RESOLUTION NO. 9106

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS APPROVING AND RECERTIFYING THE CITY'S SEWER SYSTEM MANAGEMENT PLAN IN ACCORDANCE WITH THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD'S ADOPTED STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR SANITARY SEWER SYSTEMS, WATER QUALITY ORDER NO. 2006-003

WHEREAS, on May 2, 2006, the California State Water Resources Control Board ("Water Board") adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, requiring owners of public sanitary sewer collection systems to prepare a Sewer System Management Plan ("SSMP"); and

WHEREAS, the SSMP is a document that addresses procedures to operate, maintain and manage wastewater collection systems; and

WHEREAS, utilization of the SSMP provides the guidelines and procedures to reduce the number and frequency of sanitary sewer overflows ("SSOs") and thereby decrease the risk to human health and the environment in our community; and

WHEREAS, on August 18, 2009, the City Council approved and certified the SSMP; and

WHEREAS, on August 19, 2014, the City Council approved and re-certified the SSMP; and

WHEREAS, on December 6, 2016, the City Council approved and re-certified the SSMP; and

WHEREAS, the SSMP must be updated every five (5) years, and must include any significant program changes, and re-certification by the governing board of the legislative body is required in accordance with Section D.14 of the Order No. 2206-003 when significant updates to the Sanitary Sewer Management Plan are made.

NOW, THEREFORE, the City Council of the City of Milpitas hereby finds, determines, and resolves as follows:

1. The City Council has considered the full record before it, which may include but is not limited to such things as the staff report, testimony by staff and the public, and other materials and evidence submitted or provided to it. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

2. The City Council hereby approves and re-certifies the SSMP, attached hereto as **Exhibit A**.

PASSED AND ADOPTED this 19th day of October 2021, by the following vote:

AYES: (5) Mayor Tran, Vice Mayor Montano, Councilmembers Chua, Dominguez, and Phan

NOES: (0) None

ABSENT: (0) None

ABSTAIN: (0) None

ATTEST:

Wendy Wood, City Clerk

APPROVED:

Rich Tran, Mayor

APPROVED AS TO FORM:

Christopher J. Diaz, City Attorney

Sewer System Management Plan 2021 Update

Activities to Manage the Wastewater Collection System Effectively

City of Milpitas
455 East Calaveras Blvd.
Milpitas, CA 95035
www.Milpitas.ca.gov
(408) 586-3000

Sewer System Management Plan 2021 Update

Revised by City of Milpitas
Public Works Department

Approved by Milpitas City Council on August 18, 2009
Updated August 19, 2014
Updated December 2016
Updated October 2021

City of Milpitas
455 East Calaveras Blvd.
Milpitas, CA 95035
www.Milpitas.ca.gov
(408) 586-3000

Sewer System Management Plan

City of Milpitas

Certificate of Compliance

This certification is included to ensure compliance with the State Water Resource Control Board, General Order 2006-0003-DWQ and Order No. WQ 2013-0058-EXEC.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision. The information submitted is to the best of my knowledge and belief, true, accurate, and complete.

Name: _____
Tony Ndah

Title: Public Works Director

Date: 1/5/2022

TABLE OF CONTENTS

Element 1 Goals…….…….. 1
Element 2 Organization…….…… 3

2.1 Roles & Responsibilities…….……. 3

2.2 Chain of Communication: SSO Reporting…….. 6

Element 3 Legal Authority…….8

Element 4 Operation & Maintenance Program ……..10

4.1 Collection System Maps ……11
4.2 Preventative Maintenance ……..11
4.3 Rehabilitation & Replacement Plan ……...12
4.4 Training Schedule ……..14
4.5 Contingency Equipment & Replacement Inventories ……...14

Element 5 Design & Performance Provisions ……..15

Element 6 Overflow Emergency Response Plan ……..16

Element 7 FOG Control Program …….26

7.1 Outreach …….27
7.2 FOG Disposal …….27
7.3 Legal Authority ……..27
7.4 Grease Removal Devices ……28
7.5 Restaurant Inspections ……28
7.6 Sanitary Sewer System FOG Blockages ……29
7.7 FOG Source Control Measures ……..29

Element 8 System Evaluation and Capacity Assurance Plan …….30

8.1 Capacity Assessment ……..30
8.2 Capacity Enhancement Measures ……...31
8.3 System Evaluation & Capacity Assurance Plan …….32
8.4 Schedule of Completion …….33

Element 9 Monitoring, Measurement & Program Modification ……34

9.1 SSMP Activity Prioritization ……..34

9.2 Implementation & Effectiveness ……35

9.3 Assessment of Preventive Maintenance Program ……...35

9.4 Program Updates ……35

9.5 Trends: Frequency, Location & Volume ……35

Element 10 SSMP Program Audits ……37

Element 11 Communication Program……...38

Appendices

Appendix A State Water Resource Control Board General Order 2006-0003-DWQ & Order No. WQ 2013-0058-EXEC
Appendix B Utility Maintenance Standard Operating Procedures: SSO Responding & Reporting
Appendix C Overflow and Emergency Response Plan
Appendix D Milpitas Municipal Code Excerpts
Appendix E Sanitary Sewer System Map
Appendix F Sanitary Sewer Pipe Ages Map
Appendix G Sanitary Sewer Pipe Materials Map
Appendix H Storm Drain Facilities Map
Appendix I Five-Year Capital Improvement Program
Appendix J Excerpt from City of Milpitas *Engineering Plans and Map Procedures and Guidelines*
Appendix K Excerpt from City of Milpitas *Standard Specifications for Sanitary Sewers*
Appendix L Excerpt from City of Milpitas *Standard Drawings*
Appendix M Audit Record
Appendix N Equipment-Material Vendor List
Appendix O SSO Location Map
Appendix P Preventative Maintenance Log
Appendix Q Milpitas Manhole Flowrate Chart
Appendix R Sewer System Management Plan Change Log

Tables and Figures

Table 2-1: City SSO Contact List …….. 5
Table 2-2: SSMP Elements & Responsibilities …….. 6
Table 8-1: Proposed CIP Schedule and Budget ……32
Table 9-1: Causes of SSOs, 2009 - 2013 …….. 36
Figure 2-1: SSMP Organization Flowchart ……4
Figure 2-2: SSO Chain of Communication Flow Chart …….. 7
Figure 9-1: Annual Volume of SSOs, 2012 -2016 …….. 36

ABBREVIATIONS

ABAG	Association of Bay Area Governments
BACWA	Bay Area Clean Water Agencies
BAWQA	Bay Area Water Quality Association
BMP	Best Management Practice
CA	California
CCTV	Closed-Circuit Televising
Cal OES	California Office of Emergency Services
CIP	Capital Improvement Program
CIWQS	California Integrated Water Quality System
CWEA	California Water Environment Association
FOG	Fat, Oils, and Grease
GIS	Geographical Information System
GRD	Grease Removal Device
GWDR	General Waste Discharge Requirements
I/I	Inflow/Infiltration
LRO	Legally Responsible Official
MRP	Monitoring & Reporting Program
NOI	Notice of Intent
NPDES	National Pollution Discharge Elimination Systems
RWQCB	San Francisco Bay Regional Water Quality Control Board
SCADA	Supervisory Control and Data Acquisition
SOP	Standard Operating Procedure
SSMP	Sewer System Management Plan

SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board
US	United States
WARN	Water Agency Response Network
WDR	Water Discharge Requirements
WPCP	San Jose/Santa Clara Water Pollution Control Plant

GLOSSARY

Bay Area Clean Water Agencies (BACWA)	The San Francisco Bay Area Joint Powers Authority is comprised of wastewater treatment and collection system agencies. The BACWA vision is to: Develop a region-wide understanding of the watershed protection and enhancement needs through reliance on sound scientific, environmental and economic information, and ensure that this understanding leads to long-term stewardship of the San Francisco Bay Estuary.
Blockage	A buildup of debris in the sewer that stops the flow of wastewater and allows the water to back up behind the blockage, sometimes causing an overflow. Also called a **stoppage**.
City	The City of Milpitas.
Geographical Information System (GIS)	A database linked with mapping, which includes various layers of information used by government officials. Examples of information found on a GIS can include a sewer map; sewer features such as pipe location, diameter, material, condition, last date cleaned or repaired. The GIS also typically contains base information such as streets and parcels.
Inflow/Infiltration (I/I)	Inflow is generally considered to be extraneous water that enters the system as a direct result of a rain event, such as through improper connections to the sanitary sewer, through flooded manhole covers, or through defects in the sewer. Infiltration is generally considered to be extraneous water that enters the sewer system over longer periods of time, such as groundwater seepage through cracks in the sewer. While it is impossible to control all I/I, it is certainly desirable to reduce I/I when cost-effective.
Lateral	The portion of sewer that connects a home or business with the main line in the street. Laterals are owned and maintained by the property owner.
Legally Responsible Official (LRO)	The Legally Responsible Official is responsible for reporting all spills to the applicable regulatory agencies within the prescribed timelines.
Regional Water Quality Control Board (RWQCB)	The San Francisco Bay Regional Water Quality Control Board (also known as RWQCB). Its mission is to preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.
Sanitary Sewer Overflow (SSO)	Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include: Overflows or releases of untreated or partially treated wastewater that reach waters of the United States; Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.
State Water Resource Control Board (SWRCB)	The umbrella agency responsible for implementation of State laws.

1 GOALS

Element 1

SWRCB Requirements:
The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer collection system. This will help reduce and prevent SSOs, as wells as mitigate any SSOs that do occur.

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

- To properly manage, operate, and maintain all parts of the wastewater collection system
- To provide adequate capacity to convey peak flows
- To minimize the frequency of SSOs
- To mitigate the impact of SSOs

The City of Milpitas is located in northeastern Santa Clara County between the Cities of San Jose and Fremont. The City encompasses 14 square miles of residential, commercial, industrial, agricultural and recreational land uses, roughly oriented around the intersections of SR 237 with I-880 on the west and I-680 on the east. The City provides wastewater collection services to a population of 77,961 as of 2020 and hosts a number of High Tech electronic research, development and manufacturing facilities typical of the Silicon Valley.

The City of Milpitas owns and operates its municipal sewer collection system consisting of 160 miles of gravity pipe and 5 miles of force main. The collection system generally flows from east to west and south to north towards the San Francisco Bay. Most of the collection system flows by gravity to the Milpitas Main Pump Station then is pumped to the San Jose-Santa Clara Regional Wastewater Facility through dual force mains. The Venus Way Lift Station pumps sewage from a small portion of the City in the Pines neighborhood that is at a lower elevation up to a higher elevation where it then flows by gravity to the Main Pump Station.

The City of Milpitas has prepared this Sewer System Management Plan (SSMP) to comply with the State Water Resource Control Board (SWRCB) General Order 2006-0003-DWQ and WQ 2013-0058-EXEC. (see Appendix A). The SSMP provides a plan and schedule to properly manage, operate, and maintain all components of the municipal sanitary sewer system. Since the City has proactively planned for adequate capacity and performed aggressive preventive maintenance over the past several years, it already has a low incidence rate of sanitary sewer overflows (SSOs), averaging approximately one incident per year, with zero in 2017, two in 2018, one in 2019, one in 2020, and one in 2021. This SSMP documents past activities and provides guidance to maintain a low SSO rate, as well as mitigate any SSOs that do occur.

The provisions of the SSMP were developed and updated to ensure that the City is able to meet its goals by:

- Implementing a collection system maintenance program to minimize the frequency of sanitary sewer overflows.
- Respond to sanitary sewer overflows quickly and mitigate the impact of the SSO.
- Mitigating the impact of sewer overflows that do occur as well as follow up investigations to identify the cause of the overflow event and using that information to either adjust the maintenance schedule or schedule a repair/replacement.
- Properly manage, operate and maintain all elements of the wastewater collection system to better allocate resources and manpower.
- Continue to implement the closed-circuit televising (CCTV) program for the collection system.
- Develop and maintain design construction standards and specifications for the installation and repair of the collection system and its associated infrastructure.
- Maintain comprehensive and up-to-date maps of the wastewater collection system.
- Provide training on a regular basis for staff in collection system maintenance and operations.
- Maintain a Fats, Oils, and Grease (FOG) program to limit fats, oils, and grease, and other debris that may cause blockages in the sewage collection system.
- Ensure Corrective Action is taken in a timely manner

The City has implemented policies and procedures for the systematic inspection and continued maintenance of its infrastructure. The City personnel are utilizing the procedural training available through organizations such as Bay Area Clean Water Agencies (BACWA) and California Water Environment Association (CWEA).

Element

2

2 ORGANIZATION

2.1 SSMP Roles & Responsibilities

SWRCB Requirements:

SSMP must identify:

A. Name of the responsible or authorized representative as described in section J of this Order;

B. Names & telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures of SSMP. SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and

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

RWQCB Requirements:

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

- Identify agency staff responsible for implementing, managing, and updating the SSMP
- Identify chain of communication for responding to SSOs
- Identify chain of communication for reporting SSOs

The Public Works Director, Deputy Public Works Director, and Public Works Manager, all with the City of Milpitas Department of Public Works, are authorized to serve as Legally Responsible Officials (LROs) for the purposes of certifying the component of this plan and for reporting SSOs in the California Integrated Water Quality System electronic database.

Figure 2-1 shows the City's organization chart and City staff who manage all sanitary sewer activities within the City, whether it be reporting SSOs, analyzing capacities of the sanitary sewer system, or maintaining sanitary sewer facilities.

City Council – Approves operating budgets and capital improvement program enters agreements on behalf of the City.

City Manager – City's executive officer. Oversees and coordinates works of all departments.

City Attorney – City's legal counsel. Advises on content of sewer ordinances, coordinates ordinance adoption, provides legal interpretations, and serves in enforcement actions.

Public Works Director (Contingent LRO) – Establishes sewer system policy and plans strategy, leads and assigns duties of engineering staff, prepares budgets and serves as the spokesperson for SSO related events. (See section 2.2: Chain of Communication: SSO Reporting).

Deputy Public Works Director (Secondary LRO) – Oversees and prepares wastewater collection system planning documents, documents new and rehabilitated assets, proposes rate analysis reports and staff recommendations, and coordinates development and implementation of SSMP.

Public Works Manager for Utilities (Primary LRO) – Manages field operations and maintenance activities, provides relevant information to management, prepares and implements contingency plans, leads emergency response, investigates and reports SSOs, and trains field crews. (See section 2.2: Chain of Communication: SSO Reporting).

Public Works Maintenance Crew/Standby Crew – Undertakes preventive maintenance activities, mobilizes and responds to notification of stoppages and SSOs (mobilize sewer cleaning equipment, by-pass pumping equipment, and portable generators).

WPCP – Provides pre-treatment program inspection and permitting to ensure compliance of the WPCP operations with its NPDES discharge permit.

Figure 2-1: SSMP Organization Flowchart

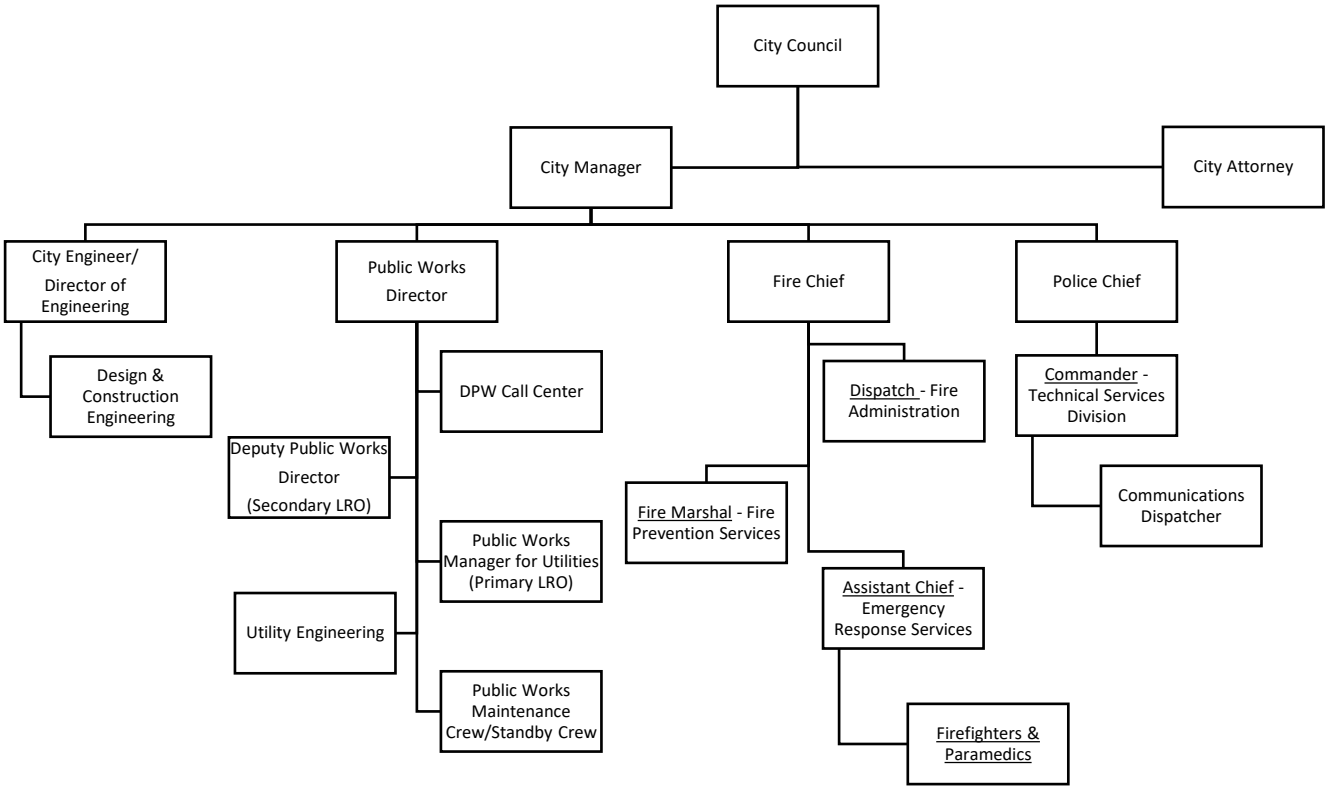


Table 2-1: City SSO Contact List

Names	Business Hours	After Hours	Email
Public Works Call Center	408-586-2600 (7:00 a.m. – 5:00 p.m.)	911 or 408-586-2400	
Glen Campi, Public Works Manager for Utilities (Primary LRO)	408-586-2643	408-690-3617	gcampi@ci.milpitas.ca.gov
Elaine Marshall Deputy Public Works Director (Secondary LRO)	408-586-2603	911 or 408-586-2400	emarshall@ci.milpitas.ca.gov
Tony Ndah Public Works Director (Contingent LRO)	408-586-2602	911 or 408-586-2400	tndah@ci.milpitas.ca.gov
Public Works Standby Crew Pager	408-586-2400 (5:00 p.m. – 7:00 a.m.) M-F and 24 hours on weekends	408-699-2725 pager	

The Deputy Public Works Director has primary responsibility for the SSMP to ensure it is current. The Deputy Public Works Director and Public Works Manager for Utilities are responsible for implementation of various elements within this SSMP as delineated in Table 2-2 below.

Table 2-2: SSMP Elements & Responsibilities

	SSMP Chp.	Deputy Public Works Director 408-586-2602	Public Works Manager for Utilities 408-586-2643
Goals	1	√	
Organization	2	√	
Legal Authority	3	√	
Operations and Maintenance Program	4		√
Design and Performance Provisions	5	√	
Overflow Emergency Response Plan	6		√
FOG (Fats, Oils, Grease) Control Program	7	√	
System Evaluation and Capacity Assurance Plan	8	√	
Monitoring, Measurement, and Plan Modifications	9	√	√
SSMP Audits	10	√	
Communication Program	11	√	√

2.2 Chain of Communication: SSO Reporting

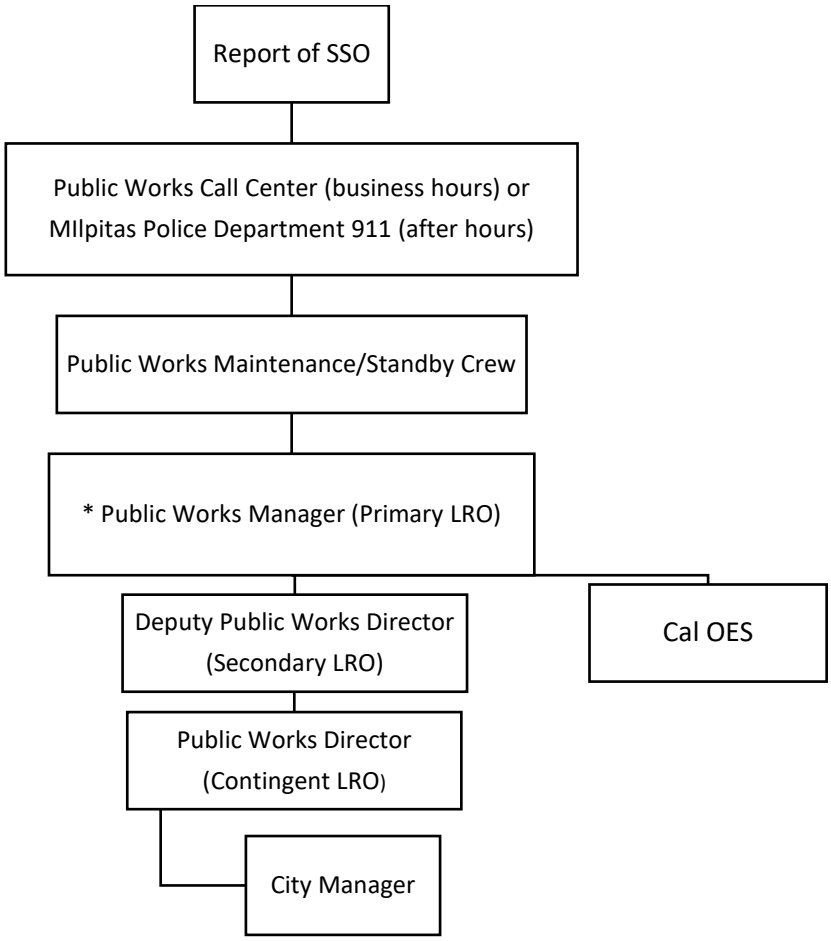
The SSMP must identify:

C. Chain of communication for reporting SSOs, from receipt of complaint or other information, including persons responsible for reporting SSO to the State and Regional. Water Board and other agencies if applicable (such as County Health, County Environmental Health Agency, Reg. Water Board &/or Cal OES).

SSO reports are routed to the City's Public Works call center during normal business hours. After hours reporting comes through the City's 9-1-1 emergency system. The Utility Maintenance Standard Operating Procedures (SOP) (Appendix B) describes roles and responsibilities of City personnel when responding to, and reporting SSOs. The Public Works Maintenance crew is using the Association of Bay Area Governments (ABAG) Overflow and Back-up Response Plan (Appendix C), which incorporates the City's SSO Response SOP, for detailed response and clean-up guidelines for sanitary sewer overflows. This plan identifies the chain of communication for responding to, and reporting SSOs. The Public Works Manager for Utilities has primary responsibility to ensure that the City responds appropriately and all

reports to all regulatory agencies are made within the pre-designated timeline. The table of contents and selected excerpts from the ABAG Overflow and Back-up Response Plan are included in Appendix C and are discussed in Element 6. Figure 2-2 identifies the City's Chain of Communication in the event of an SSO. Information on notification of outside agencies is shown in Appendix B.

Figure 2-2: SSO Chain of Communication Flow Chart



*The Public Works Manager for Utilities has primary responsibility to make the electronic reports of SSOs to CIWQS within the State's reporting timeline. These are within 2 hours, or as soon as practicable without impeding the SSO response for a Category 1 or 2 spill of any amount reaching surface waters or 1,000 gallons or greater that does not reach surface waters, respectively If less than 1,000 gallons and fully captured, reporting must be certified within 30 days after the end of the calendar month in which the SSO occurs. In the Public Works Manager's absence, the Deputy Public Works Director will make the necessary reports, or if both staff are absent, the Public Works Director will make the reports. In the event the SSO cannot be reported online, the reporting LRO is to submit via fax. Fax information can be found in the SSO Response Envelope.

Responsibility for SSMP Implementation The Deputy Public Works Director and Public Works Manager for Utilities are responsible for developing, implementing, and maintaining all elements of the City's SSMP.

3 LEGAL AUTHORITY

Element 3

The City has enrolled in the State's general sanitary sewer overflow program for its sewer collection system as required by Order 2006-0003-DWQ and WQ 2013-0058-EXEC (see Appendix A). Use of the City's sanitary sewer system is regulated by the Milpitas Municipal Code, Title VIII, Chapter 2 (see Appendix D), which is sufficient to comply with the General Order. The City Engineer is responsible to establish design criteria, and implement and enforce use regulations.

SWRCB Requirements:

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

A. Prevent illicit discharges into its sanitary sewer system (I/I, storm-water, chemical dumping, unauthorized debris and cut roots, etc.);
B. Require that sewers and connections be properly designed and constructed;
C. Ensure access for maintenance, inspection or repairs for portions of the lateral owned /maintained by Public Agency;
D. Limit the discharge of fats, oils, and grease (FOG) and other debris that may cause blockages, and
E. Enforce any violation of its sewer ordinance.

RWQCB Requirements:

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

- Control infiltration/inflow (I/I) from satellite wastewater collection systems and laterals.
- Require proper design and construction of new and rehabilitated sewers and connections.
- Require proper installation, testing, and inspection of new and rehabilitated sewers.

The following is a partial list of sanitary sewer ordinance sections:

Title VIII, Chapter 2, Article II, Section 2.15	Drainage and Unpolluted Water Connections Prohibited
Title VIII, Chapter 2 Article V, Section VIII-2-5.03	Responsibility for Enforcement
Title VIII, Chapter 2, Article V, Section VIII-2-5.10	Pretreatment by Owner
Title VIII, Chapter 2, Article V, Sections VIII-2-5.11 -5.28	Specific requirements on wastewater discharge constituents.
Title VIII, Chapter 2, Article V, Sections VIII-2-5.29 - 5.30	Installation, Maintenance & Operation of Grease Control Devices
Title VIII, Chapter 2, Article V, Sections VIII-2-5.34 - 5.44	Specific requirements on customer wastewater discharge permits & reports
Title VIII, Chapter 2, Article V, Section VIII-2-5.48	Power to Inspect
Title VIII, Chapter 2, Article V, Sections VIII-2-5.49 - 5.50	Correction of Violations, Collection of Costs, Injunction & Civil Penalties
Title VIII, Chapter 2, Article XI, Section 11.01	Design Standards
Title VIII, Chapter 2, Article XII, Section 12.05	Violation Unlawful

Title VIII, Chapter 2, Article XII, Section 12.06	Termination of Service and Disconnection of Facilities
Title VIII, Chapter 2, Article XIII, Section 13.01	Maintenance by City
Title VIII, Chapter 2, Article XIII, Section 13.02	Maintenance by User

In addition, the City's agreement with the San Jose/Santa Clara Water Pollution Control Plant (WPCP) allows the City to discharge Milpitas sewage into the WPCP for treatment and disposal. WPCP Source Control Inspectors issue Industrial Wastewater Discharge Permits, perform inspections, and monitor effluent quality. The Milpitas sewer collection system is considered to be a tributary agency to the WPCP.

4 OPERATION & MAINTENANCE PROGRAM

Element

4

The City operates and maintains its sewer collection system effectively. Fundamentals of the Operation and Maintenance Program (O&M) include asset mapping, prevention activities, replacement plan and financing, training, and parts inventory. These fundamentals are described in more detail in this section.

SWRCB Requirements:

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

A. Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes, and 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 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 of ranking the condition of the 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 replacements plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;

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

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

RWQCB Requirements

- Collection System Map – Each wastewater collection system agency shall maintain up-to-date maps of its wastewater collection system facilities.
- Resources and Budget - Each wastewater collection system agency shall allocate adequate resources for the operation, maintenance, and repair of its collection system.
- Prioritized Preventive Maintenance – Each wastewater collection system agency shall prioritize its preventive maintenance activities.
- 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.
- 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.

RWQCB Requirements (cont.)

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

4.1 Collection System Maps

Requirement:

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 storm-water conveyance facilities.

The sanitary sewer system service area lies entirely within the City of Milpitas. Appendix E shows an up-to-date map of the City's sewer system, including gravity and pressure pipes, valves, manholes, pump stations and siphons. The City Geographical Information System (GIS) system map the sanitary sewer information, such as pipe location, diameter, material, condition, and length. The GIS also contains base information such as streets and parcels. The City's sewer plat maps are generated directly from the GIS. The Engineering, Public Works, and Information Technology Departments maintains up-to-date information of the GIS system. The sanitary sewer collection system includes over 179 miles of sewer mains, two force mains, and two pump stations. The City's storm system is completely separate from the sanitary sewer system; a map is included in or Appendix H. The following maps can be found in this plan:

Appendix F	Sanitary Sewer Pipe Ages Map
Appendix G	Sanitary Sewer Pipe Materials Map
Appendix H	Storm Drain Facilities Map

Requirement:

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

4.2 Preventive Maintenance

A good preventive maintenance program is an important component in keeping a system in good repair and preventing excessive infiltration/inflow (I/I), service interruptions, and system failures, which can result in SSOs. A preventive maintenance program also protects the capital investment in the collection

system. Preventative maintenance is documented in our computerized maintenance management system by the maintenance crew and maintained by the Public Works Manager for Utilities. (see Appendix P)

The City's preventive maintenance activities include the following:

- Scheduled weekly cleaning for high problem areas or areas with frequent stoppages. Other areas, with more moderate frequency problems, receive cleaning on a monthly or 6-month schedule. And low frequency areas, the remainder of the City receive sewer line cleaning on a 24-month basis.
- Proactively repair or replace problem areas with structural deficiencies in the City's CIP (see Element 8.3 for additional discussion).
- Root control in areas that are known to have recurring SSOs or premature structural damage due to root intrusion. Root foaming is performed by the newly equipped Vactor Truck
- Investigate and resolve customer complaints upon notification, 24 hours a day.
- Periodic cleaning of force mains to maintain pump station efficiency and prevent backups.
- Keep maintenance activity records to support appropriate analysis and reporting.
- Weekly cleaning of one problem siphon and quarterly cleaning of all other siphons.

