intended to meet the requirements of both the RWQCB and the SWRCB.

RWQCB Reporting Requirements

As part of the Statewide WDR requirements, the RWQCB must be notified of any spill resulting in a discharge to a drainage channel or surface water. Refer to Section 0 for details about this requirement.

Additionally, the City must prepare, by March 15 of each year, an annual report to the RWQCB. The annual report must include a summary of the SSOs experienced by the City during the previous calendar year.

SWRCB Reporting Requirements

2-Hour Notification/ 24-Hour Certification

For SSOs that result in a discharge to a drainage channel or surface water, the City will notify OES, Solano County Department of Resource Management, and the RWQCB as soon as possible but no later than two hours after becoming aware of the spill. Additionally, the City will, as soon as possible but no later than 24 hours after becoming aware of the spill, certify to the RWQCB that OES and Solano County have been notified of the spill. **Figure VI- 4** presents a flow chart for the RWQCB for 2 hour/24 hour notification.

Where natural waterways or habitat may be affected, the City will notify the California Department of Fish and Game.

Category 1 SSOs

Category 1 SSOs are defined as those spills resulting from a failure in the City's sanitary sewer system that:

- Equal or exceed 1000 gallons, or
- Result in a discharge to a drainage channel and/or surface water; or
- Discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system.

Except as provided under "Notification" above, all Category 1 SSOs must be reported as soon as:

- the City has knowledge of the discharge,
- reporting is possible, and
- Reporting can be provided without substantially impeding cleanup or other emergency measures.

Initial reporting of Category 1 SSOs will be reported to the Statewide Online SSO System, by the Foreman and/or Superintendent, as soon as possible, but no later than 3 business days after the City is made aware of the SSO. The minimum information that will be contained in the 3-day report will include all information identified below, except for item (k):

- a) Location of SSO by entering GPS coordinates;
- b) Applicable Regional Water Board, i.e. identify the region in which the SSO occurred;
- c) County where SSO occurred;
- d) Whether or not the SSO entered a drainage channel and/or surface water;
- e) Whether or not the SSO was discharged to a storm drain pipe that was not fully captured and returned to the sanitary sewer system;
- f) Estimated SSO volume in gallons;
- g) SSO source (manhole, cleanout, etc.);
- h) SSO cause (main line blockage, roots, etc.);
- i) Time of SSO notification or discovery;
- j) Estimated operator arrival time;
- k) SSO destination;
- l) Estimated SSO end time; and
- m) SSO Certification. Upon SSO Certification, the SSO Database will issue a Final SSO Identification (ID) Number.

A final certified report will be completed through the Online SSO System, by the Foreman and/or Superintendent, within 15 calendar days of the conclusion of SSO response and remediation. The finalized report will include all of the following information:

- a) All information listed above for the 3-day report for Category 1 SSOs, as well as;
- b) Estimated SSO volume that reached surface water, drainage channel, or not recovered from a storm drain;
- c) Estimated SSO amount recovered;
- d) Response and corrective action taken;
- e) If samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA must be selected.
- f) Parameters that samples were analyzed for (if applicable);
- g) Identification of whether or not health warnings were posted;
- h) Beaches impacted (if applicable). If no beach was impacted, NA must be selected;
- i) Whether or not there is an ongoing investigation;
- j) Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
- k) OES control number (if applicable);
- l) Date OES was called (if applicable);
- m) Time OES was called (if applicable);
- n) Identification of whether or not County Health Officers were called;
- o) Date County Health Officer was called (if applicable); and
- p) Time County Health Officer was called (if applicable).

The City may, at its discretion, add additional information to the certified report, in the form of an attachment, at any time.

Category 2 SSOs

Category 2 SSOs are defined as those spills resulting from a failure in the City's sanitary sewer system not meeting the definition of a Category 1 SSO.

All Category 2 SSOs will be reported by the City to the Online SSO Database, by the Foreman and/or Superintendent, within 30 days after the end of the calendar month in which the SSO occurs (e.g., all SSOs occurring in the month of January must be entered into the database by March 1st).

The minimum information that will be contained the report will include all information identified above for the 3-day report for Category 1 SSOs.

Private Lateral Sewage Discharges

Private Lateral sewage discharges are defined as those spills that are caused by blockages or other problems within a privately owned lateral. All Private Lateral sewage discharges may be reported, based upon the City's discretion, to the Online SSO Database.

At the present time, the City does not plan to report Private Lateral sewage discharges to the Online SSO Database.

External Reporting to OES, Solano County, and CDFG

In addition the requirements as provided under "Notification" above, spills that are equal to or greater than 1,000 gallons; occur in sensitive areas; present an imminent or substantial danger to human health; or

result in a fish kill, require that the Foreman and/or Superintendent notify OES, the Solano County Department of Resource Management, and the California Department of Fish and Game.

Tab 5G of the City's SSOBRP in **Appendix** provides an example script to be followed when reporting spills to OES.

Figure VI- 3 presents a flow chart for external spill reporting. **Figure VI- 4** presents a flow chart for 2 hour/24 hour notification.

