CITY OF
MOUNTAIN VIEW

Sewer System
Management Plan

April 2014

Sewer System Management Plan

Note: Section numbers are based on General Waste Discharge Requirements (GWDR) Order dated May 2, 2006.

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Introduction

A. Sewer System Management Plan

This Sewer System Management Plan (SSMP), prepared by the City of Mountain View Public Works Department in 2008, is updated to reflect organization changes and master plan updates. It is a compendium of the policies, procedures, and activities that are included in the planning, management, operation, and maintenance of the City's sanitary sewer system.

This SSMP is intended to meet the requirements of the San Francisco Bay Regional Water Quality Control Board and the State Water Resources Control Board.

The structure (section numbering and nomenclature) of this SSMP follows the General Waste Discharge Requirements (GWDR) for Wastewater Collection Agencies, State Water Resources Control Board Order No. 2006-0003 dated May 2, 2006. The requirements of the San Francisco Bay Regional Water Quality Control Board, where they differ from the GWDR, are also included.

B. Sanitary Sewer System Facilities

The City operates a sanitary sewer system that serves a population of approximately 74,000 in a 12 square mile service area. The sewer system consists of 159 miles of gravity sewers (approximately 3,850 line segments), approximately one mile of 42" force main, and two pump stations. The sewers range in size from 4" to 42" in diameter.

There are approximately 16,000 sanitary sewer laterals in the City. Maintenance and repair of sanitary sewer laterals within the City are the responsibility of the property owner; however, the City provides maintenance and repair services for laterals located within the public right-of-way upon request as a courtesy service to the residents of Mountain View. The City does not own any portion of the service lateral.

C. Definitions, Acronyms, and Abbreviations

American Society for Testing and Materials (ASTM)

American Water Works Association (AWWA)

Base Wastewater Flow (BWF)

Best Management Practices (BMP)

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

Calendar Year (CY)

California Integrated Water Quality System (CIWQS)

Refers to the State Water Resources Control Board online electronic reporting system that is used to report SSOs, certify completion of the SSMP, and provide information on the sanitary sewer system. The electronic reporting requirement became effective on May 2, 2007 in Region 2.

California Office of Emergency Services (Cal OES)

Capital Improvement Plan (CIP)

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

City

Refers to the City of Mountain View.

Closed-Circuit Television (CCTV)

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

County Health

Refers to the Santa Clara County Health Services Agency.

Daily Peaking Factor (DPF)

Depth to Diameter Ratio (d/D)

Dispatch

Dispatch refers to MV 3 Communications.

Environmental Safety Section

Refers to the City of Mountain View Fire Department's Environmental Safety Section.

Fats, Oils, and Grease (FOG)

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

Fiscal Year (FY)

Food Service Establishment (FSE)

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

Full-time Equivalent (FTE)

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

General Waste Discharge Requirements (GWDR)

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

Geographical Information System (GIS)

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

Groundwater Infiltration (GWI)

Infiltration/Inflow (I/I)

Refers to water that enters the sanitary sewer system from stormwater and groundwater that increases the quantity of flow. Infiltration enters through defects in the sanitary sewer system after flowing through the soil. Inflow enters the sanitary sewer without flowing through the soil. Typical points of inflow are

holes in manhole lids and direct connections to the sanitary sewer (e.g., storm drains, area drains, and roof leaders).

Lateral

Refers to the piping that conveys sewage from a building to the City sewer system.

Legally Responsible Official (LRO)

Refers to the individual who has the authority to certify reports and other actions that are submitted through CIWQS.

Million Gallons Per Day (MGD)

Monitoring, Measurement, and Plan Modifications (MMPM)

Municipal Operations Center (MOC)

MV 3 Communications

The City of Mountain View operates two communication centers. During normal business operations, calls are received by Mountain View 3. During all other hours, calls are received by Mountain View Communications, the City's 9-1-1 system which is staffed 24/7. For the purpose of this SSMP, both will be referred to as MV 3 Communications.

Operations and Maintenance (O&M)

Overflow Emergency Response Plan (OERP)

For the purpose of this SSMP, this plan will be referred to as the Sanitary Sewer Overflow Response Plan (SSORP).

Palo Alto Regional Water Pollution Control Plant (PARWPCP)

Polyvinylchloride Pipe (PVC)

Preventive Maintenance (PM)

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

Property Damage Overflow

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

Property Line Cleanout

Refers to the cleanout that is typically located on the building lateral near the sidewalk or at the edge of the City right-of-way. The property line cleanout is used to provide access to maintain the lower lateral.

Public Services Division (PSD)

Public Works Department (PWD)

Rainfall Derived Inflow and Infiltration (RDI/I)

Regional Water Quality Control Board (RWQCB)

Refers to the San Francisco Bay Regional Water Quality Control Board.

Sanitary Sewer Overflow Response Plan (SSORP)

Refers to the City's Overflow Emergency Response Plan which is a component of this SSMP that addresses the City's response to SSO events.

Sanitary Sewer Overflows (SSOs)

Refers to the overflow or discharge of any quantity of partially treated or untreated wastewater from the sanitary sewer system at any point upstream of the wastewater treatment plant. SSOs are typically caused by blockages, pipe failure, pump station failure, or capacity limitation.

Sanitary Sewer System

Refers to the portion of the sanitary sewer facilities that are owned and operated by the City of Mountain View.

Service Call Database

Refers to the City of Mountain View database that is used to track and analyze service calls and SSOs.

Sewer System

See Sanitary Sewer System.

Sewer System Management Plan (SSMP)

Standard Dimension Ratio (SDR)

Refers to the ratio of pipe diameter to pipe wall thickness in plastic pipes.

State Water Resources Control Board (SWRCB)

Refers to the California Environmental Protection Agency (EPA) State Water Resources Control Board and staff responsible for protecting the State's water resources.

Supervisory Control and Data Acquisition (SCADA)

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

System Evaluation and Capacity Assurance Plan (SECAP)

Vitrified Clay Pipe (VCP)

Water of the State

Water of the State means any water, surface or underground, including saline waters, within the boundaries of California. In case of a sewage spill, storm drains are considered to be waters of the State unless the sewage is completely contained and returned to the sewer system. May also be referred to as surface water(s) or State waterway.

Wastewater Section (WWS)

Refers to the City of Mountain View Public Works Department, Public Services Division, Wastewater Section.

Wastewater Service Call Report

Refers to the City of Mountain View Wastewater Service Call Report.

D. References

New Requirements for Preparing Sewer System Management Plans, California Regional Water Quality Control Board San Francisco Bay Region letter to Sewer System Authorities, July 7, 2005 (*www.cwea.org/conferences/sso/Reg2Letter-SSMP0705.pdf*).

Sewer System Management Plan (SSMP) Development Guide, San Francisco Bay Regional Water Quality Control Board in cooperation with Bay Area Clean Water Agencies, July 2005 (*http://www.waterboards.ca.gov/sanfranciscobay/publications_forms/documents/SSMP%20Development%20Guide%20-%20Final.pdf*).

State Water Resources Control Board Order No. 2006-0003 Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, California State Water Resources Control Board, May 2, 2006 (*http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2006/wqo/wqo2006_0003.pdf*).

Monitoring and Reporting Program 2006-0003 Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, State Water Resources Control Board, May 2, 2006 (*http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2006/wqo/wqo2006_0003.pdf*).

State Water Resources Control Board Monitoring and Reporting Program No. 2006-0003-DWQ (as revised by Order No. WQ 2008-0002-EXEC) Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, California State Water Resources Control Board, February 20, 2008 (*http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2008/wqo/wqo2008_0002_exec.pdf*).

State Water Resources Control Board Monitoring and Reporting Program No. 2006-0003-DWQ (as revised by Order No. WQ 2013-0058-EXEC) Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, California State Water Resources Control Board, July 30, 2013 (*http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2013/wqo2013_0058exec.pdf*)

Section I: Goals

A. Introduction

This section of the SSMP formally states the goals of the SSMP.

B. Regulatory Requirements for Goals Section

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

RWQCB Requirement

Each wastewater collection system agency shall, at a minimum, develop goals for the Sewer System Management Plan (SSMP) as follows:

a. To properly manage, operate, and maintain all parts of the wastewater collection system.

b. To provide adequate capacity to convey peak flows.

c. To minimize the frequency of sanitary sewer overflows (SSOs).

d. To mitigate the impact of SSOs.

GWDR 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.

C. SSMP Goals

The goals of the City of Mountain View SSMP are to:

- Properly **manage**, **operate,** and **maintain** the wastewater collection system.

- **Maintain** design construction standards and specifications for the installation of new wastewater systems.

- **Verify** the wastewater collection system has adequate capacity to convey sewage during peak flows.

- **Minimize** the frequency of sanitary sewer overflows.

- **Respond** to sanitary sewer overflows quickly and mitigate the impact of the overflow.

- **Provide** training on a regular basis for staff in collection maintenance and operations.

- **Encourage** and **support** participation in the California Water Environment Associations' voluntary Wastewater Certification Program and ongoing training programs.

- **Maintain** a fats, oil, and grease (FOG) program to limit fats, oils, grease, and other debris that may cause blockages in the sewage collection system.

- **Develop** a closed-circuit televising (CCTV) program for the sewer collection system.

- **Identify** and **prioritize** structural deficiencies and implement short-term and long-term maintenance and rehabilitation actions to address each deficiency.

- **Meet** all applicable regulatory notification and reporting requirements.

- **Provide** excellent customer service.

Section II: Organization

A. Introduction

This section of the SSMP identifies City staff who are responsible for implementing this SSMP, responding to SSO events, and reporting SSOs.

B. Regulatory Requirements for Organization Section

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

RWQCB Requirement

Each wastewater collection agency shall, at a minimum, provide information regarding organization:

a. Identify agency staff responsible for implementing, managing, and updating the SSMP.

b. Identify chain of communication for responding to SSOs.

c. Identify chain of communication for reporting SSOs.

GWDR Requirement

The collection system agency's SSMP must identify:

a. The name of the responsible or authorized representative.

b. 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.

c. The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, and/or California Office of Emergency Services (Cal OES).

C. Organization

1. Reporting Structure

The City of Mountain View Utilities Section is responsible for the City's Wastewater Collection System. The Engineering and Environmental Sections work independently and report to their respective managers who in turn report to the Assistant Public Works Director.

The Wastewater Operation is responsible for the daily operation and maintenance of the wastewater collection system. The Wastewater Supervisor reports to the Utility Services Manager.

The City of Mountain View Fire Department's Environmental Safety Section inspects and monitors 237 commercial and industrial grease generators discharging into the City's collection system. The Wastewater Operation and Environmental Safety Sections work together to reduce grease-related sanitary sewer overflows.

The organization chart for the management, operation, and maintenance of the City's wastewater collection system is shown on Figure II-1. The organization chart for the City of Mountain View Fire Department is shown on Figure II-2.

2. Service Calls/Sanitary Sewer Overflow Reporting

The City of Mountain View operates two communication centers. During normal business operations (Monday through Friday, 8:00 a.m. to 4:00 p.m.), calls are received by Mountain View 3. During all other hours, calls are received by Mountain View Communications. This is the City's 9-1-1 system and is staffed 24/7.

Note: For the purpose of this SSMP, both will be referred to as MV 3 Communications.

Upon receiving the information, the Wastewater Duty Person is immediately contacted. After hours, the Wastewater Duty Person is provided a cell phone, pager, and utility truck and must have a response time of one hour or less. The Wastewater Duty Person will evaluate the situation and determine if additional help is necessary.

The Wastewater Duty Person must notify the Wastewater Supervisor if:

- More than one employee is called to assist;
- The SSO is over 1,000 gallons;
- The SSO enters surface water or drainage channel;
- The SSO causes property damage or flooding in a home structure; or
- The SSO constitutes an imminent danger to the public or environment.

The Wastewater Duty Person completes a Wastewater Service Call Report for all SSOs. The report is forwarded to the Wastewater Supervisor for investigation and/or follow-up.

Figure II-1: Organization Chart and SSO Reporting Chain of Communication

PUBLIC WORKS DEPARTMENT

PUBLIC WORKS DIRECTOR*
(Michael A. Fuller)

TRANSPORTATION AND BUSINESS SERVICES

1 Transportation and Business Manager (Linda Forsberg)

Administration

1 Admin. Analyst I/II
1 Secretary
1 Office Assistant III
0.5 Office Assistant I/II

Transportation Management

1 Transportation Planner

Property Management

1 Real Property Program Administrator

Solid Waste

1 Solid Waste Program Manager
1 Senior Admin. Analyst
1 Admin. Analyst I/II

Environmental Sustainability

1 Environmental Sustainability Coordinator

ENGINEERING

1 Assistant Public Works Director (Jacqueline Andrews Solomon)

Construction Engineering

1 Principal Civil Engineer
1 Senior Civil Engineer
1 Junior/Assistant/Associate Engineer
1 Senior Public Works Inspector
1 Public Works Inspector I/II

Capital Projects

1 Principal Civil Engineer
2.5 Senior Civil Engineer
2 Senior Project Manager
2 Junior/Assistant/Associate Engineer
0.5 Project Manager

Traffic Engineering

1 Traffic Engineer
1 Senior Civil Engineer

Land Development

1 Principal Civil Engineer
2 Senior Civil Engineer
0.5 Senior Civil Engineer (limited period)**
2 Junior/Assistant/Associate Engineer
1 Junior/Assistant/Assoc. Engineer (Limited-Period)
1 Engineering Assistant I/II

FLEET AND FACILITIES

1 Fleet and Facilities Manager (Scott Estes)

Facilities Maintenance

1 Facilities Maintenance Supervisor
1 Facilities Contract Coordinator
1 Facilities Maintenance Worker III
2 Facilities Maintenance Worker I/II
1 Program Assistant

Fleet Services

1 Equipment Maintenance Supervisor
1 HVAC Technician
2 Equipment Mechanic III
3 Equipment Mechanic I/II
1 Equipment Service Worker
1 Program Assistant

PUBLIC SERVICES

1 Asst. Public Works Director (Gregg Hosfeldt)

Safety/Administration

1 Safety & Training Admin.
1 Senior Admin. Analyst
0.5 Streets Technician
1 Secretary
3 Office Assistant III

Engineering & Envir. Compliance

1 Principal Civil Engineer
2 Senior Civil Engineer
1 Facilities Project Manager
1 Environ. Compliance Spec.
1 Systems Coordinator/Tech.