4.3 Rehabilitation & Replacement Plan

Requirement:

C. Develop a rehabilitation & replacement (R/R) plan to identify & prioritize system deficiencies & implement short- & long-term rehab actions to address each deficiency. Program should include regular visual & TV inspections of manholes, sewer pipes, and a system for ranking the condition of sewer pipes & scheduling rehabilitation. R/R should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. R/R should include a Capital Improvement Plan addressing proper management and protection of the infrastructure assets. Include a time schedule for implementing short- & long-term plans plus a schedule for developing the funds needed for Capital Improvement Plan.

The City hired HydroScience to create a new Sewer Master Plan in 2020. The Sewer Master Plan developed a Capital Improvement Program based on current (2020) and future (2040) planning horizons, a condition assessment consisting, CCTV inspection, hydraulic modeling, risk analysis, and pump station inspection. The Sewer System Replacement Project has been included in the CIP in anticipation of those results. See Element 8.3 for more discussion on the Capital Improvement Program. A systematic inspection program is one component for keeping a system in good repair and preventing excessive I/I, service interruptions, and system failures, which can result in SSOs.

The City's inspection activities include the following:

- Routine inspections of the collection system facilities, including siphons, frequently clogged locations, and pump stations.
- Inspections based on customer complaints and/or SSOs.
- Periodic flow monitoring for capacity analysis.

- Condition assessments based on pipe age.
- Maintenance of records to support appropriate analysis and reporting.
- CCTV on program basis to conduct asset management assessment and rating/ranking pipes according to PACP and investigate complaints.
- Focus on risk management, including higher risk areas in close proximity to waterways, flows, and impact to public health and the environment.

Construction on the City's Main Lift Station Replacement project was completed in Spring 2009. This station serves the entire City and has a wet weather capacity of 45 mgd. At the beginning of the project the design team prepared a Functionality and Operation Report (Winzler and Kelly November 7, 2005).

Functional requirements were developed for each process, including the comminutors, pump selection, wet well design, valve vault, force main, control building and garage, wet well ventilation, odor control, electrical system, instrumentation and controls, on-site SCADA and communications, site improvements and cathodic protection.

Rehabilitation of the Venus Pump Station was completed in March 2009. This small satellite station serves about 1,200 homes. The work includes sandblasting and coating the wet well, replacement of pumps, control panel and access hatch, installation of alarms and a manual electric transfer switch.

Funding

The City's sewer utility is a self-supporting enterprise. Revenues derived from sewer rates and other sources, including reserves, must be sufficient to cover all operating and capital expenditures each year. The City aims to balance its budgets each year. Fund reserves generated in surplus years are typically used to make up any revenue shortfalls in deficit years.

The City has evaluated several aspects of the sanitary sewer system's fiscal needs. The Sewer Master Plan has identified pipe deficiencies and treatment capacity shortfalls that must be mitigated to meet build-out conditions. The Utility Depreciation Study identified the age and materials of the collection system and established a long-term replacement schedule. The Financial Utility Master Plan incorporated the proposed Master Plan projects and replacement needs and developed a cash flow scenario for a 20-year period. The City of Milpitas has demonstrated its commitment to provide and operate a functional sewer collection system with sufficient capacity monitoring, measurement & program modifications.

The City's rate structure conforms to the State Water Resources Control Board (SWRCB) revenue program guidelines that require each customer or class to pay sewer rates in proportion to the cost of service received. Milpitas customer rates are allocated based on estimated wastewater flows and strengths. Sewer rates are adopted by City Council via ordinance. The sewer section derives funding from the sewer enterprise fund, which includes the user rate structure (Sewer Fund) and developer hookup fees (Sewer Treatment Plant) and Sewer Bond.

Sewer Infrastructure Fund: Monies set aside to replace aging infrastructure for sewer related projects.

Sewer Fund: Enterprise fund which receives revenue from sewer rates for sewer related improvements.

Sewer Treatment Fund: Funded from fees collected from developers connecting to the Sewer System. Funds restricted for sewer related projects.

Sewer Bond: Bond is a debt security issued to finance capital expenditures including the sewer system. Restricted use.

Expenses typically fall into four categories: City operations, City capital improvements, WPCP operations, or WPCP capital improvements. The Milpitas City Council has established target reserve levels for the Sewer Fund.

4.4 Training Schedule

Requirement:

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

The City's utility maintenance crew members attend sanitary sewer maintenance training on a regular basis. This training includes topics such as equipment operation and repair, spill volume identification, and OERP and SSMP review.

In addition to in-house training, personnel also attend available webinar training, seminars, and other sewer system operations and maintenance training conducted by outside providers. On-going training logs and back up training documentation are housed in the Public Works Department new database software which includes safety, system maintenance and updates on regulatory compliance and maintenance issues, personal protective equipment, vehicle safety, hydro-flushing equipment, and confined space training. Public Works evaluates all job classifications and maintains a matrix of which job classifications require which training classes.

4.5 Equipment & Replacement Inventories

Requirement:

E. Provide equipment and replacement part inventories, including ID of critical replacement parts.

Equipment is kept in inventory to minimize equipment/facility downtime in the event of an unplanned failure.

Critical replacement parts include for pumps, motors, pipes, and vehicles, and appropriately maintained emergency response equipment and accessories to allow utility maintenance crews to effectively respond to incidents and efficiently perform routine maintenance. Without an adequate inventory of replacement parts, the City may experience high volume and/or extended overflow events in the event of a breakdown or malfunction. The City has a dedicated back-up generator at the Main Lift Station. The City can obtain equipment and material from the vendors, contractors, and other agencies listed in Appendix N. in the event of a large-scale failure.

5 DESIGN & PERFORMANCE PROVISIONS

Element 5

SWRCB Requirements:

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.

RWQCB Requirements:

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.

5.1 Design & Construction

The City has standards for design installation, rehabilitation and repair, inspection, and testing of new and rehabilitated facilities in the following documents.

Engineering Plans and Map Procedures and Guidelines, Section VIII – (see Appendix J)

Standard Specifications for Sanitary Sewers – (see Appendix K)

Standard Drawings – (see Appendix L)

These Standards are available as hard copy documents and on the City's web page.

6 OVERFLOW EMERGENCY RESPONSE PLAN

Element

6

SWRCB Requirements:

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

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

B. A program to ensure an appropriate response to all overflows;

C. Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with this MRP, the CA Water Code, other State Law, and other applicable Regional Water Board WDRs or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification;

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

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

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

RWQCB Requirements:

The collection system agency must develop an overflow emergency response plan (OERP) that provides procedures for SSO notification, response, reporting, and impact mitigation. The response plan should be developed as a stand-alone document and summarized in the SSMP.

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

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

The City's overflow emergency response plan (OERP) is divided into sections, as follows:

1. Purpose
2. Policy
3. Definitions as used in the OERP
4. Regulatory Requirements for OERP Element of SSMP
5. Goals
6. SSO Detection and Notification
7. SSO Response Procedures
8. Recovery and Cleanup
9. Water Quality
10. Sewer Backup Into/Onto Private Property Claims Handling Procedure
11. Notification, Reporting, Monitoring, and Recordkeeping Requirements
12. Post SSO Event Debriefing
13. Failure Analysis Investigation
14. SSO Response Training
15. High Priority Access
16. Authority
17. References

Objectives of the City's OERP are to protect public health and the environment, satisfy regulatory agency requirements, and minimize risk of enforcement actions against the City. Additional objectives include providing appropriate customer service and protecting City personnel, the collection system and facilities, and private and public property.

SSO Categories:

CATEGORIES	**DEFINITIONS**
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 storm water 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 DISCHARGE (PLSD)	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.

The City significantly revised its "Overflow Emergency Response Plan" in 2016 (Appendix C). An entire copy of the re-certified SSMP and OERP are available in each utility maintenance vehicle and utility standby vehicle, which includes a copy of the SOP for field response. Vehicles are also equipped with an SSO Response Envelope. All Maintenance Crew and Standby Crew have been properly trained in responding to an SSO and have been made aware the procedures of the City's SOPs and trained on the Overflow Emergency Response Plan.

The purpose of the OERP is to ensure that City personnel follow established guidelines in responding, relieving, cleaning and decontaminating sanitary sewer overflows and backups which may occur within the City service area in order to safeguard public health and the environment. The OERP also includes guidelines so that notification and reporting is made to the appropriate local, state and federal authorities. The Public Works Manager for Utilities has primary responsibility to ensure that the City responds appropriately and all notifications are made. In the event of his/her absence, the Deputy Public Works Director or the Public Works Director are the legally responsible officials (LRO) for reporting to the applicable regulatory agencies. The reporting LRO is also responsible for notifying other LROs on SSO clean up and reporting status.

OERP Sections 6, 7, 8 and 9 detail response procedures from detection and initial notification through field response and internal reporting and water quality. Summarized subsections are listed below and include the following:

- Public Observation
    - Public observation is the most common way that the City is notified of blockages and spills. Contact numbers and information for reporting sewer spills and backups are in the phone book and on the City's website: www.ci.milpitas.ca.gov. The City's telephone number for reporting sewer problems is (408) 586-2600. After hours callers are directed to call Police Dispatch at (408) 586-2400 or 911.

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

- Contractor Observation
    - Procedures to be followed in the event that a contractor/plumber causes or witnesses a Sanitary Sewer Overflow.

- Safety
    - The Maintenance Crew is responsible for following safety procedures at all times. Special safety precautions must be observed when performing sewer work to protect and restore public health, environment, and property from sewage spill events.
    - There may be times when City Staff responding to a sewer system event are not familiar with potential safety hazards for that particular sewer task. In such cases, it would be appropriate to call the Public Works Manager for Utilities to discuss and identify hazards, discuss safety issues, consider the order of work, and check safety equipment before starting the job. If appropriate, the Public Works Manager for Utilities may decide to call out more experienced personnel or respond to the site.

- Initial Response, Containment, and Restore Flow
    - Initial Response - All sanitary sewer system calls require a response to the reported location of the event in an attempt to minimize or eliminate an overflow. The first responder must arrive at the site of the reported problem immediately and visually check for potential sewer stoppages or overflows.

        - It is the goal of the City to respond to an SSO within 30 minutes of the first call during regular business hours (Monday thru Friday between 7:00 am and 5:00 pm), and within 60 minutes after hours and during weekends and holidays.
        - Maintenance Crew /First Person at SSO site Role is to:
        - Identify and clearly assess the affected area and extent of spill and note arrival time at spill site.
        - Establish traffic and crowd perimeters and control zones with traffic cones, barricades, vehicles, or terrain.
        - Document conditions upon arrival with photographs.
        - Promptly notify the LRO in the event of a Category 1 or 2 SSO or when the spill appears to be large, in a sensitive area, or there is doubt regarding the extent, impact, or how to proceed.
        - Contain and control the sewage discharged to the maximum extent possible.
        - Make every effort to prevent the discharge of sewage into waterways.
        - Restore the flow as soon as practicable and contact the caller for additional information.
        - Return the spilled sewage to the sewer system.
        - Restore the area to its original condition (or as close as possible).
    - Containment - Decide whether to proceed with clearing the blockage to restore the flow or to initiate containment measures.
        - The guidance for this decision is:
            - Small Spills (less than 50 gallons) – proceed with clearing the blockage.
            - Moderate spill where containment is anticipated to be simple (greater than 50 gallons to 999 gallons) – proceed with containment measures.
            - Large spills where containment is anticipated to be difficult (greater than 1000 gallons) – proceed with clearing the blockage however, call the Public Works Manager for Utilities for additional assistance after 15 minutes if unable to clear the blockage and implement containment measures.
        - The Maintenance Crew/First Person at the SSO site should also attempt to contain as much of the spilled sewage using the following steps:
            - Determine the immediate destination of the overflowing sewage.
            - Plug storm drains using air plugs, sandbags, and/or plastic mats to contain the spill, whenever appropriate. If spilled sewage has made contact with the storm drainage system, attempt to contain the spilled sewage by plugging downstream storm drain facilities.
    - Restore Flow - Attempt to remove the blockage from the system and observe the flows to ensure that the blockage does not recur downstream.
        - If blockage cannot be cleared within a reasonable time (15 minutes), or the sewer facility requires construction repairs to restore flow, then initiate containment and/or bypass pumping. If assistance is required, immediately contact the Public Works Manager, other employees, contractors, and equipment suppliers.

- PLSDs: The enrollee is strongly encouraged to notify Cal OES of discharges greater than or equal to 1,000 gallons of untreated or partially treated wastewater that result or may result in a discharge to surface water resulting from failures or flow conditions within a privately owned sewer lateral or from other private sewer asset(s) if the enrollee becomes aware of the PLSD. If a PLSD is recorded in the CIWQS Online SSO Database, the enrollee must identify the sewage discharge as occurring and caused by a private sanitary sewer system asset and should identify a responsible party (other than the enrollee), if known. Certification of PLSD reports by enrollees is not required.

- SSO Volume Estimation, Estimating of Recovery Volume of Spilled Sewage
    - A variety of approaches exist for estimating the volume of a sanitary sewer spill. It should be noted that the person preparing the estimate should use the method most appropriate to the sewer overflow in question and use the best information available. Three commonly used methods are detailed in the OERP and include:
        - Eyeball Estimation Method
        - Volume estimation: Duration and Flow Rate Comparison Method
        - Upstream Lateral Connections Method

- SSO Start Time – The start time is sometimes difficult to establish. Below are suggestions for determining spill start times:

    - Nearby Witnesses: Witnesses can be used to establish start time. Contact and interview the reporting party, nearby residents, business owners or any witnesses that may have observed the incident. Inquire as to their observations. Spills that occur in public right 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.
    - Site Conditions: 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. After 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 information. Taking photographs to document the observations can be helpful if questions arise later in the process.
    - Accounting for Flow Variations: 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.
    - Spill Volume/Flowrate: Start time can be calculated using estimated flowrate and estimated spill volume. City Staff will use the Milpitas Manhole Flowrate Chart (see Appendix Q) to estimate the flow rate and to estimate the spill volume using approved methodology (see E.2 Measured Volume). The start time then is calculated by using both the estimated flow rate and the estimated spill volume.

- SSO Stop Time - The stop time is usually much easier to establish. The stop time is determined when field crews confirm that the SSO has stopped. This typically is the time when the blockage has been removed.

- Clean-up and Public Notification
    - Clean-up – Clean-up and disinfection procedures will be implemented to reduce the potential for human health issues and adverse environmental impacts that are associated with an SSO event. The procedures described are for dry weather conditions and will be modified as required for wet weather conditions. Where clean-up is beyond the capabilities of the City Maintenance/Standby Crew, a clean-up contractor will be used. Types of areas to be cleaned include private property, hard surface areas, landscape and unimproved natural vegetation, and natural waterways.
    - Public Notification – Post “Raw Sewage” signs and place barricade/cones with caution tape to keep vehicles and pedestrians away from contact with spilled sewage. Do not remove the signs until directed by the Santa Clara County Health Department.

        - Creeks and streams that have been contaminated as a result of an SSO will have signs posted at visible access locations until the risk of contamination has subsided to acceptable levels.
        - Warning signs, once posted, will be inspected every day to ensure that they are still in place.
        - Major spills may warrant broader public notice. The Public Works Director will authorize contact with local media when significant areas may have been contaminated by sewage.

- Water Quality Sampling and Testing
    - Water quality sampling and testing is required for Category 1 SSOs of 50,000 gallons or greater to determine the extent and impact of the SSO. The water quality sampling procedures must be implemented within 48 hours and include the following:
        - The first responders will collect samples as soon as possible after the discovery and mitigation of the SSO event.
        - The water quality samples will be collected from upstream of the spill, from the spill area, and downstream of the spill in flowing water (e.g. creeks). The water quality samples will be collected near the point of entry of the spilled sewage.
        - The samples shall then be brought to the City's currently contracted lab for analysis.

- Water Quality Monitoring Requirements

To comply with subsection D.7(v) of the SSS WDRs, the enrollee shall develop and implement an SSO Water Quality Monitoring Program to assess impacts from SSOs to surface waters in which 50,000 gallons or greater are spilled to surface waters. The SSO Water Quality Monitoring Program, shall, at a minimum:

1. Contain protocols for water quality monitoring.

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

3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.

4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.

5. Within 48 hours of the enrollee becoming aware of the SSO, require water quality sampling for, at a minimum, the following constituents: i. Ammonia ii. Appropriate Bacterial indicator(s) per the applicable Basin Plan water quality objective or Regional Board direction which may include total and fecal coliform, enterococcus, and e-coli.

OERP Sections 10, 11, 12 and 13 detail response procedures from private property claims, record keeping requirements, SSO event debriefing and failure analysis investigation.

- Sewer Backup Into/Onto Private Property Claims Handling Procedure
    - It is the procedure of the City that a claims form shall be offered to anyone wishing to file a claim. The following procedures will be observed for all sewer overflows/backups into/onto private property:
        - City Maintenance/Standby Crew will offer a City claim form whenever it is possible that the sanitary sewer backup may have resulted from an apparent blockage in the City-

owned sewer lines or whenever a City customer requests a claim form. The claim may later be rejected if subsequent investigations into the cause of the loss indicate the City was not at fault.

- It is the responsibility of the Maintenance/Standby Crew to gather information regarding the incident and notify the Public Works Maintenance Manager for Utilities or his/her designee.
- It is the responsibility of the Risk Manager or his/her designee to review all claims and to oversee the adjustment and administration of the claim to closure.

- Notification, Reporting, Monitoring, and Recordkeeping Requirements
  - In accordance with the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SSS GWDRs), the City of Milpitas maintains records for each sanitary sewer overflow. Records include:
    - Documentation of response steps and/or remedial actions
    - Photographic evidence to document the extent of the SSO, field crew response operations, and site conditions after field crew SSO response operations have been completed. The date, time, location, and direction of photographs taken will be documented.
    - Documentation of how any estimations of the volume of discharged and/or recovered volumes were calculated including all assumptions made.
  - Regulator Required Notifications and Complaint Records are detailed in the OERP and include:

ELEMENT	**REQUIREMENT**	**METHOD**
NOTIFICATION	Within two hours of becoming aware of any Category 1 SSO greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water, notify the California Office of Emergency Services (Cal OES) and obtain a notification control number. Following the initial notification to Cal OES and until such time that an enrollee certifies the SSO report in the CIWQS Online SSO Database, the enrollee shall provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s).	Call Cal OES at: (800) 852-7550
REPORTING	Category 1 SSO: Submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date. • Category 2 SSO: Submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date. • Category 3 SSO: Submit certified report within 30 calendar days after the end of calendar month in which SSO occurs. • SSO Technical Report: Submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters. • "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.	Enter data into the CIWQS Online SSO Database (http://ciwqs.waterboards.ca.gov/), certified by enrollee's Legally Responsible Official(s).

WATER QUALITY MONITORING	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.
RECORD KEEPING	SSO event records. • Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP. • Records to document Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters. • Collection system telemetry records if relied upon to document and/or estimate SSO Volume.	Self-maintained records shall be available during inspections or upon request.

- Post SSO Event Debriefing
    - Every SSO event is an opportunity to evaluate the City response and reporting procedures. Each overflow event is unique, with its own elements and challenges including volume, cause, location, terrain, climate, and other parameters.
    - As soon as possible after Category 1 and Category 2 SSO events all of the participants, from the person who received the call to the last person to leave the site, will meet to review the procedures used and to discuss what worked and where improvements could be made in preventing or responding to and mitigating future SSO events. The results of the debriefing will be documented and tracked to ensure the action items are completed as scheduled.

- Failure Analysis Investigation
    - The objective of the failure analysis investigation is to determine the "root cause" of the SSO and to identify corrective action(s) needed that will reduce or eliminate future potential for the SSO to recur or for other SSOs to occur. The investigation will include reviewing all relevant data to determine appropriate corrective action(s) for the line segment. The investigation will include:
        - Reviewing and completing the Sanitary Sewer Overflow Report (in Appendix B and Appendix C) and any other documents related to the incident
        - Reviewing the incident timeline and other documentation regarding the incident
        - Reviewing communications with the reporting party and witness
        - Reviewing volume estimate, volume recovered estimate, volume estimation assumptions and associated drawings
        - Reviewing available photographs
        - Interviewing staff that responded to the spill
        - Reviewing past maintenance records
        - Reviewing past CCTV records,
        - Conducting a CCTV inspection to determine the condition of all line segments immediately following the SSO and reviewing the video and logs,
        - Reviewing any Fats, Oils, Roots and Grease (FROG) related information or results
        - Post SSO debrief records
        - Interviews with the public at the SSO location

    - The product of the failure analysis investigation will be the determination of the root cause and the identification and scheduling of the corrective actions.

OERP Section 14 details response procedures for **SSO response training** and includes the following:

- **Initial and Annual Refresher Training**
  All City personnel who may have a role in responding to, reporting, and/or mitigating a sewer system overflow will receive training before they are placed in a position where they may have to respond. Training of new personnel include shadowing with current personnel, experienced in responding to an SSO, before they are released to respond as a first person at a possible SSO event. Current employees receive annual refresher training and as needed on this plan and the procedures to be followed.
- **SSO Response Drills**
  Periodic training drills will be held to ensure that employees are up to date on the procedures, the equipment is in working condition, and the required materials are readily available. The training drill 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 drills should be recorded and action items should be tracked to ensure completion.
- **SSO Training Record Keeping**
  Records will be kept of all training that is provided in support of this plan. The records for all scheduled training courses and for each overflow emergency response training event will include date, time, content, name of trainer(s), and name of attendees.
- **Contractors Working on City Sewer Facilities**
  All contractors working on City sewer facilities will be contractually required to develop a project-specific Emergency Overflow Response Plan. All contractor personnel will be required to receive training in the contractor

Record Keeping

The following records shall be maintained by the enrollee for a minimum of five (5) years and shall be made available for review by the Water Boards during an onsite inspection or through an information request:

1. General Records: The enrollee shall maintain records to document compliance with all provisions of the SSS WDRs and this MRP for each sanitary sewer system owned including any required records generated by an enrollee's sanitary sewer system contractor(s).

2. SSO Records: The enrollee shall maintain records for each SSO event, including but not limited to: i. Complaint records documenting how the enrollee responded to all notifications of possible or actual SSOs, both during and after business hours, including complaints that do not result in SSOs.

Each complaint record shall, at a minimum, include the following information:

a. Date, time, and method of notification.
b. Date and time the complainant or informant first noticed the SSO.
c. Narrative description of the complaint, including any information the caller can provide regarding whether or not the complainant or informant reporting the potential SSO knows if the SSO has reached surface waters, drainage channels or storm drains.
d. Follow-up return contact information for complainant or informant for each complaint received, if not reported anonymously.
e. Final resolution of the complaint.

ii. Records documenting steps and/or remedial actions undertaken by enrollee, using all available information, to comply with section D.7 of the SSS WDRs. iii. Records documenting how all estimate(s) of volume(s) discharged and, if applicable, volume(s) recovered were calculated.

3. Records documenting all changes made to the SSMP since its last certification indicating when a subsection(s) of the SSMP was changed and/or updated and who authorized the change or update. These records shall be attached to the SSMP.

4. Electronic monitoring records relied upon for documenting SSO events and/or estimating the SSO volume discharged, including, but not limited to records from: i. Supervisory Control and Data Acquisition (SCADA) systems ii. Alarm system(s) iii. Flow monitoring device(s) or other instrument(s) used to estimate wastewater levels, flow rates and/or volumes.

See Appendix C: City of Milpitas Overflow Emergency Response Plan 2021.

7 FOG CONTROL PROGRAM

Element

7

SWRCB Requirements:

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

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

RWQCB Requirements:

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 Sewer System Management Plan (SSMP). If an agency determines that a FOG program is not needed, the agency must provide justification for why it is not needed.

Fats, oil, and grease (FOG) is a common cause of sewer system blockages that could result in SSOs. The City's Building Department and FOG Inspection Program works to insure restaurants have properly sized and properly maintained grease removal devices. Restaurants may be required to subscribe to a tallow service. In addition, the City has provided outreach materials for residents.

The City has evaluated its SSOs and found that over the past five years, only six (6) SSOs resulted from FOG and were non-reoccurring. These data are shown in Table 9-1 in Element 9.

7.1 Outreach

Requirement:

A. An implementation plan and schedule for a public education outreach promoting proper disposal of FOG.

The City periodically provides outreach to the community through a variety of methods, including educational information via the City's website and social media. Regional efforts result in articles in the area newspapers and radio spots to promote proper disposal of FOG. The City provides outreach to private sewer systems on proper operation and maintenance to prevent SSOs. The DES extends outreach to the City's restaurants, the largest contributors of FOG. This includes Grease Management Best Management Practices (6 fact sheets – Grease Trap Maintenance, Grease Interceptor Maintenance, Maintenance Documentation, Power-Operated Grease Removal Devices, Chemicals, Enzymes and Bacteria, Vapor/Ventilation Hood Cleaning, and a poster – Managing Fats, Oils, & Grease, "It's Easier Than You Think"). Additionally, outreach material is available at the Building Department to plumbers and contractors to assist in the prevention of SSOs.

7.2 FOG Disposal

Requirement:

B. A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area.

Fats, oils, and grease from non-residential sites can be disposed of:

A. Hauled by tallow companies;

B. Hauled by other licensed companies (possible component for bio-diesel fuel);

C. WPCP is investigating the conversion of an existing facility to accept FOG. This may be a possible future option.

7.3 Legal Authority

Requirement:

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

The Milpitas Municipal Code, Title VIII, Chapter 2 (see Appendix D) governs dischargers' use of grease traps and digesters and regulates the discharge of illegal materials. Section 5.16 prohibits grease, oils, and fats discharge into the sanitary sewer, and Section 5.29 discusses installation and maintenance of oil

and grease removal devices. Sections 5.03 and 5.50 identify the City Engineer and WPCP Director as having enforcement authority.

7.4 Grease Removal Devices

Requirement:

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

The City of Milpitas has adopted discharge limits for fats, oils, and grease into the sanitary sewer system. The Milpitas Building Department requires food service facilities to obtain approval for the grease interceptor size prior to issuance of building permits. Building Department staff determines the requirements for grease removal devices (GRD). The size and type of GRD required is determined based upon the facility's potential for discharging grease in the wastewater. The size of the restaurant, the cooking and cleaning equipment installed, and the number of meals served, are some of the factors considered in order to determine the standard required GRD size. Requirements range from a small grease trap beneath the pot sink to a large in-ground grease interceptor.

Staff may discuss Best Management Practices (BMPs) to restaurant representatives during the plan check, including kitchen practices to minimize the discharge of grease into the sewer system, maintenance tips for grease traps and interceptors, and record keeping requirements. The City Building Inspectors and FOG Program Inspectors verify the installation and connections of the GRD.

The plan review process also involves a GRD certification. This certification involves the restaurant representative signing an acknowledgement of GRD requirements. Some of the requirements acknowledged in the certification is the minimum acceptable cleaning frequency for the type of GRD being required, an onsite maintenance schedule, cleaning instructions, and cleaning records and receipts

7.5 Restaurant Inspections

Requirement:

E. Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;

The City's Ordinance, found in the Milpitas Municipal Code, Title VIII, Chapter 2, Section 5.48 (Appendix D) grants the City Engineer and the FOG Program the right to access all properties for the purpose of inspection. The FOG Program staff inspects all restaurant and other food service facilities. Their initial inspection includes determining if the restaurant generates grease, if there is a GRD in place, and reviewing the cleaning records for the GRD, as well as practices used to clean floor mats, vent hoods, and outside areas. Enforcement actions are taken against any restaurant that does not clean their GRD at the minimum set frequency (monthly for grease traps and quarterly for grease interceptors) or keep 3 years of cleaning records. Facilities generating grease are re-inspected periodically (every one to three years), depending on the number of areas of concern observed during the inspection. BMPs are distributed to restaurant operators during the inspections, as appropriate, including the kitchen practices to minimize the discharge of grease into the sewer system, maintenance tips for grease trap and interceptors, and record

keeping requirements. Additionally, County Health conducts regular inspections of food facilities, which are helpful to ensure continuing compliance to Program requirements.

To assist businesses to comply, the FOG Inspectors provide various brochures and booklets such as "Good Practices to Protect Our Creeks and Bay – Guidelines for Restaurants, Grocery Stores, Cafeterias, Bakeries and Delicatessens," posters on "Good Cleaning Practices". Some of these items are available in multiple languages for those individuals where English is not the primary language. The FOG Program staff believe that education is the key to compliance and works with businesses to this end. If a higher level of enforcement is necessary, the Milpitas Municipal Code authorizes the City to terminate or revoke permits, impose civil penalties, issue citations, and take action by the City Attorney.

7.6 Sanitary Sewer System FOG Blockages

Requirement:

F. An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section.

The Public Works Maintenance Division follows a preventative maintenance schedule for areas of the sewer systems that have experienced problems with FOG or other blockages. Preventative maintenance consists of flushing or jetting sewers that accumulate sediment or grease on a weekly and quarterly basis. Between frequent flushing of the lines in targeted areas and the FOG Inspectors conducting inspections, including follow up visits when necessary, the City of Milpitas implements effective source control measures to minimize blockages, and subsequently reduce the quantity of SSOs as is expressed in our SSO history.

7.7 FOG Source Control Measures

Requirement:

G. Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in F above.

Source control is an effective method to minimize FOG in the sanitary sewer collection system. The City of Milpitas has implemented a grease trap program for restaurants, which are the largest potential FOG source. In addition, outreach materials are periodically distributed to residents and published for general circulation.

8 SYSTEM EVALUATION & CAPACITY ASSURANCE PLAN

Element

8

SWRCB Requirements:

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

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

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

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

D. Schedule: The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a)-(c) above. This schedule shall be reviewed and updated consistent with the Sewer System Management Plan (SSMP) review and update requirement as described in Section D.14.

RWQCB Requirements:

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

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.

8.1 Capacity Assessment

Capacity assessment evaluates if adequate capacity exists in all portions of the collection system and that downstream portions that will receive wastewater from new connections can handle additional flow. Prepared capacity assessments include:

- The 2004 Sewer Master Plan Revision was completed in August 2004 (Raines, Melton & Carella, Inc.).

- The 2009 Sewer Master Plan Update was adopted in May 2010 (RMC Water & Environment).
- The 2020 Sewer Master Plan completed in May 2021 (HydroScience Engineers).