Figure VI- 3: External Spill Reporting Process Flow Chart

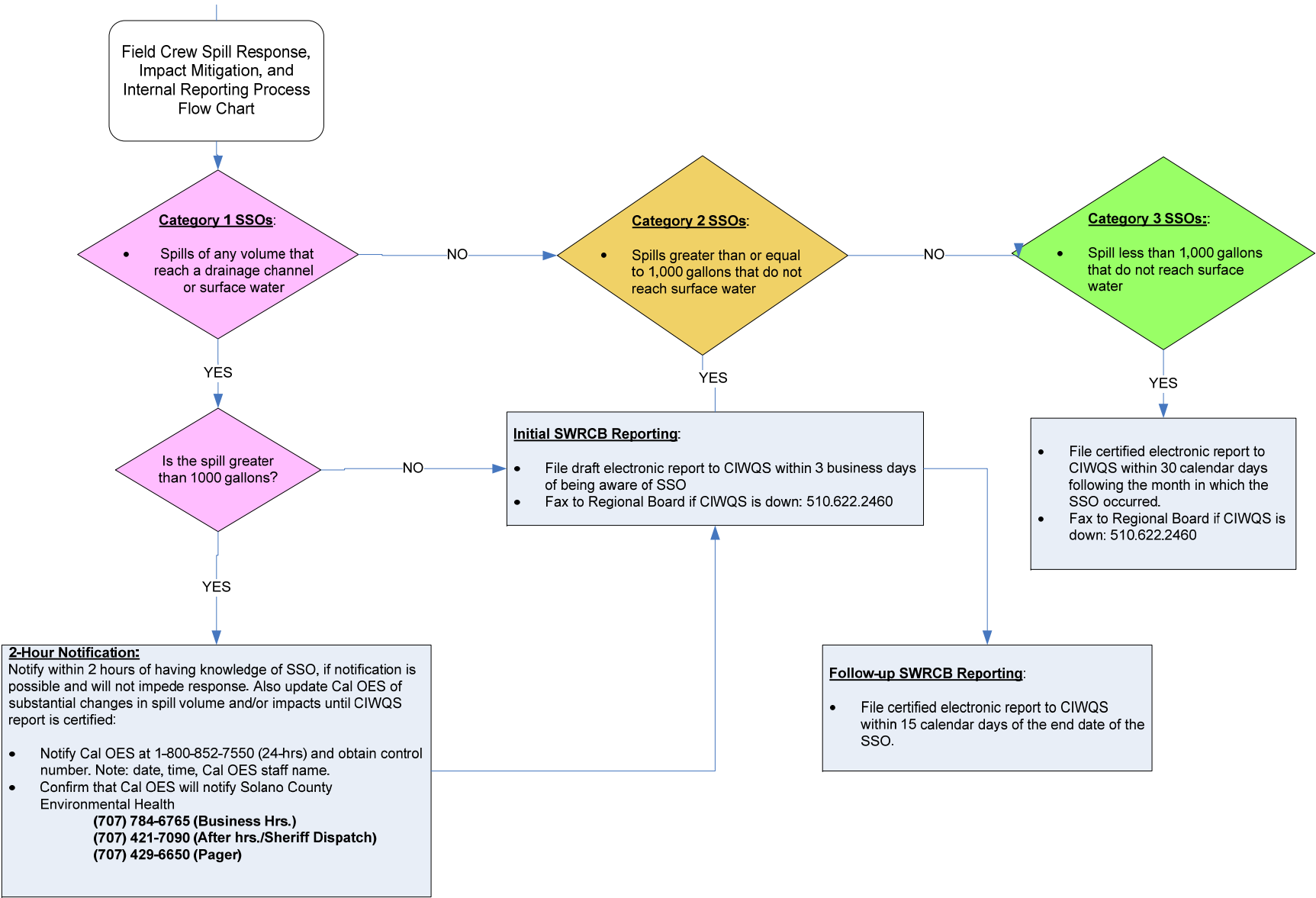
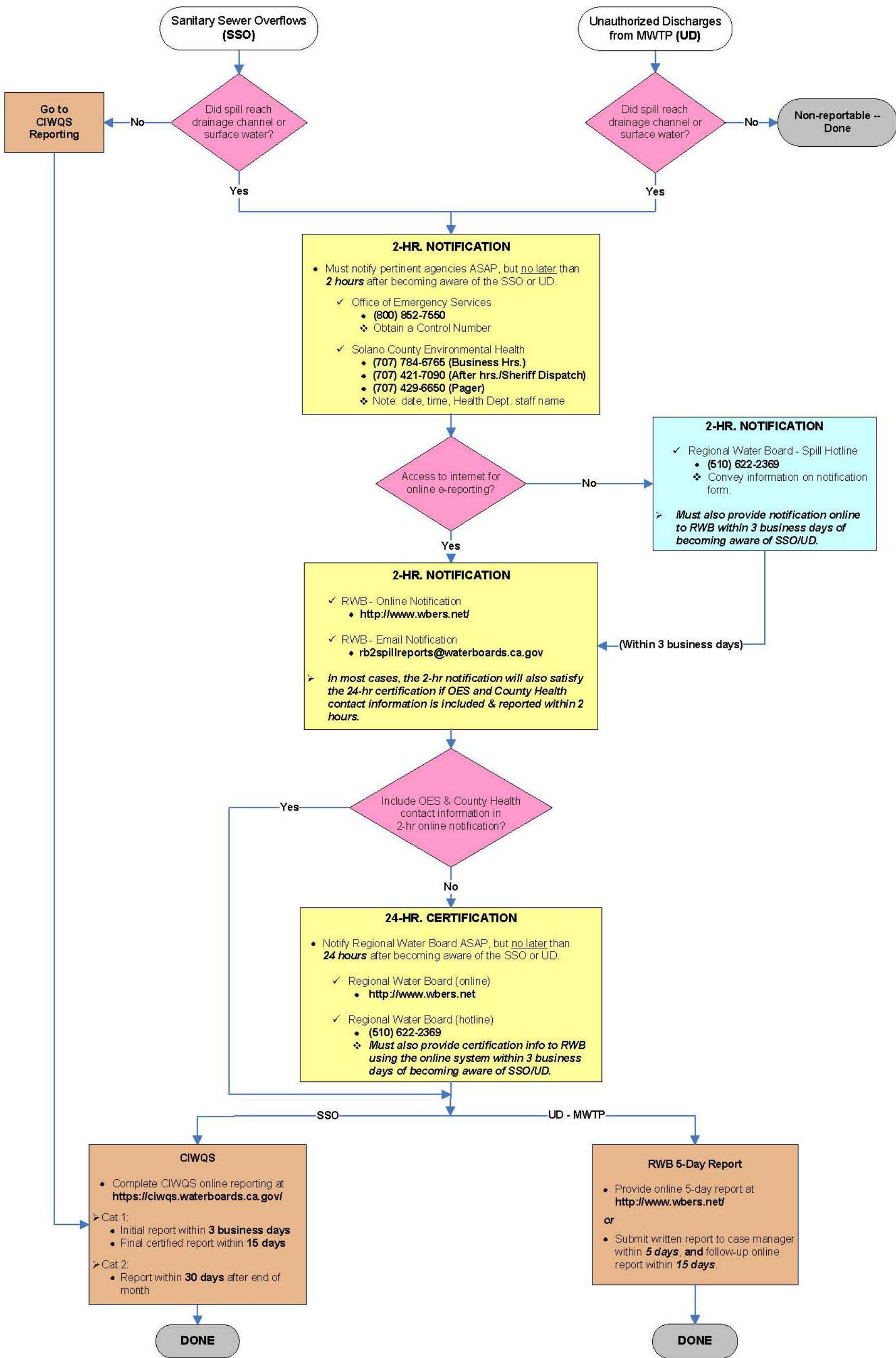


Figure VI- 4: 2 hour/ 24 hour Notification Flow Chart



8.3 External SSO Reporting Responsibility and Contact Information

8.3.1 Responsibility

External SSO reporting is the responsibility of the Foreman and/or Superintendent.