Utilities Management

1 Utilities Svcs. Manager

Utility Systems

1 Utilities Systems Supervisor
1 Utilities Systems Specialist
1 Utilities Electrician
2 Sr. Utilities Systems Tech.

Water Meters

1 Water Meter Supervisor
1 Cross-Connection Ctrl. Spec.
1 Meter Service Worker III
3 Water Utility Worker I/II

Water Distribution

1 Water Supervisor
1 Water Conservation Coord.
1 Water Resources Tech.
1 Water Quality Technician
2 Sr. Water System Operator
2 Water System Operator
1 Utilities Inspector/Locator
1 Heavy Equipment Operator
2 Water Utility Worker III
3 Water Utility Worker I/II

Wastewater

1 Wastewater Supervisor
2 Wastewater Utility Wrkr. III
5 Wastewater Utility Wrkr. I/II

Streets Maintenance

0.5 Streets & Landfill Closure Mgr.
1 Streets Supervisor
1 Street Lighting Technician
1 Heavy Equipment Operator
3 Streets Maint. Worker III
4 Streets Maint. Worker I/II
2 Street Sweeper Operator

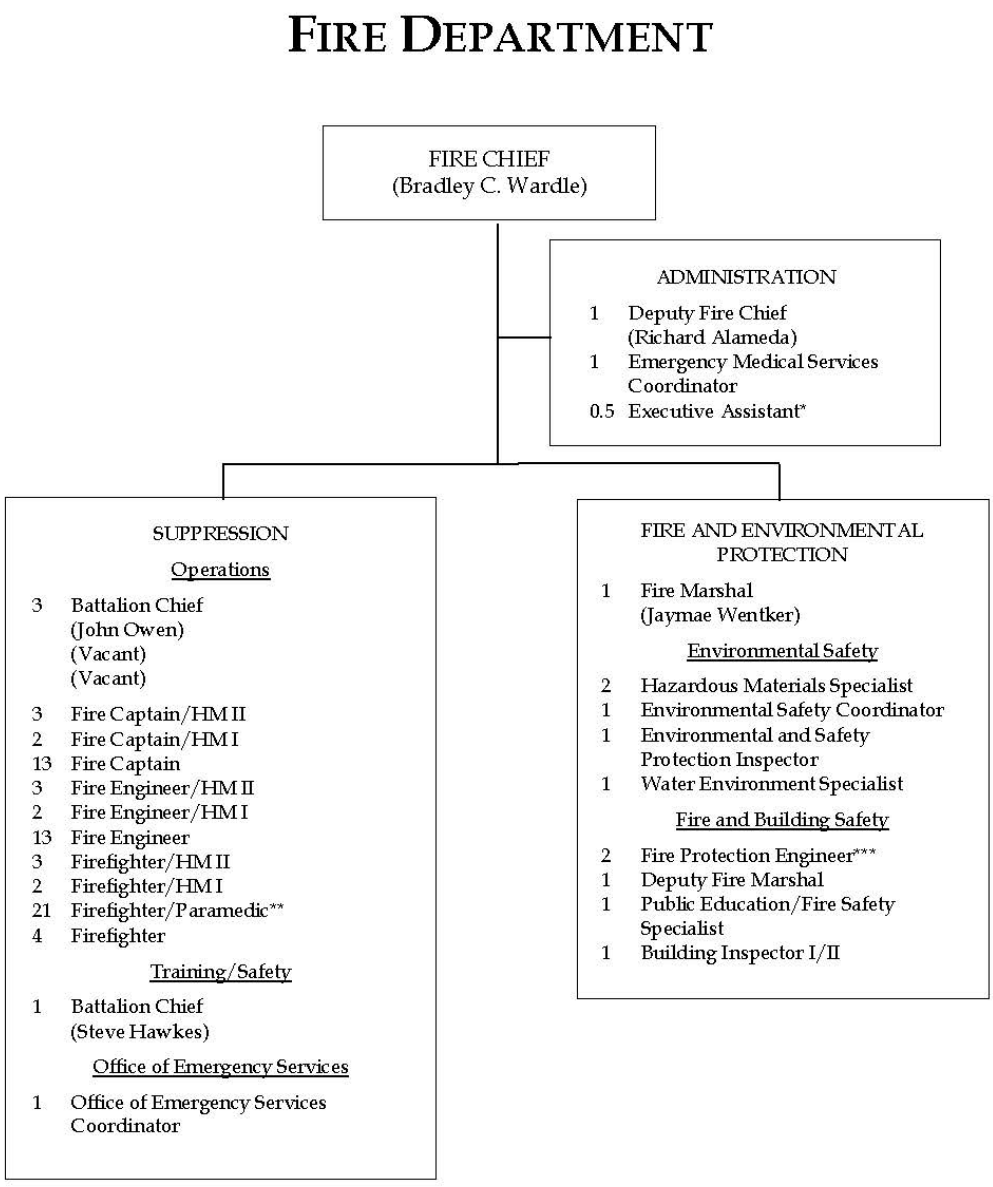
Landfill Maintenance

0.5 Streets & Landfill Closure Mgr.
1 Postclosure Supervisor
2 Postclosure Envir Sys Spec
2 Sr. Postclosure Envir Sys Tech
1 Heavy Equipment Specialist

FISCAL YEAR 2013-14 POSITION TOTALS: 115.0 Full-Time
2.0 Regular Part-Time
1.5 Limited-Period

* This position also acts in the capacity of City Engineer.
** One-half limited-period Senior Civil Engineer position has been approved for the duration of the Google Reimbursement Agreement.

Figure II-2: Organization Chart—City of Mountain View Fire Department



FISCAL YEAR 2013-14 POSITION TOTALS: 85.5 Full-Time

* Position directly reports to the Police Department but supports the Fire Department.
** Authorization of 21 Paramedics includes Engineer and Firefighter/Hazardous Materials II levels.
*** Located in Community Development Department but budgeted in Fire Department.

3. Authorized Representative

The City's Authorized Representative in all wastewater collection system matters is the Wastewater Supervisor. The Wastewater Supervisor is authorized to submit electronic and written spill reports to the RWQCB, the County Health Agency, and the Cal OES. The Utilities Services Manager is the City's legally responsible official (LRO) who is authorized to certify electronic spill reports submitted to the SWRCB.

The Crew Leader is the Acting Wastewater Supervisor and is authorized to act as the City's Authorized Representative in the Wastewater Supervisor's absence. The Wastewater Supervisor is authorized to submit verbal, electronic, and written spill reports to the SWRCB, the RWQCB, the County Health Agency, and Cal OES.

4. Responsibility for SSMP Development, Implementation, and Maintenance

The Wastewater Supervisor has responsibility for developing, implementing, periodically auditing, and maintaining the City's SSMP. The Wastewater Supervisor may delegate the responsibility for developing, implementing, periodically auditing, and maintaining portions of the City's SSMP to his staff.

Other City staff responsible for developing, implementing, and maintaining specific elements of the City's SSMP, along with their job titles and contact information, are shown in Appendix II-A.

5. SSO Reporting Chain of Communication

The SSO Reporting Chain of Command follows the Organization Chart shown on Figure II-1. The SSO reporting process and responsibilities are described in detail in Section VI of the SSMP, Sanitary Sewer Overflow Response Plan.

Appendix II-A: City Staff with Area of Responsibility for SSMP

Name	Department/Title	Area of Responsibility for SSMP
Mike Mulhearn	Public Works Department, Public Services Division, Wastewater Supervisor	Goals
Mike Mulhearn	Public Works Department, Public Services Division, Wastewater Supervisor	Organization
Gregg Hosfeldt	Public Works Department, Assistant Public Works Director	Legal Authority
Mike Mulhearn	Public Works Department, Public Services Division, Wastewater Supervisor	Operations and Maintenance Program
Alison Turner	Public Works Department, Public Services Division, Utilities Services Manager	Design and Performance Provisions
Mike Mulhearn	Public Works Department, Public Services Division, Wastewater Supervisor	Sanitary Sewer Overflow Response Plan
Eric Anderson	Fire Department, Fire and Environmental Protection Division, Environmental Waste Inspector	FOG Control Program
Alison Turner	Public Works Department, Public Services Division, Utilities Services Manager	System Evaluation and Capacity Assurance Plan
Alison Turner	Public Works Department, Public Services Division, Utilities Services Manager	Monitoring, Measurement, and Program Modifications
Alison Turner	Public Works Department, Public Services Division, Utilities Services Manager	SSMP Program Audits
Alison Turner	Public Works Department, Public Services Division, Utilities Services Manager	Communication Program

Section III: Legal Authority

A. Introduction

This section of the SSMP discusses the City's legal authority, including the Municipal Code and agreements with other agencies.

B. Regulatory Requirements for Legal Authority Section

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

RWQCB Requirement

Each wastewater collection system agency shall, at a minimum, describe its legal authority, through sewer use ordinances, services agreements, or other legally binding procedures, to:

a. Control infiltration/inflow (I/I) from satellite wastewater collection systems and laterals.

b. Require proper design and construction of new and rehabilitated sewers and connections.

c. Require proper installation, testing, and inspection of new and rehabilitated sewers.

GWDR Requirement

The wastewater collection system agency 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), stormwater, 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, grease, and other debris that may cause blockages.

e. Enforce any violation of its sewer ordinances.

f. Authority to inspect grease-producing dischargers.

g. Authority to enforce sewer-related ordinances.

C. Municipal Code

The Mountain View Municipal Code, Chapter 35, describes the City's current legal authorities. The legal authorities provided by the Municipal Code and other sources that address the regulatory requirements are summarized on Table III-1.

Table III-1: Summary of Legal Authorities in Municipal Code and Other Sources

Requirement	Municipal Code Reference	Meets GWDR Requirements?
General		
Prevent illicit discharges into the wastewater collection system	Sec. 35.33.12	Yes
Limit the discharge of fats, oils, grease, and other debris that may cause blockages	Sec. 35.33.12(11) Sec. 35.33.13(D)	Yes
Require that sewers and connections be properly designed and constructed	Sec. 35.32.17.A Sec. 35.37 Sec. 35.33.22	Yes
Require proper installation, testing, and inspection of new and rehabilitated sewers	Sec. 35.32.17.A Sec. 35.37 Sec. 35.33.22	Yes
Laterals		
Clearly define City responsibility and policies	Sec. 35.10 Sec. 35.29	Yes
Ensure access for maintenance, inspection, or repairs for portions of the service lateral owned or maintained by the City	Sec 35.2.1 Sec 35.35.40	Not Applicable
Control infiltration and inflow (I/I) from private service laterals	Sec. 35.33.11(2)	Yes
FOG Source Control		
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	Sec. 35.33.11(I)	Yes
Authority to inspect grease-producing facilities	Sec. 35.32.1	Yes
Enforcement		
Enforce any violation of its sewer ordinances	Sec. 35.3 Sec. 35.30.1 Sec. 35.30.2 Sec. 35.30.3 Sec. 35.30.4 Sec. 35.30.5 Sec. 35.30.6 Sec. 35.32.3.6	Yes

D. Agreements with Satellite Agencies

The City of Los Altos wastewater collection system discharges to Mountain View's sanitary sewer system. The City has an agreement with the City of Los Altos dated March 24, 1970.

Section IV: Operations and Maintenance Program

A. Introduction

This section of the Sewer System Management Plan (SSMP) is intended to provide an overview of the City's sewer system Operations and Maintenance (O&M) Program.

B. Regulatory Requirements for the Operations and Maintenance Program Section

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

RWQCB Requirement (Measures and Activities):

The RWQCB required elements of an operations and maintenance program are:

a. Collection System Map

Each wastewater collection system agency shall maintain up-to-date maps of its wastewater collection system facilities.

b. Resources and Budget

Each wastewater collection system agency shall allocate adequate resources for the operation, maintenance, and repair of its collection system.

c. Prioritized Preventive Maintenance

Each wastewater collection system agency shall prioritize its preventive maintenance activities.

d. Scheduled Inspections and Condition Assessment

Each wastewater collection system agency shall identify and prioritize structural deficiencies and implement a program of prioritized short-term and long-term actions to address them.

e. Contingency Equipment and Replacement Inventories

Each wastewater collection system agency shall provide contingency equipment to handle emergencies and spare/replacement parts intended to minimize equipment/facility downtime.

f. Training

Each wastewater collection system agency shall provide training on a regular basis for its staff in collection system operations, maintenance, and monitoring.

g. Outreach to Plumbers and Building Contractors

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.

GWDR Requirement (Operations and Maintenance):

The GWDR requirements for the operations and maintenance program are:

a. Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities.

b. Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventive Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders.

c. Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan.

d. Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained.

e. Provide equipment and replacement part inventories, including identification of critical replacement parts.

C. Operations and Maintenance Program

The majority of the RWQCB and SWRCB requirements for the operations and maintenance program element of the SSMP are in agreement. The following presents the portions of the operations and maintenance program that respond to the SWRCB requirements first. The RWQCB requirements that are not satisfied by the response to the SWRCB requirements follow at the end of this section.

1. Collection System Maps

The City has a Geographical Information System (GIS) that includes the information for its wastewater collection system assets, including gravity line segments, manholes, pumping facilities, and pressure pipes (force mains). The City also has information in its GIS for its storm drainage system. The GIS information is available to appropriate City staff.

The field crews use hard copy maps that are produced using the GIS. Map corrections are noted by field crews and submitted to the Wastewater Supervisor. The Wastewater Supervisor submits the corrections to the City's GIS staff. Maps are updated annually. The City verified the location of its manholes and completed this effort in 2008.

2. Preventive Operation and Maintenance

The elements of the City's sewer system O&M Program include:

- Proactive, preventive, and corrective maintenance of gravity sewers.
- CCTV inspection.
- Rehabilitation and replacement of sewers that are in poor condition.
- Periodic inspection and preventive maintenance for the pump stations.

The details of the City's O&M Programs are:

Gravity Sewers

The City proactively cleans its sewer system every four years, and it preventively cleans sewers with a history of problems every 1, 3, 6, or 12 months.

The City contracts CCTV inspection services for both periodic condition assessment and for follow-up on SSO events.

City crews correct problems that are identified by CCTV and sewer cleaning crews. Repairs are completed in priority order. Repairs and replacement projects are coordinated with the City's street resurfacing program and annual water main replacement projects.

The City repairs significant structural defects as they are identified.

Gravity sewer maintenance is currently scheduled using maps and lists of "hot spot" line segments. Completed gravity sewer maintenance is recorded on field crew daily reports.

The City's standard operating procedure for sewer cleaning is included as Appendix IV-A.

Pump Stations

Utility Systems Section employees inspect the operation of the Sewage Wastewater Lift Station daily and its performance is monitored 24/7 using SCADA. The Pastel Lane Lift Station is inspected twice weekly.

3. Rehabilitation and Replacement Program

The City's goal is to inspect the condition of its gravity sewers on an eight-year cycle. This information is used as the basis for the rehabilitation and replacement program. The information gathered during the condition assessment will be used to select individual gravity sewers for repair/ rehabilitation/replacement.

The City plans annual projects for rehabilitation and replacement of its sanitary sewer system. The projects that are included in the City's Capital Improvement Program are shown in Appendix IV-B.

The funds that support the Capital Improvement Program come from the City's Sewer Fund. The Sewer Fund is an enterprise fund and sewer fees are established to meet projected needs.