Industry standard practice is to update or develop a new Sewer Master Plan every ten years. The 2020 Sewer Master Plan Update incorporates a sound methodology to provide wastewater volume estimates based on current (2020) and future (2040) planning horizons. The methodology starts with land use zoning for each parcel and develops average base wastewater generation flows for each type of zoning. Several sites were identified as large dischargers, which are defined as those customers that discharge a disproportionately large volume of wastewater for the parcel size and use type. Large dischargers were assigned a diurnal pattern based on the original parcel land use codes. Wet-weather monitoring provided data for groundwater infiltration and rainfall-dependent infiltration/inflow estimates. The total wastewater discharge is calculated to be the sum of the base wastewater flow multiplied by a peaking factor, plus groundwater infiltration, plus rainfall-dependent infiltration/inflow. In addition, multiple scenarios were developed using assumed land use changes over time. The 2020 Sewer Master Plan Update incorporates proposed land use change scenarios, specifically, the waste flow increase from "Opportunity Areas" identified throughout the City as areas of potential growth and/or redevelopment, Main Street Gateway Plan, and Metro Specific Plan. The wastewater discharge data from these scenarios is entered into the InfoWorks ICM by Innovyze® sewer system hydraulic model to identify collection system deficiencies. Sewer system improvements, such as parallel or replacement pipes, are then recommended.

In addition to providing sufficient collection system capacity, the City of Milpitas must contract for wastewater treatment capacity. The City of Milpitas is a tributary agency to the San Jose/Santa Clara Water Pollution Control Plant (WPCP). In 2009 the City purchased 0.75 mgd capacity from Cupertino Sanitary District, bringing the total available treatment capacity to 14.25 mgd. Treatment capacity consists of four components: flow, biochemical oxygen demand (BOD), suspended solids, and ammonia. The City will monitor the discharge and procure adequate BOD treatment capacity as needed. Additional capacity can be obtained from the regional treatment plant by a number of methods including:

- Purchase additional capacity when the treatment plant is expanded.
- Purchase rights to use excess capacity held by other tributary agencies.
- Adopt mutual agreements with other tributary agencies use of excess capacity when needed.
- Pursue other regional solutions.

8.2 Capacity Enhancement Measures

Requirement:

B. Design criteria: where design criteria do not exist or are deficient, undertake the evaluation identified in (a) to establish appropriate design criteria.

Design criteria have been established in the City's Sewer Master Plan to determine estimated wastewater volume. These criteria include base wastewater flow generation factors, peak factors, groundwater infiltration, and rainfall dependent inflow.

Additional design criteria are contained in the City's *Engineering Plans and Map Procedures and Guidelines* (see Appendix J). These criteria focus on the sewer collection components and include pipe material, velocity, manhole spacing, easements, minimum diameter, and pretreatment requirements.

8.3 System Evaluation & Capacity Assurance Plan

Requirement:

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

The CIP is a comprehensive five-year plan of capital improvement projects for the City of Milpitas (see Appendix I) Capital improvement projects are purchases or construction of capital assets including streets, park developments or upgrades, the acquisition of land, major construction of public facilities, and major repair/rehabilitation of City infrastructure and facilities. Only funding for current year projects is appropriated by City Council on an annual basis. Funding is projected for subsequent years for planning purposes. The CIP is reviewed annually to allow for necessary adjustments. Sewer system capital projects are generated using a variety of methods and studies.

The 2020 Sewer Master Plan (Hydroscience, May 2021) identifies improvements to the sanitary sewer system resulting from identified capacity deficiencies based upon land use, including the Metro Specific Plan, Main Street Gateway Specific Plan, and Opportunity Areas. here are several "Opportunity Areas" identified throughout the City as areas of potential growth and/or redevelopment. Provided below in Table 8-1 is a proposed budget and schedule for the CIP and recommended projects over 20-years in 5-year increments. The most critical projects are scheduled for earlier implementation. It is noted that the timing of projects can be adjusted based on results of CCTV and future operating conditions.

Table 8-1: Proposed CIP Schedule and Budget

Projects	5-Year (2021-2025)	10-Year (2026-2030)	15-Year (2031-2035)	20-Year (2036-2040)
Existing Projects				
6124 Pump Station Rehabilitation Program	$200,000[1]	--	--	--
6126 Minor Sewer Projects	$200,000[2]	--	--	--
6130 Main Lift Station Odor Emissions Control	$200,000	--	--	--
6131 Sanitary Sewer Cathodic Protection Improvements	$500,000	--	--	--
6134 On-Call Sewer Maintenance & Repair Services	$98,000	--	--	--
Total Existing Projects	**$1,198,000**	**--**	**--**	**--**
Proposed Projects				
CCTV large diameter and high-risk assets	$400,000	--	--	--
Highest Priority Improvements	$1,562,000	--	--	--
Medium- to High- Priority Improvements	$5,266,000	$6,424,000	--	--
Low Priority Improvements	--	--	$6,888,000	$1,240000
Allocation for improvements identified from ongoing CCTV	$1,250,000	$1,250,000	$1,250,000	$1,250,000
Total Proposed Projects	**$8,478,000**	**$7,674,000**	**$8,138,000**	**$2,490,000**
Existing and Proposed Projects	**$9,676,000**	**$7,674,000**	**$8,138,000**	**$2,490,000**

Notes:

1. Original allocation is $200,000 through 2023 with $148,000 in prior year funding from Sewer Infrastructure Fund to be allocated for other projects in FY2020-21.
2. Original allocation is $200,000 with $37,000 in prior year funding from Sewer Infrastructure Fund to be allocated for other projects in FY2020-21.

In 2020 the City completed a Sewer Utility Asset Renewal and Replacement Study (Brown and Caldwell, August 2020) as part of the 2020 Sewer Master Plan to assess the current condition of the City's wastewater collection system. This includes CCTV inspection results, an assessment of the relative risk of failure of all pipe segments in the City, as well as lift station inspection results. Approximately 105,000 ft (449 segments) of sewer main was inspected using CCTV as part of the condition assessment, of which 50,000 ft requires improvement. The 2020 Sewer Master Plan (Hydroscience, 2021) prioritized a set of CIP projects developed as a culmination of CCTV inspection, hydraulic modeling, and pump station inspection.

During the CCTV inspection, there were instances of large grease buildup in various locations throughout the wastewater collection system. Locations identified as having grease buildup are cleaned to prevent blockages from moving further downstream. The 2020 Sewer Master Plan proposed a CIP to continue CCTV inspection and complete CCTV of large diameter and high-risk assets. Continued CCTV inspection may generate additional improvement projects that may augment the proposed CIP.

In September 2008, the Milpitas City Council adopted a Transit Area Development Impact Fee to pay for improvements within the Metro Specific Plan Area. Developers may be required to install projects adjacent to their developments. These projects may not be included in the CIP.

The City has operated a sewer collection system since the 1950's. Since 1975, the City has pumped its wastewater through a two-mile long force main to the WPCP for treatment. The City continues to establish and assess projects that focus on providing sufficient capacity and assesses capacity requirements as well as major sewer facility improvements. Included are projects such as Main Sewage Pump Station Improvements, Venus Pump Station Improvements, and Sewer System improvements such as pipe replacement.

8.4 Schedule of Completion

Requirement:

D. Schedule: Develop a schedule of completion dates for all portions of the CIP developed in A.-C. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements (D14).

Annually, the City reviews proposed capital projects to verify project scope and priority. Collection system projects are prioritized based upon physical condition and capacity. The capital program is then adjusted accordingly. A proposed five-year schedule of projects is shown in Appendix I.

The SSMP is a living document, to be continuously updated to ensure that it contains current information. The Deputy Public Works Director shall be responsible for reviewing and updating this plan every five years, and more frequently as needed.

9 MONITORING, MEASUREMENT & PROGRAM MODIFICATIONS

Element 9

SRWCB Requirements:
The Enrollee shall:

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

RWQCB Requirements:
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.

9.1 SSMP Activity Prioritization

Program effectiveness is most commonly measured by the frequency of SSO occurrences. Prioritization of SSMP elements is based upon each element's likelihood of reducing SSOs. The City's operation and maintenance program are the most important SSMP element since daily activities and response have a direct impact on reducing SSOs. The results are immediately apparent.

City staff track the following performance indicators to monitor the effectiveness of this plan:

- Volume distribution of SSOs (e.g. number of SSOs < 100 gallons, 100 to 999 gallons, 1,000 to 9,999 gallons, > 10,000 gallons).
- Volume of SSOs contained in relation to total volume of SSOs.
- SSOs by cause (e.g. roots, grease, debris, pipe failure, pump station failure, capacity, other).
- Number of stoppages over the past 12 months.
- Average time to respond to an SSO.

Other elements, such as hydraulic studies and the resulting capital improvement program may take years to implement. The resulting impact on SSOs is long-term.

9.2 Implementation & Effectiveness

Requirement:

A. Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP.

The City has implemented all elements of this SSMP. The elements are effectively minimizing SSO occurrences.

9.3 Assessment of Preventative Maintenance Program

Requirement:

B. Assess the success of the preventative maintenance program.

The Milpitas preventative maintenance program includes weekly maintenance for sites warranting more rigorous maintenance and/or cleaning frequency. This attention to system operations has resulted in a very low rate of SSOs, as seen in Figure 9-1, which is the program's goal.

9.4 Program Updates

Requirement:

C. Update program elements, as appropriate, based on monitoring or performance evaluations;

The SSMP is reviewed annually for updates in compliance with the Regional Water Quality Control Boards required audit, due March 15. The Deputy Public Works Director shall review and update Program elements as needed, but at a minimum, will review, revise and recertify the Program at the State's requirement of every five years.

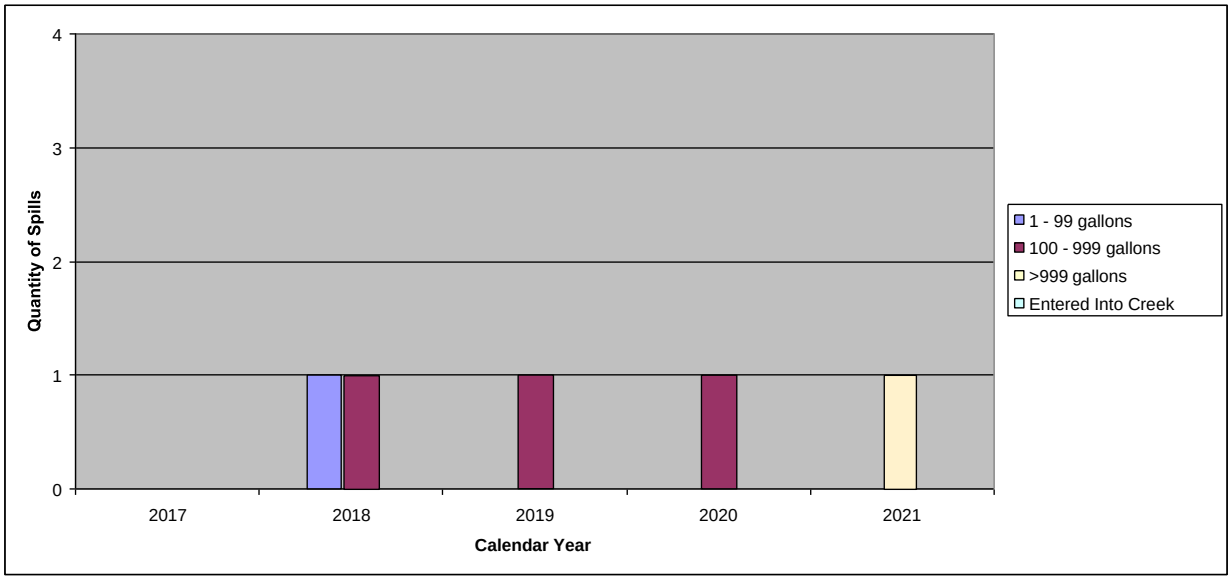
9.5 Trends: Frequency, Location & Volume

Requirement:

D. Identify and illustrate SSO trends, including frequency, location, and volume.

The City maintains records on SSOs. Figure 9-1 shows the frequency and volume of SSOs by year. Table 9-1 shows the SSOs causes. Appendix O shows the location of SSOs in Milpitas. From these data, it is apparent that the City experiences a very low SSO rate.

Figure 9-1: Annual Volume of SSOs, 2017 – 2021



There were no SSO's for calendar year 2017.

Table 9-1: Causes of SSOs, 2017 – 2021

Cause Category		Number	Percent of Total
Blockage:			
Roots		1	20%
Grease		4	80%
Debris		0	0%
Debris from Laterals		0	0%
Vandalism		0	0%
Construction Debris		0	0%
Multiple Causes		0	0%
Diaper Wipes		0	0%
Subtotal for Blockage		**5**	**100%**
Infrastructure Failure		0	0
Inflow & Infiltration		0	0
Electrical Power Failure		0	0
Flow Capacity Deficiency		0	0
Natural Disaster		0	0
Bypass		0	0
Cause Unknown		0	0
Contractor Error/Private Party		0	0
Total		**5**	**100%**

10 SSMP PROGRAM AUDITS

Element

10

SWRCB Requirements:
As part of the SSMP, enrollee shall conduct periodic internal audits, appropriate to the size of the system and number of SSOs. At minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the Enrollee's compliance with the SSMP requirements identified in this subsection (D-13, PG.10), including identification of any deficiencies in the SSMP and steps to correct them.

RWQCB Requirements:
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.

Every year, the Deputy Public Works Director shall conduct an audit of the SSMP program. The purpose of the audit is to evaluate the effectiveness of the SSMP. Effectiveness is most commonly measured by the frequency of SSO occurrences. If SSOs have occurred, the audit shall include:

- SSO cause
- Method to prevent future SSO
- Review whether response is appropriate
- Proposed changes to process or SSMP

At this time, the rate of SSOs is very low. When an SSO occurs, the Deputy Public Works Director and the Public Works Manager for Utilities discuss its cause, its location, and the adequacy of the crew's response to correct the problem, contain the spill and clean up the site. The City is not experiencing recurring problems that would indicate an underlying flaw in the public's use of the system, the condition of the infrastructure, or the crew's response. (see Appendix M for most recent audit record.)

11 COMMUNICATION PROGRAM

Element 11

SWRCB Requirements:

The Enrollee 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 Enrollee as the program is developed and implemented.

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

The City will effectively communicate with the public and other agencies about the feedback. The City will continue to post the SSMP and other related information on the City's website for input by the public as well as dissemination of important SSMP requirements. Additional links such as the Association of Bay Area Governments' (ABAG) "Sewer Smart," the Santa Clara Valley Water District's "Best Management Practices" for storm water discharges, and the City's Standard Design Details are available for residential and commercial customers.

Communication with other local sanitary sewer agencies

The City is a tributary agency to the City of San Jose's and City Santa Clara's Water Pollution Control Plant. Other tributary agencies include the West Valley Sanitation District, Cupertino Sanitary District, County Sanitation District No. 2-3 and the Burbank Sanitary District. Collectively, these agencies along with the City have been included in a communication program initiated by the City of San Jose to establish a collaborative approach during the development and implementation of, and future improvements, to the SSMP.

Wastewater collection agencies share the same watershed basins with storm water collection agencies or cities and Santa Clara Valley Water District. Since all are subject to State WDR and/or NPDES permitting, it is imperative that open communication be maintained which acknowledges a partnership of stakeholders with the common interest of keeping the South Bay, creeks and their tributaries free of pollutants. Specifically, this City shares the Watershed basins, defined by Penitencia Creek, Scott Creek Berryessa Creek and Coyote Creek with the cities of Fremont and San Jose.

The City will be communicating with the above agencies to note the identified areas at risk in the event of SSOs and working to develop strategies for joint response, when practical, to contain and prevent SSOs from reaching fishable creeks or receiving waters to the Bay.

Communication with other local Watershed Stakeholders

California Water/Wastewater Agency Response Network (CalWARN) was established with a mission to support and promote statewide emergency preparedness and mutual assistance for member public and private water and wastewater utilities, has been active for approximately 12 years. The organization is divided into six regions within the state. The cities of Milpitas and Santa Clara are currently members of CalWARN Region II – Coastal Region. Within Santa Clara County the City of Sunnyvale, California Water Service Company, San Jose Water Company, San Jose Municipal Water System, San Jose Water Pollution Control Plant, and Santa Clara Valley Water District are also members. Membership in this

organization of all the tributary agencies and others having common watershed interests, would be a first step toward accomplishing the stated objectives above described and is encouraged. Additional information for CalWARN can be found at its website www.calwarn.org.

SSMP Availability

A copy of the general WDRs and the certified SSMP shall be maintained at appropriate locations (such as the Enrollee's offices, facilities, and/or Internet website) and shall be available to sanitary sewer system operating and maintenance personnel at all times.

The enrollee shall provide the publicly available internet website address to the CIWQS Online SSO Database where a downloadable copy of the enrollee's approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP is posted. If all of the SSMP documentation listed in this subsection is not publicly available on the Internet, the enrollee shall comply with the following procedure:

a. Submit an electronic copy of the enrollee's approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP to the State Water Board, within 30 days of that approval and within 30 days of any subsequent SSMP re-certifications, to the following mailing address: State Water Resources Control Board Division of Water Quality Attn: SSO Program Manager 1001 I Street, 15th Floor, Sacramento, CA 95814

Appendix A

State Water Resource Control Board

General Order 2006-0003-DWQ

Order No. WQ 2013-0058-EXEC

STATE WATER RESOURCE CONTROL BOARD GENERAL ORDERS

See the following SWRCB General Orders at the link below:

Statewide General WDRs for Sanitary Sewer Systems Order WQO No. 2006-0003-DWQ
Revised Monitoring and Reporting Program Order WQ No. 2013-0058-EXEC

Link: https://www.waterboards.ca.gov/water_issues/programs/sso/#general

Appendix B

Standard Operating Procedures:

SSO Responding

SSO Reporting

City of Milpitas
Department of Public Works
Utility Maintenance
July 2014
(Reviewed and Updated Contact info October 2021)

Sanitary Sewer Overflow (SSO) Response

---

1. Policy

It is the policy of the Utility Maintenance Department to respond quickly and effectively to the report of a sanitary sewer overflow (SSO). Employees are required to report all wastewater overflows found and to take the appropriate action to secure the wastewater overflow area, relieve the cause of the overflow, and ensure the area is cleaned as soon as possible to minimize health hazards to the public and protect the environment.

2. Objective and scope

The objective of the Sewer Spill Overflow SOP is to have a clear and concise response plan in place in the event of a sewer spill emergency so that all precautions are taken to preserve public health, property and the environment. When an overflow occurs, maintenance crews shall take all feasible steps and necessary remedial action to 1) control or limit the volume of untreated or partially treated wastewater discharged, 2) terminate the discharge, and 3) recover as much of the wastewater discharged as possible for proper disposal, including any wash down water. Furthermore, this SOP documents the necessary steps to be taken post-sewer spill, specifically the reporting requirements to the regulatory agencies. The general scope of this SOP covers from the initial report of a spill, the containment and clean up, to the reporting requirements following the response.

3. Regulatory Agencies

Department of Fish & Wildlife

California Office of Emergency Services (Cal OES)

San Francisco Regional Water Quality Control Board, Region 2, (RWQCB)

Santa Clara County Environmental Health Services (SCC Environmental Health Services)

State Water Resource Control Board (SWRCB)

4. Definitions

Legally Responsible Official (LRO): Designated City Personnel responsible for reporting SSOs within the pre-determined deadlines.

Sanitary Sewer Overflow (SSO): Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system.

CIWQS: California Integrated Water Quality System, State database for reporting SSOs.

5. Roles and responsibilities

Call Center – Department of Public Works call center during business hours and Milpitas Police Department after hours.

Public Works Maintenance Crew/Standby Crew – Perform preventive maintenance activities, mobilize and respond to notification of stoppages and SSOs (mobilize sewer cleaning equipment, by-pass pumping equipment, and portable generators).

Standby Crew: After hours (5:00 p.m. to 7:00 a.m.) maintenance crew assigned to respond to emergency field calls. Standby crew is trained in utility maintenance activities and emergency utility response.

Public Works Manager (Primary LRO) – Manages field operations and maintenance activities, provides relevant information to management, prepares and implements contingency plans, leads emergency response, investigates and reports SSOs, and trains field crews.

Principal Utility Engineer (Secondary LRO) – Oversees and prepares wastewater collection system planning documents, documents new and rehabilitated assets, proposes rate analysis reports and staff recommendations, and coordinates development and implementation of SSMP

Public Works Director/City Engineer (Contingent LRO) – Establishes sewer system plans strategy, leads and assigns duties of engineering staff, prepares budgets and serves as public information officer.

6. Materials, tools, and equipment

Sanitary Sewer Overflow and Backup Response Plan
Pre-packaged Sanitary Sewer Overflow Envelope
Hydro Truck
By-Pass Pumping Equipment
Portable Generators (as necessary)
Lighting (as necessary)
Disposable Camera
Traffic Cones
Barricades
De-Chlorinating Diffuser
De-Chlorinating Tablets
Kitty Litter
Boom
Five-Gallon Bucket
Neoprene Mats
Straw Bails
Plat Maps

7. Safety

See General Work Safety SOP

When responding to SSOs, the utility maintenance crew, or standby crew, are to observe all safety precautions as expected for any service call. Traffic vests, cones, and flashing lights are to be used for traffic control safety. Barricades are to be used as needed to protect the public safety. Additionally, all utility maintenance crew are to keep current on Hepatitis B and Tetanus immunizations.

8. Procedure

SSOs will be reported to Public Works Dispatch during business hours (408) 586-2600, and the Milpitas Police Department Dispatch (408) 586-2400 or 9-1-1, after normal business hours and holidays.

Upon notification of an SSO, Dispatch will contact the utility maintenance crew or after hours standby crew to respond.

The first responder is to determine if the discharge has reached drainage channel or surface waters. If so, contact the responsible LRO immediately.

Place lighting, traffic and crowd control measures as appropriate. Maintenance Crew safety and the safety of the general public will be the first priority when responding to an SSO.

**Determine if it is more effective to set up sewer overflow barricades around storm drains, private property, etc., FIRST, or if it is more effective to just clear the blockage and clean up later. If the spill is large or in a sensitive area, document conditions upon arrival with photographs. The guidance for this decision is:

- Small spills – proceed with clearing the blockage.
- Moderate or large spills where containment is anticipated to be simple – proceed with the containment measures.
- Moderate or large spills where containment is anticipated to be difficult – proceed with clearing the blockage; however, whenever deemed necessary, call for additional assistance and implement containment measures.

Using plat map, locate the direction of sewage flow.

If the cause is determined to be a blockage, locate the nearest manhole downstream of the blockage.

Remove manhole cover.

Insert hydro vacuum into manhole. (See Hydro Vacuum SOP or manual for operating instructions)

Clear the blockage to clear the sewer line and stop the overflow of sewage.

Using kitty litter, boom, five-gallon bucket, neoprene mats, straw bails, or any other means to immediately stop/block the spill from reaching the storm drain or any other exposed channel of water. The utility maintenance crew shall respond appropriately to the spill with regard to the *Sanitary Sewer Overflow and Backup Response Plan*, *Field Guide*, as developed by the City of Milpitas/ABAG.

Once the spill is blocked from reaching the storm drain/or other receiving waters, assess the volume and the ultimate disposition of sewage (fully-captured or reaching storm drain/waters of the State). Determine whether the spill is a Category 1, 2 or 3.

Spill Categories and Definitions:

Category 1

Discharges of untreated or partially treated wastewater of any volume 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.

Category 2

Discharges of untreated or partially treated wastewater of 1,000 gallons or greater that do not reach surface water, a drainage channel or 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.

***If spill is calculated to be near 1,000 gallons (900+ gallons), err on the side of caution and report the spill to the LRO immediately.**

If a spill is classified as Category 1, IMMEDIATLEY contact the Primary LRO, and if not available contact the Secondary LRO, and if unavailable, the Contingent LRO.

Primary LRO: Glen Campi, Public Works Manager

Business Hours: 408-586-2643 After Hours: 408-690-3617

408-699-8463

Secondary LRO: Elaine Marshall, Deputy Public Works Director

Business Hours: 408-586-2603 After Hours: 408-586-2400

Contingent LRO: Tony Ndah, Public Works Director

Business Hours: 408-586-2603 After Hours: 408-586-2400

When the spill is secured, take photos at arrival, during the stoppage, at the clearance of the blockage and repair and clean up. Be as thorough as possible in documentation!

Check the area of pipe/manhole in question and make modifications to the sanitary sewer system as necessary, whether temporary or permanent, to prevent another overflow in the same location.

Using the Hydro, vacuum up any sewage and return it to the sanitary sewer system.

Using the de-chlorinating diffuser, decontaminate the area affected by the overflow, including private property. Take precaution to ensure no further damage is done to private property.

Vacuum up any water generated by the clean up and return it to the sanitary sewer system.

Interview parties witness to the overflow when possible to determine cause of overflow, duration of overflow, and any other relevant facts pertaining to the overflow. Note any witness contact information.

Open the pre-packaged *Sanitary Sewer Overflow Envelope.* The packet is located in all utility maintenance vehicles.

Fill out the *SSO Report* on *page OP-2*.

Post public warnings as necessary (Contact the Utility Engineer/Assistant City Engineer before posting). Door hangers and pre-printed notices for posting are in the *Sanitary Sewer Overflow Envelope* in the utility maintenance vehicles.

After filling out the *SSO Report page OP-2,* fill out the first page of the SSO Packet and turn it into the LRO ASAP.

Fill out, in as much detail as possible, the Public Works Customer Service Request form, or, in the case of Standby, fill out the Standby Report with as much detail as possible. Turn it into the Administrative Analyst.

The LRO will determine what regulatory agencies the SSO needs to be reported to and how quickly based on the circumstances of the SSO.

9. Documentation

- Pre-packaged Sanitary Sewer Overflow Packet & SSO Report
- Any documentation that can support the proof of containment (i.e. photos, hydro vacuum measurement).
- Calculation of spill measurement to determine size of SSO, applicable photos.
- Contact Information for witnesses/reporting parties.
- Completed Customer Service Request generated by initial report of SSO.
- Completed Standby Report (as applicable)

10. References

Attached: ABAG Sanitary Sewer Overflow and Backup Response Plan

City of Milpitas
Department of Public Works
Utility Maintenance
July 2014
(Reviewed and Updated Contact info October 2021)

Sanitary Sewer Overflow (SSO) Regulatory Reporting

1. Policy

It is the policy of the Public Works Department to report all sewer system overflows (SSOs) according to the current State's Waste Discharge Requirements (WDR) and the corresponding Monitoring and Reporting Program (MRP).

2. Objective and scope

The objective of the SSO Reporting SOP is to provide instruction to the Legally Responsible Official(s) (LRO) as to how, and when, to report an SSO in order to stay in compliance with the State Water Resource Control Board's WDR, Order No. 2006-0003-DWQ, the subsequent MRP Order No. WQ 2013-0058-EXEC.

3. Regulatory Agencies

Department of Fish & Wildlife

California Office of Emergency Services (Cal OES)

San Francisco Regional Water Quality Control Board, Region 2, (RWQCB)

Santa Clara County Environmental Health Services (SCC Environmental Health Services)

State Water Resource Control Board (SWRCB)

4. Definitions

Legally Responsible Official (LRO): Designated City Personnel responsible for reporting SSOs within the pre-determined deadlines.

Sanitary Sewer Overflow (SSO): Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system.

CIWQS: California Integrated Water Quality System, State database for reporting SSOs.

5. Roles and responsibilities

Call Center – Department of Public Works call center during business hours and Milpitas Police Department after hours.

Public Works Maintenance Crew/Standby Crew – Perform preventive maintenance activities, mobilize and respond to notification of stoppages and SSOs (mobilize sewer cleaning equipment, by-pass pumping equipment, and portable generators).

Standby Crew: After hours (5:00 p.m. to 7:00 a.m.) maintenance crew assigned to respond to emergency field calls. Standby crew is trained in utility maintenance activities and emergency utility response.

Public Works Manager (Primary LRO) – Manages field operations and maintenance activities, provides relevant information to management, prepares and implements contingency plans, leads emergency response, investigates and reports SSOs, and trains field crews.

Deputy Public Works Director (Secondary LRO) – Oversees and prepares wastewater collection system planning documents, documents new and rehabilitated assets, proposes rate analysis reports and staff recommendations, and coordinates development and implementation of SSMP

Public Works Director (Contingent LRO) – Establishes sewer system plans strategy, leads and assigns duties of utility engineering staff, prepares budgets and serves as public information officer.

6. Reporting Tools

ABAG Kit: City of Milpitas SSO and Backup Response Plan, 2012

- Completed SSO Report OP-2A
- Regulatory Notifications Packet, RN

Cal OES (800) 852-7550

SCC Health Department Fax (408) 258-5891

Fax Machine

Computer

Web address: http://ciwqs.waterboards.ca.gov/

Login/Passwords:

Primary LRO	Public Works Manager
Secondary LRO	Deputy Public Works Director
Contingent LRO	Public Works Director

7. Procedure

7.1 Dispatch/MPD will notify maintenance/standby crew of SSO, who will then assess SSO category based on the following criteria:

Spill Categories and Definitions:

Category 1

Discharges of untreated or partially treated wastewater of any volume 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.

Category 2

Discharges of untreated or partially treated wastewater of 1,000 gallons or greater that do not reach surface water, a drainage channel or 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.

7.2 Maintenance/Standby crew to notify the assigned LRO:

Primary LRO: Glen Campi, Public Works Manager

Business Hours: 408-586-2643 After Hours: 408-690-3617
408-699-8463

Secondary LRO: Elaine Marshall, Deputy Public Works Director

Business Hours: 408-586-2603 After Hours: 408-586-2400

Contingent LRO: Tony Ndah, Public Works Director

Business Hours: 408-586-2603 After Hours: 408-586-2400

7.2 If Category 1 classified, fill out the top portion of the Regulatory Notification Packet, RN-3, *SSO Description* and begin the 2 hour reporting notification required (within 2 hours of spill notification):

CalOES* **Phone (800) 852-7550**
*Per attached email from Claudia Villacorta, RWQCB, CalOES will notify the RWQCB. No notification on City's part necessary.

*****Be sure to get <u>CalOES Control Number.</u>**

SCC Health Dept. **Fill out and fax form RN-2 to (408) 258-5891**

Additional agency reporting requirements will vary by agency. See ABAG Kit: *SSO and Backup Response, Regulatory Notifications Packet, RN-1, Side B* for a list of additional reporting agencies and requirements.

7.3 Once notifications have been made, complete Form RN-3, *SSO 2-Hour Notification Summary*

7.4 Once the spill has been contained, cleaned and repaired, the Maintenance Crew will fill out the ABAG Kit: *SSO Report, OP-2, Side A.*

7.5 The maintenance crew will pass the ABAG Kit: *SSO Report, OP-2, Side A* to the LRO.

7.6 **Reporting to the SWRCB:**

The LRO will report the spill to the SWRCB according to the timeline below:

SWRCB Reporting Timetable:

Category 1 SSOs: Submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date.

Category 2 SSOs: Submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date.

Category 3 SSOs: Submit certified report within 30 calendar days of the end of month in which SSO occurred.