8.3.2 RWQCB

SSOs can be reported electronically or by telephone. Electronic reporting is the preferred method. Use voice mail notification in the event that internet access is not available. The list of information required if email or voice mail is to be used is included in **Appendix**.

Contact Information:

Website: <http://www.wbers.net> ; Need City login and password

Email: RB2SpillReports@waterboards.ca.gov

Telephone: (510) 622-2369 (SSO Hotline)
(8:00 a.m. - 5:00 p.m., Monday through Friday except holidays)

8.3.3 SWRCB

SSOs can be reported electronically or by fax. Electronic reporting is the preferred method. Use fax notification in the event that internet access is not available. SWRCB California Integrated Water Quality System (CIWQS) Category 1 and Category 2 SSO Forms are included in **Appendix**.

Contact Information:

Website: <https://www.ciwqs.waterboards.ca.gov> ; Need City login and password

Fax: (510) 622-2460 (note faxed forms will go to RWQCB)

8.3.4 Solano County Department of Resource Management / Environmental Health Division

The Solano County Department of Resource Management, which includes the Environmental Health Division, will post public notices at parks, or beaches when necessary if discharges reach the public lands, creeks or bay waters.

Contact Information:

Telephone: (707) 784-6765 (business hours)

Sheriff dispatch: (707) 421-7090 (after hours)

Fax: (707) 784-4805

8.3.5 OES

The OES operator will provide a Spill Number and notify other State agencies of the spill. The OES notification list includes California Department of Fish and Game, California Highway Patrol, California Department of Health Services, Caltrans, U.S. Environmental Protection Agency, and U.S. Fish and Wildlife Service.

Contact Information:

Telephone: (800) 852-7550 or (916) 262-1621

9 Emergency Response Equipment

This section provides a list of specialized equipment that is required to support this Overflow Emergency Response Plan.

Closed Circuit Television (CCTV) Inspection Unit (or Lateral Inspection Unit)

A portable CCTV Inspection Unit is required to determine the root cause for all SSOs from gravity sewers. This equipment requirement can be met through the use of contract CCTV inspection services.

Camera

A digital or disposable camera is required to record the conditions upon arrival, during clean up, and upon departure.

Emergency Response Truck

A utility body pickup truck is required to store and transport the equipment needed to effectively respond to sewer emergencies. The equipment and tools should include lights and spilled sewage containment and clean up materials.

GPS Unit

A hand held GPS unit is required to determine the coordinates of spills for use in meeting SWRCB SSO reporting requirements.

Portable Pumps and Hoses

One 2-inch portable pump and one 4-inch portable pump and hoses are required to pump around line failures and lift station failures and to pump spilled sewage and/or contaminated water back into the sewer system. Available pumps and hoses that are owned by the District or the City of Fairfield can be provided as necessary.

High Velocity Sewer Cleaner

A high velocity sewer cleaner is required to clear blockages in gravity sewers.

Vacuum Truck or Trailer

A vacuum truck or trailer is needed to vacuum up spilled sewage. This service can be provided by a contractor.

10 Spill Response, Reporting, and Mitigation Training

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

10.1 Initial and Annual Refresher Training

All Public Works Operations and Maintenance personnel should be trained in sewage overflow response. The training should be updated annually.

All employees who may have a role in responding to, reporting, and or mitigating a sewer system overflow should receive training. All new employees should 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.

10.2 Spill Response Drills

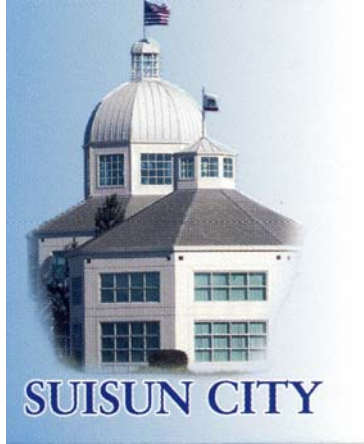
Periodic training drills should be held to ensure that employees are up to date on the procedures, the equipment is in working order, and the required materials are readily available. The training drills should cover scenarios typically observed during sewer related emergencies (e.g. mainline blockage,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

10.3 Record Keeping

Records should 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 should include date, time, place, content, name of trainer(s), and names of attendees.

10.4 Contractors Working On City Sewer Facilities

All contractors working on City sewer facilities will be required to develop a project-specific OERP to cover their work. All contractor personnel will be required to receive training on the Contractor's OERP and to follow the Contractor's OERP in the event that they cause or observe an SSO.



City of Suisun City

Sewer System Management Plan

Element VII: FOG Control

FEBRUARY 2014

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List of Abbreviations

Cities	Cities of Fairfield and Suisun City
City	City of Suisun City
CY	Calendar Year
FOG	Fats, Oils, and Grease
FSE	Food Service Establishment
FSSD, District	Fairfield-Suisun Sewer District
GRD	Grease Removal Device
RWQCB	Regional Water Quality Control Board
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board
WWTP	Wastewater Treatment Plant

VII. FOG CONTROL

1 Introduction

The intent of this section of the SSMP is to evaluate the extent and nature of SSOs related to Fats, Oils, and Grease (FOG), to determine the need for a FOG Control Program, and to outline the elements of the City's FOG Control Program.

It should be noted that this section of the City's SSMP mirrors the FOG Control sections that appear in the SSMPs for the Fairfield-Suisun Sewer District and the City of Fairfield. Due to the nature of the relationships between the three agencies, it was collectively decided to describe each agency's problem areas and maintenance practices within one FOG Control Program to promote awareness and communication among the agencies. This coordinated approach is intended to facilitate a better understanding, by members of each agency, of FOG control efforts in the Fairfield-Suisun area. .