4. Training

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

The City's contract language will require contractors working in the wastewater collection system to provide training for their employees in the activities that may cause SSOs and in responding to contractor-caused SSOs.

5. Replacement Parts

No critical replacement parts are warranted. The pump stations have gravity bypasses, and the City has informal agreements with neighboring agencies for equipment support in the event the sewer maintenance equipment fails.

6. Operation and Maintenance Resources

The City's staff that are dedicated to the maintenance of the collection system facilities are shown on Table IV-1. The major equipment to support the maintenance activities is included in Appendix IV-C. The staff and equipment resources exceed the projected workload.

Table IV-1: Collection System Maintenance Resources

Position/Activity	FTEs
Wastewater Supervisor	1.0
Wastewater Utility Worker III	2.0
Wastewater Utility Worker I/II	4.0
Total	7.0

The City's Capital Improvement Program allocates an average of $1.66 million per year for rehabilitation/replacement projects during the next four fiscal years. This equates to an investment of approximately 1 percent of the replacement value of its collection system facilities per year.

7. Outreach to Sewer Service Contractors

The City participates in the Bay Area Clean Water Agencies region-wide outreach program to notify plumbing contractors about the potential impact of their work on the City's sanitary sewer system.

Appendix IV-A: Standard Operating Procedure for Sewer Cleaning

Purpose

The purpose of this Standard Operating Procedure is to ensure that sewer cleaning is performed in a manner that will produce a high-quality work product. Quality is important because it ensures that the sanitary sewers will not experience problems prior to their next scheduled cleaning.

Goal

The goal of cleaning a gravity sewer is to restore the flow area to 95 percent of the original flow area of the pipe.

Required Equipment and Tools

1. Personal protective equipment (hardhat, steel toe boots, gloves, eye/face protection, hearing protection).
2. Calibrated gas detector.
3. Proper safety cones/barricades/flagging/signs or other traffic-control devices.
4. Confined space equipment—tripod, harness, and ventilation blower.
5. Sanitary sewer system map book.
6. Combo (jet rodder/vacuum) truck.
7. 45-degree sewer cleaning nozzle and root saws.
8. Debris traps in the sizes that will be encountered during the day.
9. Manhole hook or pickax.
10. Measuring wheel.
11. Disinfectant.

Required Forms

- Cleaning work order.
- Daily truck report form.
- Damage report form.

Procedures for Sewer Cleaning Crew

Prior to Leaving the Yard

1. Plan the work so that it starts in the upstream portion of the area and moves downstream.
2. Wherever possible, plan to clean sewers from the downstream manhole.
3. Inspect the sewer cleaning nozzles for wear. Replace nozzles that are excessively worn.
4. If this is the crew's first day with this cleaning unit, inspect the first 200' of hose and couplings for damage or wear.

At the Job Site

1. Wear proper personnel protective equipment (PPE).
2. Fill the water tank at or near the first job site.
3. Determine and confirm location of upstream and downstream manholes (use manhole identification numbers if possible).
4. Look for any overhead utilities that may come into contact with the vacuum boom during the cleaning operation.
5. Set up proper traffic control by placing traffic signs, flags, cones, and other traffic-control devices.
6. Move the cleaning unit into the traffic control so that the hose reel is positioned over the manhole.
7. Open the manhole and use the gas detector to determine if it is safe to proceed with the cleaning operation.

8. Install the 45-degree sewer cleaning nozzle or root saw on the hose.

Cleaning Operation

1. Insert the debris trap if needed.

2. Start the auxiliary engine.

3. Lower the hose, with a guide or roller to protect the hose, into the manhole and direct it into the sewer to be cleaned.

4. Start the high-pressure pump and set the engine speed to provide adequate pressure for the sewer cleaning operation.

5. Open the water valve and allow the hose to proceed up the sewer. The hose speed should not exceed 3′ per minute.

6. Allow the hose to proceed 25 percent of the length of the sewer (or 50′ minimum) and pull the hose back.

7. Observe the nature and the quantity of debris pulled back to the manhole.

8. If there is little or no debris, allow the hose to proceed to the upstream manhole.

9. If there is moderate to heavy debris, clean the remaining portion of the sewer in steps not to exceed 25 percent of the length of the sewer (or 50′ minimum).

10. Open the upstream manhole and verify that the nozzle is at or past the manhole.

11. The sewer has been adequately cleaned when successive passes with a cleaning nozzle do not produce any additional debris.

12. Determine the nature and quantity of the debris removed during the cleaning operation. Use the codes shown in Table IV-2 to report the nature and quantity of debris.

13. Remove the debris from the manhole using the vacuum unit.

14. Rewind the hose on the reel.

15. Remove the debris trap.

16. Clean the mating surface and close the manhole. Ensure that the manhole is properly seated.

17. Enter the results on the work order.

18. Move the cleaning unit, break down and stow the traffic controls.

19. Proceed to the next cleaning job site.

Table IV 2: Nature and Quantity of Debris Removed During Cleaning

Type of Debris	Clear (no debris)	Light	Moderate	Heavy
Sand, grit, rock	CLR	DL	DM	DH
Grease	CLR	GL	GM	GH
Roots	CLR	RL	RM	RH
Other (specify)	CLR	OL	OM	OH

At the End of the Day

1. Inspect the equipment and tools for problems.

2. Report any problems with equipment, tools, or sewers that were cleaned during the day to the Supervisor.

3. Submit daily work reports to the Supervisor at end of shift.

Appendix IV-B: Rehabilitation and Replacement Program

Project Title	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17
Wastewater System Improvements	$ 146,000	$ 149,000	$ 182,000	$ 188,000
Miscellaneous Storm/Sanitary Sewer Main Replacements*	$1,465,000	$1,495,000	$1,565,000	$1,555,000
Total	$1,611,000	$1,644,000	$1,677,000	$1,710,000

*Assumes 90% of expenditures in CIP are for sanitary sewer system.

Appendix IV-C: Major Sewer System Equipment

Equipment Number	Major Equipment Type	Year Purchased
2800	Combination Cleaning Unit (VacCon)	2006
2801	Combination Cleaning Unit (VacCon)	2006
2806	Dump Truck, 10 cubic yard (International)	2010
492	Backhoe (Caterpillar)	2010
449	Trash Pump, 6" (Deutz)	1987
702	Trash Pump, 4" (Gorman Rupp)	1991

Section V: Design and Performance Provisions

A. Introduction

The City's design and construction standards are used by the City staff and are communicated to consulting engineers and/or developers at the start of a design process or proposed development.

B. Regulatory Requirements for the Design and Performance Provisions Section

The regulatory requirements for the Design and Performance Provisions Section are:

RWQCB Requirement (Design and Construction Standards):

a. Standards for Installation, Rehabilitation, and Repair

Each wastewater collection system agency shall identify minimum design and construction standards and specifications for the installation of new sewer systems and for the rehabilitation and repair of existing sewer systems.

b. Standards for Inspection and Testing of New and Rehabilitated Facilities

Each wastewater collection system agency 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.

GWDR Requirement (Design and Performance Provisions):

a. Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations, and other appurtenances, and for the rehabilitation and repair of existing sanitary sewer systems.

b. Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances, and for rehabilitation and repair projects.

C. Design Criteria

The City's design criteria for new and rehabilitated sewers are specified in the City of Mountain View Standard Design Criteria for Sanitary Sewers, August 2002. A copy of the design criteria is included in Appendix V-A.

D. Construction Standards

The City's construction standards are specified in the City of Mountain View Standard Provisions, March 2005.

Appendix V-A: Standard Design Criteria for Sanitary Sewers

These design criteria apply to all new and rehabilitated sanitary sewer system facilities within the City of Mountain View. Any variations from these criteria require the prior approval of the Public Works Director. Requests for variations must be accompanied by information supporting the need for the variation, including an assessment of available alternatives and related drawings and calculations.

The following abbreviations are used: groundwater infiltration (GWI), base wastewater flow (BWF), rainfall derived inflow and infiltration (RDI/I), daily peaking factor (DPF), and depth to diameter ratio (d/D).

Sewer Mains

All sewer mains, whether intended for City maintenance or homeowner association maintenance, will be designed to these standards.

1. Materials for Construction

    a. Vitrified Clay Pipe (VCP), extra strength (ASTM C700) with elastomeric joints (ASTM C425); or

    b. Polyvinylchloride Pipe (PVC), SDR 26 (ASTM D3034 or F679)

        i. C900 PVC may be used in place of SDR 26 PVC.

2. Sewer Location and Alignment

    a. Locate sewer mains on street centerline.

    b. The minimum distance from underground utilities is:

        i. Domestic water main:

            (1) Sewer mains will not cross domestic water mains unless absolutely necessary.

            (2) When sewer mains cross domestic water mains, the minimum distances measured between the outside wall of the pipe at the closest location will be:

                (a) 10′ horizontally.

(b) 1′ vertically with the sewer main located below the elevation of the domestic water main.

(c) The sewer main joints will be located as far as possible on either side of the point of crossing.

ii. Underground pipes, conduits, structures, or other utilities:

(1) 5′ horizontally and 1′ vertically measured from the closest outside wall.

c. Sewers with vertical or horizontal curves are not allowed.

3. Size

a. The minimum size for sewer mains is 8″.

4. Depth

a. The minimum depth from finished grade to sewer invert is 5′.

i. The minimum depth for unfinished streets where street grades have not been set is 6′ from the existing grade.

b. The maximum depth from finished grade to sewer invert is 22′.

5. Slope

a. The minimum slope will be 0.004′/1′ (0.04 percent).

b. The design slope shall provide a velocity of 2′/second when the sewer is flowing half full (d/D = 0.5) where d/D refers to the depth-to-diameter ratio.

i. Wherever possible, the design slope will provide a velocity of 2′/second during peak daily dry weather flow.

c. The maximum slope will be limited to a velocity of 10′/second during any flow condition.

6. Capacity

a. The design flow will be calculated using the following criteria:

i. Residential Design flow = GWI + BWF + RDI/I where:

(1) GWI + RDI/I = 800 gallons per acre per day

(a) This value is for use on sewers ≤ 10" in diameter.

(b) This factor will be established using actual flow data for all other cases.

(2) BWF = Population Served x Daily Peaking Factor x 90 gallons per capita per day where:

(a) Population Served = projected population at build-out.

ii. Nonresidential Design Flow

(1) Nonresidential sewage generation factors shall be:

(a)	Commercial	100 gpd/1,000 square feet
(b)	Office/R&D	150 gpd/1,000 square feet
(c)	Mixed Use	100 gpd/1,000 square feet
(d)	Industrial	60 gpd/1,000 square feet
(e)	Public	15 gpd/employee
(f)	Employment	15 gpd/employee
(g)	Restaurant	1,000 gpd/1,000 square feet

iii. Daily Peaking Factor, DPF:

(1) 0 to 199 upstream connections, DPF = 2.5

(2) 200 to 1,000 upstream connections, DPF = 2.2

(3) > 1,000 upstream connections, DPF = 1.8

iv. Maximum Depth of Flow will be:

(1) Sewers ≤ 12″ in diameter, d/D = 0.5

(2) Sewers > 12″ in diameter, d/D = 0.75

b. The sewer capacity will be calculated using Manning's Equation with the friction factor, n = 0.013.

7. Manholes

a. Provide a 0.1′ drop in flow line at all manholes.

b. Manholes will be installed:

i. At all changes in direction, slope, pipe size, and pipe material.

ii. At the intersection of all sewer mains.

iii. The soffit (or crown) elevation of smaller sewer mains shall match the soffit elevation of larger sewer mains.

iv. At the upstream end of all sewer mains.

(1) At the property line where a private sanitary sewer connects to the City-maintained sewer main.

v. Nominally every 300′ along the sewer main with the maximum distance not to exceed 350′.

vi. At 8″ or larger lateral connections.

c. Drop manholes will be installed when the flow line of the sewer main entering the manhole is 30″ or more above the manhole flow line.

d. End-of-line cleanouts are not allowed.

i. Cleanouts may be used at the temporary ends of sewer mains.

8. Siphons

a. Siphons will be avoided whenever possible.

b. The minimum flow line drop across siphons will be 2′.

c. Siphons will have a minimum of two barrels.

i. One barrel will be designed to provide a velocity of at least 2′/second during peak daily dry weather flows.

ii. The second barrel will be designed:

(1) Flow will enter the second barrel when the flow line is at or above the crown of the first barrel.

(2) The second barrel will be designed to accommodate peak wet weather flows.

iii. Additional barrels will be designed to accommodate intermediate flow conditions if warranted.

d. Siphon inlet and outlet structures will be designed:

i. To provide for the installation of stop logs to direct flows.

ii. To provide for adequate room to accommodate siphon cleaning equipment.

e. Siphon material will be ductile iron pipe (AWWA C111) with interior and exterior corrosion-protection and passive cathodic-protection system.

9. Pump Stations

a. Public pump stations are not allowed.

b. Private pump stations are not allowed.

c. Individual pump stations serving a single dwelling unit are not allowed.

10. Rehabilitation

a. Sewer main rehabilitation methods will include:

i. Pipe bursting.

ii. Open cut.

b. Manholes will be replaced or rehabilitated when sewer mains are rehabilitated.

c. Lower sewer service laterals between the sewer main and the property line will be replaced or rehabilitated when sewer mains are rehabilitated.

i. Service lateral connections to the sewer main will be reinstated by excavating the lateral and installing a factory wye, tap, or watertight/ root-tight saddle.

ii. In-situ or internal service lateral reinstatement is not allowed.

Sewer Service Laterals

All sewer service laterals will be designed to these standards.

1. Materials for Construction

a. Polyvinylchloride Pipe (PVC), SDR 26.

2. Individual laterals will be installed from each dwelling unit to the sewer main.

3. Lateral Location and Alignment

a. Laterals will be connected to manholes wherever possible.

i. Laterals in cul-de-sacs will be connected to manholes. The invert of the lateral will be located at the flow line of the manhole (no drop will be allowed).

b. Laterals will not be located:

i. Under driveways.

ii. Within 5' horizontally from domestic water service.

iii. Within 10' horizontally from the drip line of any existing or planned street trees.

c. The location of laterals will be stationed on the design drawings.

d. Lateral alignment will be at right angle or radial to the street right-of-way.

e. Lateral alignment will be marked where it crosses under the curb with a 1″ high "S" stamped or ground into the concrete.

4. Size

a. The minimum size for detached, single-family dwellings is 4″.

b. The minimum size for all other connections is 6″ or larger if required to provide adequate capacity.

5. Depth

a. The minimum depth from finished grade to sewer invert is 4′ at the back of the sidewalk or property line for easement sewers.

b. Deep sewer risers are required where the depth of the sewer main is 10′ or greater.

6. Slope

a. The minimum slope will be 0.02′/foot (2 percent).

7. Cleanouts

a. All sewer service laterals will have cleanouts as shown on the Standard Details.

b. Cleanout size and type will be:

i. Single-family residential—4″, one-way.

ii. All others—full size, one-way.

c. Cleanouts in paved areas will have traffic-rated metal covers.