7.7 **SWRCB Reporting Instructions:**

Go to http://ciwqs.waterboards.ca.gov/, the SWRCB Database.

Using the login and passwords above, the LRO will log in.

Select "SSO – Sanitary Sewer Overflows"

Select "Reporting New SSO"

Following the website, enter as much information as possible known about the SSO from the ABAG Kit: *SSO Report, OP-2, Side A,* or from first-hand personal knowledge. If any additional first hand knowledge of the spill is not included on the SSO Report, make a note and attach it to the hard copy report. Please include your name. *The report can be submitted incomplete, to be completed with 15 days post-spill. See 7.8 if necessary.*

When complete, click "Submit".

Print a copy of the report to keep for records.

Forward the full report, completed ABAG Forms, pictures, etc., to Glen Campi

7.8 Incomplete SWRCB Reports:

Information may be added or corrected at a later date. To do so:

Re-login, select "SSO – Sanitary Sewer Overflows"

Select "Modify Existing SSO"

Enter in incident search criteria, for example, incident date or location, and select "Search".

Select the incident from the list and make amendments as necessary.

A final certified report must be completed in CIWQS within 15 days of the SSO incident.

7.9 The reporting LRO will notify the other LRO's of the spill and reporting status ASAP.

8. Documentation

- ABAG Kit: SSO and Backup Response Plan:

  Faxed documentation to SCC Dept. of Environmental Health, RN-2

  SSO 2-Hour Notification Summary, RN-3

  SSO Report, OP-2, Side A

- Print and maintain a hard copy of certified report to CIWQS as proof of submission.
- CalOES Control Number (upon CalOES Reporting)

9. References

ABAG Kit: SSO and Backup Response Plan

State Water Resource Control Board, MRP Order No. WQ 2013-0058-EXEC

Email of reporting direction from Claudia Villacorta, regarding RWQCB requirements

SWRCB Website Documentation regarding RWQCB reporting

Appendix C

Overflow and Emergency Response Plan

City of Milpitas

Overflow Emergency Response Plan

Effective Date: 10/19/21

Revised Date: 10/19/21

Approved by: TONY NOAH

Signature:

Date: JAN. 5, 2022

Prepared by David Patzer, DKF Solutions Group
(707) 373-9709 dpatzer@dkfsolutions.com

Table of Contents

Sanitary Sewer Overflow Emergency Response Plan (OERP)

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

1. Purpose
2. Policy
3. Definitions as used in this OERP
4. Regulatory Requirements for OERP Element of SSMP
5. Goals
6. Sanitary Sewer Overflow (SSO) Detection and Notification
7. SSO Response Procedures
8. Recovery and Cleanup
9. Water Quality
10. Sewer Backup Into/Onto Private Property Claims Handling Procedure
11. Notification, Reporting, Monitoring and Recordkeeping Requirements
12. Post SSO Event Debriefing
13. Failure Analysis Investigation
14. SSO Response Training
15. High Priority Assets
16. Authority
17. References

Appendix A: Regulatory Notifications Packet

Instructions ..... Packet Envelope
Regulatory Reporting Guide **A**-1
Category 1 SSO Reporting Checklist ..... -2a
Category 2 and 3 SSO Reporting Checklist ..... -2b
Regional Water Quality Control Board Notification Fax ..... -3

Appendix B: Sanitary Sewer Backup Packet

Response Instructions ..... Packet Envelope
Response Flowchart **B**-1
Bubbled Toilets Letter ..... -2
First Responder Form ..... -3
Sanitary Sewer Overflow Report ..... -4
Start Time Determination Form ..... -5
Volume Estimation Methods
- Eyeball Estimation ..... -6a
- Duration and Flow Rate Comparison ..... -6b
- Upstream Lateral Connections ..... -6c

Lateral CCTV Report ..... -7
Claims Submittal Checklist ..... -8
Collection System Failure Analysis Form ..... -9
Customer Service Packet
- Instructions ..... envelope
- Customer Information *(in English, Spanish, Tagalog, Vietnamese, and Chinese)* CS-1
- Claim Form CS-2
- Sewer Spill Reference Guide ..... pamphlet

Regulatory Notifications Packet ..... See contents list above
Door Hanger

Table of Contents

Appendix C: Sanitary Sewer Overflow Packet

Instructions and Chain of Custody ..... Packet Envelope
Overflow Response Flowchart **C**-1
Sanitary Sewer Overflow Report ..... -2
Start Time Determination Form ..... -3
Volume Estimation Methods
- Eyeball Estimation ..... -4a
- Duration and Flow Rate Comparison ..... -4b
- Upstream Lateral Connections ..... -4c

Lateral CCTV Report ..... -5
Collection System Failure Analysis Form ..... -6
Regulatory Notifications Packet ..... See contents list above
Public Posting
Door Hanger
Sewer Spill Reference Guide ..... pamphlet

Appendix D: Field Sampling Kit

Procedures for Sampling Receiving Waters and Posting Warnings after a Sewage Spill **D**-1
Sample Collection Chain of Custody Record ..... -2

Appendix E: Contractor Orientation

1. Purpose

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

2. Policy

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

3. Definitions As Used In This OERP

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

ENROLLEE - A federal or state agency, municipality, county, district, and other public entity that owns or operates a sanitary sewer system, as defined in the general WDRs, and that has submitted a complete and approved application for coverage under this Order.

FROG – Fats, Roots, 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. Tree root invasion (R) presents an additional problem. If a mat of root hair forms in the sewer line it slows the flow of wastewater and exacerbates the rate of accumulation of FOG materials.

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

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

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

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

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

a. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
b. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

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

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

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

SANITARY SEWER BACKUP (BACKUP) – When blockages or flow conditions cause wastewater to backup into buildings and on private property.

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

(i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;

(ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and

(iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

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

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

SSO Categories:

CATEGORIES	DEFINITIONS
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 storm water 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 DISCHARGE (PLSD)	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.

SSO REPORTING SYSTEM: Online spill reporting system that is hosted, controlled, and maintained by the State Water Board. The web address for this site is http://ciwqs.waterboards.ca.gov. This online database is maintained on a secure site and is controlled by unique usernames and passwords.

SANITARY SEWER SYSTEM: Any publicly owned system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to the publicly owned treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not considered to be SSOs.

SATELLITE COLLECTION SYSTEM: The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility to which the sanitary sewer system is tributary.

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

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

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

WATERS OF THE STATE*:* Waters of the State (or waters of the United States) means any surface water, 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 wastewater collection system and that portion of the storm drain is cleaned.

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

GWDR Requirement

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

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

(b) A program to ensure appropriate response to all overflows;

(c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, regional water boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the Monitoring and Reporting Program (MRP). All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board Waste Discharge Requirements or National Pollutant Discharge Elimination System (NPDES) permit requirements. The Sewer System Management Plan should identify the officials who will receive immediate notification;
(d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
(e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
(f) A program to ensure that all reasonable steps are taken to contain untreated wastewater and prevent discharge of untreated wastewater to Waters of the United States and minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

The Sewer System Management Plan and critical supporting documents are available to the public at www.ci.milpitas.ca.gov.

5. Goals

This SSMP element identifies goals the City has set for the management, operation and maintenance of the sewer system and discusses the role of the SSMP in supporting these goals. These goals provide focus for City staff to continue high-quality work and to implement improvements in the management of the City's wastewater collection system.

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

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

6. SSO Detection and Notification

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

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

The City operates two wastewater pump stations. For Venus Pump Station, the high-level sensor or pump failure sensor will send an alarm to the Police Dispatch, and the on call Pump Station Operator will be called out. In

the event the first alarm system fails, a secondary alarm system will directly page the on-call Pump Station Operator. To prevent overflow, wastewater from the wet well can either be pumped into a vacuum truck for disposal to a nearby sanitary sewer manhole or bypassed around the station into the sanitary sewer system. For the Main Lift Station, high level or pump failure conditions will trigger the alarm system to send an alarm to Police Dispatch. In the event this alarm system fails, a secondary alarm system will directly page the on-call Pump Station Operator.

6.1 PUBLIC OBSERVATION

Public observation is the most common way that the City is notified of blockages and spills. Contact numbers and information for reporting sewer spills and backups are in the phone book and on the City's website: www.ci.milpitas.ca.gov. The City's telephone number for reporting sewer problems is (408) 586-2600. After hours callers are directed to call Police Dispatch at (408) 586-2400 or 911. Blockages and spills can also be reported through the MyMilpitas App, hosted on the SeeClickFix platform.

Normal Work Hours

When a call reporting a sewer spill or backup is made during normal work hours, the Public Works Call Center takes the call and enters the specifics into the MyMilpitas App, which creates a work request in Central Square Enterprise Asset Management, aka Lucity. Alternately the report can be submitted directly through MyMilpitas App which will also create a work request in Lucity. Public Works Dispatch and Lucity will notify the available Sewer Maintenance Crew. The responder(s) will evaluate the circumstances, take any action necessary, create a Lucity work order and notify the Public Works Maintenance Manager for Utilities for review and/or to conduct any necessary notifications.

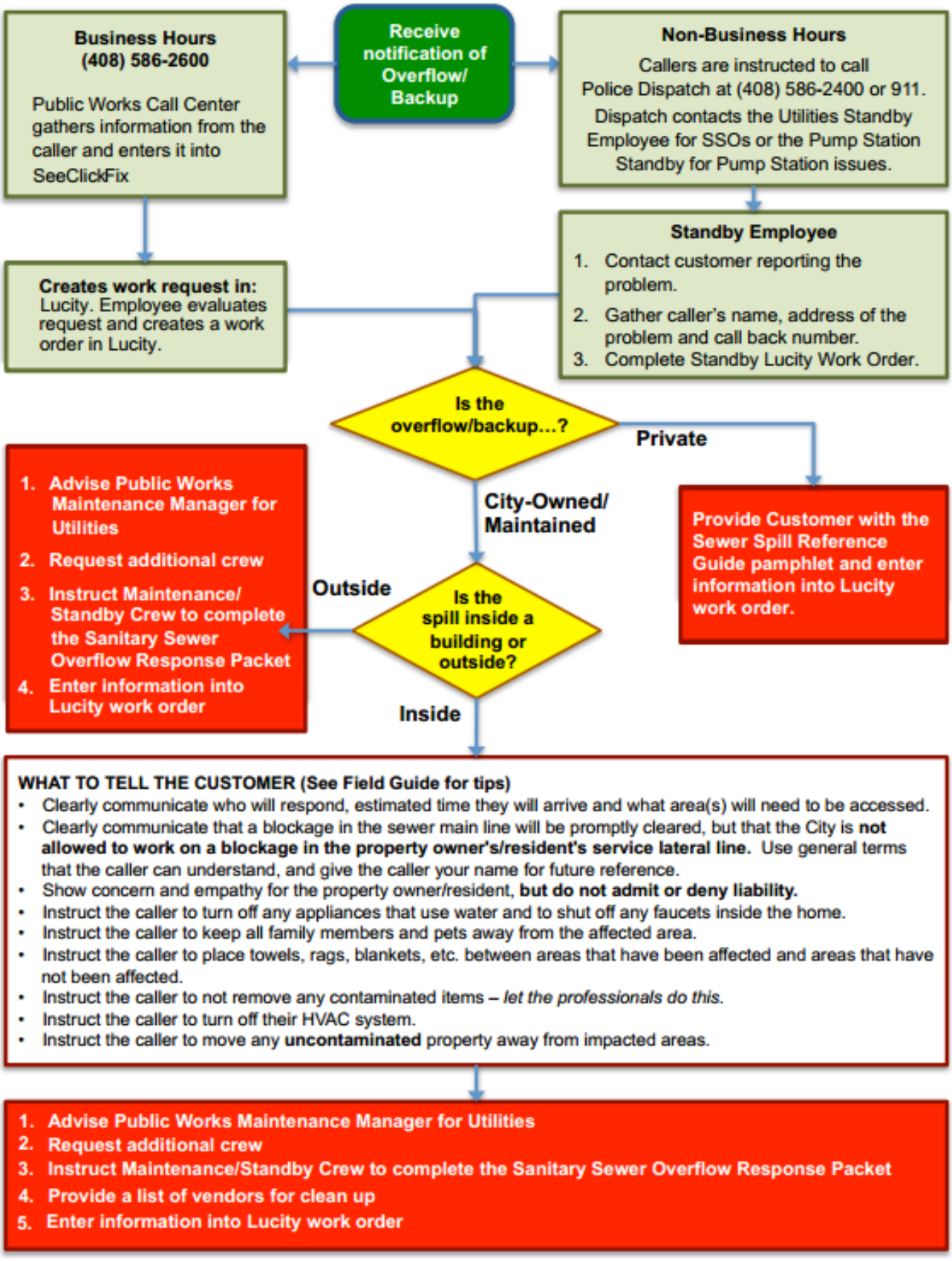
After Hours

After hours callers are directed to call Police Dispatch, which will notify the Utilities Standby Employee for SSOs or the Pump Station Standby on-call Operator for Pump Station issues. The Standby Employee will complete a Standby Lucity work order and notify the Public Works Maintenance Manager for Utilities for review.

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

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

The following is an overview of receiving a sewage overflow or backup report:



6.2 CITY STAFF OBSERVATION

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

6.3 CONTRACTOR OBSERVATION

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

1. Immediately notify the City
   Business Hours: (408) 586-2600
   Non-Business Hours: (408) 586-2400 or 911
2. Protect storm drains
3. Protect the public
4. Provide Information to the City Maintenance/Standby Crew such as start time, appearance point, suspected cause, weather conditions, etc.
5. Direct ALL media and public relations requests to the Public Works Director or their designee. They will provide the media with all relevant information.

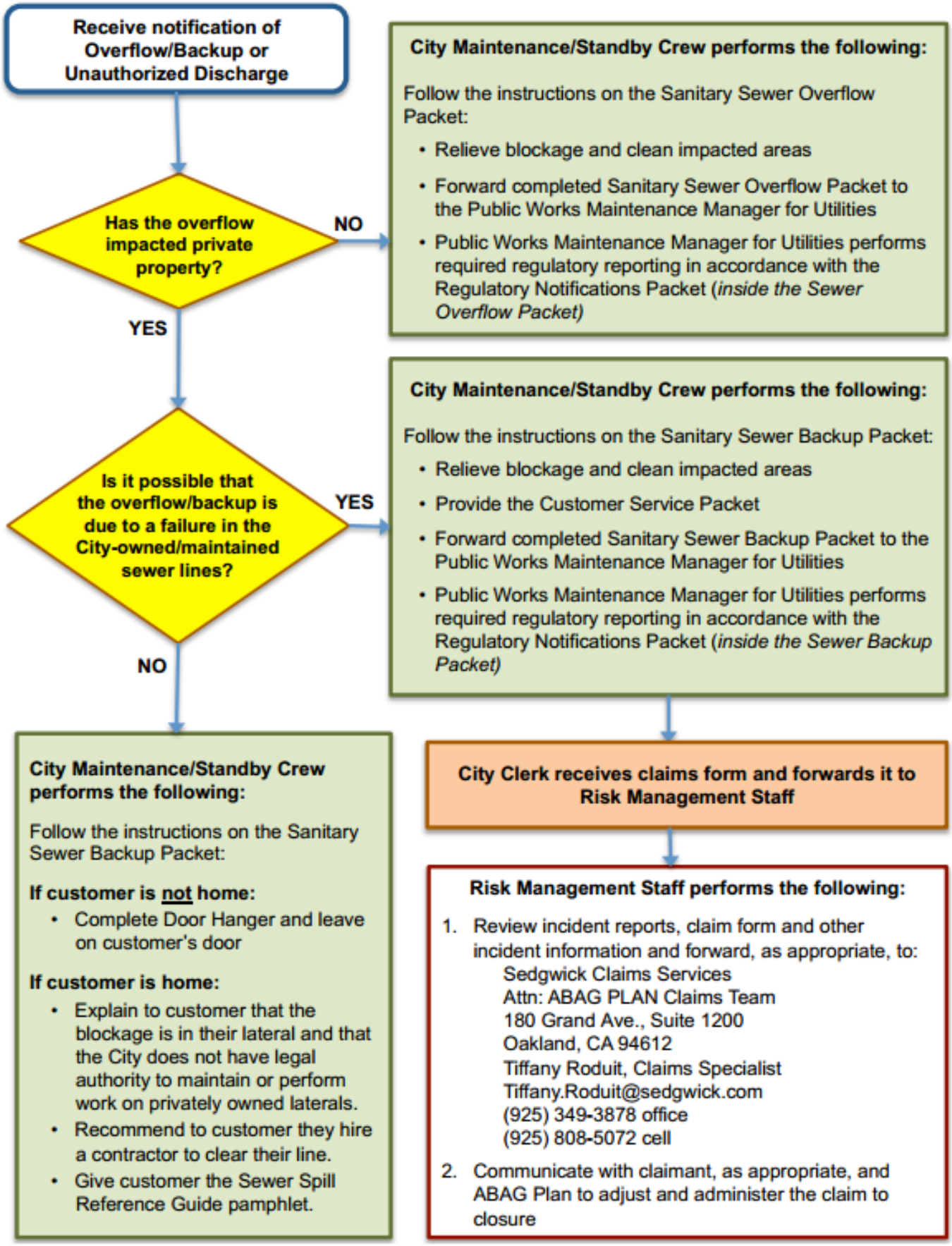
7. SSO Response Procedures

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

7.1 Sewer Overflow/Backup Response Summary

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

Figure 7.1 Overview of SSO/Backup Response



7.2 First Responder Priorities

The first responder's priorities are:

- To follow safe work practices.
- To identify and clearly assess the affected area and extent of spill and note arrival time at spill site.
- To respond promptly with the appropriate and necessary spill control and containment equipment.
- To address traffic and crowd control by establishing perimeters and control zones with traffic cones, barricades, vehicles, or terrain.
- To document conditions upon arrival with photographs.
- To contain the spill wherever feasible.
- To restore the flow as soon as practicable.
- To minimize public access to and/or contact with the spilled sewage. Promptly notify the LRO in the event of a Category 1 or 2 SSO or when the spill appears to be large, in a sensitive area, or there is doubt regarding the extent, impact, or how to proceed. Contain and control the sewage discharged to the maximum extent possible.
- To make every effort to prevent the discharge of sewage into waterways.
- To restore the flow as soon as practicable and contact the caller for additional information.
- To return the spilled sewage to the sewer system
- To restore the area to its original condition (or as close as possible).

7.3 Safety

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

7.4 Initial Response

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

The first responder will:

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

- Take steps to contain the SSO. For detailed procedures refer to Appendix B: Sanitary Sewer Backup Procedures, and Appendix C: Sanitary Sewer Overflow Packet.

7.5 Initiate Spill Containment Measures

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

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

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

7.6 Restore Flow

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

7.7 Equipment

This section provides a list of specialized equipment that may be used to support this Overflow Emergency Response Plan.

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

8. Recovery and Cleanup

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

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

8.1 Estimate the Volume of Spilled Sewage

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

8.2 Recovery of Spilled Sewage

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

8.3 Clean-up and Disinfection

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

Private Property

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

Hard Surface Areas

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

Landscaped and Unimproved Natural Vegetation

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

Natural Waterways

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

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

8.4 Public Notification

Signs will be posted and barricades put in place to keep vehicles and pedestrians away from contact with spilled sewage. County Environmental Health instructions and directions regarding placement and language of public warnings will be followed. Additionally, the Public Works Maintenance Manager for Utilities will use their best judgment regarding supplemental sign placement in order to protect the public and local environment. Signs will not be removed until directed by County Environmental Health, the Public Works Maintenance Manager for Utilities or designee.

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

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

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

9. Water Quality

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

9.1 Waters of the State

Waters of the State (or waters of the United States) means any surface water, 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 wastewater collection system and that portion of the storm drain is cleaned.

9.2 Water Quality Sampling and Testing

Water quality sampling and testing is required for Category 1 SSOs of 50,000 gallons or greater to determine the extent and impact of the SSO. The water quality sampling procedures must be implemented within 48 hours and include the following:

- The first responders will collect samples as soon as possible after the discovery and mitigation of the SSO event.

- The water quality samples will be collected from upstream of the spill, from the spill area, and downstream of the spill in flowing water (e.g. creeks). The water quality samples will be collected near the point of entry of the spilled sewage.
- The samples shall then be brought to the City's currently contracted lab for analysis.

9.3 Water Quality Monitoring Plan

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

1. Contain protocols for water quality monitoring.
2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g. safety, access restrictions, etc.)
3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.
4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.
5. Within 48 hours of the City becoming aware of the SSO, require water quality sampling for ammonia and total and fecal coliform.
6. Observe proper chain of custody procedures.

9.4 SSO Technical Report

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

<u>Causes and Circumstances of the SSO:</u>

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

<u>City's Response to SSO:</u>

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

Water Quality Monitoring:

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

10. Sewer Backup Into/Onto Private Property Claims Handling Procedure

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

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

- It is the responsibility of the Maintenance/Standby Crew to gather information regarding the incident and notify the Public Works Maintenance Manager for Utilities or his/her designee.

- It is the responsibility of the Risk Manager or his/her designee to review all claims and to oversee the adjustment and administration of the claim to closure.

11. Notification, Reporting, Monitoring and Recordkeeping Requirements

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

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

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

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

11.1 Regulator Required Notifications

ELEMENT	REQUIREMENT	METHOD
NOTIFICATION	Within two hours of becoming aware of any Category 1 SSO greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water, the City will notify the California Office of Emergency Services (CalOES) and obtain a notification control number.	Call Cal OES at: **(800) 852-7550**
REPORTING	• Category 1 SSO: The City will submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date. • Category 2 SSO: The City will submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date. • Category 3 SSO: The City will submit certified report within 30 calendar days of the end of month in which SSO the occurred. • SSO Technical Report: The City will submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters. • "No Spill" Certification: The City will certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred. • Collection System Questionnaire: The City will update and certify every 12 months	Enter data into the CIWQS Online SSO Database[1] (http://ciwqs.waterboards.ca.gov/) certified by the Legally Responsible Official(s) [2]. All information required by CIWQS will be captured in the Sanitary Sewer Overflow Report. Certified SSO reports may be updated by amending the report or adding an attachment to the SSO report within 120 calendar days after the SSO end date. After 120 days, the State SSO Program Manager must be contacted to request to amend an SSO report along with a justification for why the additional information was not available prior to the end of the 120 days.
WATER QUALITY MONITORING	The City will conduct water quality sampling within 48 hours after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.	Water quality results will be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.
RECORD KEEPING	The City will maintain the following records: • SSO event records. • Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP. • Records documenting Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters. • Collection system telemetry records if relied upon to document and/or estimate SSO Volume.	Self-maintained records shall be available during inspections or upon request.

[1] In the event that the CIWQS online SSO database is not available, the Public Works Maintenance Manager for Utilities will notify SWRCB by phone and will fax or e-mail all required information to the RWQCB office at (510) 622-2460 in accordance with the time schedules identified above. In such an event, the City will submit the appropriate reports using the CIWQS online SSO database when the database becomes available. A copy of all documents that certify the submittal in fulfillment of this section shall be retained in the SSO file. 2

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

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

Reporting SSOs to Other Regulatory Agencies These reporting requirements do not preclude an enrollee from reporting SSOs to other regulatory agencies pursuant to state law. In addition, these reporting requirements do not replace other Regional Water Board notification and reporting requirements for SSOs.

11.2 Complaint Records

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

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

The above information is entered into the Maintenance Connection software. Electronic records and hard copies are maintained for two years plus the current year. Hard copy SSO records are maintained for five years.

12. Post SSO Event Debriefing *ref. SWRCB Order No. 2006-0003-DWQ Element 6(d)*

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

As soon as possible after Category 1 and Category 2 SSO events all of the participants, from the person who received the call to the last person to leave the site, will meet to review the procedures used and to discuss what worked and where improvements could be made in preventing or responding to and mitigating future SSO events. The results of the debriefing will be documented and tracked to ensure the action items are completed as scheduled.

13. Failure Analysis Investigation *ref. SWRCB Order No. 2006-0003-DWQ Element 6(d)*

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

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

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

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

14. SSO Response Training *ref. SWRCB Order No. 2006-0003-DWQ Element 6(d)*

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

14.1 Initial and Annual Refresher Training

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

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

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

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

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

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

14.2 SSO Response Drills

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

14.3 SSO Training Record Keeping

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

14.4 Contractors Working On City Sewer Facilities

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

15. High Priority Assets

The following assets need to be monitored and inspected prior to, during, and following an extreme weather event or natural disaster:

Critical Asset	Location	Access	Monitor and Inspection Description
Main Lift Station	1425 N. McCarthy Blvd.	Card Key or EM1 key	Check station for normal operation and status
Venus Lift Station	1085 Venus Way	EM1 key	Check station for normal operation and status

16. Authority

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

17. References

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

Appendix A

REGULATORY NOTIFICATIONS PACKET

City of Milpitas: Overflow Emergency Response Plan

Regulatory Notifications Packet

Instructions:

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

Contents:

Form	Page Number
Regulatory Reporting Guide	A-1
Reporting Checklist: Category 1	-2a
Reporting Checklist: Categories 2 and 3	-2b
RWQCB Notification Fax	-3

Regulatory Notifications Packet Regulatory Reporting Guide

A-1 Side A

Reporting Instructions

Deadline	See reverse side for contact information and definitions of the categories of spills of untreated or partially treated wastewater from publically owned sanitary sewer system			Spill from Private Lateral
	Category 1	**Category 2**	**Category 3**	
2 hours after awareness of SSO	If SSO is greater than or equal to 1,000 gallons, call CalOES at (800) 852-7550. Notify Santa Clara Valley Water District for any SSOs impacting creeks that are part of their drinking water system.	-	-	-
As soon as possible	If SSO impacts private property that may be due to a failure in the City sewer and/or if the City believes a claim for damages may be submitted against the City contact ABAG Plan Corporation and the Risk Manager. See Side B for contact information.			-
48 Hours after awareness of SSO	If 50,000 gal or more were not recovered, begin water quality sampling and initiate impact assessment	-	-	-
3 Days after awareness of SSO	Submit Draft Spill Report in the CIWQS* database	Submit Draft Spill Report in the CIWQS* database	-	-
15 Calendar Days after the SSO end date	Certify Spill Report in CIWQS* within 15 calendar days of the SSO end date. Update as needed until 120 days after SSO end time	Certify Spill Report in the CIWQS* database within 15 calendar days of the SSO end date. Update as needed until 120 days after SSO end time	-	-
30 Days after end of calendar month in which SSO occurred	-	-	Certify Spill Report in the CIWQS* database. Update as needed until 120 days after SSO end time	-
45 days after SSO end time	If 50,000 gal or more were not recovered, submit SSO Technical Report using CIWQS*	-	-	-

* In the event that the CIWQS online SSO database is not available , the enrollee must fax or e-mail all required information to the appropriate Regional Water Board office in accordance with the time schedules identified

herein.and complete the following until the CIWQS online SSO database becomes available: (See contact information on Side B)

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

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

Contact Information

Contact	Telephone/Fax/Email	
CalOES	(800) 852-7550	
Santa Clara Valley Water District	(888) 510-5151 (leave information per automated instructions)	
ABAG Plan Corporation/Sedgewick Claims Services		
1) Tiffany Roduit, Claims Specialist 2) Cynthia Gordon, Unit Manager	1) Telephone: (925) 349-3878 Cell: (925) 808-5072	2) Telephone: (925) 349-3916
If you do not receive a call back from Tiffany Roduit within 30 minutes, call: Tasso Mavroudis, Secondary Contact	Telephone: 650.228.6611	
Risk Management Staff	(408) 586-3144	
San Francisco Regional Water Quality Control Board (SFRWQCB):	Telephone: (510) 622-2369 Fax: (510) 622-2460	
State Water Resources Control Board (SWRCB):		
Russell Norman, P.E.	(916) 323-5598	Russell.Norman@waterboards.ca.gov
Gil Vasquez, Water Resources Control Engineer	(916) 322-1400	Gil.Vasquez@waterboards.ca.gov

Authorized Personnel

The following are authorized to perform regulatory reporting:

Title	Telephone	Cell	✓ If LRO*
Public Works Maintenance Manager for Utilities	(408) 586-2643	(408) 690-3617	✓
Deputy Public Works Director	(408) 586-2603	(408) 209-4883	✓
Public Works Director	(408) 586-2602	(408) 712-7812	✓

**Legally Responsible Official (LRO) is authorized to electronically sign and certify SSO reports in CIWQS.*

Definitions of Spill Categories

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

Category	Definition
Category 1:	Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either: • Reaches surface water and/or drainage channel tributary to a surface water; or • Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.

Category 2:	Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either: • Does not reach surface water, a drainage channel, or an MS4, or • The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.
Category 3:	All other discharges of untreated or partially treated wastewater resulting from a sanitary sewer system failure or flow condition

Regulatory Notifications Packet

Category 1 SSO Reporting Checklist

A-2a

Use this Checklist for Category 1 SSOs only

STEP 1: Receive call from crew.

STEP 2: 2-hour Notification

☐☐ If SSO is greater than or equal to 1,000 gallons, notify CalOES within 2 hours of the time the agency was notified of the spill (800) 852-7550: ○ Date Called: ___ ○ Time called: :___ ☐ AM ☐ PM ○ CalOES Control number: ___ ○ CalOES Operator Name:

STEP 3: As soon as possible

If SSO impacts private property that may be due to a failure in the City sewer and/or if the City believes a claim for damages may be submitted against the City, notify the following:

☐☐ Contact ABAG Plan Corporation

☐☐ Risk Management Staff

STEP 4: Within 48-Hours after awareness of SSO

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

STEP 5: Within 3 Days after awareness of SSO

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

STEP 6: Within 15 Calendar Days after the SSO end date

☐☐ Certify the Spill Report using the CIWQS online reporting database. Updates to the Spill Report may be made for up to 120 days following the conclusion of the SSO Response.

STEP 7: Within 45 Days after SSO end time

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

This form completed by: _____ _____ _____

Name *Title* *Date*

Regulatory Notifications Packet

Category 2 & 3 SSO Reporting Checklist

A-2b

Use this Checklist for Category 2 and 3 SSOs only

STEP 1: Receive call from crew.

STEP 2: As soon as possible

If SSO impacts private property that may be due to a failure in the City sewer and/or if the City believes a claim for damages may be submitted against the City, notify the following:

☐☐ ABAG Plan Corporation

☐☐ Risk Management Staff

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

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

STEP 4: Certify Spill Report

☐☐ Certify the Spill Report using the CIWQS online reporting database:

- Category 2 SSO: Within 15 calendar days after the SSO end date
- Category 3 SSO: Within 30 days after the end of the calendar month in which the SSO occurred

☐☐ Updates to the Spill Report may be made for up to 120 days following the conclusion of the SSO Response.