2 Regulatory Requirements for FOG Control Element

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

RWQCB Requirement:

The collection system agency must evaluate its service area to determine whether a FOG control program is needed. If so, a FOG control program shall be developed as part of the SSMP. If the City determines that a FOG program is unnecessary, proper justification must be provided.

SWRCB Requirement:

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

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

3 FOG Control Program Approach

The three agencies will focus on their preventive maintenance program while they gather additional FOG data that will be used to determine the nature and scope of future FOG control programs and activities. The maintenance and data gathering activities are as follows:

Conduct FSE inspections

On behalf of all three agencies, the District has expanded the scope of FSE stormwater inspections that are currently conducted by the County on the District's behalf. The collection of data will identify the presence of GRDs within FSEs and the maintenance practices for GRDs. The goal of the increased attention to GRDs during FSE inspections is to expand agency understanding of GRDs in the collection system, increase FSE awareness and improve GRD maintenance practices to reduce FOG.

Inspect FOG problem area sewers and optimize preventive maintenance activities

The agencies will continue to perform increased cleaning frequencies for known "hot spot" areas described in section C above. The agencies will conduct focused CCTV inspections in order to develop a better understanding of the FOG "hot spot" areas. Based on the results of the CCTV inspections, preventive maintenance (i.e., sewer cleaning) activities and/or corrective maintenance will be scheduled.

The data described above will be collected and analyzed periodically as needed, prior to initiating changes to the FOG control program.

4 Response to SSMP Requirements

Requirement (a):

An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG.

Response:

The District, Fairfield, and Suisun City currently manage FOG-related problems with focused preventive maintenance programs. Suisun City crews provide information on proper FOG disposal to residents that have experienced a FOG-related blockage or SSO, and have distributed the same information door-to-door in designated FOG "hot spot" areas with Suisun City. The infrequent blockages and SSOs that are caused by FOG from residential sources do not warrant a public education outreach program at this time.

Requirement (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.

Response:

Based on the agencies' collective experience with commercial grease haulers working within the combined service areas of the District and the Cities, there is no indication that additional grease disposal sites are needed at this time.

Requirement (c):

The legal authority to prohibit illegal discharges to the sanitary sewer system and identify measures to prevent SSOs and blockages caused by FOG.

Response:

The District's Wastewater Discharger Ordinance and Suisun City's City Code provide the legal bases for a FOG Control Program. Proposed revisions to the City of Fairfield City Code, which provide a similar legal basis for a FOG Control Program, will be presented in the Legal Authority section (Section V) of the City of Fairfield SSMP.

Requirement (d):

Requirements to install grease removal devices (e.g., traps or interceptors), design standards for the grease removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements.

Response:

See activity (1) in Section D above. Based on the low occurrence of grease related SSO's from FSE's (see Table VII-1) additional effort in this area is not warranted.

Requirement (e):

Authority to inspect sanitary sewers for grease producing facilities, enforcement authorities, and determination of whether the City has sufficient staff to inspect and enforce the FOG ordinance.

Response:

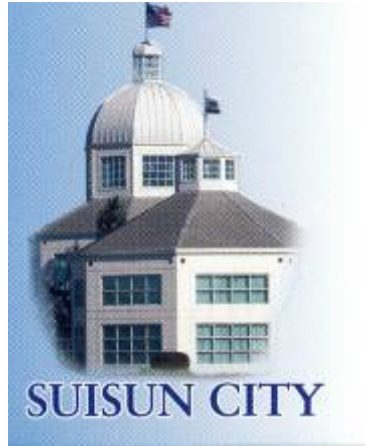
See response to requirement (c) above.

Requirements (f) and (g):

An identification of sewer system sections subject to FOG blockages and the establishment of a cleaning maintenance schedule for each section, and development and implementation of source control measures, for all sources of FOG discharged to the sewer system, for each sewer system section identified above.

Response:

The Cities' and District's preventive maintenance programs and cleaning frequencies are focused on the problematic grease dischargers and the problematic sewer line segments. Based on the analysis of data collected during expanded FSE inspections and additional CCTV work, sewer cleaning frequencies, and structural repair activities, may be revised with the goal of minimizing FOG-related blockages and spills. Additional source control measures beyond those described in Section D (1) above do not appear to be warranted.



City of Suisun City

Sewer System Management Plan

Element VIII: System Evaluation & Capacity Assurance Plan

FEBRUARY 2014

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List of Abbreviations

Cities	Cities of Fairfield and Suisun City
City	City of Suisun City
CIP	Capital Improvement Plan
FSSD, District	Fairfield-Suisun Sewer District
FY	Fiscal Year
mgd	million gallons per day
RWQCB	Regional Water Quality Control Board
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board
WWTP	Wastewater Treatment Plant

VIII. SYSTEM EVALUATION & CAPACITY ASSURANCE PLAN

1 Introduction

This element of the SSMP discusses the City's capacity management practices and procedures. This section fulfills the requirements of both the RWQCB (Element 8) and the SWRCB (Element 8).

2 Regulatory Requirements for System Evaluation & Capacity Assurance Plan (SECAP) Element

The summarized requirements for the SECAP element of the SSMP are:

RWQCB Requirement:

The RWQCB SECAP (Capacity Management) requirement is divided into two sections:

- Capacity Assessment: The wastewater collection system agency shall establish a process to assess the current and future capacity requirements for the collection system facilities. The SSMP should describe whether a current capacity assessment has been prepared, and if not, provide a schedule of activities for completing an assessment.
- System Evaluation and Capacity Assurance Plan: The wastewater collection system agency shall prepare and implement a capital improvement plan to provide hydraulic capacity of key sewer system elements under peak flow conditions. Once the capacity assessment described in (a) above has been completed, a capital improvement program must be implemented to address any capacity needs. The SSMP should briefly describe the capital improvements anticipated and be updated as implementation occurs and priorities change.