8. Backflow Prevention Valve

a. Any dwelling unit or other connection where the elevation of the lowest floor is less than 1′ above the elevation of the rim of the next downstream manhole must install a sewer backwater prevention valve.

b. The property owner is responsible for the proper installation and maintenance of the backflow prevention valve.

Section VI: Sanitary Sewer Overflow Response Plan

A. Introduction

The City of Mountain View Public Works Department, Public Services Division, Wastewater Section (WWS) is responsible for the operation and maintenance of the sanitary sewer system. Mountain View's collection system is mostly gravity-fed and flows to the Shoreline Wastewater Lift Station. This station pumps an average of 9 million gallons per day (MGD) of untreated sewage to the Palo Alto Regional Water Pollution Control Plant (PARWPCP). Mountain View is a partner with the PARWPCP along with five other agencies.

1. Purpose

The Sanitary Sewer Overflow Response Plan (SSORP) is designed to ensure that every report of a confirmed sanitary sewer overflow (SSO) is immediately dispatched to the appropriate crews. This plan provides a procedure that, when enacted in response to the sewer overflow/spill, reduces or eliminates public health hazards, prevents unnecessary property damage, and minimizes the inconvenience of service interruptions. This plan provides procedures for City staff to follow in responding to, cleaning up, and reporting SSOs.

2. Safety

Whenever qualified City personnel respond to a report of an overflow/spill, they may encounter an emergency situation that requires immediate action. The most critical aspect of resolving an incident of this nature is to safely and competently perform the actions necessary to return the system or facility to normal operations as soon as possible.

The most important item to remember during this type of incident is that safe operations always take precedence over expediency or shortcuts.

Upon arrival at an SSO, the Wastewater Duty Person will conduct a hazard assessment to determine potential safety hazards. There is always a possibility that a sewage overflow may contain unknown hazardous waste or chemicals. On rare occasions, gasoline and industrial solvents have been found in the sewer system. If a hazardous waste is suspected, the responding field crew will notify MV 3 Communications immediately and will request the Fire Department's Hazardous Materials Response Team.

The Wastewater Supervisor should be notified as soon as possible. Personnel shall stay clear of any hazards and secure the area from the public. The City's Hazardous and Biohazardous Material Spill Policy and Procedures can be found in Appendix VI-A.

Depending on the nature or cause of the SSO, personnel may be required to remove a mainline blockage with a hydro-flusher, repair a damaged section of pipeline, or wash/clean a City street. At this point, it is essential that all standard safety procedures and/or duties are followed as deemed appropriate.

Typical responses may require personnel to implement the following types of safety procedures:

- Standard personal protective equipment;
- Lock-out/tag-out of equipment for repairs;
- Confined space entry procedures;
- Traffic control;
- Heavy equipment operation; and/or
- Adequate communication via two-way radio and/or cellular telephone.

B. Regulatory Requirements for SSORP Section

The requirements for the SSORP section are:

RWQCB Requirement

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

a. Notification—Provide SSO notification procedures.

b. Response—Develop and implement a plan to respond to SSOs.

c. Reporting—Develop procedures to report and notify SSOs per SSO Monitoring and Reporting Program (MRP).

d. Impact Mitigation—Develop steps to contain wastewater, to prevent overflows from reaching surface waters, and to minimize or correct any adverse impact from SSOs.

GWDR Requirement

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

a. Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner.

b. A program to ensure appropriate response to all overflows.

c. Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g., health agencies, regional water boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Monitoring and Reporting Program. All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board Waste Discharge Requirements or National Pollutant Discharge Elimination System (NPDES) permit requirements. The Sewer System Management Plan should identify the officials who will receive immediate notification.

d. Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained.

e. Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities.

f. A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to Waters of the United States, and minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

C. Sanitary Sewer Overflow Response

1. Receipt of Information Regarding SSO

The City of Mountain View operates two communication centers. During normal daytime business operations (Monday through Friday, 8:00 a.m. to 4:00 p.m.), calls are received by the Utilities Division staff at the Municipal Operations Center (Mountain View 3). During all other hours, calls are received by Mountain View Communications staff at the Police/Fire Administration Building. This is the City's nonemergency 9-1-1 system and is staffed 24/7/365.

Note: For the purpose of this SSMP, both will be referred to as MV 3 Communications.

The MV 3 Communications Operator should obtain all relevant information available regarding the overflow, including:

- Time and date call was received.
- Specific location.
- Description of problem.
- Time possible overflow was noticed by caller.
- Caller's name and phone number.
- Observations of the caller (e.g., odor, back or front of property).
- Other relevant information that will enable the responding investigator and crews, if required, to quickly locate, assess, and stop the overflow.

2. Responding to an SSO

MV 3 Communications records the information and contacts the designated Wastewater Duty Person. The response time is typically 15 to 30 minutes. A crew personnel list is updated on a daily basis.

If an SSO occurs during nonbusiness hours, the Wastewater Duty Person is contacted. This person must respond within one hour of receiving the information. (The Duty Program is staffed 24/7/365.)

3. Responding Staff Responsibilities

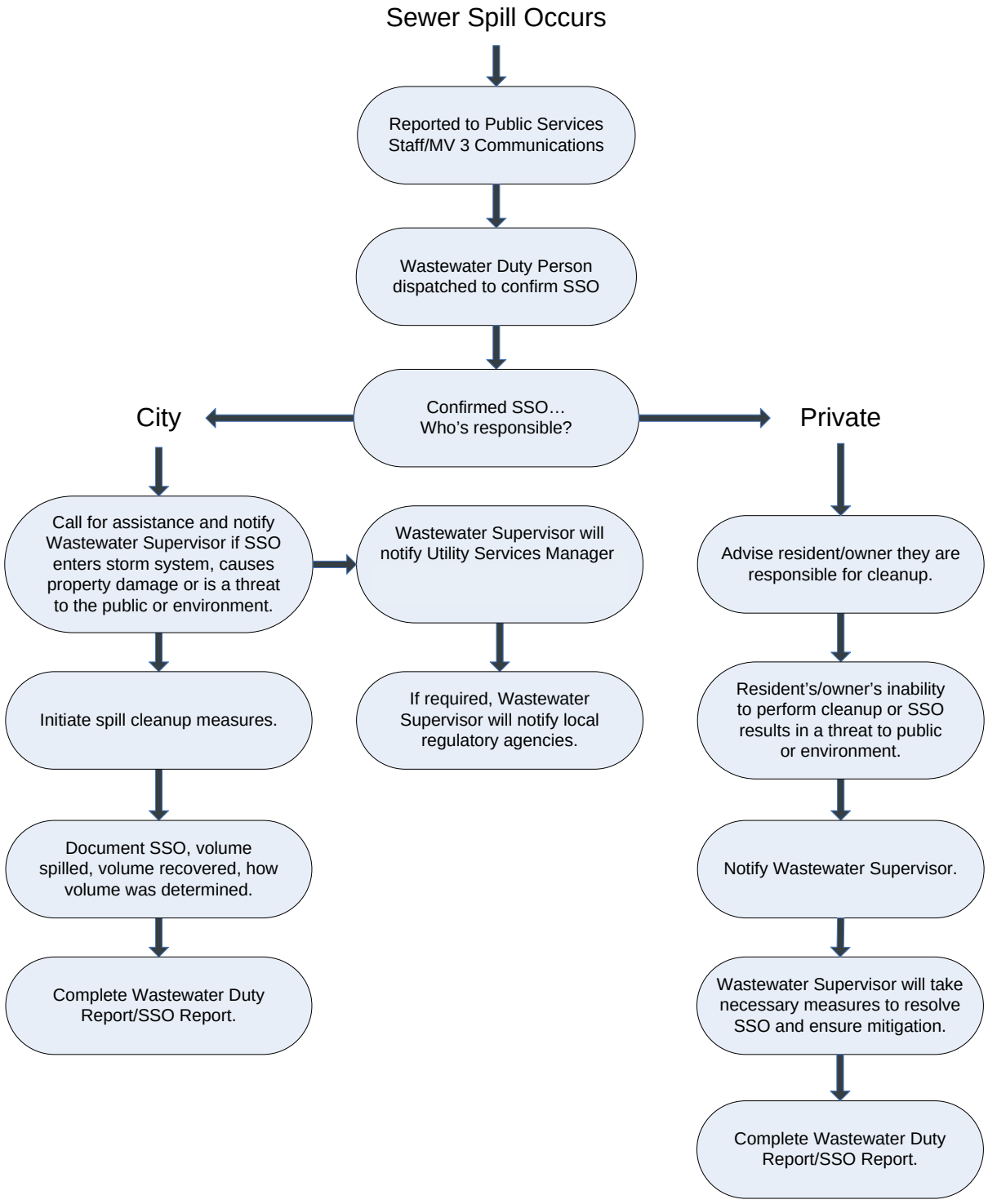
The Wastewater Duty Person responding to a sewer backup has the immediate responsibility to protect people, property, and the environment from the effects of a sewage spill overflow. To meet these objectives in a rapid, effective, and organized manner, staff will respond and fulfill the duties in the following categories as directed by this plan.

- REDUCE or STOP the overflow at its source.
- CONTAIN spilling sewage from entering waterways.
- CAPTURE the sewage where it can be recovered and returned to the sewer system.
- CONTAIN sewage in advantageous locations (i.e., vacant lots, plugged storm system, curb/gutter, etc.). Containment materials include sand, sand bags, etc.
- CONTROL the spill area and bypass the area if necessary.
- BYPASS the obstructed line by pumping the spillage into another nonrestricted line or vacuum with a VacCon.
- CLEAN UP the affected public areas to ensure public safety. (The Wastewater Supervisor must approve cleaning on private property.)
- WASH DOWN and CONTAIN runoff, being careful not to wash sewage into storm drainage system.

D. SSO Response Procedures

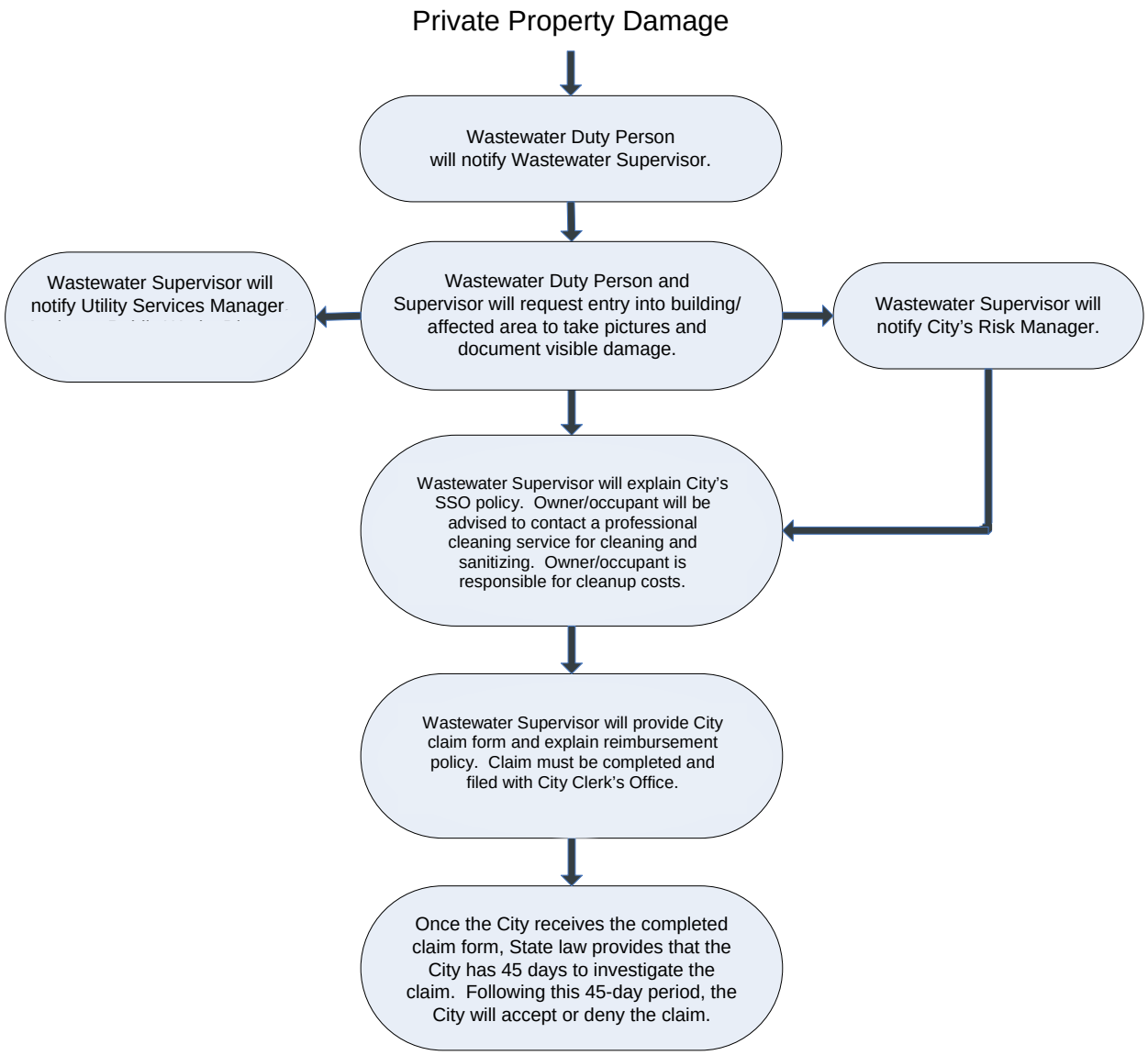
This section provides the step-by-step procedures explaining the actions to be taken in response to an SSO. A flow diagram of the SSO response process is included as Figure VI-1. A flow diagram for use when there is private property damage is included as Figure VI-2. This section is divided into four sections that describe the various causes of an SSO: pipeline blockage, pipeline failure, force main, and pump station failures.

Figure VI-1: SSO Response Flow Chart



Note: For the purpose of the Sanitary Sewer Overflow Response Plan, the Wastewater Supervisor is to be notified immediately when an SSO causes property damage or enters a storm system. If the Wastewater Supervisor is unavailable, the Wastewater Duty Person will refer to the internal SSO Call-Out List found in Appendix VI-B (Public Services and Environmental Safety Section Personnel List).

Figure VI-2: Private Property Damage Flow Chart



1. SSO Resulting from Pipeline Blockage

Upon arrival at the scene, the Wastewater Duty Person will determine the source of the SSO.

Private SSO

If it is determined the SSO is originating from a private sewer main or cleanout, the property owner, resident, or manager must be notified and informed they are responsible for corrective action, cleanup, and any damages. Chronic overflow/spills at the same property shall be referred to the City's Environmental Safety Section.