This form completed by: _____ _____ _____

Name *Title* *Date*

Regulatory Notifications Packet

Regional Water Quality Control Board Notification Fax

A-3

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

FAX TO: San Francisco Regional Water Quality Control Board
Fax Number: (510) 622-2460
Telephone: (510) 622-2369

Date: _____

Pages: _____

FROM: City of Milpitas
Telephone: (408) 586-2600
Fax: (408) 586-2608

Address of SSO: _____ City: _____

County: _____ Date/Time: _____

SSO Start Time: _____ SSO Stop Time: _____

Volume of SSO: _____ Volume Recovered: _____

Final Disposition: _____

_____

Affected Water Body: _____

Samples Collected? ☐YES ☐NO

Taken to: _____

Crew Members: _____

Agencies Notified	Number(s)		Contact	Time	Date
CalOES	(800) 852-7550	☐YES ☐NO	_____	_____	_____
CIQWS		☐YES ☐NO	_____	_____	_____
OTHER:	_____				
	_____				

Appendix B

SANITARY SEWER BACKUP RESPONSE PACKET

Sanitary Sewer Backup Response Packet
Table of Contents

Form	Form Number
Instructions and Chain of Custody	packet envelope
Backup Response Flowchart	B-1
Bubbled Toilets Letter	-2
First Responder Form	-3
Sanitary Sewer Overflow Report	-4
Start Time Determination Form	-5
Volume Estimation Forms	-6a, -6b, -6c
Lateral CCTV Report	-7
Claims Submittal Checklist	-8
Collection System Failure Analysis Form	-9
Customer Service Packet	
Instructions	packet envelope
Customer Information	CS-1
Claim Form	-2
Sewer Spill Reference Guide	pamphlet
Regulatory Notifications Packet	
Instructions	envelope
Regulatory Reporting Guide	A-1
Category 1 SSO Reporting Checklist	-2a
Category 2 & 3 SSO Reporting Checklist	-2b
RWQCB Notification Fax	-3
Door Hanger	

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

- ❑ **If this is a Category 1 SSO greater than or equal to 1,000 gallons, IMMEDIATELY contact the Public Works Maintenance Manager for Utilities:**
  - Office: (408) 586-2643
  - Cell: (408) 690-3617

  (Public Works Maintenance Manager for Utilities: Contact CalOES to make 2-hour notification)

- ❑ **If the backup is into/onto private property AND possibly due to a problem in the public sewer, notify Public Works Maintenance Manager for Utilities.**

  (Public Works Maintenance Manager for Utilities: Contact Tiffany Roduit, Claims Specialist at Sedgwick Claims Services/ABAG Plan Claims Team at (925) 349-3878 telephone or (925) 808-5072 cell. If she cannot be reached within 30 minutes, call Tasso Mavroudis, Secondary Contact 650.228.6611 cell.

- ❑ **Media requests must be directed to the Public Works Director or their designee.**

Maintenance/Standby Crew:

- ❑ Follow the instructions on the Sewer Backup Response Flowchart (B-1). Note: If multiple dwelling units are affected, use one packet per unit and check here: ☐
- ❑ If indicated on the flowchart, give the customer the Bubbled Toilets Letter and/or the Customer Service Packet and have them initial here:
  Customer acknowledgement of receipt of Bubbled Toilets Letter: _____
  Customer acknowledgement of receipt of Customer Service Packet: _____
- ❑ Place completed forms in this envelope, complete the Chain of Custody record (right) and forward this packet to the Public Works Maintenance Manager for Utilities.

Print Name: _____

Initial: _____

Date: _____

Time: _____

Public Works Maintenance Manager for Utilities:

Follow the instructions on the bottom of the Sewer Backup Response Flowchart (B-1).

- ❑ Complete the Regulatory Notifications Packet.
- ❑ Complete the Claims Submittal Checklist.
- ❑ Complete the Chain of Custody record (right) and forward this packet to the City Clerk.

Print Name: _____

Initial: _____

Date: _____

Time: _____

Risk Management Staff:

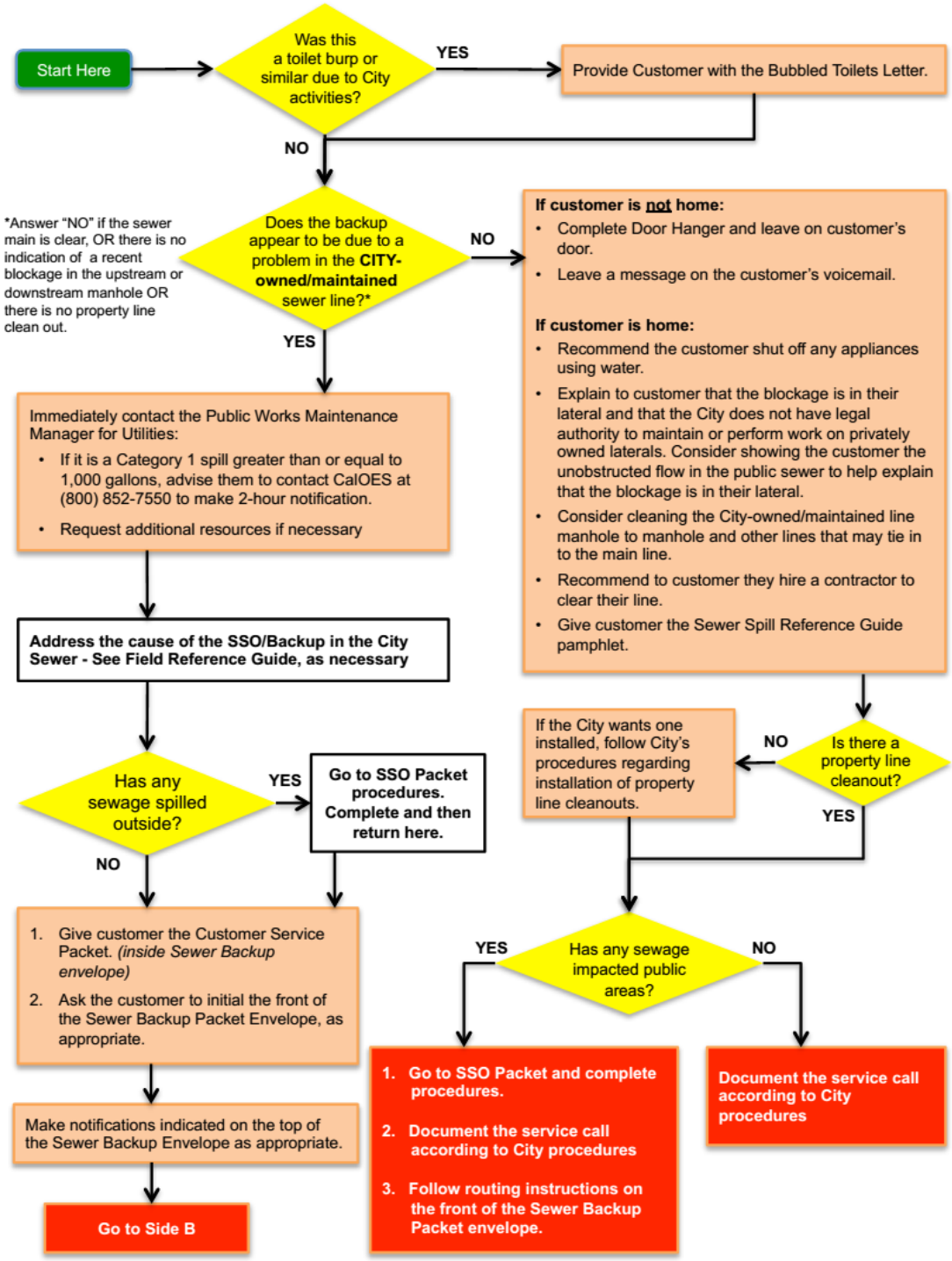
- ❑ Refer to the Claims Submittal Checklist.

City of Milpitas: Overflow Emergency Response Plan

Sanitary Sewer Backup Response Packet

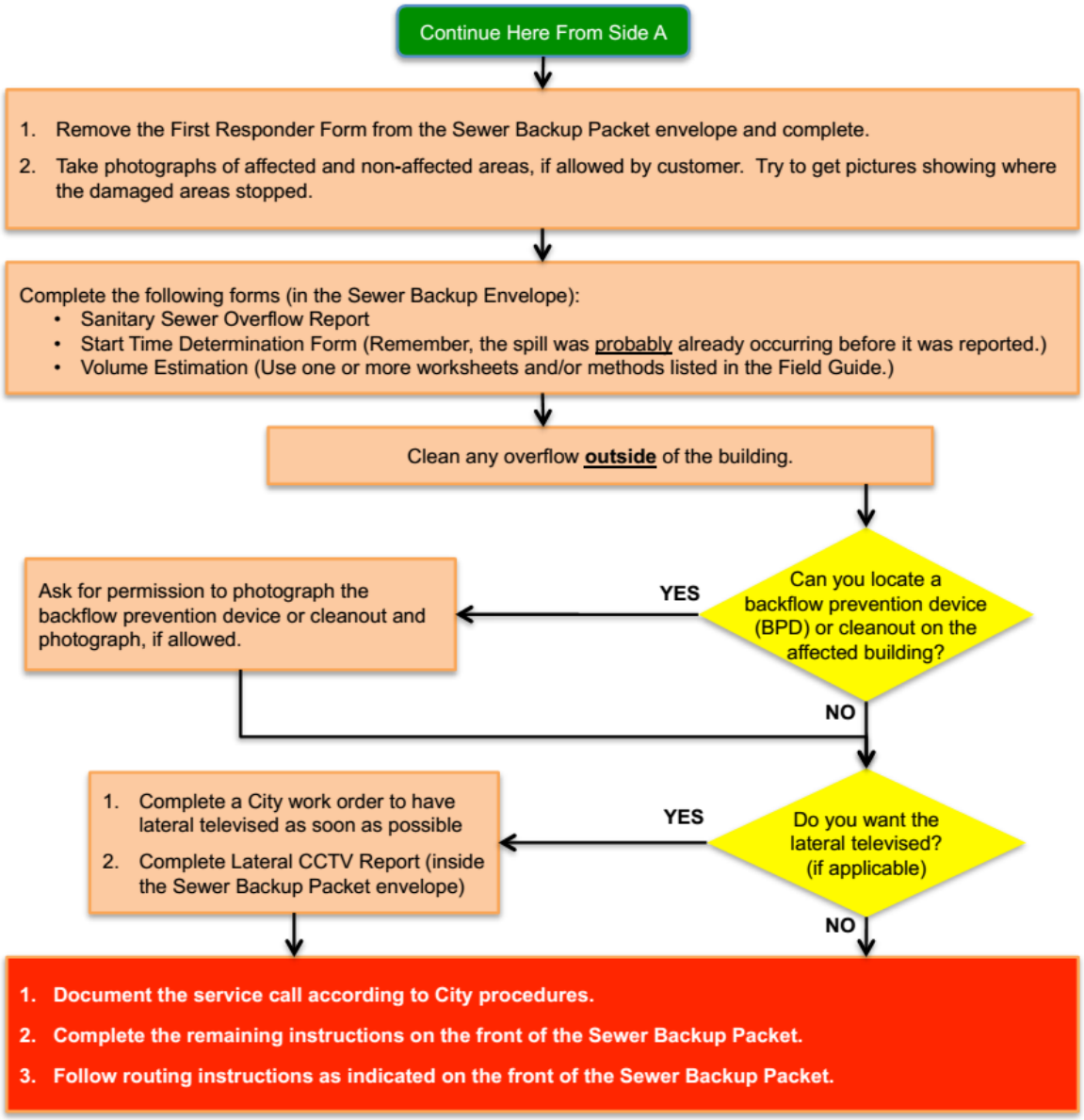
Backup Response Flowchart

B-1
Side A



Sanitary Sewer Backup Response Packet
Backup Response Flowchart

B-1
Side B



MEDIA AND PUBLIC RELATIONS GUIDELINES:

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

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

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

In most cases, refer media requests to the Public Works Director or designee as indicated on the front of the Sewer Backup Packet envelope.

Dear City of Milpitas Customer,

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

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

2. **What is the City doing in the street?**
   In order to insure reliable sewer service, the City inspects, cleans, and repairs its sewer system on a continuous basis.

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

4. **What causes the air to come from my toilet?**
   Over the years, City crews have found that the bubbling of toilets have many causes, some of which are:
   - Obstructed vent pipes;
   - Vent pipes that are positioned too far from the toilet;
   - Lateral pipes that may be in use as the crew is cleaning (e.g. draining washing machine, draining bathtub, etc.);
   - Lateral pipes that may have obstructions that are causing them to hold water (e.g. roots, grease, etc.).

5. **What does City staff do, once informed of a bubbling toilet?**
   Once notified of a bubbling toilet, the crew leader explains to the customer what has happened. The crew leader then makes notes and completes paperwork that puts the address on the City's list. In the future, crews will notice that this address was "bubbled" at one time, and, before commencing the cleaning, they will notify the occupant of the possibility of bubbling toilets. In the event the occupant is not present when the cleaning begins, the crews will attempt to open clean-outs and/or lower water pressure to avoid bubbling.

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

It is always a good idea to keep the toilet lid down when not in use, and not install carpets in the bathroom unless they can be easily removed and cleaned. For more information please call the Public Works Maintenance Manager for Utilities at (408) 586-2643.

Sincerely,

City of Milpitas

City of Milpitas: Overflow Emergency Response Plan

Sanitary Sewer Backup Response Packet
First Responder Form

B-3
Side A

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

PERSON COMPLETING THIS FORM: Name: _____ Title: _____	PHONE: DATE: TIME:
TIME STAFF ARRIVED ON-SITE:	
DID CUSTOMER CALL CLEANING CONTRACTOR? ☐ Yes ☐ No If YES, name of contractor:	
RESIDENT NAME: ☐ Owner ☐ Renter	IF RENT, PROPERTY MANAGER(S): OWNER:
STREET ADDRESS: CITY, STATE AND ZIP: PHONE:	STREET ADDRESS: CITY, STATE AND ZIP: PHONE:
Is nearest upstream manhole visibly higher than the drain/fixture that overflowed? ☐ Yes ☐ No	
# OF PEOPLE LIVING AT RESIDENCE:	

Approximate Age of Home:	# of Bathrooms:	# of Rooms Affected:
Approximate Amount of Spill (gallons):	Approximate Time Sewage Has Been Sitting (hrs/days):	

Numbers of Photographs or Videos Taken: ☐ Photographs ☐ Video	What device are photos/video stored on?
Does property have a Property Line Cleanout or BPD?	☐ YES ☐ NO ☐ Unknown
If yes, was the Property Line Cleanout/BPD operational at the time of the overflow?	☐ YES ☐ NO ☐ Unknown
Have there ever been any previous spills at this location?	☐ YES ☐ NO ☐ Unknown
Has the resident had any plumbing work done recently? *If YES, please describe:*	☐ YES ☐ NO

GO TO SIDE B

City of Milpitas: Overflow Emergency Response Plan

Sanitary Sewer Backup Response Packet
First Responder Form

B-3
Side B

SANITARY SEWER LINE BLOCKAGE LOCATION

PLEASE CHECK THE BOXES THAT DESCRIBE YOUR OBSERVATIONS:	
Customer Cleanout Was: ☐ Non-Existent ☐ Full ☐ Empty	Public Cleanout was: ☐ Non-Existent ☐ Full ☐ Empty

On the diagram below, indicate the location of the sewer line and where the problem occurred.

Did sewage go under buildings? ☐ Yes ☐ No ☐ Unsure

Recommended Follow-Up Action(s):

Place completed form in Sewer Backup Envelope and follow routing instructions

City of Milpitas: Overflow Emergency Response Plan

Sanitary Sewer Backup Response Packet

Sanitary Sewer Overflow Report

B-4
Side A

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

SSO Category *(check one)*:

☐ Category 1: Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either (1) Reaches surface water and/or drainage channel tributary to a surface water; OR (2) Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.

☐ Category 2: Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either (1) Does not reach surface water, a drainage channel, or an MS4, OR (2) The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.

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

A. SSO LOCATION		
SSO Location Name:		
Latitude Coordinates*:	Longitude Coordinates:	
Street Name and Number:		
Nearest Cross Street:	City:	Zip Code:
County:	SSO Location Description:	

B. SSO OCCURRING TIME (complete Start Time Determination Form and then complete information below)	
Estimated SSO start date:	Estimated SSO start time:
Date SSO reported to sewer crew:	Time SSO reported to sewer crew:
Date sewer crew arrived:	Time sewer crew arrived:
Who was interviewed to help determine start time?	
Estimated SSO end date:	Estimated SSO end time:

C. SSO DESCRIPTION (Complete Volume Estimation Worksheets and/or refer to Field Guide as needed for estimations.)

SSO Appearance Point (check one or more): ☐ Combined Sewer D.I. (Combined CS Only) ☐ Force Main ☐ Gravity Mainline
☐ Lateral Cleanout (Private) ☐ Lateral Cleanout (Public) ☐ Inside Building or Structure ☐ Manhole ☐ Pump Station
☐ Lower Lateral (Private) ☐ Lower Lateral (Public) ☐ Upper Lateral (Private) ☐ Upper Lateral (Public)
☐ Other Sewer System Structure (specify):

Were there multiple appearance points? ☐ No ☐ Yes, number of appearance points:

Did the SSO reach a drainage channel and/or surface water? ☐ Yes (*Category 1)* ☐No

If the SSO reached a storm sewer, was it fully captured and returned to the Sanitary Sewer? ☐ Yes ☐No (*Category 1)*

Was this spill from a private lateral? ☐ Yes ☐No If YES, name of responsible party:

Final Spill Destination: ☐ Ocean/ocean beach* ☐ Surface waters other than ocean ☐ Drainage channel ☐ Building/structure
☐ Separate Storm drain ☐ Combined storm drain ☐ Paved surface ☐ Unpaved surface ☐ Street/curb/gutter
☐ Other:
*Provide name(s) of affected drainage channels, beach, etc.:

Total Estimated SSO volume *(in gallons – 1,000gal or more = Category 1)*:			gallons
Est. volume that reached a separate storm drain that flows to a surface water body:	gal	Recovered:	gal
Est. volume that reached a drainage channel that flows to a surface water body:	gal	Recovered:	gal
Est. volume discharged directly to a surface water body:	gal	Recovered:	gal
Est. volume discharged to land:	gal	Recovered:	gal

Calc. Methods: ☐Eyeball ☐Photo Comparison ☐Upstream Lat. Connections ☐Area/Volume (include sketch/photo with dimensions)
☐Other (describe):

* If multiple appearance points, use the GPS coordinates for the location of the SSO appearance point closest to the failure point/blockage.

Sanitary Sewer Overflow Response Packet

Sanitary Sewer Overflow Report

B-4
Side B

D. CAUSE OF SSO

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

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

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

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

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

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

E. SSO RESPONSE

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

SSO response completed (date & time):

Visual inspection result of impacted waters (if applicable):

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

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

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

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

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

What major equipment was used in the response?

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

F. NOTES

G. NOTIFICATION DETAILS

CalOES contacted date and time (if applicable):

CalOES Control Number (if applicable): Spoke to:

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

Place completed form in Sewer Backup Envelope and follow routing instructions.

Sanitary Sewer Backup Response Packet

Start Time Determination Form

B-5

SSO Start Date: _____ Location: _____

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

What time was the City notified of the SSO? _____ ☐ AM ☐ PM

Who notified the City? _____

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

Who at the City received the notification? _____

What time did the crew arrive at the site of the SSO? _____ ☐ AM ☐ PM

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

Name	Contact Information	Statement

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

SSO Start Date: _____ SSO Start Time: _____ ☐ AM ☐ PM

SSO End Date: _____ SSO End Time: _____ ☐ AM ☐ PM

SSO Duration: _____ **minutes**

This form completed by:

Name: _____ Signature: _____

Job Title: _____ Date: _____

Sanitary Sewer Backup Response Packet

Volume Estimation: Eyeball Estimation Method

B-6a

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

SSO Date: _____ Location: _____

STEP 1: Position yourself so that you have a vantage point where you can see the entire SSO.

STEP 2: Imagine one or more buckets or barrels of water tipped over. Depending on the size of the SSO, select a bucket or barrel size as a frame of reference. It may be necessary to use more than one bucket/barrel size.

STEP 3: Estimate how many of each size bucket or barrel it would take to make an equivalent spill. Enter those numbers in Column A of the row in the table below that corresponds to the bucket/barrel sizes you are using as a frame of reference.

STEP 4: Multiply the number in Column A by the multiplier in Column B. Enter the result in Column C.

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

STEP 5: Is rainfall a factor in the SSO? ☐Yes ☐No

If yes, what volume of the observed spill volume do you estimate is rainfall? _____ gallons

If yes, describe how you determined the amount of rainfall in the observed spill?

STEP 6: Calculate the estimated SSO volume by subtracting the rainfall from the SSO volume:

_____ gallons (Estimated SSO Volume) − _____ gallons (Rainfall) = _____ gallons (**Total Estimated SSO Volume**)

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

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

This worksheet completed by:

Name: _____ Signature: _____

Job Title: _____ Date: _____

Sanitary Sewer Backup Response Packet

Volume Estimation: Duration and Flow Rate Comparison Method

SSO Date: _____ Location: _____

STEP 1: Compare the SSO to reference images on the following pages (B-6b pages 2 through 4) to estimate flow rate of the current overflow. Describe which reference photo(s) were used and any additional factors that influenced applying the reference photo data to the actual SSO:

Flow Rate Based on Photo Comparison: _____gallons per minute (gpm)

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

SSO Duration: _____minutes

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

_____ gpm	X	_____ minutes	=	_____ gallons
Flow Rate		SSO Duration		Estimated SSO Volume

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

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

By what percentage are you adjusting the estimation? ☐ increase ☐ decrease _____%

Translate the percentage into gallons: _____gallons

STEP 5: Calculate the adjusted SSO volume estimate:

_____ gallons	+ or -	_____ gallons	=	_____ gallons
Estimated SSO Volume		Adjustment		**Estimated SSO volume**

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

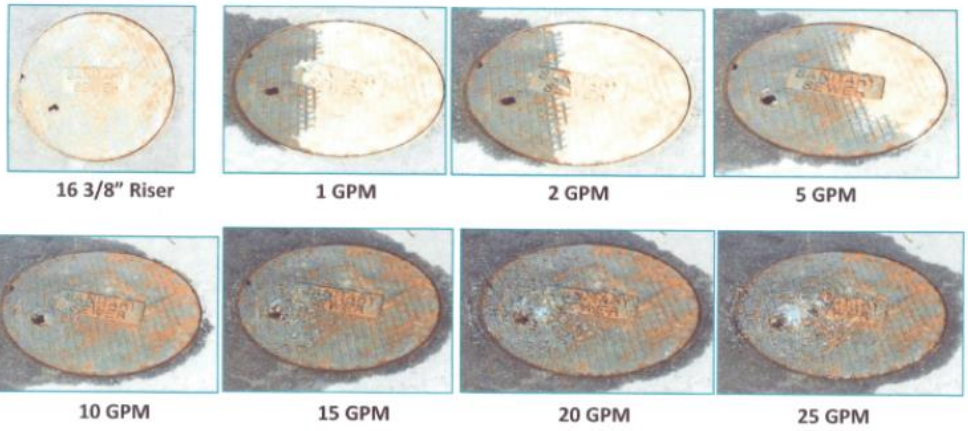
If no, you MUST use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:

Name: _____ Signature: _____

Job Title: _____ Date: _____

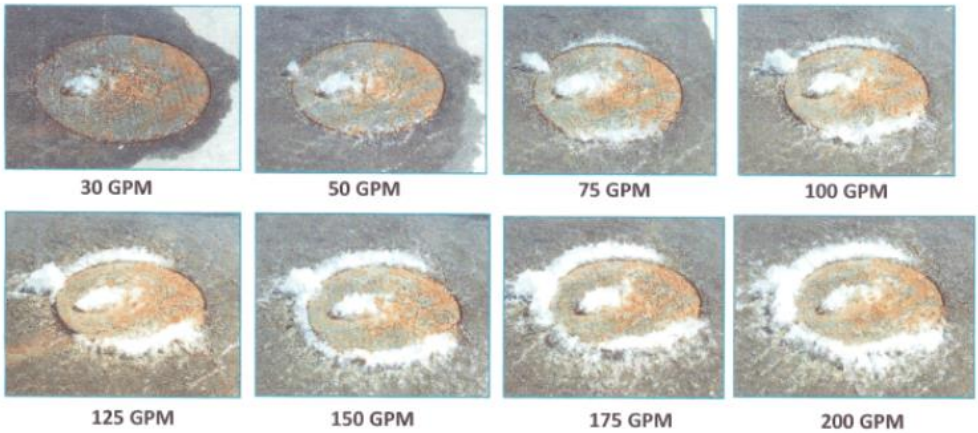
24" Manhole, Page 1 of 2



Instructions: Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:

1) If you are able, take a picture of overflowing manhole/riser.
2) Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.
3) Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.

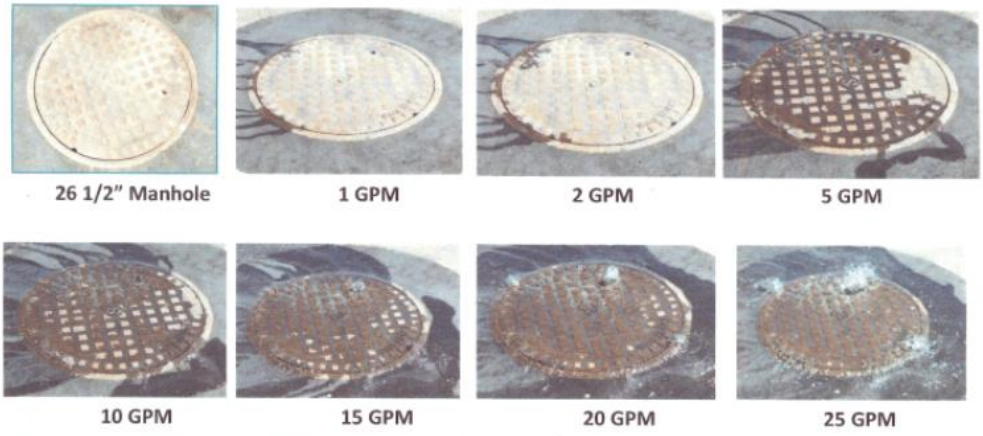
24" Manhole, Page 2 of 2



Instructions: Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:

1) If you are able, take a picture of overflowing manhole/riser.
2) Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.
3) Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.

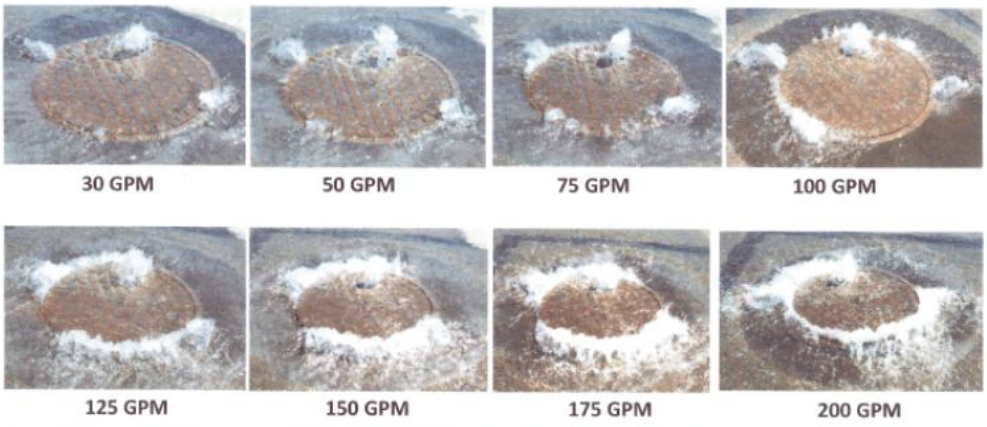
26 1/2" "A" Manhole, Page 1 of 2



Instructions: Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:

1) If you are able, take a picture of overflowing manhole/riser.
2) Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.
3) Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.

26 1/2" "A" Manhole, Page 2 of 2



Instructions: Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:

1) If you are able, take a picture of overflowing manhole/riser.
2) Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.
3) Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.

26 1/2" "B" Manhole, Page 1 of 2


26 1/2" Manhole


1 GPM


2 GPM


5 GPM


10 GPM


15 GPM


20 GPM


25 GPM

Instructions: Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:

1) If you are able, take a picture of overflowing manhole/riser.
2) Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.
3) Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.

26 1/2" "B" Manhole, Page 2 of 2


30 GPM


50 GPM


75 GPM


100 GPM


125 GPM


150 GPM


175 GPM


200 GPM

Instructions: Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:

1) If you are able, take a picture of overflowing manhole/riser.
2) Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.
3) Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.

Sanitary Sewer Backup Response Packet

Volume Estimation: Upstream Lateral Connections Method

B-6c

SSO Date: _____ Location: _____

STEP 1: Determine the number of Equivalent Dwelling Units (EDUs) for this SSO: _____ EDUs
NOTE: A single-family residential home = 1 EDU. For commercial buildings, refer to agency documentation.

STEP 2: This volume estimation method utilizes daily usage data based on flow rate studies of several jurisdictions in California. Column A shows how an average daily of usage of 180 gallons per day is distributed during each 6-hour period. Adjust the table as necessary to accurately represent the actual data.

Complete Column E by entering the number of minutes the SSO was active during each 6-hour time period. Multiply column D times Column E to calculate the gallons spilled during each time period. Add the numbers in Column F together for the Total Estimated SSO Volume per EDU.

	Flow Rate Per EDU				SSO	
	A	**B**	**C**	**D**	**E**	**F**
Time Period	Gallons per Period	Hours per period	A÷B = Gallons per Hour	C÷60 = Gallons per Minute	Minutes SSO was active during period	D × E = Gallons spilled per period
6am-noon	72	6	12	0.20		
noon-6pm	36	6	6	0.10		
6pm-midnight	54	6	9	0.15		
midnight-6am	18	6	3	0.05		
Total Estimated SSO Volume per EDU:						

STEP 3: Multiply the Estimated SSO Volume per EDU from Step 2 by the number of EDUs from Step 1.