SWRCB Requirement:

The wastewater collection system agency shall prepare and implement a capital improvement plan that will provide hydraulic capacity of key sewer system elements under peak flow conditions. This plan must include:

- a) Evaluation: The agency must identify actions needed to evaluate those portions of the sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows, estimates of the capacity of key system components, hydraulic deficiencies, 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, the agency should undertake the evaluation identified in (a) above to establish appropriate design criteria.
- c) Capacity Enhancement Measures: The agency must identify the steps needed to establish a short- and long-term capital improvement plan 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 capital improvement plan shall include an implementation schedule and shall identify sources of funding.

- d) Schedule: The agency shall develop a schedule of completion dates for all portions of the CIP developed in (a) through (c) above. This schedule shall be reviewed and updated at least every five years.

3 Capacity Assessment/Evaluation

To date, system evaluation and capacity assurance of the City's collection system has consisted of observation of sewer system performance during dry and wet weather and enforcement of the City's design standards for new sewers. Capacity assessment has been handled historically by the Fairfield-Suisun Sewer District for the geographic area including Fairfield, Suisun City and portions of Solano County served by the District.

In 2013, the District completed a Sewer System Master Plan (an update of its previous Master Plan completed in 2007). The Master Plan identified all parcels within the service area of Suisun City, land-use type for each parcel and the status of developed versus undeveloped. Wastewater flows generated by each parcel were calculated and imported into a hydraulic model of the sewer system. The Master Plan utilized a hydraulic model to assess the current and future flows and capacity needs of all gravity sewers 12-inches in diameter and larger; these larger trunk sewers have a greater potential for capacity deficiency due to extended tributary areas.

The future evaluation and capacity assurance of City sewers will include continued observation of system performance during wet weather; expansion of the hydraulic model as needed, and enforcement of design standards to ensure that new sewers are sized with adequate capacity to serve new development. In the future, the City plans to prepare a Master Plan for its sanitary sewer system, which will be coordinated with the District's Master Plan and hydraulic model, in order to develop a capital improvement program to address any identified capacity issues.

The following sub-sections provide a brief description of the potential modeled system, flow estimates, and evaluation criteria to be used for the City's sewer system capacity evaluation.

3.1 Hydraulic Model

As a part of the District's 2013 Master Plan, a hydraulic model was developed using Hydra™ modeling software to evaluate existing and future system capacity. Hydra is a semi-dynamic hydraulic model that provides a realistic representation of changes in flow over time as well as estimates of surcharging and backwater effects due to capacity limitations. The model was updated as part of the District's recent Master Plan Update. GIS tools developed by the District's master plan consultant were used to develop the network and loading (land uses and flows) data for the model. The section of the Master Plan report on "System Analysis Methodology" provides a detailed discussion of the model development and use of the model to identify capacity deficiencies and needed improvements.

The City will continue to observe system performance during wet weather conditions to identify lines with potential capacity deficiencies. City sewers that may potentially be added to the hydraulic model include:

- City sewers with observed hydraulic deficiencies or wet weather SSO histories;
- City sewers upstream of modeled lines with potential capacity deficiencies;
- Sewers that serve extensive service areas;

3.2 Flow Estimates

Through its master planning efforts, the District has estimated the City's wastewater flows based on land use information provided by the City. Wastewater flow was estimated separately for three components:

sanitary base flow, including land use-based sanitary flow and point flow sources; wet weather infiltration (groundwater infiltration); and storm-related infiltration and inflow. These estimates were calibrated to historical wastewater flow monitoring data collected by the District.

Current (2013) and future dry weather flows and peak 5-year, 10-year, and 20-year design storm flows were developed. The design storms are 24-hour events based on historical rainfall intensity-depth-duration statistics for the Fairfield-Suisun area as documented in the Solano County Water Agency Hydrology Manual.

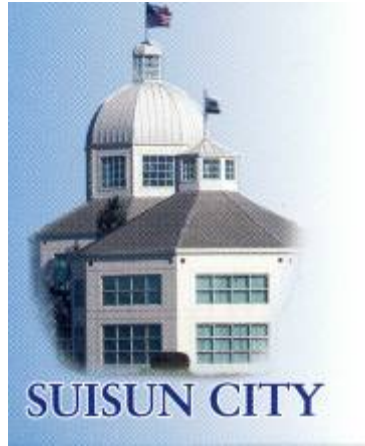
The same basis of flows will be used for the capacity assessment of the City's sewer facilities that may be identified for inclusion in the hydraulic model based on the criteria noted in the section above.

3.3 Capacity Evaluation Criteria

As part of its future Sewer System Master Plan, the City will develop design and capacity evaluation criteria, including an appropriate design event to be used for the assessment and design of sanitary sewers within its collection system.

3.4 Capital Improvement Plan

As discussed in Element IV (Operations & Maintenance Program) of this SSMP, the City's current CIP includes recommended projects developed based on review of the 2007 and subsequent CCTV inspections. At this time, the City has not identified the need for any capacity related CIP projects. Any capacity related improvements identified through additional capacity assessment efforts will be added to the CIP. Following its completion, the updated and prioritized CIP will be appended to this SSMP element. Further, the City will thereafter review and update its CIP as necessary at intervals of 5 years or less.



City of Suisun City

Sewer System Management Plan

***Element IX: Monitoring, Measurement, &
Program Modifications***

FEBRUARY 2014

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List of Abbreviations

City	City of Suisun City
CY	Calendar Year
GWDR	General Waste Discharge Requirement
MMPM	Monitoring, Measurement, and Program Modifications
RWQCB	Regional Water Quality Control Board
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board

IX. MONITORING, MEASUREMENT, & PROGRAM MODIFICATIONS (MMPM)

1 Introduction

This element of the SSMP discusses the City's plans for monitoring and measuring the implementation of its SSMP, as well as plans for making modifications to any of its SSMP program. This section fulfills the Monitoring, Measurement, and Program Modification requirements of both the RWQCB (Element 9) and the SWRCB GWDR (Element 9).

2 Regulatory Requirements for MMPM

The summarized requirements for MMPM element of the SSMP are:

RWQCB Requirement:

The City shall monitor the effectiveness of each SSMP element and update and modify SSMP elements to keep them current, accurate, and available for audit as appropriate.

SWRCB Requirement:

The City shall:

- a) Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;
- b) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;
- c) Assess the success of the 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.