If a private SSO is flowing into or threatens a private storm drain system or is a danger to the public, further City intervention will be necessary. If the Wastewater Duty Person must perform work on private property, notify the Wastewater Supervisor. If possible, inform the property owner, resident, or manager that work will be performed on private property and explain why. Follow the same procedures used when a property line sewer cleanout or sewer main overflows. Upon completion, the Wastewater Duty Person must document the incident and complete a Wastewater Service Call Report and, if appropriate, the Major SSO Report Form. (Sample forms are included as Figures VI-3 and VI-4.)

Property Line Cleanout SSO

If it is determined the SSO has originated from a property line sewer cleanout, City crews will contain the overflow, remove the spilled sewage, and remove the blockage. An overflow from a single-family home is typically small and easy to clean up. An overflow from a large apartment building or commercial building may require a response similar to a sewer main SSO. After the blockage has been removed, clean and disinfect the area. Call for additional Wastewater crew members and a VacCon if the overflow cannot be washed back into the cleanout. Upon completion, the Wastewater Duty Person must document the incident and complete a Wastewater Service Call Report.

City Sewer Main SSO

If it is determined the SSO has originated from a City sewer main, call for assistance immediately. Additional Duty personnel from Utility Systems and Water Distribution are available 24/7. The Wastewater Duty Person must estimate the level of response necessary to resolve the incident. Keep in mind

it is better to have extra people and both VacCons on a large overflow. If necessary, close the area/roadway to the public. Upon completion, the Wastewater Duty Person must document the incident and complete a Wastewater Service Call Report.

2. SSO Resulting from Pipeline Failure

An SSO resulting from a pipeline failure will require additional time and personnel to resolve. When a sewer lateral or sewer main pipeline failure is suspected, the Wastewater Supervisor or agent shall be notified immediately. The Wastewater Supervisor will determine the level of response necessary. It may be necessary to set up a sewer bypass with portable pumps or use VacCons to transport sewage downstream while a repair is being performed. If a pipeline failure occurs on a large diameter sewer main (12" or larger), or the pipe is over 12' deep, a contractor may be used to perform the repair. Additional staff and equipment may be requested in the form of mutual aid from neighboring cities.

3. SSO Resulting from Force Main Failure/Blockage

An SSO resulting from a force main failure is likely to be a serious threat to the environment and the public. The City of Mountain View operates approximately one mile of 42" sanitary force main. This 42" force main conveys an average of nine MGD to the PARWPCP. In the event of a force main SSO, Utilities Systems personnel will shut down the Shoreline Wastewater Lift Station. This would reduce the pressure in the force main. If it is determined a repair is necessary, the City of Mountain View will contract with an experienced large-diameter sewer main repair contractor. A list is provided as Appendix VI-C. The list provides company names, employees, and emergency contact numbers. The information provided on this list is to be checked for accuracy annually. City crews will do all that is possible to contain a spill of this type using pumps and VacCons. Due to the large volume of sewage the force main conveys, mutual aid would most likely be requested from neighboring cities.

4. SSO Resulting from Pump Station Failure

The City of Mountain View operates two sewage lift stations: Shoreline Sewage Wastewater Lift Station and Pastel Lane Lift Station.

The largest pump station is called the Shoreline Sewage Wastewater Lift Station and is located within the boundary of Shoreline at Mountain View. This station pumps an average of nine MGD of untreated sewage to the

PARWPCP. It is unlikely a failure at this station would result in an SSO. The plant is designed to transfer to a gravity flow system in the event of a mechanical failure. The pump station is also connected to the City's SCADA system and is monitored by the Utilities System Duty Person in the event of a system failure. History has demonstrated this station can operate in the bypass mode beyond 90 days.

The second pump station is called the Pastel Lane Lift Station. The station is small and serves approximately 10 single-family homes. This station is checked weekly. In the event of a station failure, the station will hold approximately two weeks of sewage. Past station failures have not resulted in an SSO. A VacCon would be used to maintain the system in the event of a station failure.

Figure VI-3: Wastewater Service Call Report

Wastewater Service Call Report

Name: Date:

Origin of Call:	MV3 ◯	Comm. ◯	Function:		SR #:		
Time of Call:	Day ◯	Duty ◯	Wastewater:	◯	Facilities:	◯	
Street #: St. Name:			Water:	◯	Police:	◯	
Cross St:			Streets:	◯	Fire:	◯	
			Parks:	◯	Other:	◯	
Contact:			Phone:				

Time Received (24 hour):			Type: Lateral:	☐	Cleanout:			
Time Arrived:			Main:	☐	One:	☐		
Time Completed:			Drain Inlet:	☐	Two:	☐		
Time Out of Service:			Other:	☐	None:	☐		
Follow-up Required?	Yes ◯	No ◯	Onsite Problem:		Yes ◯	No ◯		

Comments:

Must complete for sewer main stoppage:

Upstream M/H #:	Downstream M/H #:
Detail description of blockage, location, cause, etc.:	

Must complete for private lateral SSO's:

Time spill reported (24 hour):		Gallons spilled:	Did sewage enter storm system ?
Time spill stopped:		Gallons recovered:	Yes ◯ No ◯

Cause & Cleanup:

Submit by Email | Print Form | Reset Form

Figure VI-4: Major SSO Report Form

SSO REPORT

Spill type category:	1		2		3		PLSD	

Location:		M/H #:		D/I #:	
GPS Location:	Longitude:		Latitude:		

Time SSO Reported:		Time SSO stopped:	
Time arrived at SSO:		Time Cleanup Completed:	
Responding Crew:			
Supervisor:			

Detail description of SSO (cause; damage; etc.):

Detail description of cleanup procedures:

Estimated SSO volume:		Estimated SSO volume recovered:	

Explain how volume was determined:

Estimated volume of SSO discharged to surface waters:		Pictures taken?	Yes		No	

Water Quality Test performed:	Yes		No		If yes, explain below:

Notified Office of Emergency Services:	Yes		No		Notified RWQCB:	Yes		No	
If yes, date/time:					If yes, date/time:				
OES: 800-852-7550		OES No.:			RWQCB: 510-622-5633				

Crew:	Hours:	Equipment:	Hours:

Notified Utilities Services Mgr.:	Yes		No		Notified Public Works Director:	Yes		No	
If yes, date/time:					If yes, date/time:				

E. SSO Recovery and Cleanup Procedures

This section provides guidelines and procedures for cleaning and disinfecting the area contaminated by a sanitary sewer overflow.

1. SSO on Public Property

To minimize health effects to the public and to protect the environment:

- Start cleaning the wastewater spill area as soon as possible.
- Secure the affected area with cones, barricades, caution tape, etc.
- Take pictures to document the overflow. This is very important if the overflow causes property damage.
- Inspect the storm drain catch basins to determine whether wastewater has entered the storm system and to what extent.
- If necessary, install plugs, sandbags, sand/rock, etc., to contain the sewage. Flush the area with water and vacuum up all liquid and/or pump it back into the collection system.
- Remove all debris found in the spill area.
- If a disinfectant is used, it must be collected and deposited in the collection system.
- Thoroughly inspect the spill area before you leave.

2. SSO on Private Property

City crews are not to work on private property unless directed to do so by the Wastewater Supervisor. Cleaning on private property (outside) may be necessary when there is imminent danger to the general public. An example would be an overflow in a public parking lot or school.

If an SSO results in flooding/damage inside a building or residence, advise the owner/occupant to call a professional cleaning service for cleaning, sanitizing, placing of blowers, and/or dehumidifiers. Do not recommend specific contractors or companies.

If it is necessary to perform an SSO cleanup on private property, follow the same procedure used for public property.

Forms and guidelines for handling sewer backups that affect private property are included as Appendices VI-D and VI-E.

3. SSOs That Reach Surface Water

If an SSO is confirmed to have entered a creek or waterway, determine the extent of the SSO:

- As soon as possible, contact the Wastewater Supervisor.
- It must be determined if the creek is safe to enter. During the winter storm season, cleaning the creek may not be possible due to high water flows.
- Cleaning a creek can be very difficult. Get plenty of help, contact additional Wastewater crew members if necessary.
- If possible, block the creek downstream of the contaminated flow based on visual evidence. Block the creek in an area that is safe to enter and is accessible to pumps and/or VacCons. Pump or vacuum contamination from creek and return it to collection system.
- As soon as possible, contact the Wastewater Supervisor who will notify required State agencies. Post public SSO spill signs and sample the creek. Follow-up sampling will also be required.

F. Water Quality Sampling and Testing

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

- Use ammonia test strip. If positive, then conduct sampling.
- The Wastewater Duty Person should notify the Wastewater Supervisor and/ or Environmental Safety Section to collect samples. Samples should be collected as soon as possible after the discovery of the SSO event.
- Only take samples when it is safe to do so. Do not enter a confined space area.

- The water quality samples should be collected from upstream and downstream of the spill (e.g., creeks). The water quality samples should be collected near the point of entry of the spilled sewage and every 100' along the shore on impoundments (e.g., ponds).

- The Wastewater Supervisor/Environmental Safety Section will perform a water quality test for the presence of ammonia. If the presence of ammonia is confirmed, additional samples will be tested for total coliform, fecal coliform, biochemical oxygen demand (BOD), and dissolved oxygen. Follow-up sampling will be performed to determine when posting signs can be removed.

- The Wastewater Supervisor will make follow-up calls to affected agencies until posting has been discontinued.

G. Public Notification

Public notification is required when an SSO poses a threat to public health or the environment. The notification methods are described in the following sections.

Creeks, streams, and beaches that have been contaminated as a result of an SSO should be posted at visible locations until the risk of contamination has subsided to acceptable background levels. The Environmental Safety Section will make this determination. The warning signs should be checked every day to ensure they are still in place. A sample warning sign is included as Appendix VI-G.

Posting signs and barricades may be necessary to keep vehicles and pedestrians away from spilled sewage. Posting should be done at the direction of the Wastewater Supervisor or Environmental Safety Section. 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 the overflow occurs at night, the location should be inspected as soon as possible the following day. The site should be inspected for any signs of sewer-related debris/material that may warrant additional cleanup activities.

Major spills may warrant broader public notice. Local media may need to be notified when significant areas may have been contaminated by sewage. The Wastewater Supervisor will notify the Utilities Services Manager, Environmental Safety Section, Assistant Public Works Director, Public Works Director, and OES Coordinator in the event of a major SSO.

1. Responder Documentation

This section will explain documentation requirements when responding to an SSO.

- The Wastewater Duty Person must complete a Wastewater Service Call Report to record basic information for all Wastewater calls. When an SSO occurs, the sanitary sewer overflow section must be completed. If additional space is needed to explain the incident, attach a separate letter.

- The information provided on the form will be used to file an SSO Report with the State Water Resources Control Board and the California Regional Water Quality Control Board.

- If possible, take pictures of the spill. If a spill occurs on private property, pictures are required. If property damage is suspected inside a building or residence, the Wastewater Duty Person and Wastewater Supervisor will request permission to enter and take pictures. Ask the resident to identify the damage and document with pictures. If you are denied entry, note this on the report.

- Use methods outlined in Appendix VI-F to estimate the volume of the spilled sewage.

- Whenever possible, use photos of the SSO site before the recovery operation.

- When the cleanup has been completed, document the volume of sewage recovered. In most cases, you will have to estimate.

2. SSO Investigation

All SSOs should be thoroughly investigated by the Wastewater Supervisor to determine the cause of the overflow. This information will determine if additional maintenance is needed or a repair/replacement is required; all

records are maintained within the Maps and Files Storage Room located at the Municipal Operations Center.

The procedures for investigating the SSO are:

- Review the incident/overflow report.
- Interview responding crew members.
- Review past maintenance records.
- Review past CCTV records.
- Conduct new CCTV inspection if necessary.
- Evaluate all information and determine necessary course of action to avoid future SSOs.
- Document results of investigation and course of action.

3. Post SSO Debriefing

Every SSO is an opportunity to thoroughly evaluate response and reporting procedures. Each overflow event is unique, with its own elements and challenges that might include volume, 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. These records will be attached to the Wastewater Service Call Report.

H. SSO Categories

The California State Water Resources Control Board has established guidelines for classifying and reporting SSOs. Reporting and documentation requirements vary based on the type of SSO.

There are four categories of SSOs as defined by the SWRCB:[1]

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:

- Reach surface water and/or reach a drainage channel tributary to a surface water; or

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

Category 2—Discharges of untreated or partially treated wastewater of 1,000 gallons or greater resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or a MS4 unless the entire SSO 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.

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 sewer assets. PLSDs that the enrollee becomes aware of may be voluntarily reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.

[1] State Water Resources Control Board Monitoring and Reporting Program No. 2006-0003-DWQ (as revised by Order No. WQ 2013-0058-EXEC), Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

I. SSO Documentation and Reporting

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:

1. Internal SSO Reporting Procedures

- The Wastewater Duty Person will fill out the Wastewater Service Call Report and turn it in to the Wastewater Supervisor.
- The Wastewater Supervisor will notify the Utilities Services Manager.
- The Wastewater Supervisor will investigate the SSO within 10 days of the incident.
- The SSO will be entered in the Service Call Database.

Category 1 SSOs

- The Wastewater Duty Person will immediately notify the Wastewater Supervisor.
- The Wastewater Duty Person or Supervisor will notify Cal OES within two hours of being notified of the spill.
- The Wastewater Supervisor will notify the Environmental Safety Section, the Utilities Services Manager, Assistant Public Works Director, and Public Works Director.
- The Wastewater Duty Person will fill out the Wastewater Service Call Report and turn it in to the Wastewater Supervisor.
- The Wastewater Supervisor will meet with field crew(s) at the site of the SSO event to assess the situation and to document the conditions with photos.
- The Wastewater Supervisor will investigate the SSO the following workday.
- The incident will be entered into the Service Call Database.

2. External SSO Reporting Procedures[2]

The California Integrated Water Quality System electronic reporting system should be used for reporting SSO information to the SWRCB whenever possible. A flow chart is included as Figure VI-5 showing the external reporting response requirements based on the type of SSO.

a. *Category 1 SSO*

i. Within two hours of becoming aware of any Category 1 SSO, notify the California Office of Emergency Services (CalOES) and obtain a permit number.

ii. Submit a draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date.

iii. SSO Technical Report: Submit within 45 calendar days after the end date of any Category SSO in which 50,000 gallons or greater are spilled to surface waters.

iv. The Utilities Services Manager will update the certified report as new or changed information becomes available.

b. *Category 2 SSOs Reporting Requirement*

Submit a draft report within 3 days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date.

c. *Private Lateral Sewage Discharges*

The Utilities Services Manager may report private lateral SSOs using CIWQS at the City's discretion, specifying that the sewage discharge occurred and was caused by a private lateral and identifying the responsible party (other than the City) if known.

d. *No Spill Certification (Monthly)*

Within 30 calendar days after the end of each calendar month, if there are no SSOs during the calendar month, the Utilities Services Manager

[2] State Water Resources Control Monitoring and Reporting Program No. 2006 0003-DWQ (as revised by Order No. WQ 2013-0058- EXEC), Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

will submit an electronic report that the City did not have any SSOs. The Utilities Services Manager will certify the report.

e. *CIWQS Not Available*

In the event that CIWQS is not available, the Utilities Services Manager will fax all required information to the RWQCB office in accordance with the time schedules identified above. In such event, the City will submit the appropriate reports using CIWQS as soon as practical.