_____ gallons (Volume per EDU) X _____ (# of EDUs) = _____ gallons (Estimated SSO Volume)

STEP 4: Adjust SSO volume as necessary considering other factors, such as activity that would cause a fluctuating flow rate (doing laundry, taking showers, etc.). Explain rationale below and indicate adjusted SSO estimate (attach a separate page if necessary):

Estimated SSO Volume: _____ gallons

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

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

This worksheet completed by:

Name: _____ Signature: _____

Job Title: _____ Date: _____

Sanitary Sewer Backup Response Packet

Lateral CCTV Report

B-7

PLEASE COMPLETE AS THOROUGHLY AS POSSIBLE	
PERSON COMPLETING THIS FORM:	DATE: PHONE:
CAMERA TYPE:	LOCATION OF CAMERA ENTRY:
AFFECTED PROPERTY STREET ADDRESS: CITY, STATE AND ZIP: PHONE	LOCATION OF CAMERA STOP: DESCRIBE AREA TV'd: UPSTREAM MANHOLE #:
WEATHER AT TIME OF CCTV WORK:	
PLEASE CHECK ALL THAT WERE DISCOVERED – *Describe Extent & Location Using Camera Entry Point As Reference*: ❒ Broken Lateral – Describe: Depth: ❒ Roots – Severity: ☐Light ☐Moderate ☐Heavy ❒ Grease – Severity: ☐Light ☐Moderate ☐Heavy ❒ Sag – Describe: Depth: ❒ BPD – Describe: Location: ❒ Cleanout – Describe: Location: ❒ Joint/Junction – Describe: Depth ❒ Grade – Describe: ❒ Grit – Severity: ☐Light ☐Moderate ☐Heavy ❒ Other – Describe:	TIME OF OVERFLOW: TIME BLOCKAGE RELIEVED: TIME LATERAL TV'd: DEPTH OF LATERAL: RECOMMENDED FOLLOW UP WORK ACTIONS:
Mark for USA location? ☐Yes ☐No	Lateral Locations Marked in Green Paint? ☐Yes ☐No
SIGNATURE OF EMPLOYEE PERFORMING TV WORK:	DATE

If applicable, place completed form in Sewer Backup Packet and follow routing instructions.

Sanitary Sewer Backup Response Packet
Claims Submittal Checklist

B-8

Public Works Maintenance Manager for Utilities

1. **Complete the following information:**

   Title: _____

   Name: _____

   Phone: _____

   Today's Date: _____

2. **Copy the items listed below and retain originals for internal archiving purposes.**

3. **Place the originals back in the Backup Response Envelope and forward envelope with original forms to the Finance Department:**

   - ☐ **Form B-3: First Responder Form**
   - ☐ **Form B-4: Sanitary Sewer Overflow Report**
   - ☐ **Form B-5: Start Time Determination Form**
   - ☐ **Form B-6: Volume Estimation Forms (a, b and/or c)**
   - ☐ **Form B-7: Lateral CCTV Report**
   - ☐ **Form B-8: Claims Submittal Checklist** *(this form)*
   - ☐ **All photos taken: Check here if digital photographs will be forwarded separately** ☐
   - ☐ **Any other information you feel is important in this claim**

4. **Go to Regulatory Notifications Packet and make all appropriate notifications.**
5. **Complete Form BP-9: Collection System Failure Analysis**

Risk Management Staff

1. **Verify claims packet is complete.**
2. **Notify Sedgwick Claims Services**

   Sedgwick Claims Services
   Attn: ABAG PLAN Claims Team
   180 Grand Ave., Suite 1200
   Oakland, CA 94612

   Tiffany Roduit, Claims Specialist
   Tiffany.Roduit@Sedgwick.com
   (925) 349-3878 office
   (925) 808-5072 cell

Sanitary Sewer Backup Response Packet
Collection System Failure Analysis

B-9
Side A

Incident Report #		Prepared By	
SSO/Backup Information			
Event Date/Time	Address		
Volume Spilled	Volume Recovered		
Cause			
Summary of Historical SSOs/Backups/Service Calls/Other Problems			
Date	Cause	Date Last Cleaned	Crew
Records Reviewed By:		Record Review Date:	
Summary of CCTV Information			
CCTV Inspection Date		Tape Name/Number	
CCTV Tape Reviewed By		CCTV Review Date	
Observations			

Go to Side B

Recommendations					
✓	Type	Specific Actions	Who is Responsible?	Completion Deadline	Who Will Verify Completion?
	No Changes or Repairs Required	n/a	n/a	n/a	n/a
	Repair(s)				
	Construction				
	Capital Improvement(s)				
	Change(s) to Maintenance Procedures				
	Change(s) to Overflow Response Procedures				
	Training				
	Misc.				
Comments/Notes:					
Review Date:					

City of Milpitas CA
Overflow Emergency Response Plan

Customer Service Packet

Contents:

Form	Form Number
Customer Information Letter *(in English, Spanish, Tagalog, Vietnamese, and Chinese)*	CS-1
Claim Form	-2
Sewer Spill Reference Guide	pamphlet

Instructions:

1. Review the Customer Information letter to determine actions that need to be taken immediately.
2. See the Customer Information letter for information about filing a claim.
3. Review the Sewer Spill Reference Guide pamphlet.

If you have any questions contact:

Regarding Sewer Issues:
Public Works Maintenance Manager for Utilities
(408) 586-2643

Regarding Submitting a Claim for Damages:
Risk Management Staff
(408) 586-3001

This packet provided by:

NAME: _____

TITLE: _____

PHONE: _____

Print on 6" x 9" envelope

City of Milpitas: Overflow Emergency Response Plan

Sanitary Sewer Backup Response Packet

Customer Information Regarding Sewer Backup Claims

CS-1
English

Dear Property Owner:

We recognize that sewer back flow incidents can be stressful. The City has prepared this brief set of instructions to help you minimize the impact of the loss by responding promptly to the situation.

The City is not responsible for cleanup charges or damages caused by blockages in the property owner's sewer line or caused by code violations. At this time, the City is investigating the cause of the loss and does not assume liability for damages. However, if our investigation determines the City is responsible for this incident, the costs you incur for reasonable and necessary cleanup will be included in the settlement of your claim. Regardless of whether you or the City is responsible for the loss, it is up to you to arrange for the repair of your property and to present a claim for consideration.

You or the property owner should immediately contact a firm for clean-up of the affected areas. If you do not know of a company to call for service, the following 24-hour emergency restoration companies are available to respond: *

Restoration Company	Location	Contact
Restoration Management	Los Altos Hills	(707) 750-6320
Restoration Management	South Bay	(800) 400-5058
Restoration Management	Milpitas	(707) 750-6320
Service Master	Redwood Town	(650) 299-9080
Service Master	South San Francisco	(415) 584-6100
Service Master	Hayward-Los Altos Hills	(800) 480-8439 or (510) 300-2990
Servpro	Milpitas	(707) 226-2181
Ideal Drying	South San Francisco	(800) 379-6881
Britannia Cal Pacific	South San Francisco	(650) 742-6490
Montgomery Sansom Ltd.	Millbrae	(650) 777-9010
Four Star Cleaning & Restoration	Fremont	(800) 255-3333 or (510) 796-5900

* This list is provided as a resource only. The City does not require or endorse the use of any of these firms. This list is not to be construed as exclusive, comprehensive or limiting in any way. Qualified contractors can be found in the Yellow Pages under "Water Damage Restoration" or "Fire & Water Damage Restoration". However, be sure you hire a firm with experience in sewer backups and enough resources to get the job done quickly.

What you need to do now:

- Contact a restoration company for clean up and removal of affected surfaces.
- Do not attempt to clean the area yourself, let the company you hire handle this.
- Keep people and pets away from the affected area(s).
- Turn off heating/air conditioning systems.
- Turn off any appliances that use water.
- Prevent any material from reaching floor vents to prevent contamination.
- Do not remove items from the area –the company you hire will handle these contents.
- If you had recent plumbing work, contact your plumber or contractor.
- Contact your homeowner's insurance carrier to report a claim.
- File your claim with City Clerk at 455 E. Calaveras Boulevard, Milpitas, CA 95035, (408) 586-3144, as soon as practical. The California Government Code, Sections 900 -960, requires filing a written claim and outlines specific time lines and notice procedures that must be used.
- Call the City's Claims Administrator and provide a number where you can be reached: Association of Bay Area Governments (ABAG) Tiffany Roduit at (925) 349-3878

Important Legal Notice: For your protection, read carefully, obtain a reliable translation, and/or consult your attorney.

Notificación Legal Importante: para su protección, lea cuidadosamente, consiga una traducción confiable o consulte con su abogado.

Importanteng legal na notipikasyon: Para sa iyong proteksyon, basahin na maigi, kumuha ng tagapagsalin, at kumunsulta sa abogado.
Thông Báo Pháp Lý Quan Trọng: Để bảo vệ quý vị, hãy đọc kỹ, nhận bản dịch đáng tin cậy, và/hoặc tham khảo ý kiến luật sư của quý vị.

重要的法律注意事项： 请仔细阅读，聘请可靠的翻译，并/或咨询您的律师，保护您的权益。

Sanitary Sewer Backup Response Packet
Informacion Sobre Reclamos de Estancamiento de los Desagues

CS-1
Spanish

Estimado Propietario:

Reconocemos que los incidentes del estancamiento de los desagües pueden ser estresantes. La Ciudad preparó estas instrucciones breves para ayudarle a minimizar el impacto de la pérdida al responder rápidamente a la situación.

La Ciudad no es responsable por los gastos de limpieza o daños causados por los bloqueos en la línea de desagües en la propiedad o por violaciones a los códigos. Por lo pronto, la Ciudad está investigando la causa de la pérdida y no asume ninguna responsabilidad por los daños. Si nuestra investigación determina que la Ciudad es responsable de este incidente, los gastos que usted incurra para una limpieza necesaria y razonable serán incluidos en el acuerdo de su reclamo. Sin importar si usted o la Ciudad son responsables por la pérdida, es su responsabilidad hacer los arreglos para la limpieza y reparación de la propiedad, y presentar un reclamo para que sea considerado.

Usted o el propietario deberán contactar de inmediato a una empresa para que se realice la limpieza de las áreas afectadas. Si no sabe de ninguna empresa para contactar, las siguientes empresas de restauración con servicio de emergencia las 24 horas están disponibles:

Restoration Company	Location	Contact
Restoration Management	Los Altos Hills	(707) 750-6320
Restoration Management	South Bay	(800) 400-5058
Restoration Management	Milpitas	(707) 750-6320
Service Master	Redwood City	(650) 299-9080
Service Master	South San Francisco	(415) 584-6100
Service Master	Hayward-Los Altos Hills	(800) 480-8439 or (510) 300-2990
Servpro	Milpitas	(707) 226-2181
Ideal Drying	South San Francisco	(800) 379-6881
Britannia Cal Pacific	South San Francisco	(650) 742-6490
Montgomery Sansom Ltd.	Millbrae	(650) 777-9010
Four Star Cleaning & Restoration	Fremont	(800) 255-3333 or (510) 796-5900

* Esta lista se proporciona como un recurso solamente. La Ciudad no requiere que use estas empresas. Esta lista no es para que se interprete como exclusiva, integral o limitante en cualquier forma. Se puede encontrar contratistas calificados para este trabajo en las Páginas Amarillas en la sección "Water Damage Restoration" o "Fire & Damage Restoration". Asegúrese de contratar una empresa con experiencia en estancamientos de desagües y con suficientes recursos para poder realizar el trabajo rápidamente.

Lo que tiene que hacer ahora:

- Contacte a una empresa de restauración para la limpieza y la extracción de superficies afectadas.
- No intente limpiar el área usted mismo, permita que la empresa que contrate se encargue de ello.
- Mantenga a las personas y las mascotas alejadas de las áreas afectadas.
- Apague los sistemas de calefacción o aire acondicionado.
- Apague cualquier aparato que utilice agua.
- Evite que cualquier material llegue a las rejillas del piso para prevenir la contaminación.
- No quite nada en el área afectada, la empresa que contrate se encargará de esto.
- Si recientemente le hicieron trabajos de plomería, comuníquese con el plomero o el contratista.
- Contacte a la compañía de seguros de vivienda para presentar un reclamo.
- Mande su reclamo al City Clerk en 455 E. Calaveras Boulevard, Milpitas, CA 95035, (408) 586-3144, lo más pronto posible. El Código del Gobierno de California, Secciones 900 a 960, requiere que se presente un reclamo por escrito y estipula plazos de tiempo y procedimientos de notificación específicos que se deben utilizar.
- Llame al Administrador de Reclamos de la Ciudad y deje un número donde se le pueda localizar: Asociación Gubernamental del Área de la Bahía (Association of Bay Area Governments, ABAG) Tiffany Roduit al (925) 349-3878

Notificación Legal Importante: para su protección, lea cuidadosamente, consiga una traducción confiable o consulte con su abogado.

Sanitary Sewer Backup Response Packet
Impormasyon para sa mga May-ari ng Ari-arian

CS-1
Tagalog

Para sa May-Ari ng Ari-Arian:

Napag alaman namin na ang problema sa sewer back flow ay isang nakababahalang na problema. Ang Lungsod ay naghanda ng isang set ng mga tagubili upang matulungan kayo na mapapababa ang magiging masamang epekto kung kaya kayo ay susunod sa mga alituntunin.

Ang Lungsod ay hindi responsibilidad ang paglilinis sa naapektuhang lugar o sa mga nasira dahil sa pagkakabara sa sewer line na maaaring maging bayolasyon ng mayari. Sa oras na ito, ang Lungsod ay sinisiyasat ang dahilan ng mga nasira at hindi ipinapalagay na may pananagutan ang lungsod para sa mga pinsala. Ngunit, Kung mapapatunayan na may pananagutan ang Lungsod sa insidente, Ang mga nagastos sa naaayon na mga presyo para sa pagpapalinis ay maaaring maisettle upang maibalik ang nagastos. Hindi alintana kung ikaw o ang Lungsod ang responsable para sa mga nasira, ito ay nasa iyo na maghanda para sa pagkumpuni ng iyong ari-arian at magpakita ng mga claim para sa pagsasaalang-alang.

Ikaw at ang mayari ng ariarian ay dapat na magugnayan sa lalong madaling panahon upang malinis ang mga lugar na naapektuhan. Kung hindi mo alam kung sino ang maaaring kontakin para sa serbisyo, ang 24 oras na Emergency Restoration Companies ay handang sumagot anumang oras.*

Restoration Company	Location	Contact
Restoration Management	Los Altos Hills	(707) 750-6320
Restoration Management	South Bay	(800) 400-5058
Restoration Management	Milpitas	(707) 750-6320
Service Master	Redwood City	(650) 299-9080
Service Master	South San Francisco	(415) 584-6100
Service Master	Hayward-Los Altos Hills	(800) 480-8439 or (510) 300-2990
Servpro	Milpitas	(707) 226-2181
Ideal Drying	South San Francisco	(800) 379-6881
Britannia Cal Pacific	South San Francisco	(650) 742-6490
Montgomery Sansom Ltd.	Millbrae	(650) 777-9010
Four Star Cleaning & Restoration	Fremont	(800) 255-3333 or (510) 796-5900

* Ang listahan ay nagbibigay impormasyon lamang. Ang Lungsod ay walang ugnayan sa anumang kumpanya. Ang listahang ito ay hindi dapat ipakahulugan na eksklusibo, kumprehensibo o paglilimita sa anumang paraan. Mga kwalipikadong kontratista ay matatagpuan sa Yellow Pages sa ilalim ng "Water Damage Restoration" o "Fire & Water Damage". Gayunpaman, Siguruhin na makipagugnayan sa mga kumpanya na may karanasan sa ganitong klaseng insidente kagaya ng sewer backup at magagawa agad ang trabaho ng mabilisan.

Mga Dapat Tandaan:

- Kontakin ang Restoration Company upang malinis at matanggal ang mga dapat tangglin sa naapektuhan na lugar.
- Huwag linisin ng ikaw lamang hayaan na ang tinawagan na kumpanya ang gumawa nito.
- Huwag hayaan may makalapit na tao o alagang hayop sa naapektuhan na lugar.
- Patayin ang air con/heater.
- Patayin ang anumang gumaganang gamit sa bahay.
- Huwag hayaan na may gamit na malapit sa floor vents upang maiwasan ang kontaminasyon.
- Huwag tanggalin ang mga gamit na nasa naapektuhan na lugar hayaan ang propesyonal ang gumawa nito.
- Kung nagpagawa ng mga tubo sa lababo nitong nakaraan lang maaaring kontakin ito.
- Kontakin ang insurance ng homeowner upang maclaim ang insurance.
- Ifile ang clain sa Lungsod sa address na ito City Clerk at 455 E. Calaveras Boulevard, Milpitas, CA 95035, (408) 586-3144 Ang California Government Code, Sections 900-960, ay nagsasaaad na kinakailangan ng kasulatan para sa claim at mga listahan ng mga ginawa kasama na ang oras at mga kinabit o pinalitan.
- Tawagan ang tagapamahala ng City Claim at magbigay ng numero upang matawagan.
  Association of Bay Area Governments (ABAG) Tiffany Roduit at (925) 349-3878

Importanteng legal na notipikasyon: Para sa iyong proteksyon, basahin na maigi, kumuha ng tagapagsalin, at kumunsulta sa abogado.

City of Milpitas: Overflow Emergency Response Plan

Sanitary Sewer Backup Response Packet

Thông tin cho Chủ sở hữu đất

CS-1
Vietnamese

Kính Gửi Chủ Đất:

Chúng tôi biết rằng các sự cố nước thải chảy ngược có thể gây khó chịu. Thành Phố đã lập một số hướng dẫn ngắn gọn này để giúp quý vị giảm thiểu tác động tổn thất bằng cách phản ứng nhanh chóng với tình huống.

Thành Phố không có trách nhiệm thanh toán chi phí dọn dẹp hoặc thiệt hại gây ra bởi tắc nghẽn trong đường ống nước thải của chủ đất hoặc gây ra bởi các trường hợp vi phạm quy định. Tại thời điểm này, Thành Phố đang điều tra nguyên nhân tổn thất và không chịu trách nhiệm pháp lý đối với thiệt hại. Tuy nhiên, nếu điều tra của chúng tôi xác định rằng Thành Phố chịu trách nhiệm đối với sự cố này, các chi phí mà quý vị phải chịu cho công tác dọn dẹp hợp lý và cần thiết sẽ được đưa vào giải quyết khiếu kiện của quý vị. Bất kể quý vị hay Thành Phố chịu trách nhiệm đối với tổn thất, quý vị có quyền bố trí sửa chữa nhà mình và nộp khiếu kiện để được xem xét.

Quý vị hoặc chủ đất nên ngay lập tức liên lạc với một công ty để dọn dẹp các khu vực bị ảnh hưởng. Nếu quý vị không biết phải gọi cho công ty nào để được phục vụ, các công ty phục hồi khẩn cấp 24 giờ sau đây có thể phản hồi: *

Restoration Company	Location	Contact
Restoration Management	Los Altos Hills	(707) 750-6320
Restoration Management	South Bay	(800) 400-5058
Restoration Management	Milpitas	(707) 750-6320
Service Master	Redwood City	(650) 299-9080
Service Master	South San Francisco	(415) 584-6100
Service Master	Hayward-Los Altos Hills	(800) 480-8439 or (510) 300-2990
Servpro	Milpitas	(707) 226-2181
Ideal Drying	South San Francisco	(800) 379-6881
Britannia Cal Pacific	South San Francisco	(650) 742-6490
Montgomery Sansom Ltd.	Millbrae	(650) 777-9010
Four Star Cleaning & Restoration	Fremont	(800) 255-3333 or (510) 796-5900

* Danh sách này chỉ nhằm cung cấp thông tin. Thành Phố không yêu cầu hay ủng hộ việc sử dụng bất kỳ công ty nào trong số này. Danh sách này không nhằm được diễn giải là bao hàm tất cả, toàn diện hay hạn chế dưới bất kỳ hình thức nào. Có thể tìm thấy các nhà thầu có năng lực trong các Trang Vàng ở mục "Water Damage Restoration" hoặc "Fire & Water Damage Restoration". Tuy nhiên, hãy đảm bảo quý vị thuê một công ty có kinh nghiệm về trào ngược nước thải và có đủ nguồn lực để thực hiện công việc một cách nhanh chóng.

Lúc này quý vị phải làm gì:

- Liên lạc với một công ty phục hồi để tiến hành dọn dẹp và loại bỏ các bề mặt bị ảnh hưởng.
- Không tìm cách tự vệ sinh khu vực đó, hãy để công ty quý vị thuê xử lý vấn đề này.
- Đảm bảo con người và vật nuôi cách xa (các) khu vực bị ảnh hưởng.
- Tắt các hệ thống sưởi/điều hòa không khí.
- Tắt bất kỳ thiết bị nào có sử dụng nước.
- Ngăn không cho bất kỳ chất gì chạm đến các lỗ thông trên sàn để phòng ngừa nhiễm bẩn.
- Không mang đồ đạc ra khỏi khu vực – công ty quý vị thuê sẽ xử lý những thứ này.
- Nếu quý vị gần đây có đi đường ống nước, hãy liên lạc với thợ sửa ống nước hoặc nhà thầu.
- Liên lạc với công ty bảo hiểm nhà ở của quý vị để báo cáo yêu cầu bồi thường bảo hiểm.
- Nộp yêu cầu của quý vị cho Thư Ký Thành Phố tại địa chỉ 455 E. Calaveras Boulevard, Milpitas, CA 95035, (408) 586-3144, càng sớm càng tốt. Bộ Luật Chính Phủ California, các Mục 900 -960, yêu cầu nộp khiếu kiện bằng văn bản và mô tả thời hạn cụ thể và các thủ tục thông báo phải được sử dụng.
- Hãy gọi cho Người Quản Lý Khiếu Kiện của Thành Phố và cung cấp số điện thoại để có thể liên lạc với quý vị: Association of Bay Area Governments (ABAG) Tiffany Roduit theo số (925) 349-3878

Thông Báo Pháp Lý Quan Trọng: Để bảo vệ quý vị, hãy đọc kỹ, nhận bản dịch đáng tin cậy, và/hoặc tham khảo ý kiến luật sư của quý vị.

City of Milpitas: Overflow Emergency Response Plan	CS-1 Chinese
Sanitary Sewer Backup Response Packet 对于业主信息	

尊敬的业主：

我们明白污水回流问题很棘手。市政府已制定了此简短指导，以迅速解决目前的问题，帮助您将损失降低到最小。

市政府对因业主下水道堵塞或违规情况而造成的清理费用或损失概不负责。市政府正在调查造成损失的原因且不对损失承担任何责任。然而，如果我们的调查结果显示市政府应对此次事故负责，那么我们将在理赔时列入您合理必须进行的清理所产生的费用。无论哪方承担损失费用，你要自己决定是否对您的房屋进行维修并提交索赔申请。

您或业主应立即联系清理公司处理受污区域。如果您不知道任何提供此类服务的公司，那么您可联系下方列出的紧急修复公司，这些公司提供 24 小时服务：

Restoration Company	Location	Contact
Restoration Management	Los Altos Hills	(707) 750-6320
Restoration Management	South Bay	(800) 400-5058
Restoration Management	Milpitas	(707) 750-6320
Service Master	Redwood City	(650) 299-9080
Service Master	South San Francisco	(415) 584-6100
Service Master	Hayward-Los Altos Hills	(800) 480-8439 or (510) 300-2990
Servpro	Milpitas	(707) 226-2181
Ideal Drying	South San Francisco	(800) 379-6881
Britannia Cal Pacific	South San Francisco	(650) 742-6490
Montgomery Sansom Ltd.	Millbrae	(650) 777-9010
Four Star Cleaning & Restoration	Fremont	(800) 255-3333 or (510) 796-5900

* 此名单仅作参考之用。市政府不要求或指定雇用其中任何公司。此名单绝不具有唯一性、完整性或限制性。您可在黄页的"水管维修"或"火灾与水灾修复"栏下找到合格的承包商。但是，请确保您雇用的公司具有处理下水道回水的经验以及具备足够的资源迅速解决问题。

您现在需要做的事：

- 联系一家维修公司，清理并清除受污表面区域的污物。
- 请勿自行清理受污区域，务必请专业公司进行处理。
- 请让人和宠物远离受污区域。
- 关闭暖气/冷气系统。
- 关闭一切用水电器。
- 防止任何物体靠近地板通风口，预防污染。
- 请勿清除受污区域的物品，清理公司将为您处理这些问题。
- 如果您近期进行过管道工程，请联系您的水管工或承包商。
- 请联系您的房主保险公司，申请索赔。
- 尽快向市政书记处提交索赔申请，地址：455 E. Calaveras Boulevard, Milpitas, CA 95035；电话：(408) 586-3144。加利福尼亚政府法第 900-960 条规定应提交书面申请，并列明了必须遵守的时间限制以及通知程序。
- 请致电市政索赔行政人员，并留下可联系到您的电话号码： 海湾区政府协会 (ABAG)，Tiffany Roduit，电话：(925) 349-3878

重要的法律注意事项：请仔细阅读，聘请可靠的翻译，并/或咨询您的律师，保护您的权益。

CLAIM AGAINST THE CITY OF MILPITAS

CS-2

Complete the following information, attaching additional sheets and receipts, as necessary. Return the signed original form to:	**City of Milpitas** **Attn: City Clerk** **455 E. Calaveras Blvd.** **Milpitas, CA 95035**	*For office use only*

Claimant's Name: (*please print*)		
Claimant's Address:		
Home Phone #:		**Work Phone #:**
Mobile Phone #:		**Amount of Claim: $**

Address to which notices are to be sent, if different than above (*please print*):

Mailing Address:		
Date of Incident:	**Time of Incident:**	**Location of Incident:**

Description of the incident or accident, including your reason for believing that the City is liable for your damages:
(If you need more space, you may include additional sheet with this form)

Description of all damages which you believe you have incurred as a result of the incident:
(If you need more space, you may include additional sheets with this form)

Name(s) of any City employee(s) causing the damage(s) you are claiming:

Dollar amount of all damages you are claiming (*please attach all bills and/or estimates that are available):*

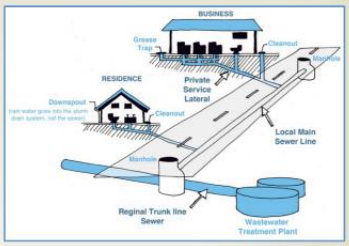
If this is a claim for indemnity, on what date were you served with the underlying lawsuit?

SIGNATURE OF CLAIMANT: *X.* _____		**Date:**

NOTE: Claims must be filed not later than six months after the incident, per California Government Code §911.2 Every person who, with intent to defraud, presents any false or fraudulent claim may be punished by imprisonment or fine or both.

How a Sewer System Works

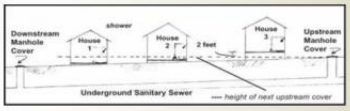
A property owner's sewer pipes are called ***service laterals*** and are connected to larger local main and regional trunk lines.
Service laterals run from the connection at the home to the connection with the public sewer. These laterals are the responsibility of the property owner and must be maintained by the property owner.



Is my home required to have a backflow prevention device?

Section 710.1 of the Uniform Plumbing Code (U.P.C.) states: *"Drainage piping serving fixtures which have flood level rims located below the elevation of the next upstream manhole cover or private sewer serving such drainage piping* ***shall*** *be protected from backflow of sewage by installing an approved type of backwater valve."* The intent of Section 710.1 is to protect the building interior from mainline sewer overflows or surcharges.

Additionally, U.P.C. 710.6 states: *"Backwater valves* ***shall*** *be located where they will be accessible for inspection and repair at all times and, unless continuously exposed, shall be enclosed in a masonry pit fitted with an adequately sized removable cover."*



If you have a sewage spill from your private sewer line that impacts storm drains, waterways or public property, contact:

City of Milpitas
(408) 586-2600

Santa Clara County Environmental Health
(408) 918-3400

California Health and Safety Code, Sections 5410-5416 requires:

- No person shall discharge raw or treated sewage or other waste in a manner that results in contamination, pollution, or a nuisance.
- Any person who causes or permits a sewage discharge to any state waters:
  - Must immediately notify the local health agency of the discharge.
  - Shall reimburse the local health agency for services that protect the public's health and safety.
  - Who fails to provide the required notice to the local health agency is guilty of a misdemeanor and shall be punished by a fine (between $500–$1,000) and/or imprisonment for less than one year.

San Francisco Regional Water Quality Control Board
(510) 622-2300
Requires the prevention, mitigation, response to, and reporting of sewage spills.

California Governor's Office of Emergency Services (CalOES)
(800) 852-7550
California Water Code, Article 4, Chapter 4, Sections 13268-13271 & California Code of Regulations, Title 23, Division 3, Chapter 9.2, Article 2, Sections 2250-2260 require:

- Any person who causes or permits sewage in excess of 1,000 gallons to be discharged to state waters shall immediately notify the Office of Emergency Services.
- Any person who fails to provide the notice required by this section is guilty of a misdemeanor and shall be punished by a fine (less than $20,000) and/or imprisonment for not more than one year.

Sewer Spill Reference Guide

Your Responsibilities as a Private Property Owner

Provided to you by:

City of Milpitas

455 E. Calaveras Boulevard
Milpitas, CA 95035

(408) 586-2600
www.ci.milpitas.ca.gov

How do sewage spills happen?

Sewage spills occur when the wastewater in underground pipes overflows through a manhole, cleanout, or broken pipe. Most spills are relatively small and can be stopped and cleaned up quickly, but left unattended they can cause health hazards, damage to homes and businesses, and threaten the environment, local waterways, and beaches.

CAUTION!

When trying to locate a sewer problem, never open manholes or other public sewer structures. Only our crews are allowed to open & inspect these structures.

Common causes of sewage spills

- Grease build-up
- Tree roots
- Broken/cracked pipes
- Missing or broken cleanout caps
- Undersized sewers
- Groundwater/rainwater entering the sewer system through pipe defects and illegal connections

Prevent most sewage backups with a Backflow Prevention Device

This type of device can help prevent sewage backups into homes and businesses. If you don't already have a Backflow Prevention Device, contact a professional plumber or contractor to install one as soon as possible.

Protect the environment!

If you let sewage from your property discharge to a gutter or storm drain, you may be subject to penalties and/or out-of-pocket costs for clean-up and enforcement efforts. A property owner may be charged for costs incurred by agencies responding to spills from private properties.

What to look for:

Sewage spills can be a very noticeable gushing of water from a manhole or a slow water leak that may take time to be noticed. Don't dismiss unaccounted-for wet areas. Look for:

- Drain backups inside the building.
- Wet ground and/or water leaking around manhole lids onto your street.
- Leaking water from cleanouts or outside drains
- Unusual odorous wet areas: sidewalks, external walls, ground/landscape around a building.