3 Performance Measurements/Indicators

In order to comply with SSMP requirements, the City will develop a program to monitor the implementation and effectiveness of each element of its SSMP. This program will develop and track a series of performance indicators that are in-line with the City's goals. As changes occur in the City's infrastructure, service area demands, organizational structure, and so forth, the City will have a system in place for evaluating the currentness of each SSMP element and updating elements as necessary.

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

- Total number of SSOs;
- Number of SSOs for each cause (roots, grease debris, pipe failure, capacity, pump station failures, and other);
- Portion of sewage contained compared to total volume spilled;
- Volume of spilled sewage discharged to surface water; and,
- Response time to SSOs and other service calls (time from call received to first responder arriving on site).

4 Water Quality Monitoring Plan

The following SSO Water Quality Monitoring Program (WQMP) has been developed pursuant to the requirements of the State's Amended Monitoring and Reporting Program Order No. WQ 2013-0058-EXEC. This WQMP complies with subsection D.7 (v) of the SSS WDR, which calls for adequate sampling to determine the nature and impact of a sewage release. This plan is designed to assess impacts from SSOs 50,000 gallons or greater to surface waters. The program includes the following:

- Water quality monitoring protocols
 - Sampling protocols
 - Time deadline for collecting samples
 - Constituents to be monitored
 - Maximum sample holding times
- Laboratory qualifications
- Analytical instrument maintenance
- Record keeping

5 Water Quality Monitoring Protocols

- a. Within 48 hours of becoming aware of the SSO, sample for:
 - i. Ammonia
 - ii. Fecal coliform
- b. Notify the FSSD Laboratory as soon as you become aware that water quality monitoring may be necessary. The Laboratory can be reached through the District's main number during normal business hours, (707) 429-8930. If after hours, call the Operations cell phone (707) 631-9028 or (707) 631-0850 and ask if the Laboratory is available.
- c. Receiving water samples are to be taken as soon as possible but no later than 48 hours from the time the District has confirmed the spill. If a spill occurs during non-business hours, samples may be taken on the next business day provided this is within 48 hours of spill confirmation.
- d. Due to the unpredictable timing of an accidental sewage spill the FSSD Laboratory prepares a sampling kit (Ice Chest) which will contain the following:
 - i. Eighth (8) plastic pint sample bottles w/preservative for ammonia, 8 pre-sterilized, sealed sample bottles for fecal coliform, and 8 unpreserved quart sample bottle for additional monitoring if necessary
 - ii. Chain of custody sheet , clipboard, and pen
 - iii. Rubber or vinyl gloves
 - iv. Safety glasses
- e. Before heading to the field, be sure to have all of the items needed for sampling including:
 - i. A diagram of the sampling area or blank paper to create a diagram
 - ii. Sampling device (provided by Laboratory)
 - iii. Cell phone or camera

- iv. The sampling kit (place the ice packs from the freezer into the ice chest)
- f. Safety is a primary concern when taking samples at a spill site. Do not take samples during unsafe weather conditions. If surrounding conditions at a sampling location are unsafe, find an alternate site that is safe. Do not put yourself at risk of injury in order to collect a sample. When in doubt, contact your supervisor for consultation. If a sample cannot be taken due to safety considerations or access restrictions, document the conditions with photos if possible and in writing; keep this documentation in the spill file. Be cautious, ammonia sample container will contain 1:1 sulfuric acid.
- g. Select sampling location(s) so as to characterize the impact to the receiving water. The number of sample sites depends on spill volume and the distance the spill may have traveled; use your best judgment when deciding how many sample sites to collect samples from. If the spill is to a stream, estimate the distance the spill may have traveled based on the velocity of the stream and estimated start time of the spill. The velocity may be estimated by noting the time a floating object takes to travel a given distance on the stream surface. Collect one sample upstream from the spill site and one or more samples downstream of the spill site depending on the distance the spill may have traveled. If the spill is to stagnant water, collect a sample as close to the spill site as possible and one or more samples up and down gradient from the spill site. If possible, obtain at least one sample not impacted by the spill to represent background conditions.
- h. Before collecting the sample, fill out the label on the bottle. Each bottle label will have the date, time (24-hr), sample site (description), and Client ID. A diagram of the sampling site can be prepared to illustrate the location of each sample by locating the sample site description on the diagram. Photos may be taken to illustrate sample locations and conditions.
- i. Put on rubber/vinyl gloves to protect hands from contacting contaminated water. Rubber boots may also be necessary when working in or near the water. Wash hands thoroughly when you return to the office.
- j. When collecting the water sample, try to sample as close to the middle of the stream as possible. If sampling a still pond or lake, try to get away from the shoreline and away from organic material or vegetation. Remove the cap from the sample container; submerge the container into the water with the opening facing upstream. Make sure any part of you that is in the water is downstream from the bottle/container. Collect water from the upper 5 inches of the stream/water body. If the stream/water body is shallow, do your best to avoid stirring up sediment. Try not to get bugs, leaves, sticks, etc. in the bottle. A sampling pole with a clamp to hold the sample bottle can be used to collect samples at a distance from the shore. The samples must be collected directly into the pre-sterilized bottle attached to the end of the pole. When using a sampling pole, follow the same process as described above for filling each sample bottle.
- k. Sampling protocol for fecal coliform
 - i. Use sterile, sealed plastic containers
 - ii. Uncap the container immediately before sample collection
 - iii. Avoid contaminating the container by touching inside the cap or the container
 - iv. Fill the container to "100 mL fill line"
 - v. Close the cap immediately and shake vigorously
 - vi. Place the sample in an ice-chest (with ice packs) to transport and relinquish to the laboratory and complete the chain of custody
 - vii. Do not exceed the maximum hold time; without refrigeration two hours and 8 hours when stored at 4.0 °C

- viii. Transport the samples to Caltest or any certified laboratory as soon as possible after collection to allow the laboratory time to handle the samples. Driving time to Caltest Laboratory from the treatment plant at 1010 Chadbourne Road is less than 20 minutes in light traffic. Directions to Caltest are in Attachment-1.

- l. Sampling protocol for ammonia

- i. When the samples are collected in pre-preserved containers, avoid spilling or washing out the preservative while collecting the sample.
 - ii. Follow the instruction in section (j) and fill the sample bottles to nearly full and mix well. Place the samples in the ice chest, complete the chain of custody and transport to the laboratory.
 - iii. Unpreserved samples have 24 hour hold-time if kept at 4 °C. Samples can be held for 28 days if the pH is reduced to < 2 by addition of 1:1 sulfuric acid to preserve the samples.