Reporting and Certification Checklist

Category 1 SSOs

- ✓ Within two hours of becoming aware of any **Category 1 SSO greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water,** notify the California Office of Emergency Services (Cal OES) at (800) 852-7550 and obtain a notification control number.
- ✓ Submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date. Enter data into the CIWQS Online SSO Database (*http://ciwqs.waterboards.ca.gov/*), certified by enrollee's Legally Responsible Official(s).
- ✓ SSO Technical Report: Submit within 45 calendar days after the end date.
- ✓ Conduct water quality sampling **within 48 hours** after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters. Water quality results are required to be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.

Category 2 SSOs

- ✓ Submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date. Enter data into the CIWQS Online SSO Database (*http://ciwqs.waterboards.ca.gov/*), certified by enrollee's Legally Responsible Official(s).

Category 3 SSOs

- ✓ Submit certified report within 30 calendar days of the end of month in which SSO the occurred. Enter data into the CIWQS Online SSO Database (*http://ciwqs.waterboards.ca.gov/*), certified by enrollee's Legally Responsible Official(s).

Private Lateral SSO

- ✓ 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 sewer assets. PLSDs that the enrollee becomes aware of may be voluntarily reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.

No Spill Certification

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

Collection System Questionnaire

- ✓ Update and certify every 12 months.

Two-Hour Notification

1) Make sure you ask for a "Cal OES Control Number" (for RWQCB).
2) **PARWQCP**
   Within 2 hours of becoming aware of any Category 1 SSO, notify the California Emergency Management Agency (Cal OES) and obtain a notification number. Cal OES (800) 852-7550.

California Integrated Water Quality Systems (CIWQS)

SWRCB reporting time frames depend on the size and the Category of the SSO.

- CIWQS must be used for reporting if the website is available
  - *http://ciwqs.waterboards.ca.gov*
  - User Name
  - Password
  - Waste Discharge Identification Number (WDID) #
- Fax RWQCB (only for use if website is down)

Sanitary Sewer Overflow (SSO)

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

(i) Reaches water of the United States (including storm drains, unless fully captured and returned to sanitary sewer system);
(ii) Does not reach water of the United States; and
(iii) Backs up into buildings and on private property that are caused by City-owned lines.

3. Internal SSO Documentation

a. *Category 1 and 2 SSOs*

The Wastewater Duty Person will complete a work order and the Wastewater Service Call Report and provide copies to Wastewater Supervisor.

The Wastewater Supervisor will prepare a file for each individual SSO. The file should include the following information:

- Initial service call information.
- Wastewater Service Call Report form.
- Service Call Database report.
- Copies of the CIWQS Report forms.
- Volume estimate.
- Failure analysis investigation results.

The following are optional for Category 2 SSOs:

- Appropriate maps showing the spill location.
- Photographs of spill location.
- Water quality sampling and test results if applicable.

b. *Private Lateral SSOs*

The Wastewater Duty Person will complete the Wastewater Service Call Report and provide copies to Wastewater Supervisor.

A separate file will be prepared for each individual SSO, at the Wastewater Supervisor's discretion. The file should include any relevant information from the above list.

4. External SSO Record Keeping Requirements[3]

The GWDR requires that individual SSO records be maintained by the City for a minimum of five years from the date of the SSO. This period may be extended when requested by a Regional Water Board Executive Officer.

All records shall be made available for review upon State or Regional Water Board staff's request.

Records shall be retained for all SSOs, including, but not limited to, the following when applicable:

- Record of Certified report.
- All original recordings for continuous monitoring instrumentation.
- Service call records and complaint logs of calls received by the City.
- SSO calls.
- SSO records.
- Steps that have been and will be taken to prevent the SSO from recurring and a schedule to implement those steps.
- Work orders, work completed, and any other maintenance records from the previous five years which are associated with responses and investigations of system problems related to SSOs.
- A list and description of complaints from customers or others from the previous five years.
- Documentation of performance and implementation measures for the previous five years.

[3] State Water Resources Control Monitoring and Reporting Program No. 2006 0003-DWQ (as revised by Order No. WQ 2008-0002.EXEC), Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

If water quality samples are required by an environmental or health regulatory agency or State law, or if voluntary monitoring is conducted by the City or its agent(s), as a result of any SSO, records of monitoring information shall include:

- The date, exact place, and time of sampling or measurements.
- The individual(s) who performed the sampling or measurements.
- The date(s) analyses were performed.
- The individual(s) who performed the analyses.
- The analytical technique or method used.
- The results of such analyses.

J. Equipment

This section provides a list of City-specialized equipment required to support this SSORP.

VacCon Truck

A VacCon truck is required to clear blockages in gravity sewers and to vacuum up spilled sewage. The truck can also be used for wash down and cleanup.

Portable Pumps and Hoses

Portable pumps ranging in size from 2″ to 6″ are required to pump spilled sewage and/or contaminated water back into the sewer system.

Street Sweeper

A street sweeper may be used to assist in the cleanup of roadways and parking lots.

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

A portable CCTV Inspection Unit is required to determine the root cause of all SSOs from gravity sewers. CCTV inspection services can be provided by a contractor.

Emergency Response Truck(s)/Trailer

A utility body truck and/or trailer is required to store and transport the equipment needed to effectively respond to sewer emergencies. The equipment and tools should include an electric eel rodding machine, sectional rods, generator, lights, and spill containment and cleanup materials.

Photographic Equipment

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

K. Training

This section provides information on the training that is required to support this SSORP.

1. Initial and Annual Refresher Training

   All Wastewater Section personnel and Duty personnel should be trained in sewage overflow response, which includes this plan. 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 should receive annual refresher training on this plan and the procedures to be followed.

2. SSO Response Exercises

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

3. Record Keeping

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

L. Contractors Working On City Sewer Facilities

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

Appendix VI-A: Hazardous and Biohazardous Material Spill Policy and Procedures

1. Hazardous Materials Spills

- On occasion, a spill response may involve hazardous materials. Hazardous materials include chemicals that are explosive, flammable, combustible, oxidizers, organic peroxides, water or air reactive, toxic, corrosive, radioactive, or are otherwise harmful to people or the environment.

- In the event of exposure to hazardous materials, contact 9-1-1 immediately.

- The Wastewater Duty Person will immediately notify the Fire Department through MV 3 Communications if any hazardous material, unknown substance, unlabeled container, large quantity of chemicals, and/or any other suspect items or circumstances are found. Be prepared to give all known information.

- Immediately thereafter, contact the Wastewater Supervisor.

- Once notified, the Fire Department will become the Incident Command and may give instructions to the Wastewater Section. The instructions may include traffic/perimeter control, blocking off drains, or removal of identified safe materials.

- The Wastewater Section will not be involved in hazardous material spill cleanup.

- Wastewater Section Personnel may transport identified household-type waste in closed containers back to the MOC as directed by the Fire Department. The waste must be labeled with name of waste, time, date, etc., and in a hazardous materials container/storage area for proper discharge.

Note: Sites of abandoned large quantities of hazardous materials should be treated as a crime scene. DO NOT TOUCH ANYTHING; PRESERVE EVIDENCE.

2. Biohazardous Materials SSOs/Spills

- On occasion, a spill response may involve biohazardous materials. Biohazardous materials may include blood, body tissues and organs, vomit, urine, feces, other body fluids, syringes, needles, etc.

- Immediately notify the Fire Department through MV 3 Communications if you find biohazardous material spills; unknown biological substances; unlabeled containers; large quantities of syringes, needles, or red biohazard

bags; and/or any other suspect items or circumstance. Call if there is ANY reasonable doubt. Be prepared to give all known information. The Fire Department may become the lead agency and may coordinate with the Santa Clara County Health Services Department as the situation warrants.

- Do not perform any cleanup activities you have not been trained to do.

3. Nonhazardous Materials Spills

- A nonhazardous material is one that is clearly identified and poses no threat.

- If you have any doubt when called to clean up a spill/material, call the Fire Department through MV 3 Communications to confirm it is safe. Do not take any chances.

Appendix VI-B: Public Services and Environmental Safety Section Personnel List

Department/Division	Employee	City Phone	Radio Call No.
Public Works Department		650-903-6311	
Public Works Director	Mike Fuller		320
Finance and Administrative Services		650-903-6053	
Risk Manager	Claudia Koob		~~~
Fire—Industrial Waste		650-903-6378	
Urban Runoff Coordinator	Eric Anderson		~~~
Water Environment Specialist	Carrie Sandahl		~~~
Public Services Division (PSD)		650-903-6329	
Assistant Public Works Director	Gregg Hosfeldt		401
Utilities Services Manager	Alison Turner		411
Safety and Training Administrator	Rene Munoz		392
PSD—Business and Internal Services		650-903-6329	
Fleet and Facilities Manager	Scott Estes	650-903-6892	
Customer Service Technician			412
PSD—EEC		650-903-6329	
Principal Civil Engineer	Nirmal Sajjan		409
PSD—Landfill Closure Section		650-903-6329	
Postclosure Manager	Tim Pike		370
Postclosure Supervisor	Jim Johnson		376
Senior Landfill Systems Technician	Jason Bean		374
Landfill Systems Specialist	Tim Foley		375
Landfill Systems Specialist	Steve Janssen		371
Landfill Systems Technician	Jake Steinberg		373
Heavy Equipment Operator	Rafael Salcedo		372
PSD—Meter Section		650-903-6329	
Water Meter Supervisor	Steve Haren		356
Meter Service Worker III	Mike Bernard		361
Water Utility Worker II	James Austin		369
Cross Connection Control Specialist	Matt Raptis		350
Utility Worker II	Bob Bleisner		349
Utility Worker II	Ted Roque		360

PSD—Street Section		650-903-6329	
Street Supervisor	Sam Gonzalez		383
Street Sweeper Operator	Rick Fuentes		385
Street Maintenance Worker II	Angel Lopez		395
Street Maintenance Worker I	Eddie Lopez		391
Street Maintenance Worker II	Mark Salado		387
Street Maintenance Worker I	Cameron Mills		390
Street Maintenance Worker II	Joe Servin		388
Street Lighting Technician	Victor Sotelo		393
Street Sweeper Operator	Sua Te'o		394
Street Maintenance Worker III	Barry Weiss		398
Street Maintenance Worker III	Victor Zuno		389
PSD—Utilities Section		650-903-6329	
Utilities Services Manager	Alison Turner		411
PSD—Utilities Systems Section		650-903-6329	
Utilities Systems Supervisor	Jim Baldinger		347
Senior Utilities Systems Technician	Todd Baker		348
Utilities Systems Technician	Roger Chapman		345
Inspector/Locator	Steve Lucido		357
Utilities Electrician	Menashe Reuven		346
PSD—Wastewater Section		650-903-6329	
Wastewater Supervisor	Mike Mulhearn		427
Utilities Worker III	Paul Culazzo		428
Utilities Worker II	John Foret		430
Utilities Worker III	Phill McNern		421
Utilities Worker II	Danny Velasco		422
Utilities Worker II	Dane Rudd		423
Utilities Worker I	Leon Rosario		424

PSD—Water Distribution		650-903-6329	
Water Distribution Supervisor	Will Medina		368
Water Quality Technician	Kerry Holeman		367
Senior Water System Operator	Matt Knerr		362
Senior Water System Operator	Steve Coates		351
Water System Operator	Wes Velez		359
Water System Operator	Joel Hardie		340
Utilities Worker III	Greg Mumm		352
Utilities Worker I	Matt Driscoll		366
Utilities Worker I	Nick Caruso		364

Appendix VI-C: Emergency Contractor Call-Out List

(To be used only when directed by the Wastewater Supervisor/Utility Systems Manager.)

WEST VALLEY CONSTRUCTION COMPANY, INC., 7:00 a.m. to 4:00 p.m. (650) 364-9464

Name and Title	Home Phone	Cell Phone
Nate Leary, Superintendent		(408) 640-8308
John Healey, District Manager	(650) 583-7318	(408) 716-8180
Mike Renn, Assistant Division Manager	(408) 872-3731	(408) 639-8119

PRESTON PIPELINES, INC., 6:00 a.m. to 6:00 p.m.

Emergency Contact Listing
Preston—Main Office 133 Bothelo Avenue, Milpitas, California, 95035 (408) 262-1418

Name and Title	Home Phone	Cell Phone
Dean Piers, Dispatch Manager	(408) 238-5147	(408) 640-8806
Simon Guardiola, Field Superintendent	(209) 825-1993	(408) 640-8789
Rich Lewis, V.P. Field Manager	(510) 713-8288	(408) 640-8783
Dave Heslop, V.P. Marketing/Operations	(408) 286-1355	(408) 640-8773
James Grist, Project Manager	(408) 348-3322	(408) 639-8059
Leaundra Kasprzak, Asst. Dispatch/Administration	(408) 591-6265	(408) 591-6265
Josh Young, Project Executive	(408) 847-7650	(408) 591-4793
Jordan Thomas, Project Executive	(408) 842-0793	(408) 640-6373

ABLE UNDERGROUND CONSTRUCTION, INC.

Regular Work Hours: 7:30 a.m. to 4:30 p.m. **Call Office at (408) 377-9990**

After Hours: All calls transfer to Glen Gilbert's cell phone.

Office Staff:	Cell Phone
Glen Gilbert, President	(408) 398-4990
Marsha Miller, Operations Manager	(408) 580-4228
Bob Hardesty, Superintendent	(408) 218-0655
Underground Crew:	
Ovet Marquez, Superintendent	(408) 218-0656
Jose Cruz, Foreman	(408) 489-9406

DYSERT ENVIRONMENTAL (CONTRACT ANALYTICAL LAB)

Regular Work Hours: 7:30 a.m. to 4:30 p.m. **Call Office at (650) 799-9204**

Office Staff:	Cell Phone
Mark Dysert, President	(650) 799-9204
Richard Vasquez, Sample Technician	(650) 504-1319
Kian Atkinson, Sample Technician	(650) 465-4939

Appendix VI-D: Sewer Backup Claims Procedures

The following procedures will be observed for all sewer backup claims:

- It is the responsibility of the City of Mountain View staff to gather information regarding the incident. Upon notification of a filed claim, all information will be forwarded to the City Attorney's Office.

- In the event of personal injury or property damage in which the owner/occupant feels the City is responsible, an informational card on how to file a claim against the City will be provided. A sample form is included as Appendix VI-D-1.

- The claim form must be completed in its entirety and submitted in a timely manner.