The following are indicators of a possible obstruction in your sewer line:

- Water comes up in floor drains, showers or toilets.
- Toilets, showers or floor drains below ground level drain very slowly.

What to do if there is a spill:

Immediately notify the City of Milpitas. Our crews locate the blockage and determine if it is in the public sewer; if it is the crew removes the blockage and arranges for cleanup. If the backup is in your private internal plumbing or in the private service laterals, you are required to immediately:

- Control and minimize the spill by shutting off or not using the water
- Keep sewage out of the storm drain system using sandbags, dirt and/or plastic sheeting
- Call a plumbing professional to clear blockages and make repairs as needed. Look in the yellow pages under "Plumbing Drain & Sewer Cleaning" or "Sewer Contractors."
- Always notify your sewer/public works department or public sewer district of sewage spills.

Spill cleanup inside the home:

For large clean ups, a professional cleaning firm should be contacted to clean up impacted areas, you can locate local firms by looking in the Yellow Pages under "Water Damage" or "Fire Damage." If you hire a contractor, it is recommended to get estimates from more than one company. Sometimes, homeowner's insurance will pay for the necessary cleaning due to sewer backups. Not all policies have this coverage, so check with your agent.

If you decide to clean up a small spill inside your home, protect yourself from contamination by observing the following safety measures. Those persons whose resistance to infection is compromised should not attempt this type of clean up.

Other Tips:

- Keep children and pets out of the affected area until cleanup has been completed.
- Turn off heating/air conditioning systems
- Wear rubber boots, rubber gloves, and goggles during cleanup of the affected area.
- Discard items that cannot be washed and disinfected (such as: mattresses, rugs, cosmetics, baby toys, etc.)
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.
- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks and other plumbing fixtures) with hot water and laundry or dish detergent.
- Help the drying process with fans, air conditioning units, and dehumidifiers.
- After completing cleanup, wash your hands with soap and water. Use water that has been boiled for 1 minute (allow the water to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.
- Seek immediate attention if you become injured or ill.

Spill cleanup outside the home:

- Keep children and pets out of the affected area until cleanup has been completed.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Clean up sewage solids (fecal material) and place in properly functioning toilet or double bag and place in garbage container.
- On hard surfaces areas such as asphalt or concrete, it is safe to use a 2% bleach solutions, or ½ cup of bleach to 5 gallons of water, but don't allow it to reach a storm drain as the bleach can harm the environment.
- After cleanup, wash hands with soap and water. Use water that has been boiled for 1 minute (allow to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.
- Seek immediate attention if you become injured/ill.

CITY OF MILPITAS
PUBLIC WORKS DEPARTMENT
(408) 586-2600

Milpitas Municipal Code, Title VIII, Chapter 2, Article 13, adopted by the City Council for the City of Milpitas on October 7, 1997, provides that the user shall be responsible for clearing all stoppages and maintaining flow in the side sewer consisting of the house lateral and house sewer, in accordance with the following provisions:

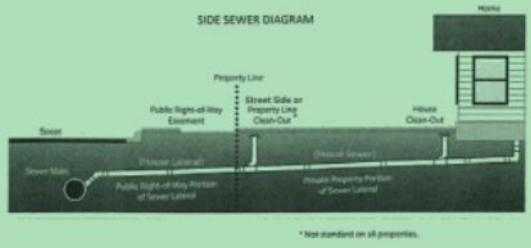
A. Stoppages or other maintenance and repairs required in the house sewer shall be the responsibility of the user.

B. The user shall be responsible for cleaning stoppages in the entire length of the house lateral. If the stoppage cannot be removed by the user or plumber hired by the user, by rodding or other routine cleaning methods, the City will attempt to clear the stoppage through the street cleanout, if one exists. If a street cleanout does not exist, the user shall be responsible for installing one. If the stoppage is found to be caused by grease, rags, or other foreign matter contributed by the user, or if in fact it is found that no stoppage exists, the user shall pay the City costs incurred. If more than one User is served by a single side sewer, the cost will be divided equally among the Users. If the stoppage is found to be caused by a broken pipe or other structural failure, necessary repairs will be made by the City at no charge to the user.

☐ The City's sewer main line in the street is clear of obstructions. It appears that the blockage is located on the property owner's side sewer, which is located from the house to the sewer main. It is the property owner's responsibility to clear this line. Please contact a licensed plumber to conduct the necessary cleaning of the side sewer.

☐ A street cleanout is required to be installed by a licensed plumber, in accordance with the City of Milpitas Municipal Code. The cleanout shall be installed per City of Milpitas Design Standards. A building permit is required for this work and can be obtained by contacting the City's Building Department at City Hall. You may contact the Building hotline at (408) 586-3240 for information.

☐ There was a blockage in the City's sewer main line. City staff has cleared the blockage in the sewer main.



Appendix C

SANITARY SEWER OVERFLOW RESPONSE PACKET

City of Milpitas: Overflow Emergency Response Plan

Sanitary Sewer Overflow Response Packet

Table of Contents

Form	Form Number
Instructions and Chain of Custody	envelope label
Overflow Response Flowchart	C-1
Sanitary Sewer Overflow Report	-2
Start Time Determination Form	-3
Volume Estimation Forms	-4a, -4b, -4c
Lateral CCTV Report	-5
Collection System Failure Analysis Report	-6
Regulatory Notifications Packet	
Instructions	envelope
Regulatory Reporting Guide	A-1
Category 1 SSO Reporting Checklist	-2a
Category 2 & 3 SSO Reporting Checklist	-2b
RWQCB Notification Fax	-3
Door Hanger	
Public Posting Sign	
Sewer Spill Reference Guide	pamphlet

In the event of a **Sanitary Sewer Overflow**
READ THIS FIRST

☐ **If this is a Category 1 SSO greater than or equal to 1,000 gallons, IMMEDIATELY contact the Public Works Maintenance Manager for Utilities:**

- Office: (408) 586-2643
- Cell: (408) 690-3617

(Public Works Maintenance Manager for Utilities: Contact CalOES to make 2-hour notification)

☐ **Check here if you believe that fats, roots, oils and/grease (FROG) caused or contributed to the SSO.**

❑ ☐ **Media requests must be directed to the Public Works Director or their designee.**

Instructions

Maintenance/Standby Crew:

- ❑ Follow the instructions on the Sewer Overflow Response Flowchart (C-1).
- ❑ Refer to the Field Guide as necessary.
- ❑ Place completed forms, camera (if applicable), and any additional notes/documentation in this envelope.
- ❑ Complete the Chain of Custody record (right) and forward this packet to the Public Works Maintenance Manager for Utilities.

Print Name: _____

Initial: _____

Date: _____

Time: _____

Public Works Maintenance Manager for Utilities:

- ❑ Review the enclosed forms.
- ❑ Complete the Regulatory Notifications Packet.
- ❑ Place completed forms, camera (if applicable), and any additional notes/documentation in this envelope.
- ❑ Complete the Chain of Custody Record (right) and file this completed Sewer Overflow Packet in accordance with City policy.
- ❑ Debrief using the Collection System Failure Analysis Form.

Print Name: _____

Initial: _____

Date: _____

Time: _____

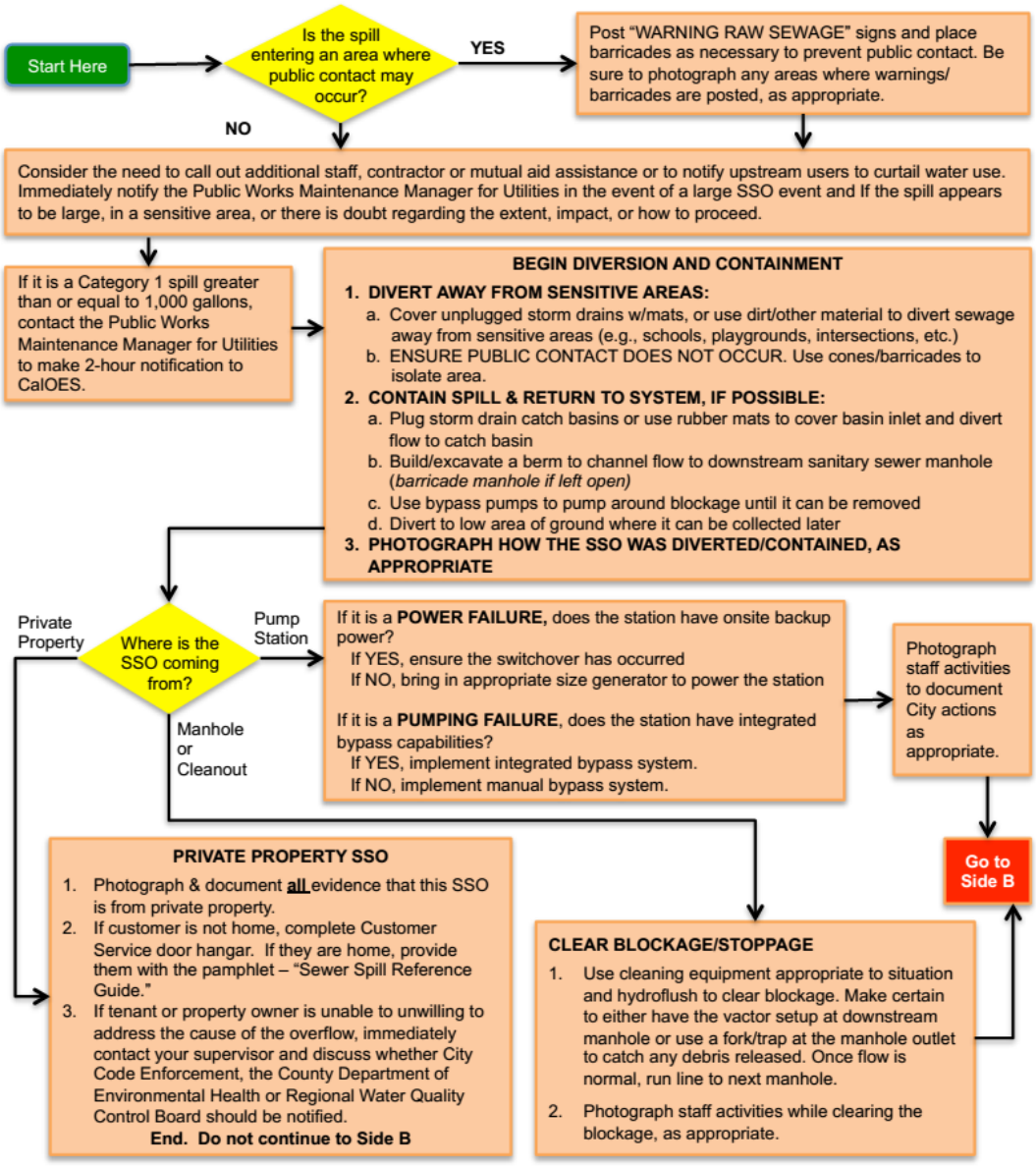
City of Milpitas Overflow Emergency Response Plan: Sanitary Sewer Overflow Packet

City of Milpitas: Overflow Emergency Response Plan

Sanitary Sewer Overflow Response Packet

Overflow Response Flowchart

C-1
Side A



MEDIA AND PUBLIC RELATIONS GUIDELINES:

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

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

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

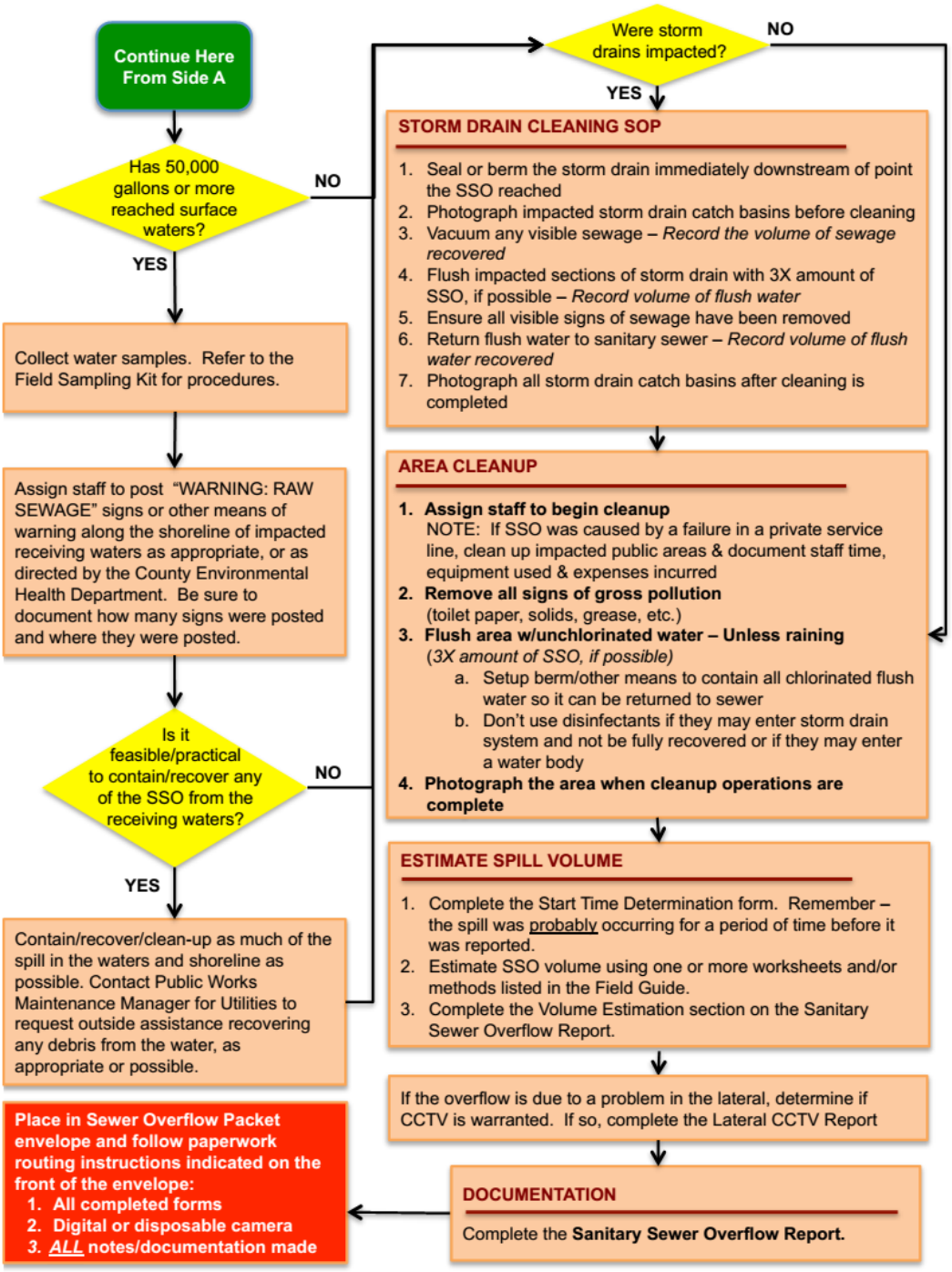
In most cases, refer media requests to the Public Works Director or designee as indicated on the front of the Sewer Overflow Packet envelope.

City of Milpitas: Overflow Emergency Response Plan

Sanitary Sewer Overflow Response Packet

Overflow Response Flowchart

C-1
Side B



City of Milpitas: Overflow Emergency Response Plan

Sanitary Sewer Overflow Response Packet

Sanitary Sewer Overflow Report

C-2
Side A

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

SSO Category *(check one)*:

☐ Category 1: Discharge of untreated or partially treated wastewater of any volume resulting from a sanitary sewer system failure or flow condition that either (1) Reaches surface water and/or drainage channel tributary to a surface water; OR (2) Reached a Municipal Separate Storm Sewer System (MS4) and was not fully captured and returned to the sanitary sewer system or otherwise captured and disposed of properly.

☐ Category 2: Discharge of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from a sanitary sewer system failure or flow condition that either (1) Does not reach surface water, a drainage channel, or an MS4, OR (2) The entire SSO discharged to the storm drain system was fully recovered and disposed of properly.

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

A. SSO LOCATION		
SSO Location Name:		
Latitude Coordinates*:	Longitude Coordinates:	
Street Name and Number:		
Nearest Cross Street:	City:	Zip Code:
County:	SSO Location Description:	

B. SSO OCCURRING TIME (complete Start Time Determination Form and then complete information below)	
Estimated SSO start date:	Estimated SSO start time:
Date SSO reported to sewer crew:	Time SSO reported to sewer crew:
Date sewer crew arrived:	Time sewer crew arrived:
Who was interviewed to help determine start time?	
Estimated SSO end date:	Estimated SSO end time:

C. SSO DESCRIPTION (Complete Volume Estimation Worksheets and/or refer to Field Guide as needed for estimations.)

SSO Appearance Point (check one or more): ☐ Combined Sewer D.I. (Combined CS Only) ☐ Force Main ☐ Gravity Mainline ☐ Lateral Cleanout (Private) ☐ Lateral Cleanout (Public) ☐ Inside Building or Structure ☐ Manhole ☐ Pump Station ☐ Lower Lateral (Private) ☐ Lower Lateral (Public) ☐ Upper Lateral (Private) ☐ Upper Lateral (Public) ☐ Other Sewer System Structure (specify):

Were there multiple appearance points? ☐ No ☐ Yes, number of appearance points:

Did the SSO reach a drainage channel and/or surface water? ☐ Yes (*Category 1)* ☐No

If the SSO reached a storm sewer, was it fully captured and returned to the Sanitary Sewer? ☐ Yes ☐No (*Category 1)*

Was this spill from a private lateral? ☐ Yes ☐No If YES, name of responsible party:

Final Spill Destination: ☐ Ocean/ocean beach* ☐ Surface waters other than ocean ☐ Drainage channel ☐ Building/structure ☐ Separate Storm drain ☐ Combined storm drain ☐ Paved surface ☐ Unpaved surface ☐ Street/curb/gutter ☐ Other:
*Provide name(s) of affected drainage channels, beach, etc.:

Total Estimated SSO volume *(in gallons – 1,000gal or more = Category 1)*: gallons

Est. volume that reached a separate storm drain that flows to a surface water body:	gal	Recovered:	gal
Est. volume that reached a drainage channel that flows to a surface water body:	gal	Recovered:	gal
Est. volume discharged directly to a surface water body:	gal	Recovered:	gal
Est. volume discharged to land:	gal	Recovered:	gal

Calc. Methods: ☐Eyeball ☐Photo Comparison ☐Upstream Lat. Connections ☐Area/Volume (include sketch/photo with dimensions) ☐Other (describe):

* If multiple appearance points, use the GPS coordinates for the location of the SSO appearance point closest to the failure point/blockage.

City of Milpitas: Overflow Emergency Response Plan

Sanitary Sewer Overflow Response Packet

Sanitary Sewer Overflow Report

C-2
Side B

D. CAUSE OF SSO

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

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

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

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

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

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

E. SSO RESPONSE

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

SSO response completed (date & time):

Visual inspection result of impacted waters (if applicable):

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

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

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

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

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

What major equipment was used in the response?

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

F. NOTES

G. NOTIFICATION DETAILS

CalOES contacted date and time (if applicable):

CalOES Control Number (if applicable): Spoke to:

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

Place completed form in Sewer Overflow Envelope and follow routing instructions.

Sanitary Sewer Overflow Response Packet

Start Time Determination Form

C-3

SSO Start Date: _____ Location: _____

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

What time was the City notified of the SSO? _____ ☐ AM ☐ PM

Who notified the City? _____

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

Who at the City received the notification? _____

What time did the crew arrive at the site of the SSO? _____ ☐ AM ☐ PM

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

Name	Contact Information	Statement

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

SSO Start Date: _____ SSO Start Time: _____ ☐ AM ☐ PM

SSO End Date: _____ SSO End Time: _____ ☐ AM ☐ PM

SSO Duration: _____ **minutes**

This form completed by:

Name: _____ Signature: _____

Job Title: _____ Date: _____

Sanitary Sewer Overflow Response Packet

Volume Estimation: Eyeball Estimation Method

C-4a

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

SSO Date: _____ Location: _____

STEP 1: Position yourself so that you have a vantage point where you can see the entire SSO.

STEP 2: Imagine one or more buckets or barrels of water tipped over. Depending on the size of the SSO, select a bucket or barrel size as a frame of reference. It may be necessary to use more than one bucket/barrel size.

STEP 3: Estimate how many of each size bucket or barrel it would take to make an equivalent spill. Enter those numbers in Column A of the row in the table below that corresponds to the bucket/barrel sizes you are using as a frame of reference.

STEP 4: Multiply the number in Column A by the multiplier in Column B. Enter the result in Column C.

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

STEP 5: Is rainfall a factor in the SSO? ☐Yes ☐No

If yes, what volume of the observed spill volume do you estimate is rainfall? _____ gallons

If yes, describe how you determined the amount of rainfall in the observed spill?

STEP 6: Calculate the estimated SSO volume by subtracting the rainfall from the SSO volume:

_____ gallons (Estimated SSO Volume) – _____ gallons (Rainfall) = _____ gallons (**Total Estimated SSO Volume**)

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

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

This worksheet completed by:

Name: _____ Signature: _____

Job Title: _____ Date: _____

Sanitary Sewer Overflow Response Packet

Volume Estimation: Duration and Flow Rate Comparison Method

SSO Date: _____ Location: _____

STEP 1: Compare the SSO to reference images on the following pages (C-4b pages 2 through 4) to estimate flow rate of the current overflow. Describe which reference photo(s) were used and any additional factors that influenced applying the reference photo data to the actual SSO:

Flow Rate Based on Photo Comparison: _____gallons per minute (gpm)

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

SSO Duration: _____minutes

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

_____gpm	X	_____minutes	=	_____gallons
Flow Rate		SSO Duration		Estimated SSO Volume

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

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

By what percentage are you adjusting the estimation? ☐ increase ☐ decrease _____%

Translate the percentage into gallons: _____gallons

STEP 5: Calculate the adjusted SSO volume estimate:

_____gallons	+ or -	_____gallons	=	_____gallons
Estimated SSO Volume		Adjustment		**Estimated SSO volume**

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

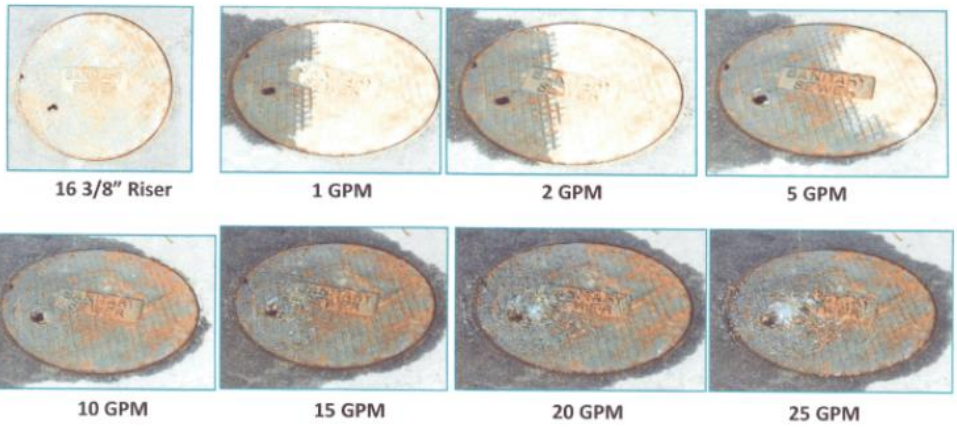
If no, you MUST use additional methods to estimate the entire SSO. If yes, it is advisable to use additional methods to support the estimation. Explain why you believe this method has/has not estimated the entire SSO:

This worksheet completed by:

Name: _____ Signature: _____

Job Title: _____ Date: _____

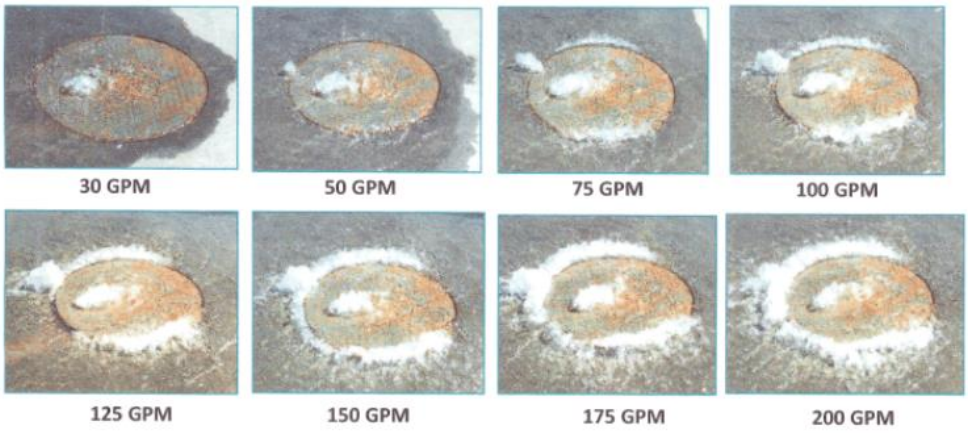
24" Manhole, Page 1 of 2



Instructions: Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:

1) If you are able, take a picture of overflowing manhole/riser.
2) Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.
3) Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.

24" Manhole, Page 2 of 2

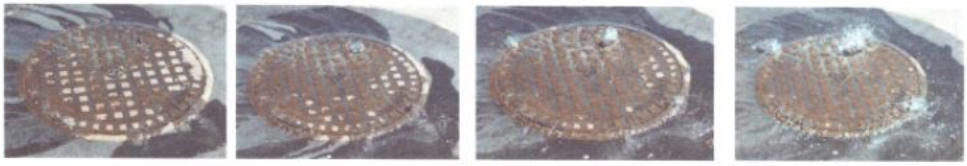


Instructions: Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:

1) If you are able, take a picture of overflowing manhole/riser.
2) Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.
3) Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.

26 1/2" "A" Manhole, Page 1 of 2

26 1/2" Manhole | 1 GPM | 2 GPM | 5 GPM

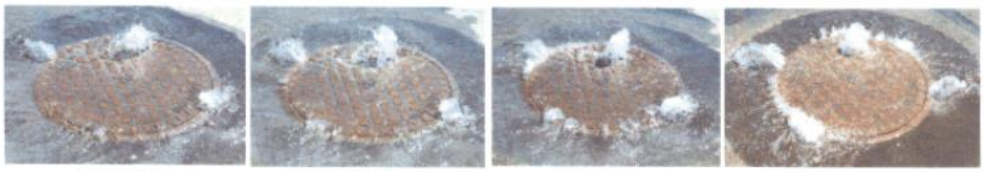


10 GPM | 15 GPM | 20 GPM | 25 GPM

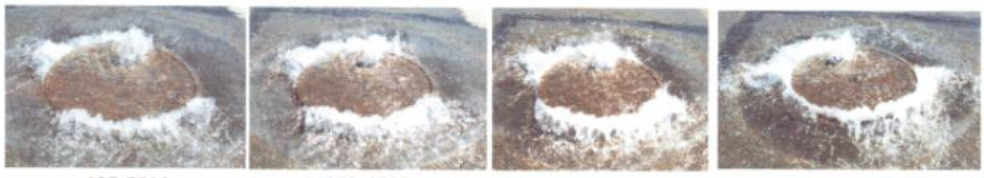
Instructions: Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:

1) If you are able, take a picture of overflowing manhole/riser.
2) Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.
3) Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.

26 1/2" "A" Manhole, Page 2 of 2



30 GPM | 50 GPM | 75 GPM | 100 GPM



125 GPM | 150 GPM | 175 GPM | 200 GPM

Instructions: Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:

1) If you are able, take a picture of overflowing manhole/riser.
2) Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.
3) Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.

26 1/2" "B" Manhole, Page 1 of 2


26 1/2" Manhole


1 GPM


2 GPM


5 GPM


10 GPM


15 GPM


20 GPM


25 GPM

Instructions: Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:

1) If you are able, take a picture of overflowing manhole/riser.
2) Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.
3) Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.

26 1/2" "B" Manhole, Page 2 of 2


30 GPM


50 GPM


75 GPM


100 GPM


125 GPM


150 GPM


175 GPM


200 GPM

Instructions: Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:

1) If you are able, take a picture of overflowing manhole/riser.
2) Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.
3) Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.

Sanitary Sewer Overflow Response Packet

Volume Estimation: Upstream Lateral Connections Method

C-4c

SSO Date: _____ Location: _____

STEP 1: Determine the number of Equivalent Dwelling Units (EDUs) for this SSO: _____ EDUs
NOTE: A single-family residential home = 1 EDU. For commercial buildings, refer to agency documentation.

STEP 2: This volume estimation method utilizes daily usage data based on flow rate studies of several jurisdictions in California. Column A shows how an average daily of usage of 180 gallons per day is distributed during each 6-hour period. Adjust the table as necessary to accurately represent the actual data.

Complete Column E by entering the number of minutes the SSO was active during each 6-hour time period. Multiply column D times Column E to calculate the gallons spilled during each time period. Add the numbers in Column F together for the Total Estimated SSO Volume per EDU.

	Flow Rate Per EDU				SSO	
	A	**B**	**C**	**D**	**E**	**F**
Time Period	Gallons per Period	Hours per period	A÷B = Gallons per Hour	C÷60 = Gallons per Minute	Minutes SSO was active during period	D × E = Gallons spilled per period
6am-noon	72	6	12	0.20		
noon-6pm	36	6	6	0.10		
6pm-midnight	54	6	9	0.15		
midnight-6am	18	6	3	0.05		
Total Estimated SSO Volume per EDU:						

STEP 3: Multiply the Estimated SSO Volume per EDU from Step 2 by the number of EDUs from Step 1.