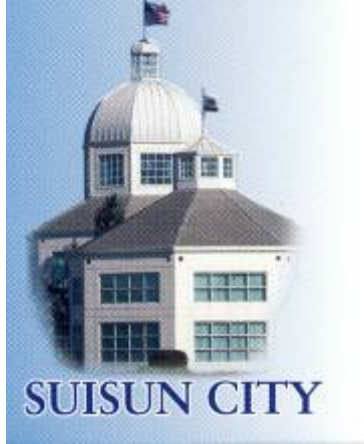
- m. Sample collection and analysis can be repeated daily, every few days or weekly until it is clear that the receiving water has returned to its preexisting condition; sample frequency and duration can be determined on a case by case basis or as directed by the Solano County Public Health Officer or the local Fish & Wildlife Warden.

6 Laboratory Qualifications

- a. Water quality analyses for ammonia and fecal coliform are performed by an accredited Laboratory certified by the California Department of Public Health.
- b. Monitoring instruments and devices used to assess water quality under this program are properly maintained and calibrated in accordance with Standard Methods 21st Edition to ensure their continued accuracy. Records to document maintenance and calibration are kept in the FSSD Laboratory log book.

7 Record Keeping

Water quality monitoring records and results are kept with the spill file. Records for SSOs have five-year retention.



City of Suisun City

Sewer System Management Plan

Element X: SSMP Audits

FEBRUARY 2014

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List of Abbreviations

City	City of Suisun City
CY	Calendar Year
FSSD, District	Fairfield-Suisun Sewer District
GWDR	General Waste Discharge Requirement
RWQCB	Regional Water Quality Control Board
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board

X. SSMP AUDITS

1 Introduction

This element of the SSMP discusses the process that the City will follow to evaluate the effectiveness of the SSMP and to identify updates that may be needed for a more effective program. This section fulfills the SSMP Audit requirements of both the RWQCB (Element 10) and the SWRCB GWDR (Element 10).

2 Regulatory Requirements for SSMP Audits

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

RWQCB Requirement:

The City shall conduct an annual audit of its SSMP which includes any deficiencies and steps to correct them (if applicable), appropriate to the size of its system and the number of overflows, and submit a report of such audit along with its annual report by March 15th of the following year.

SWRCB Requirement:

As part of the SSMP, the City shall conduct periodic internal audits, appropriate to the size of its 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 City's compliance with the SSMP requirements, including identification of any deficiencies in the SSMP and steps to correct them.

3 SSMP Audits

The City will audit its SSMP. The audit will determine 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. The first audit will be completed by March 15, 2014 and will cover CY 2013.

The scope of the audit will cover each of the sections of the SSMP. The Audit Checklist, based on the requirements in the GWDR, will be used for the audit is included in **Appendix**.

The results of the audit will be included in the Audit Report. The Audit Report is intended to identify program changes that may be needed to improve effectiveness. Information collected as part of Element IX (Monitoring, Measurement, and Program Modifications) will be used in preparing the audit. Tables, figures and/or charts will be used to summarize information about these indicators. The Audit Report to the RWQCB will include:

- Confirmation that the City has completed its initial SSMP, and a description of progress made on updates to SSMP elements, and if the City is on schedule. The Audit Report will provide justification if the SSMP development/update is behind schedule;
- How the City implemented SSMP elements during the past year;
- The City's effectiveness in implementing the SSMP elements;
- A description of the additions and improvements made to the sanitary sewer collection system in the past reporting year; and
- A description of the additions and improvements to the SSMP that are planned for the upcoming reporting year with a projected schedule for implementation.

The Audit Report will be submitted to the RWQCB, along with the Annual Report of SSOs, by March 15th of each year. Copies of the annual Audit Reports will be maintained by the City for five years.

4 SSMP Updates

The City will update its SSMP at least every five years. The first update will be completed on or before August 31, 2019, five years from the date the City's initial SSMP is due before the RWQCB.

The City will determine the need to update its SSMP more frequently based on the results of the annual audit and the performance of its sanitary sewer system using information from the Monitoring and Measurement Program. In the event that the City decides that an update is warranted, the process to complete the update will be identified at that time. The City will complete the update within one year following identification of the need for the update.

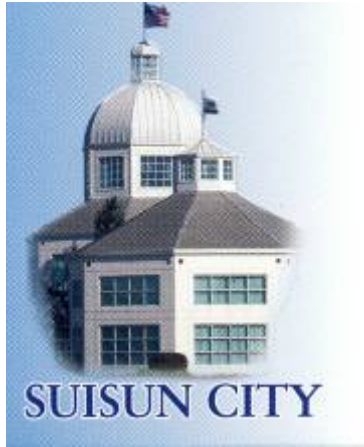
City staff will seek the approval from the City Council for any significant changes to the SSMP. The authority for approval of minor changes such as employee names, contact information, or limited procedural changes is delegated to the Director of Public Works.

Section	Title	Requirement	SSMP Meets Current Requirements?	SSMP Current?	SSMP Implemented?
I	Goals	Reduce, prevent, and mitigate SSOs			
II	Organization	Designate Legally Responsible Official (LRO)			
		Names and phone numbers for key management personnel			
		Names and phone numbers for key administrative personnel			
		Names and phone numbers for key maintenance personnel			
		Chain of communication for reporting SSOs			
III	Legal Authority	Prevent illicit discharges to sanitary sewer system			
		Require sewers and connection be properly designed and constructed			
		Ensure access for inspection, maintenance, and repairs			
		Limit discharge of FOG and debris that may cause blockages			
		Require the installation of grease removal devices			
		Ability to inspect FOG producing facilities			
		Enforce violations of the City ordinances			
IV	O&M Program	Maintain up-to-date maps of the sanitary sewer system			
		Describe routine preventive maintenance program			
		Document completed preventive maintenance using system such as work orders			
		Rehabilitation and replacement plan that identifies and prioritizes sanitary sewer system defects			