- The claim form must be returned to the City Clerk's Office located on the third floor of City Hall at 500 Castro Street in Mountain View.

- Once the City receives a completed claim form, the City has 45 days to investigate the claim. Following this 45-day period, the City will accept or deny the claim. If the City fails to respond to the claim, State law states the claim has been deemed denied.

- Any and all questions concerning a claim or the claims process should be directed to the City Attorney's Office at (650) 903-6303.

Some suggested guidelines for customer relations can be found in Appendix VI-E.

Appendix VI-D-1: Sewer Backup Claim Information Form (How to file a claim)

For claims against the City of Mountain View (CMV), contact:

CMV/Risk Management
(650) 903-6053 Fax (650) 968-5472

Providing this information does not admit any liability on behalf of CMV.

To request an insurance claim form, please see reverse side of card.

FI-153^ (3-08)

To request an insurance claim form, please provide the following information and fax to (650) 968-5472 or call (650) 903-6053.

PLEASE PRINT:

- Full Name
- Complete address with zip code
- Telephone number with area code

_____

CMV Employee's Name and Phone Number

_____

Date and Location

Appendix VI-E: Customer Relations Guidelines

It is important for employees to communicate effectively with Mountain View customers, especially in an SSO situation. How we communicate—on the phone, in writing, or in person—is how we are perceived. Good communication with the homeowner results in greater confidence in staff's ability to address the problem satisfactorily and potentially reduces the time needed to resolve the claim.

As a representative of the City, staff will occasionally have to deal with an irate homeowner. A sewer backup is a stressful event and even a reasonable homeowner can become irate should he/she perceive staff as being indifferent, uncaring, unresponsive, or incompetent.

Although sometimes difficult, effective management of a sewage back-up situation is critical. If it is not managed well, the situation can end up in a costly, prolonged process with the homeowner. The City wants the homeowner to feel assured that we are responsive, and the homeowner's best interest is a top priority.

A Few Communication Tips

- Give the homeowner ample time to explain the situation or to vent. Show interest in what the homeowner has to say, no matter how many times you have heard it before or how well you understand the situation.

- As soon as possible, let the homeowner know you will determine the cause of the sewer backup and correct it if possible.

- Acknowledge the homeowner's concerns. For example, if the homeowner seems angry or worried about property damage, explain that a PROFESSIONAL CLEANUP CREW can restore the area and, if it is determined that the City of Mountain View is at fault, the owner/occupant has a right to file a claim for any reasonable repairs or losses resulting from the incident.

- Express regret for any inconveniences caused by the incident, but do not admit fault.

- As much as possible, keep the homeowner informed on what is being done and will be done to correct the problem.

- Keep focused on the incident. Do not get involved with too much unnecessary small talk with the homeowner.

- Do not find fault or lay blame on anyone.

- Before you leave, make sure the homeowner has the name and telephone number of the Wastewater Supervisor at the City of Mountain View to call if he/she requires more detailed information.

- The Wastewater Supervisor will follow up with a telephone call to ensure everything is being handled as it should be.

Appendix VI-F: Methods for Estimating Spill Volume

A variety of approaches exists for estimating the volume of a sanitary sewer spill. This appendix documents the three methods that are most often employed. The person preparing the estimate should use the method most appropriate to the sewer overflow in question and use the best information available.

Method 1: Eyeball Estimate

The volume of small spills can be estimated using an "eyeball estimate." To use this method, imagine the amount of water that would spill from a bucket or a barrel. A bucket contains 5 gallons and a barrel contains 50 gallons. If the spill is larger than 50 gallons, try to break the standing water into barrels and then multiply by 50 gallons. This method is useful for contained spills up to approximately 200 gallons.

Method 2: Measured Volume

The volume of most small spills that have been contained can be estimated using this method. The shape, dimensions, and the depth of the contained wastewater are needed. The shape and dimensions are used to calculate the area of the spills and the depth is used to calculate the volume.

Step 1 Sketch the shape of the contained sewage (see Figure A).

Step 2 Measure or pace off the dimensions.

Step 3 Measure the depth at several locations and select an average.

Step 4 Convert the dimensions, including depth, to feet.

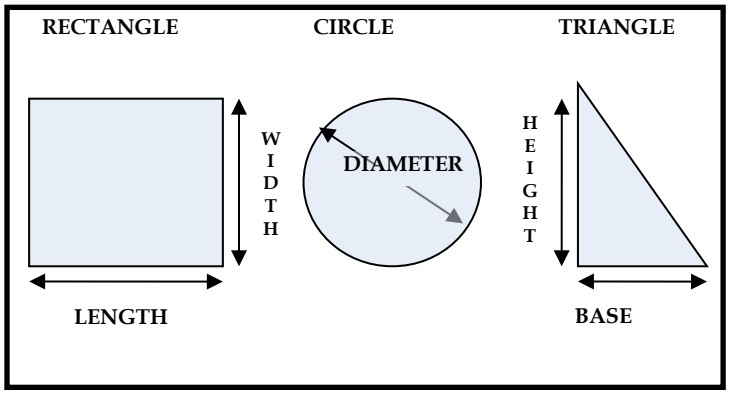
Step 5 Calculate the area in square feet using the following formulas:

Rectangle:	Area = length (feet) x width (feet)
Circle:	Area = diameter (feet) x diameter (feet) x 0.785
Triangle:	Area = base (feet) x height (feet) x 0.5

Step 6 Multiply the area (square feet) times the depth (in feet) to obtain the volume in cubic feet.

Step 7 Multiply the volume in cubic feet by 7.5 to convert it to gallons.

Figure A: Common Shapes and Dimensions used for Estimating Spill Size



Method 3: Duration and Flow Rate

Calculating the volume of larger spills, where it is difficult or impossible to measure the area and depth, requires a different approach. In this method, separate estimates are made of the duration of the spill and the flow rate. The methods of estimating duration and flow rate are:

Duration

The duration is the elapsed time from the time the spill started to the time that the flow was restored.

Start time: The start time is sometimes difficult to establish. Here are a few approaches:

- Local residents can be used to establish start time. Inquire as to their observations. Spills that occur in rights-of-way are usually observed and reported promptly. Spills that occur out of the public view can go on longer. Sometimes, observations like odors or sounds (e.g., water running in a normally dry creek bed) can be used to estimate the start time.

- Conditions at the spill site change over time. Initially, there will be limited deposits of toilet paper and other sewage solids. After a few days to a week, the sewage solids form a light-colored residue. From a few weeks to a month, the sewage solids turn dark. The quantity of toilet paper and other materials of sewage origin increase over time. These observations can be used to estimate the start time in the absence of other information. Taking photographs to document the observations can be helpful if questions arise later in the process.

- It is important to remember that spills may not be continuous. Blockages are not usually complete (some flow continues). In this case, the spill would occur during the peak flow periods (typically 10:00 to 12:00 and 13:00 to 16:00 each day). Spills that occur due to peak flows in excess of capacity will occur only during, and for a short period after, heavy rainfall.

End time: The end time is usually much easier to establish. Field crews on-site observe the "blow down" that occurs when the blockage has been removed.

Flow Rate

The flow rate is the average flow that left the sewer system during the time of the spill. Two common ways to estimate the flow rate are described below:

1. **San Diego Manhole Flow Rate Chart:** This chart, included as Appendix VI-F-1, shows sewage flowing from manhole covers at a variety of flow rates. The observations of the field crew can be used to select the appropriate flow rate from the chart. If possible, photographs are useful in documenting the basis for the flow rate estimate.

2. **Counting Connections:** Once the location of the spill is known, the number of upstream connections can be determined from the sewer maps. Multiply the number of connections by 200 to 250 gallons per day per connection or 8 to 10 gallons per hour per connection.

   For example: 22 upstream connections x 9 gallons per hour per connection
   = 198 gallons per hour ÷ 60 minutes per hour
   = 3.3 gallons per minute

Spill Volume

Once duration and flow rate have been estimated, the volume of the spill is the product of the duration in hours or days and the flow rate in gallons per hour or gallons per day.

For example:

Spill Start Time = 11:00
Spill End Time = 14:00
Spill Duration = 3 hours
3.3 gallons per minute x 3 hours x 60 minutes per hour = 594 gallons

Appendix VI-F-1: San Diego Manhole Flow Rate Chart

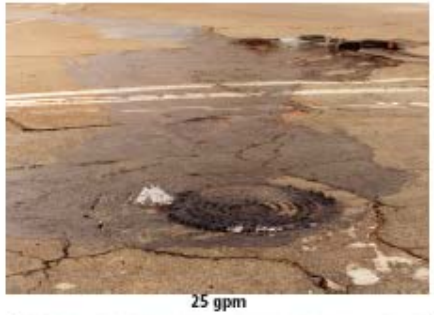
City of San Diego
Metropolitan Wastewater Department

Reference Sheet for Estimating Sewer Spills from Overflowing Sewer Manholes

All estimates are calculated in gallons per minute (gpm)

Wastewater Collection Division
(619) 654-4160


5 gpm


25 gpm


50 gpm


100 gpm


150 gpm


200 gpm


225 gpm


250 gpm


275 gpm

All photos were taken during a demonstration using metered water from a hydrant in cooperation with the City of San Diego's Water Department.

rev. 4/99

Appendix VI-G: Sample Warning Sign

WARNING

Raw Sewage Spill

Do Not Enter Area

CITY OF MOUNTAIN VIEW
PUBLIC SERVICES DIVISION
650-903-6329

Section VII: FOG Control Program

A. Introduction

This section of the SSMP presents the results of an evaluation of the extent and nature of SSOs related to fats, oils, and grease (FOG), the need for a FOG control program, and outlines the elements of the City's FOG Control Program.

B. Regulatory Requirements for FOG Control Section

The requirements for the FOG Control section of the SSMP are:

RWQCB Requirement

Each wastewater collection system agency shall 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 an agency determines that a FOG program is not needed, the agency must provide justification for why it is not needed.

GWDR 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, the collection system agency must provide justification 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, Best Management Practices (BMP) requirements, record keeping, and reporting requirements.

e. Authority to inspect grease producing facilities, enforcement authorities, and determination of whether the collection system agency 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.

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.

C. Nature and Extent of FOG Problem

The City has approximately 235 commercial and industrial sources of grease discharging to its collection system. The largest concentration of commercial grease sources are the food service establishments (FSEs) located in the vicinity of Castro Street. Many of the FSEs are located in older buildings and have undersized grease traps. The industrial grease generators include institutional facilities, such as hospitals and large cafeterias, located at businesses in the industrial areas of the City. Based on the number and types of grease-generating facilities in the City, a FOG Control Program has been implemented.

The FOG Control Program includes maintenance, monitoring, inspection, and enforcement elements. Since these elements are performed by different City departments, implementation of the City's FOG Control Program requires a coordinated effort. Knowledge of the collection system and the locations that are heavily impacted by FOG discharges is critical for developing a control strategy. Planning for maintenance of the system and implementing source control measures are the approaches for minimizing the threat of sewer overflows caused by FOG blockages.

The low incidence of FOG-related SSOs indicates that the City's historical management of FOG dischargers, combined with the City's sewer system preventive maintenance program and FOG Control Program, has been effective and that there is no basis for increasing current FOG control activities. The City will continue to gather information on its FOG-related SSOs, and it will evaluate the need for any additional FOG control measures during the next update of its SSMP.

D. FOG Control Program

The City's FOG Control Program includes five elements: Legal Authority, Preventive Maintenance, Inspections, Commercial FOG Control, and Grease Disposal Locations.

1. Legal Authority

Legal authority for the FOG Control Program is addressed in Section III of the SSMP, Legal Authority.

2. Preventive Maintenance

The Wastewater Operation within the Public Works Department is responsible for maintaining the wastewater collection system facilities. The Wastewater Operation provides preventive maintenance for gravity sewers that have a history of FOG-related problems. These gravity sewers are included on the 1-, 3-, 6-, and 12-month cleaning lists. Cleaning frequencies will be adjusted based on observed results. Additional gravity sewers are added to the cleaning lists as problems are identified.

As shown in the SSMP, the Public Services Division, Wastewater Section of the Public Works Department is also responsible for conducting preventive maintenance of the collection system and responding to collection system blockages and system overflows. Wastewater Section personnel use VacCon vacuum truck equipment and other sewer-rodding equipment to maintain the collection system. Wastewater Section personnel also visually monitor collection system conditions, which is useful for establishing maintenance schedules and frequencies. Maintenance frequencies and visual assessments are used to determine hot spot locations.

Preventive maintenance is described in greater detail in Section IV of the SSMP, Operations and Maintenance Program (Measures and Activities).

3. Commercial FOG Control

The FOG Control Program includes maintenance, monitoring, inspection, and enforcement elements. Since these elements are performed by different City departments, implementation of the City's FOG Control Program requires a coordinated effort. Knowledge of the collection system and the locations that are heavily impacted by FOG discharges is critical for developing a control strategy. Planning for maintenance of the system and implementing source

control measures are the approaches for minimizing the threat of sewer overflows caused by FOG blockages.

The Environmental Safety Section of the Fire and Environmental Protection Division is responsible for controlling grease-generating facilities within identified FOG Hot Spot areas. FOG Hot Spot areas were identified through a survey of the Wastewater Section field personnel. The FOG Hot Spots are shown on Table VII-2.

4. Inspections and Outreach

The Fire and Environmental Protection Division, Environmental Safety Section of the Fire Department is responsible for inspecting grease-generating facilities. Grease-generating facilities are inspected at a frequency of every two years or more often for compliance with FOG regulations. Inspections are conducted to ensure that grease-removal devices are adequately maintained. Best Management Practices (BMPs) to reduce grease discharges are also promoted during inspections. Enforcement actions are implemented where maintenance is inadequate or grease-removal devices are either not functioning properly or are seriously undersized. The City of Mountain View also partners with the City of Palo Alto Regional Water Quality Control Plant to do outreach regarding proper disposal of FOG. Outreach activities include:

- "Tabling" at local grocery stores during the holiday seasons to provide information to residents on proper disposal of FOG.

- Distributing grease scrapers and FOG control information to residents/ visitors at City of Mountain View events throughout the year (Art & Wine Festival, Thursday Night Live events).

- Displaying posters in City Hall during Public Works Week regarding FOG control and FOG-related overflows and response.

- Distribution of BMP posters and brochures to FSEs during routine and referral inspections involving FOG control and FOG overflows.