Section	Title	Requirement	SSMP Meets Current Requirements?	SSMP Current?	SSMP Implemented?
		Provide regular technical training for sewer system staff			
	O&M Program (cont'd)	Require contractors to provide training for their workers who work in the City's sewer system facilities			
		Maintain equipment inventory			
		Maintain critical spare part inventory			
V	Design and Performance Provisions	Design and construction standards for new sanitary sewer system facilities			
		Design and construction standards for repair and rehabilitation of existing sanitary sewer system facilities			
		Procedures for the inspection and acceptance of new sanitary sewer system facilities			
		Procedures for the inspection and acceptance of repaired and rehabilitated sanitary sewer system facilities			
VI	Overflow Emergency Response Procedures (OERP)	Procedures for the notification of primary responders			
		Procedures for the notification of regulatory agencies			
		Program to ensure appropriate response to all SSOs			
		Proper reporting of all SSOs			
		Procedure to ensure City staff are aware of and follow OERP			
		Procedure to ensure City staff are trained in the OERP procedures			

Section	Title	Requirement	SSMP Meets Current Requirements?	SSMP Current?	SSMP Implemented?
		Procedure to ensure contractor personnel are aware of and follow OERP			
	OERP (cont'd)	Procedure to ensure contractor personnel are trained in the OERP procedures			
		Procedures to address emergency operations such as traffic and crowd control			
		Program to prevent the discharge of sewage to surface waters			
		Program to minimize or correct the impacts of any SSOs that occur			
		Program of accelerated monitoring to determine the impacts of any SSOs that occur			
VII	FOG Control Program	Public outreach program that promotes the proper disposal of FOG			
		Plan for the disposal of FOG generated within the City's service area			
		Demonstrate that the City has allocated adequate resources for FOG control			
		Identification of sanitary sewer system facilities that have FOG-related problems			
		Program of preventive maintenance for sanitary sewer system facilities that have FOG-related problems			
VIII	System Evaluation and Capacity Assurance Program (SECAP)	Identification of elements of the sanitary sewer system that experience or contribute to SSOs caused by hydraulic deficiencies			
		Established design criteria that provide adequate capacity			
		Short term CIP that addressed known hydraulic deficiencies			

Section	Title	Requirement	SSMP Meets Current Requirements?	SSMP Current?	SSMP Implemented?
		Long term CIP that addressed known hydraulic deficiencies			
	SECAP (cont'd)	Procedures that provide for the analysis, evaluation, and prioritization of hydraulic deficiencies			
		The short and long term CIPs include schedules for the correction of each identified hydraulic deficiency			
IX	Monitoring, Measurement, and Program Modifications	Maintain relevant information to establish, evaluate, and prioritize SSMP activities			
		Monitor implementation of the SSMP			
		Measure, where appropriate, performance of the elements of the SSMP			
		Assess success of the preventive maintenance program			
		Update SSMP program elements based on monitoring or performance			
		Identify and illustrate SSO trends			
X	SSMP Program Audits	Conduct periodic audits			
		Record the results of the audit in a report			
		Record the changes made and/or corrective actions taken			
XI	Communications Program	Communicate with the public regarding the preparation of the SSMP			
		Communicate the public regarding the performance of the SSMP			
		Communicate with tributary or satellite sewer systems			



City of Suisun City

Sewer System Management Plan

Element XI: Communication Plan

FEBRUARY 2014

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List of Abbreviations

City	City of Suisun City
CIWQS	California Integrated Water Quality System
CY	Calendar Year
FSSD, District	Fairfield-Suisun Sewer District
GWDR	General Waste Discharge Requirement
RWQCB	Regional Water Quality Control Board
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board

XI. COMMUNICATION PLAN

1 Introduction

This element of the SSMP discusses the process involved in communicating with interested members of the public regarding the development, implementation, and performance of this plan. This Communication Plan also addresses communication between FSSD, Fairfield, and Suisun City. This section fulfills the Communication Plan requirements of the SWRCB GWDR (Element 11).

2 Regulatory Requirements for Communication Plan

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

RWQCB Requirement:

There are currently no RWQCB requirements for an SSMP communication plan.

SWRCB Requirement:

The City shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the City as the program is developed and implemented.

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

3 Communication during SSMP Development and Implementation

The City will post a notice on its website to inform interested members of the public it is developing an SSMP. The notice is:

- The City of Suisun City is developing and implementing a Sewer System Management Plan (SSMP) pursuant to State Water Resources Control Board Order WQ2013-0058-EXEC, Statewide General Discharge Requirements of Sanitary Sewer Systems. The goal of the SSMP is to minimize the frequency and severity of sanitary sewer overflows. The SSMP will cover the management, planning, design, and operation and maintenance of the City's sanitary sewer system. Once the SSMP is complete, goals and objectives of the plan will be implemented on a continuous and ongoing basis as part of the operations and maintenance of the sewer system. The SSMP Development Plan and Schedule are available for review at the City of Suisun City Corporation Yard, 4555 Peterson Road, during normal business hours. Interested parties can contact Jeff Penrod at (707) 421-7349 or jpenord@suisun.com for additional information.

The information to be provided upon request to interested parties will include: a copy of the SSMP Development Plan and Schedule, a copy of completed sections of the SSMP, a copy of the draft sections of the SSMP that have been reviewed and approved for distribution by the City, and contact information and/or opportunities for input into the development and implementation process.

4 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:

- <https://ciwqs.waterboards.ca.gov/>

The City will place a notice on its website that the sanitary sewer performance information is available at the CIWQS public access website.

5 Communication with Tributary/Satellite Sanitary Sewer Systems

The City of Suisun City, the Fairfield-Suisun Sewer District (FSSD), and the City of Fairfield are working together to develop and implement their SSMPs. Once the SSMP documents have been completed and implemented, the three agencies will continue to work together. The opportunities for communication during this period will be:

- Ongoing communication, correspondence and resource sharing regarding regional meetings and information related to the SSMP and associated State and Regional regulations.
- Collaborative training events including SSMP refresher training and emergency response training.

The point of contact at each of the three agencies to communicate any SSMP-related issues is:

City of Suisun City	City of Fairfield	FSSD
Jeff Penrod	George Shimboff	Marcie Bodeaux
(707) 421-7349	(707) 428-7415	(707) 429-8930
jpenrod@suisun.com	gshimboff@ci.fairfield.ca.us	mbodeaux@fssd.com