Table VII-1: Identified FOG Hot Spot Areas

Location	Potential FOG Sources	Comments
Ehrhorn Avenue between El Camino Real and Church Street	1 restaurant	Low flow line
San Antonio Road between El Camino Real and Fayette Drive	2 restaurants	6-month cleaning schedule
Solace Place at intersection with South Drive	1 residential care facility with cafeteria	Low flow line 6-month cleaning schedule
Wild Cherry Lane between Villa Street and West Evelyn Avenue	7 restaurants 4 future restaurants	Limited space for grease interceptors 3-month cleaning schedule
Castro Street between El Camino Real and Evelyn Avenue		Limited space for grease interceptors 6-month cleaning schedule
California Street between Castro Street and Shoreline Boulevard	3 restaurants	Limited space for grease interceptors 6-month cleaning schedule
900 Block of El Camino Real	2 restaurants	6-month cleaning schedule
600 Block of El Camino Real	2 restaurants	6-month cleaning schedule
Remainder of El Camino Real		12-month cleaning schedule
El Monte Avenue between Marich Way and El Camino Real	4 restaurants	
Independence Avenue at intersection with Old Middlefield Way	4 restaurants	12-month cleaning schedule
North Rengstorff Avenue at intersection with Charleston Road	1 restaurant	12-month cleaning schedule

The Environmental Safety Section will continue to ensure that the grease-generating facilities adequately maintain their grease-removal devices, promote the application of grease best management practices (BMPs) where appropriate, and initiate enforcement actions. Enforcement actions will include:

- Requiring more frequent maintenance of grease-removal devices;
- Requiring training on application of grease BMPs;
- Requiring installation of grease-removal devices; or
- Requiring the installation of larger grease-removal devices/grease interceptors.

5. Grease Disposal Locations

   The City has identified grease disposal sites for use by grease haulers doing business within the City. The identified grease disposal sites are shown in Appendix VII-A.

   The City's conclusion is that there is adequate local capacity to dispose of grease from commercial sources within the City at this time.

Appendix VII-A: FOG Disposal Sites

The following locations accept grease from liquid waste haulers in the Mountain View area as of June 2008.

Business Name	Location / Address	Phone Number	Services
Sirona Fuels dba Blue Sky Bio-Fuel Inc.	Oakland	(510) 868-9229	Primarily yellow grease, some brown grease. Can accept 7,000 gallons per day.
East Bay Municipal Utility District	Oakland	(510) 287-1651	Accepts grease.
Imperial Western Products (Biotane Fuels and Pumping)	Coachella Valley	(760) 398-0815 or (877) 424-6826	Southern California. They are looking to expand to the San Francisco Bay area.
Palo Alto Wastewater Treatment Plant	Palo Alto	(650) 329-2598	Accept 5,000 to 6,000 gallons per day on a first-come, first-served basis. They are in the process of increasing their ability to accept more (as of July 2008).
Salinas Tallow	Salinas	(831) 422-6436	Will consider accepting grease from other reputable haulers. They purchase yellow grease and process the interceptor grease with residue going to landfill.
San Jose Tallow Company	San Jose	(408) 452-8777	They do not accept interceptor grease but would consider accepting from outside haulers if it would not impact any of their grease hauling routes.
South Bayside Systems Authority	Redwood City	(650) 591-7121	Accepts grease.

Section VIII: System Evaluation and Capacity Assurance Plan

A. Introduction

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

B. Regulatory Requirements for the System Evaluation and Capacity Assurance Plan Section

The requirements for the System Evaluation and Capacity Assurance Plan (SECAP) section of the SSMP are:

RWQCB Requirement (Capacity Management):

a. Capacity Assessment

Each wastewater collection system agency shall establish a process to assess the current and future capacity requirements for the collection system facilities.

b. System Evaluation and Capacity Assurance Plan

Each 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.

GWDR Requirement (SECAP):

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

a. Evaluation: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity), and the major sources that contribute to the peak flows associated with overflow events.

b. Design Criteria: Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria.

c. Capacity Enhancement Measures: The steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, inflow and infiltration (I/I) reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.

d. Schedule: The City shall develop a schedule of completion dates for all portions of the Capital Improvement Program developed in (a) to (c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D.14 of the GWDR.

C. System Evaluation and Capacity Assurance Plan

1. Evaluation—Collection System Master Plan

The Sanitary Sewer Master Plan update was completed in August 2010. The master planning effort evaluated the capacity of the existing sanitary sewer system assets and provided capacity design criteria for future assets.

The City is at or near build-out. Projects within the City's service area are primarily redevelopment. The City requires that redevelopment project proponents evaluate the off-site capacity impacts of their project through an engineering study and commit to providing off-site improvements as part of the project approval process.

The City is updating the General Plan and has identified "target" areas for redevelopment. As part of the California Environmental Quality Act (CEQA) requirements, the General Plan will evaluate the long-term impacts to the collection system.

2. Evaluation—Hydraulic Model

The City periodically monitors the flow in its sanitary sewer system to identify capacity deficiencies and to monitor the quantity of inflow and infiltration present.

The flows were most recently monitored at eight locations during April and May 2005. These sites had been previously monitored in 1998.

The 2005 Flow Monitoring effort demonstrated that the City's large diameter sewers have adequate capacity (the maximum observed d/D was 72 percent).

3. Design Criteria

The capacity-related design criteria are included in Section V of the SSMP, Design and Performance Provisions.

4. Capacity Enhancement Measures—Capital Improvement Program

The City will include publicly funded capacity enhancement projects in its Capital Improvement Program. There were no known capacity deficiencies at the time this SSMP was prepared. Future capacity enhancement projects will be included as Appendix VIII-A.

5. Schedule

The schedule for the City's capacity enhancement projects will be included in the City's Capital Improvement Program.

Appendix VIII-A: Capacity Enhancement CIP Detailed Budget

There were no publicly funded capacity projects at the time this SSMP was prepared.

Fiscal Year	Project Name	Project Description	Project Budget	Funding Source

Section IX: Monitoring, Measurement, and Program Modifications

A. Introduction

This section of the SSMP outlines 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.

B. Regulatory Requirements for the Monitoring, Measurement, and Program Modifications Section

The requirements for the Monitoring, Measurement, and Program Modifications (MMPM) section of the SSMP are:

RWQCB Requirement

Each wastewater collection system agency 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.

GWDR 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.

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

C. Performance Measures

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 by 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.
- Planned to actual performance for preventive maintenance.

D. Baseline Performance

The City has limited historical, or baseline, performance data for the selected performance measures. The data that is available is shown in Appendix IX-A. Trends will be added when the quantity of data is adequate.

E. Performance Monitoring and Program Changes

The City will evaluate the performance of its wastewater collection system at least annually using the performance measures identified in Subsection C, Performance Measures, above. The City will update the data and analysis in this section at the time of the evaluation.

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

Appendix IX-A: Baseline Performance Data

Table IX-1: Gravity Sewer, Pump Station, and Force Main SSOs by Calendar Year

Calendar Year	Gravity Sewer SSOs	Pump Station SSOs	Force Main SSOs
2009	3	0	0
2010	6	0	0
2011	0	0	0
2012	0	0	0
2013	3	0	0

Table IX-2: CY Totals for SSOs by Cause

Calendar Year	Roots	Debris	Grease	Capacity	PS Failure	Pipe Failure	Other	Total
2009	1	0	0	0	0	0	2	3
2010	1	2	2	0	0	0	1	6
2011	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0
2013	1	1	1	0	0	0	0	3

Section X: SSMP Program Audits

A. Introduction

This section of the SSMP outlines the process that the City will follow to evaluate the effectiveness of the SSMP to identify updates that may be needed for a more effective program.

B. Regulatory Requirements for the SSMP Program Audits Section

RWQCB Requirement

Each wastewater collection system agency shall conduct an annual audit of their SSMP, which includes any deficiencies and steps to correct them (if applicable), appropriate to the size of the system and the number of overflows, and submit a report of such audit.

GWDR Requirement

As part of the SSMP, the City shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years, and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the City's compliance with the SSMP requirements identified in this subsection (D.13 of the GWDR), including identification of any deficiencies in the SSMP and steps to correct them.

C. Audits

The City will audit its implementation and compliance with the provisions of this SSMP on an annual basis. Calendar Year 2008 was the first year audited.

The audit will be conducted by a team consisting of City staff selected from the Public Works Department. The audit team may include members from other areas of the City, outside agencies or contractors.

The scope of the audit will cover each of the major sections of the SSMP. The Audit Checklist, based on the requirements in the GWDR, is included on Table X-1.

The results of the audit, including the identification of any deficiencies and the steps taken or planned to correct them, will be included in an Audit Report. The Audit Report will be submitted to the RWQCB by March 15 following the year that

was the subject of the audit. The first Audit Report was submitted by March 15, 2009.

D. SSMP Updates

The City will determine the need to update its SSMP based on the results of the audit and the performance of its wastewater collection system based on information from the Monitoring and Measuring Program Modifications Section of the SSMP. In the event that the City decides that an update is warranted, the process to complete the update will be identified. The City will complete the update within one year of completion of the audit.

Biennial Sewer System Management Plan Audit Report

Date: April 28, 2014

The purpose of the Sewer System Management Plan (SSMP) Audit is to evaluate the effectiveness of the City of Mountain View SSMP and to identify whether updates are needed. This document was designed to meet the requirements of State Water Resources Control Board Order No. 2006-0003-DWQ as revised by Order No. WQ 2013-0058-EXEC. Documentation of SSMP audits are kept on file at the <entity>, and an indication is made in the California Integrated Water Quality System (CIWQS) database that the audit was completed.

Directions: *Please indicate **YES** or **NO** for each question. To answer the following questions, refer to the text of the SSMP Element, any referenced material in the text, all corresponding attachments, and any data collected to assist in assessing SSMP effectiveness. For any **NO** responses, describe the updates or changes needed and the time line to completion in "Description of Scheduled Updates/Changes to the SSMP" on the last page of this form.*

ELEMENT 1. GOALS

1. Are the goals stated in the SSMP still appropriate and accurate? **YES/NO**

ELEMENT 2. ORGANIZATION

2. Is the SSMP up-to-date with organization and staffing contact information? **YES/NO**

ELEMENT 3. LEGAL AUTHORITY

3. Does the SSMP reference up-to-date information about legal authority? **YES/NO**

4. Does the City have sufficient legal authority to control sewer use and maintenance? **YES/NO**

ELEMENT 4. OPERATIONS AND MAINTENANCE PROGRAM

4.a Map of the Sanitary Sewer System

5. Does the SSMP reference up-to-date information about maps? **YES/NO**

6. Are collection system maps complete, up-to-date, and sufficiently detailed? **YES/NO**

4.b Preventative Maintenance Program

7. Does the SSMP contain up-to-date information about preventive operations and maintenance activities? **YES/NO**

8. Are the City's preventive maintenance activities sufficient and effective in reducing and preventing SSOs and blockages? **YES/NO**

4.c Rehabilitation and Replacement Plan **YES/NO**

9. Does the SSMP contain up-to-date information about rehabilitation and replacement program?
10. Does the SSMP contain up-to-date information about Closed Circuit Television (CCTV) inspections? **YES/NO**

11. Are scheduled inspections and condition assessment system effective in identifying, prioritizing, and addressing deficiencies? **YES/NO**

12. Does Capital Improvement Plan (CIP) program address prioritized projects for collection system assets? **YES/NO**

4.d Training

13. Does the SSMP contain up-to-date information about training programs? **YES/NO**

14. Do supervisors believe their staff are sufficiently trained? **YES/NO**

15. Are staff satisfied with the training opportunities and support offered to them? **YES/NO**

4.e Equipment and Replacement Part Inventories

16. Does the SSMP reference up-to-date information about equipment and replacement part inventories? **YES/NO**

ELEMENT 5. DESIGN AND PERFORMANCE PROVISIONS

17. Does the SSMP contain up-to-date information about design and construction standards? **YES/NO**

ELEMENT 6. SSO & BACKUP RESPONSE PLAN

18. Does the SSMP contain an up-to-date version of SSO Response Plan? **YES/NO**

19. Considering the information in the most recent annual Performance Measurement Report, is the Response Plan effective in handling SSOs? **YES/NO**

ELEMENT 7. FATS, OILS, AND GREASE (FOG) CONTROL PROGRAM

20. Does the SSMP reference or contain up-to-date information about the City's FOG control program? **YES/NO**

21. Is the current FOG program effective in documenting and controlling FOG sources? **YES/NO**

22. Are all attachments (besides those labeled as "example") in the Element 7 Appendix current? **YES/NO**

ELEMENT 8. SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

23. Does the SSMP reference or contain up-to-date information about the City's capacity assessment activities and documentation? **YES/NO**

24. Is the City sufficiently addressing hydraulic deficiencies? **YES/NO**

ELEMENT 9. MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

25. Does the SSMP reference up-to-date information about the City's data collection and organization (e.g., use of CMMS, performance indicators, etc.)? **YES/NO**

26. Is the City's data collection and organization sufficient to evaluate the effectiveness of the SSMP? **YES/NO**

ELEMENT 10. SSMP PROGRAM AUDITS

27. Will this SSMP Audit be completed by May 2 every two years starting May 2, 2014? **YES/NO**

ELEMENT 11. COMMUNICATION PROGRAM

28. Is the City's website up-to-date, including information related to providing an opportunity for public input on the SSMP? **YES/NO**

Evaluation of the Effectiveness of the SSMP

Include information on evaluation of effectiveness of the SSMP (performance measures, etc.).

Description of Scheduled Updates/Changes to the SSMP

Directions: *For each question answered **NO**, please describe the content of any necessary updates/changes and the time line for completion.*

Section XI: Communication Program

A. Introduction

This section of the SSMP outlines the process involved in communicating with interested members of the public regarding the development, implementation, and performance of this plan.

B. Regulatory Requirements for the Communication Program Section

The requirements for the Communication Program section of the SSMP are:

RWQCB Requirement

The RWQCB does not require a Communication Program.

GWDR 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.

C. Communication During SSMP Development and Implementation

City staff announced that it was developing an SSMP at the October 2007 City Council Meeting.

D. Communicating Sanitary Sewer System Performance

The City will make information on the performance of its sanitary sewer system performance available for review. The performance information will include the performance indicators listed in Section IX of the SSMP; Monitoring, Measurement, and Program Modifications, and will be compiled annually. Notice that the performance information is available for review will be posted on the agency's website. The notice is:

The most recent compilation of the City's sanitary sewer system performance information is available for review at 231 North Whisman Road during normal

business hours. Interested parties can contact Mike Mulhearn at (650) 903-6329 or *mike.mulhearn@mountainview.gov* for additional information.

The City reports SSOs electronically to the California Integrated Water Quality System (CIWQS). The electronic SSO data, as well as information regarding regulatory actions, is available at:

http://www.waterboards.ca.gov/ciwqs/publicreports.html.

The City will direct interested parties to the CIWQS public access website.

The City will report the performance of its sanitary sewer system to its City Council annually in an informational memorandum. The performance information will include the performance indicators listed in Section IX of the SSMP; Monitoring, Measurement, and Program Modifications, and will be compiled annually.

E. Agreements with Satellite Collection Systems

The City of Los Altos wastewater collection system discharges to the City's sanitary sewer system. The City has a written agreement covering their discharges into the City's sewer system with the City of Los Altos.

AT/7/PSD
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