_____ gallons (Volume per EDU) X _____ (# of EDUs) = _____ gallons (Estimated SSO Volume)

STEP 4: Adjust SSO volume as necessary considering other factors, such as activity that would cause a fluctuating flow rate (doing laundry, taking showers, etc.). Explain rationale below and indicate adjusted SSO estimate (attach a separate page if necessary):

Estimated SSO Volume: _____ gallons

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

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

This worksheet completed by:

Name: _____ Signature: _____

Job Title: _____ Date: _____

City of Milpitas: Overflow Emergency Response Plan

Sanitary Sewer Overflow Response Packet

Lateral CCTV Report

C-5

PLEASE COMPLETE AS THOROUGHLY AS POSSIBLE	
PERSON COMPLETING THIS FORM:	DATE: PHONE:
CAMERA TYPE:	LOCATION OF CAMERA ENTRY:
AFFECTED PROPERTY STREET ADDRESS: CITY, STATE AND ZIP: PHONE	LOCATION OF CAMERA STOP: DESCRIBE AREA TV'd: UPSTREAM MANHOLE #:
WEATHER AT TIME OF CCTV WORK:	
PLEASE CHECK ALL THAT WERE DISCOVERED – *Describe Extent & Location Using Camera Entry Point As Reference*: ❒ Broken Lateral – Describe: Depth: ❒ Roots – Severity: ☐Light ☐Moderate ☐Heavy ❒ Grease – Severity: ☐Light ☐Moderate ☐Heavy ❒ Sag – Describe: Depth: ❒ BPD – Describe: Location: ❒ Cleanout – Describe: Location: ❒ Joint/Junction – Describe: Depth ❒ Grade – Describe: ❒ Grit – Severity: ☐Light ☐Moderate ☐Heavy ❒ Other – Describe:	TIME OF OVERFLOW: TIME BLOCKAGE RELIEVED: TIME LATERAL TV'd: DEPTH OF LATERAL: RECOMMENDED FOLLOW UP WORK ACTIONS:
Mark for USA location? ☐Yes ☐No	Lateral Locations Marked in Green Paint? ☐Yes ☐No
SIGNATURE OF EMPLOYEE PERFORMING TV WORK:	DATE

If applicable, place completed form in Sewer Overflow Packet and follow routing instructions.

Sanitary Sewer Overflow Response Packet

Collection System Failure Analysis

C-6
Side A

Incident Report #		Prepared By	
SSO/Backup Information			
Event Date/Time	Address		
Volume Spilled	Volume Recovered		
Cause			
Summary of Historical SSOs/Backups/Service Calls/Other Problems			
Date	Cause	Date Last Cleaned	Crew
Records Reviewed By:		Record Review Date:	
Summary of CCTV Information			
CCTV Inspection Date		Tape Name/Number	
CCTV Tape Reviewed By		CCTV Review Date	
Observations			

Go to Side B

Sanitary Sewer Overflow Response Packet
Collection System Failure Analysis

C-6
Side B

Recommendations					
✓	Type	Specific Actions	Who is Responsible?	Completion Deadline	Who Will Verify Completion?
	No Changes or Repairs Required	n/a	n/a	n/a	n/a
	Repair(s)				
	Construction				
	Capital Improvement(s)				
	Change(s) to Maintenance Procedures				
	Change(s) to Overflow Response Procedures				
	Training				
	Misc.				
Comments/Notes:					
Review Date:					

© 2004-2014 DKF Solutions Group, LLC. All rights reserved.

Overflow Emergency Response Plan
Public Posting

DANGER

RAW SEWAGE • AVOID CONTACT

PELIGRO

AGUA CONTAMINADA • EVITE TODO CONTACTO

City of Milpitas

(408) 586-2600

© 2004-2014 DKF Solutions Group, LLC. All rights reserved.

CITY OF MILPITAS
PUBLIC WORKS DEPARTMENT
(408) 586-2600

Milpitas Municipal Code, Title VIII, Chapter 2, Article 13, adopted by the City Council for the City of Milpitas on October 7, 1997, provides that the user shall be responsible for clearing all stoppages and maintaining flow in the side sewer consisting of the house lateral and house sewer, in accordance with the following provisions:

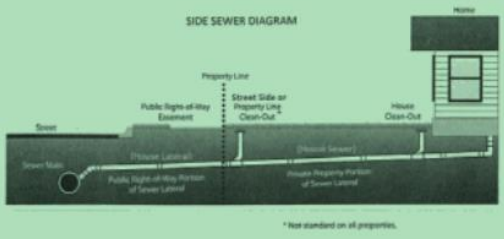
A. Stoppages or other maintenance and repairs required in the house sewer shall be the responsibility of the user.

B. The user shall be responsible for cleaning stoppages in the entire length of the house lateral. If the stoppage cannot be removed by the user or plumber hired by the user, by rodding or other routine cleaning methods, the City will attempt to clear the stoppage through the street cleanout, if one exists. If a street cleanout does not exist, the user shall be responsible for installing one. If the stoppage is found to be caused by grease, rags, or other foreign matter contributed by the user, or if in fact it is found that no stoppage exists, the user shall pay the City costs incurred. If more than one User is served by a single side sewer, the cost will be divided equally among the Users. If the stoppage is found to be caused by a broken pipe or other structural failure, necessary repairs will be made by the City at no charge to the user.

☐ The City's sewer main line in the street is clear of obstructions. It appears that the blockage is located on the property owner's side sewer, which is located from the house to the sewer main. It is the property owner's responsibility to clear this line. Please contact a licensed plumber to conduct the necessary cleaning of the side sewer.

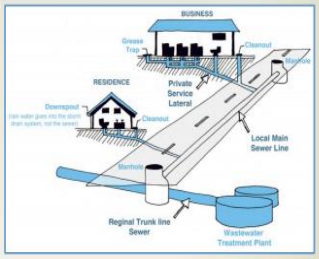
☐ A street cleanout is required to be installed by a licensed plumber, in accordance with the City of Milpitas Municipal Code. The cleanout shall be installed per City of Milpitas Design Standards. A building permit is required for this work and can be obtained by contacting the City's Building Department at City Hall. You may contact the Building hotline at (408) 586-3240 for information.

☐ There was a blockage in the City's sewer main line. City staff has cleared the blockage in the sewer main.



How a Sewer System Works

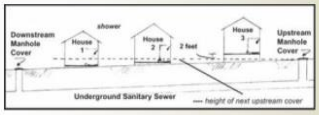
A property owner's sewer pipes are called ***service laterals*** and are connected to larger local main and regional trunk lines. Service laterals run from the connection at the home to the connection with the public sewer. These laterals are the responsibility of the property owner and must be maintained by the property owner.



Is my home required to have a backflow prevention device?

Section 710.1 of the Uniform Plumbing Code (U.P.C.) states: *"Drainage piping serving fixtures which have flood level rims located below the elevation of the next upstream manhole cover or private sewer serving such drainage piping* ***shall*** *be protected from backflow of sewage by installing an approved type of backwater valve."* The intent of Section 710.1 is to protect the building interior from mainline sewer overflows or surcharges.

Additionally, U.P.C. 710.6 states: *"Backwater valves* ***shall*** *be located where they will be accessible for inspection and repair at all times and, unless continuously exposed, shall be enclosed in a masonry pit fitted with an adequately sized removable cover."*



If you have a sewage spill from your private sewer line that impacts storm drains, waterways or public property, contact:

City of Milpitas
(408) 586-2600

Santa Clara County Environmental Health
(408) 918-3400

California Health and Safety Code, Sections 5410-5416 requires:

- No person shall discharge raw or treated sewage or other waste in a manner that results in contamination, pollution, or a nuisance.
- Any person who causes or permits a sewage discharge to any state waters:
  - Must immediately notify the local health agency of the discharge.
  - Shall reimburse the local health agency for services that protect the public's health and safety.
  - Who fails to provide the required notice to the local health agency is guilty of a misdemeanor and shall be punished by a fine (between $500–$1,000) and/or imprisonment for less than one year.

San Francisco Regional Water Quality Control Board
(510) 622-2300
Requires the prevention, mitigation, response to, and reporting of sewage spills.

California Governor's Office of Emergency Services (CalOES)
(800) 852-7550

California Water Code, Article 4, Chapter 4, Sections 13268-13271 & California Code of Regulations, Title 23, Division 3, Chapter 9.2, Article 2, Sections 2250-2260 require:

- Any person who causes or permits sewage in excess of 1,000 gallons to be discharged to state waters shall immediately notify the Office of Emergency Services.
- Any person who fails to provide the notice required by this section is guilty of a misdemeanor and shall be punished by a fine (less than $20,000) and/or imprisonment for not more than one year.

Sewer Spill Reference Guide

Your Responsibilities as a Private Property Owner

Provided to you by:

City of Milpitas

455 E. Calaveras Boulevard
Milpitas, CA 95035

(408) 586-2600
www.ci.milpitas.ca.gov

How do sewage spills happen?

Sewage spills occur when the wastewater in underground pipes overflows through a manhole, cleanout, or broken pipe. Most spills are relatively small and can be stopped and cleaned up quickly, but left unattended they can cause health hazards, damage to homes and businesses, and threaten the environment, local waterways, and beaches.

CAUTION!

When trying to locate a sewer problem, never open manholes or other public sewer structures. Only our crews are allowed to open & inspect these structures.

Common causes of sewage spills

- Grease build-up
- Tree roots
- Broken/cracked pipes
- Missing or broken cleanout caps
- Undersized sewers
- Groundwater/rainwater entering the sewer system through pipe defects and illegal connections

Prevent most sewage backups with a Backflow Prevention Device

This type of device can help prevent sewage backups into homes and businesses. If you don't already have a Backflow Prevention Device, contact a professional plumber or contractor to install one as soon as possible.

Protect the environment!

If you let sewage from your property discharge to a gutter or storm drain, you may be subject to penalties and/or out-of-pocket costs for clean-up and enforcement efforts. A property owner may be charged for costs incurred by agencies responding to spills from private properties.

What to look for:

Sewage spills can be a very noticeable gushing of water from a manhole or a slow water leak that may take time to be noticed. Don't dismiss unaccounted-for wet areas. Look for:

- Drain backups inside the building.
- Wet ground and/or water leaking around manhole lids onto your street.
- Leaking water from cleanouts or outside drains
- Unusual odorous wet areas: sidewalks, external walls, ground/landscape around a building.

The following are indicators of a possible obstruction in your sewer line:

- Water comes up in floor drains, showers or toilets.
- Toilets, showers or floor drains below ground level drain very slowly.

What to do if there is a spill:

Immediately notify the City of Milpitas. Our crews locate the blockage and determine if it is in the public sewer; if it is the crew removes the blockage and arranges for cleanup. If the backup is in your private internal plumbing or in the private service laterals, you are required to immediately:

- Control and minimize the spill by shutting off or not using the water
- Keep sewage out of the storm drain system using sandbags, dirt and/or plastic sheeting
- Call a plumbing professional to clear blockages and make repairs as needed. Look in the yellow pages under "Plumbing Drain & Sewer Cleaning" or "Sewer Contractors."
- Always notify your sewer/public works department or public sewer district of sewage spills.

Spill cleanup inside the home:

For large clean ups, a professional cleaning firm should be contacted to clean up impacted areas, you can locate local firms by looking in the Yellow Pages under "Water Damage" or "Fire Damage." If you hire a contractor, it is recommended to get estimates from more than one company. Sometimes, homeowner's insurance will pay for the necessary cleaning due to sewer backups. Not all policies have this coverage, so check with your agent.

If you decide to clean up a small spill inside your home, protect yourself from contamination by observing the following safety measures. Those persons whose resistance to infection is compromised should not attempt this type of clean up.

Other Tips:

- Keep children and pets out of the affected area until cleanup has been completed.
- Turn off heating/air conditioning systems
- Wear rubber boots, rubber gloves, and goggles during cleanup of the affected area.
- Discard items that cannot be washed and disinfected (such as: mattresses, rugs, cosmetics, baby toys, etc.)
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.
- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks and other plumbing fixtures) with hot water and laundry or dish detergent.
- Help the drying process with fans, air conditioning units, and dehumidifiers.
- After completing cleanup, wash your hands with soap and water. Use water that has been boiled for 1 minute (allow the water to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.
- Seek immediate attention if you become injured or ill.

Spill cleanup outside the home:

- Keep children and pets out of the affected area until cleanup has been completed.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Clean up sewage solids (fecal material) and place in properly functioning toilet or double bag and place in garbage container.
- On hard surfaces areas such as asphalt or concrete, it is safe to use a 2% bleach solutions, or ½ cup of bleach to 5 gallons of water, but don't allow it to reach a storm drain as the bleach can harm the environment.
- After cleanup, wash hands with soap and water. Use water that has been boiled for 1 minute (allow to cool before washing your hands) OR use water that has been disinfected (solution of 1/8 teaspoon of household bleach per 1 gallon of water). Let it stand for 30 min. If water is cloudy, use ¼ teaspoon of household bleach per 1 gallon of water.
- Wash clothes worn during cleanup in hot water and detergent (wash apart from uncontaminated clothes).
- Wash clothes contaminated with sewage in hot water and detergent. Consider using a Laundromat until your onsite wastewater system has been professionally inspected and serviced.
- Seek immediate attention if you become injured/ill.

Appendix D

FIELD SAMPLING KIT

Field Sampling Kit
Table of Contents

Form	Form Number
Procedures for Sampling Receiving Waters and Posting Warnings after a Sewage Spill	D-1
Sample Collection Chain of Custody Record	-2

Go to Water Quality Sampling Area and get the following supplies:

- Ice pack
- Ice
- Sample pole
- Latex gloves
- Long rubber gloves
- Safety glasses
- Waterproof Pen (i.e. Sharpie®)
- Chain of Custody form
- Sample Containers
  - Bac-T
  - Ammonia

© 2004-2014 DKF Solutions Group, LLC. All rights reserved.

City of Milpitas: Overflow Emergency Response Plan

D-1
Side A

Field Sampling Kit
Procedures for Sampling Receiving Waters and Posting Warnings after a Sewage Spill

Get Field Sampling Kit → Get ice pack or ice and place in cooler → Determine point spill entered waterway – photograph this location (*include a reference point in the photo)* → Don the PPE from the Sampling Kit

Determine direction of water movement from point of discharge. Estimate and record water velocity.

- Collect all samples against the direction of the water flow! (face upstream)
- Collect upstream sample first!
- Collect samples well away from the bank (preferably where water is visibly flowing) and 6" below the surface
- Avoid sampling debris or scum layer from the surface.
- Photograph evidence of dead fish!

SAMPLING STEPS

Move far enough upstream of point where spill entered waterway to ensure the waters have not been impacted by the SSO (reference sample)

Remove the seal from the fecal coliform sample container (100ml) just prior to collecting your sample. A chemical has been added to the sample container. Leave the chemical in the bottle and do not rinse.

1. Remove the cap immediately before collecting each sample.
2. Avoid allowing the inside of the cap to touch anything.
3. Holding the bottle in one hand, face upstream and lower the bottle 6" below the water surface. Then sweep the bottle upstream and out of the water. Be careful not to disturb the bottom sediment. Pour a little water out so that bottle is filled to the line. Immediately replace the cap.

Open the ammonia-nitrogen sample container and follow collection process above (steps 1-3) to fill to just below the neck of the jar. NOTE: The ammonia-nitrogen sample bottle contains sulfuric acid – LEAVE THE ACID IN THE BOTTLE AND DO NOT ALLOW IT TO TOUCH YOUR SKIN!

Label all of the samples with their location and note the date and time collected → Place samples in cooler on the ice pack → Take a photo of this sample location (*include a reference point in the photo)*

Repeat sampling steps (red boxes) to collect downstream (green tape), and discharge point (orange tape) samples. → Complete the Chain of Custody form from the Sampling Kit.

Contact the contracted lab and inform them that the following samples require processing: Ammonia-Nitrogen and fecal coliform. → Take cooler containing the samples and completed chain of custody to the Lab within 6 hours of collection time.

Post warning signs as directed by County Environmental Health Dep't or the Public Works Maintenance Manager for Utilities. (Remove Warning Signs and lift restrictions when authorized by County Environmental Health Dep't.)

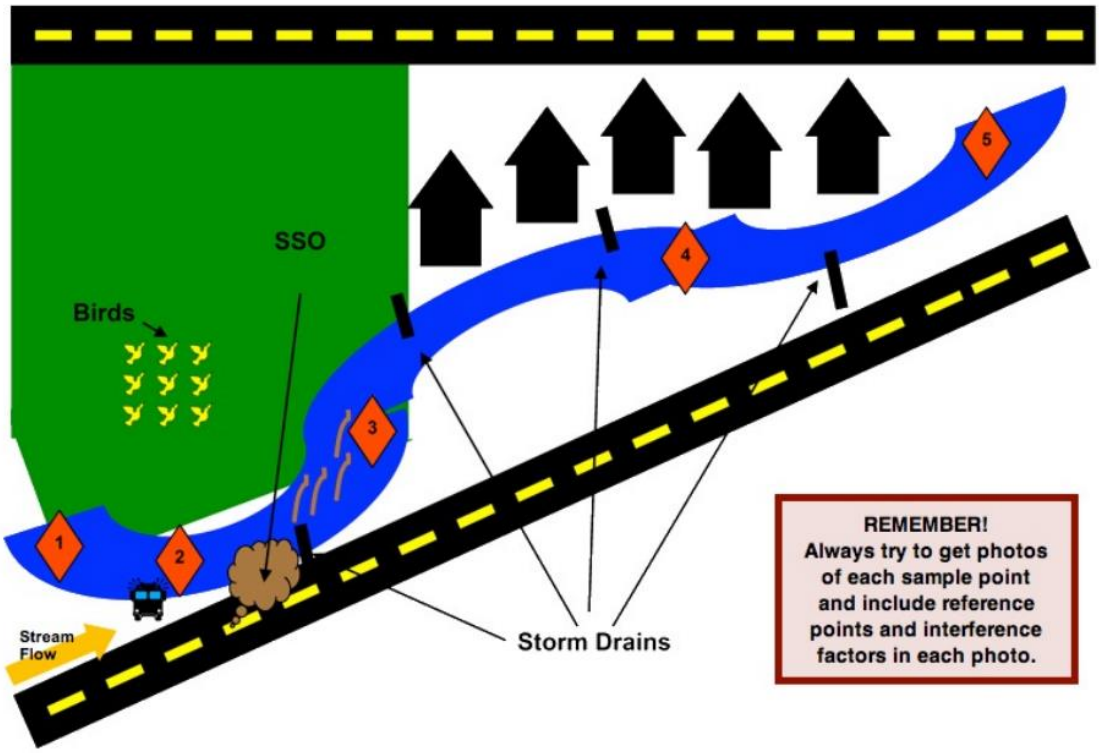
Repeat sampling daily from time the spill is known until the results of two consecutive sets of samples indicate the return to the normal level or cessation of monitoring is authorized by the County Environmental Health Department.

© 2004-2014 DKF Solutions Group, LLC. All rights reserved.

Field Sampling Kit
Procedures for Sampling Receiving Waters after a Sewage Spill

D-1
Side B

This example is provided for illustrative purposes *only!* Base each sampling event on the geography, drainage and interference factors (*i.e. birds, animals, runoff, etc.)* of the area impacted. Consult Public Works Maintenance Manager for Utilities or Wastewater Treatment Plant Laboratory as needed.



1. **Sample Location 1: Baseline Sample, *no* observable interference from birds, animals, runoff, etc**
2. **Sample Location 2: Baseline Sample, *observable* interference from birds, animals, runoff, etc**
   NOTE: Only collect this sample if you observe any possible interfering factors upstream from the spill location
3. **Sample Location 3: Immediately downstream of SSO entry point**
4. **Sample Location 4: Further downstream of SSO entry point – note any possible interfering factors**
5. **Sample Location 5: Further downstream of SSO entry point – note any possible interfering factors**

© 2004-2014 DKF Solutions Group, LLC. All rights reserved.

City of Milpitas: Overflow Emergency Response Plan

Field Sampling Kit
Sample Collection Chain of Custody Record

D-2

Customer Name				☐	**Hazardous Waste**	**PO#**	
Customer Address				☐	**Unknown Material**	**WO#**	
Customer Telephone		**Mail Code**		**CONTRACT LAB INFORMATION**		**Turnaround Requirement**	
Program Name				Ship to:		☐ Normal (21 days)	
Lab Program Coordinator		**Phone #**		Ship Date:		☐ Rush: _____	
Sampled By				Courier:		☐ Other:	

LIMS# (Issued by Lab)	SAMPLE COLLECTION INFORMATION								Analysis Requested					QA/QC Requirements	
	Date	Time	Type: Composite	Type: Grab	Sample Location	Field pH	Field Temp	# Containers	Matrix*	Ammonia	Enterococcus			☒ Lab Standard / ☐ Special (see attached)	Remarks/Notes
			☐	☒	Upstream			2	A	☒	☒	☐	☐	☐	
			☐	☒	Entry Point			2	A	☒	☒	☐	☐	☐	
			☐	☒	Downstream			2	A	☒	☒	☐	☐	☐	
			☐	☐				2		☐	☐	☐	☐	☐	
			☐	☐				2		☐	☐	☐	☐	☐	
			☐	☐				2		☐	☐	☐	☐	☐	
			☐	☐				2		☐	☐	☐	☐	☐	

*Matrix: P = Potable Water, W = Wastewater, A = Ambient Water, G = Groundwater, S = Soil, B = Biosolids, I = Industrial, O = Other (specify in remarks)

Relinquished	Date	Time

Relinquished to	Date	Time

Transport/Shipping Information		
☐ USPS	☐ UPS	☐ FedEx
Tracing #:		
☐ Other:		

Sample Receiving Documentation

Container intact? ☐ Yes ☐ No	Correct container? ☐ Yes ☐ No	Field preserved? ☐ Yes ☐ No	Custody tape intact? ☐ Yes ☐ No
Cooled? ☐ Yes ☐ No	Temp. Blank? ☐ Yes ☐ No (°C)	Comments:	
Sample distribution: ☐ Lab bench ☐ Ice chest ☐ Walk-in cooler shelf #		Disposal Date:	Disposed by: (inits.)
C-O-C Distribution Date: By:	☐ Lab Admin File ☐ Prog/proj Mgr. ☐ Lab Prog. Coord. ☐ Delivery courier ☐ Pick-up courier		

© 2004-2014 DKF Solutions Group, LLC. All rights reserved.

Appendix E

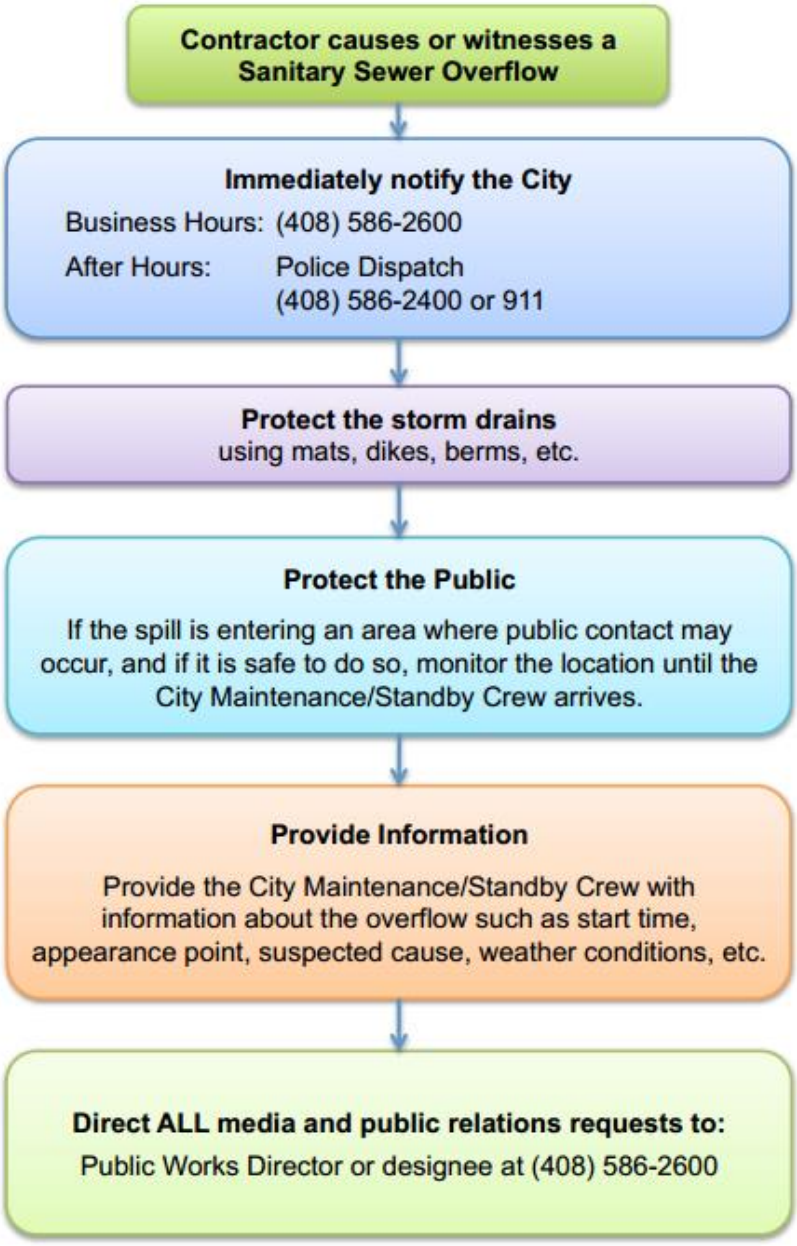
CONTRACTOR ORIENTATION

© 2004-2014 DKF Solutions Group, LLC. All rights reserved.

City of Milpitas: Overflow Emergency Response Plan

CONTRACTOR ORIENTATION

The following procedures are to be followed in the event that you cause or witness a Sanitary Sewer Overflow.



Sanitary Sewer Overflows

How to avoid them and what to do if you don't

What? A sanitary sewer overflow (SSO) is a discharge of untreated human and industrial waste before it reaches the wastewater treatment facility.

Where? SSOs usually occur through manholes, plumbing fixtures and service cleanouts.

Why? SSOs are usually caused by grease, debris, root balls, or personal hygiene products blocking the sewer lines, or by unusually high flow volume.

How to prevent SSOs:

...when clearing plugged sewer laterals:

- Remove root balls, grease blockages and any other debris from the sewer
- If you can't prevent root balls, grease or debris from entering the sewer main, call us at (408) 586-2600, so we can work with you to remove the blockage and prevent blockages further downstream
- Use plenty of water to flush lines.

...when constructing or repairing sewer laterals:

- Contact us for permits, lateral specifications and main lines inspections:

  Permit Center, City Hall
  455 E. Calaveras Boulevard, Milpitas, CA 95035
  (408) 586-3240
- Check your work area. Make sure there is no debris left in the sewer line before you backfill.
- Avoid offset joints, which may make sewer lines vulnerable to root intrusion and grease or debris accumulation. Properly bed your joints and don't hammer tap.

If you cause or witness an SSO, immediately contact:

City of Milpitas

(408) 586-2600

After Hours:
(408) 586-2400 or 911
(Police Dispatch)

City of Milpitas

455 E. Calaveras Boulevard
Milpitas, CA 95035

www.ci.milpitas.ca.gov

© 2004-2014 DKF Solutions Group, LLC. All rights reserved.

Appendix D

Excerpts from Milpitas Municipal Code, Title VIII, Chapter 2

MILPITAS MUNICIPAL CODE

See Title VIII, Chapter 2 – MILPITAS SANITARY CODE

Link: https://library.municode.com/ca/milpitas/codes/code_of_ordinances

Appendix E

Sanitary Sewer System Map

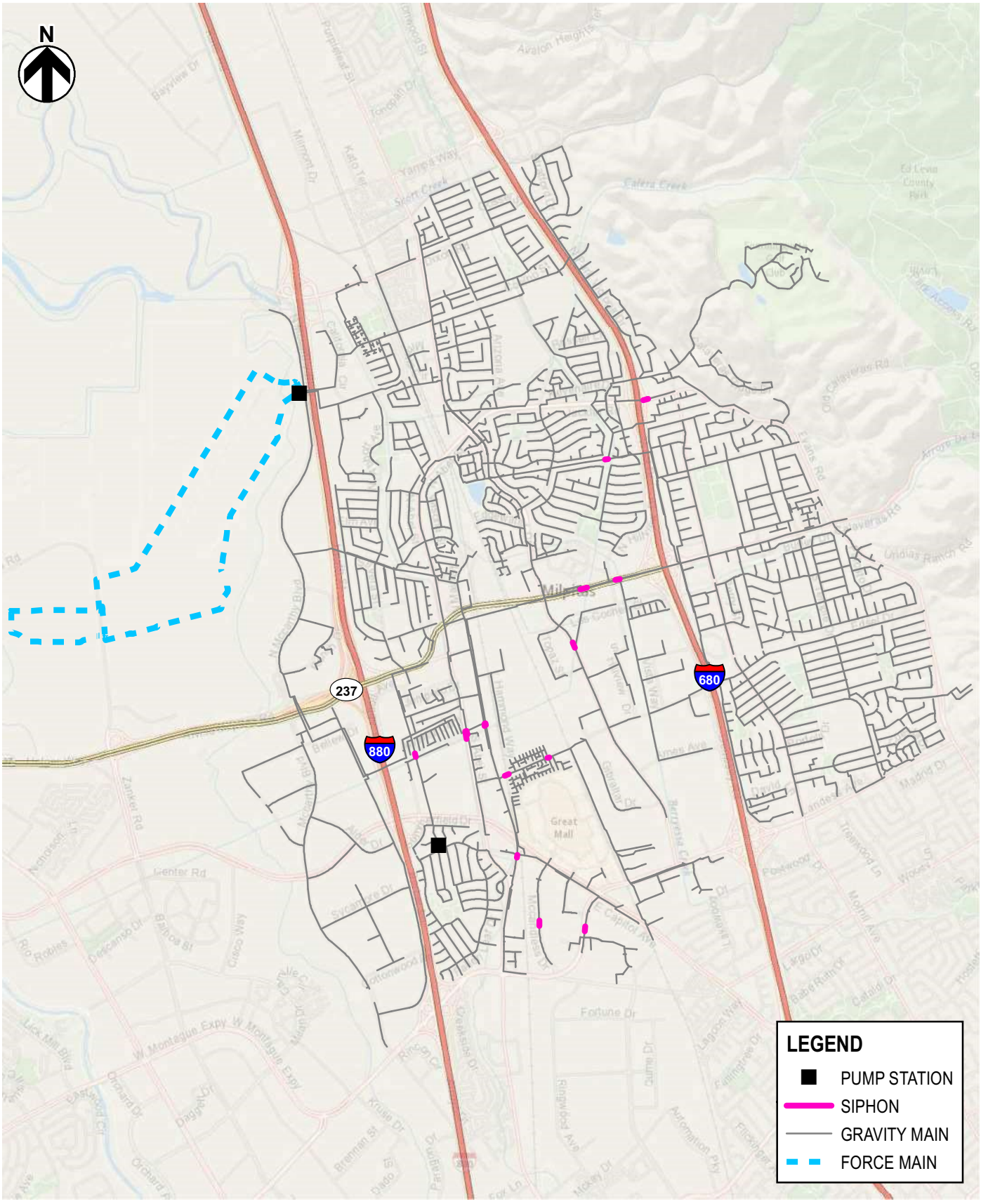


FIGURE ES-2
CITY OF MILPITAS
SEWER MASTER PLAN
WASTEWATER COLLECTION SYSTEM OVERVIEW

HydroScience

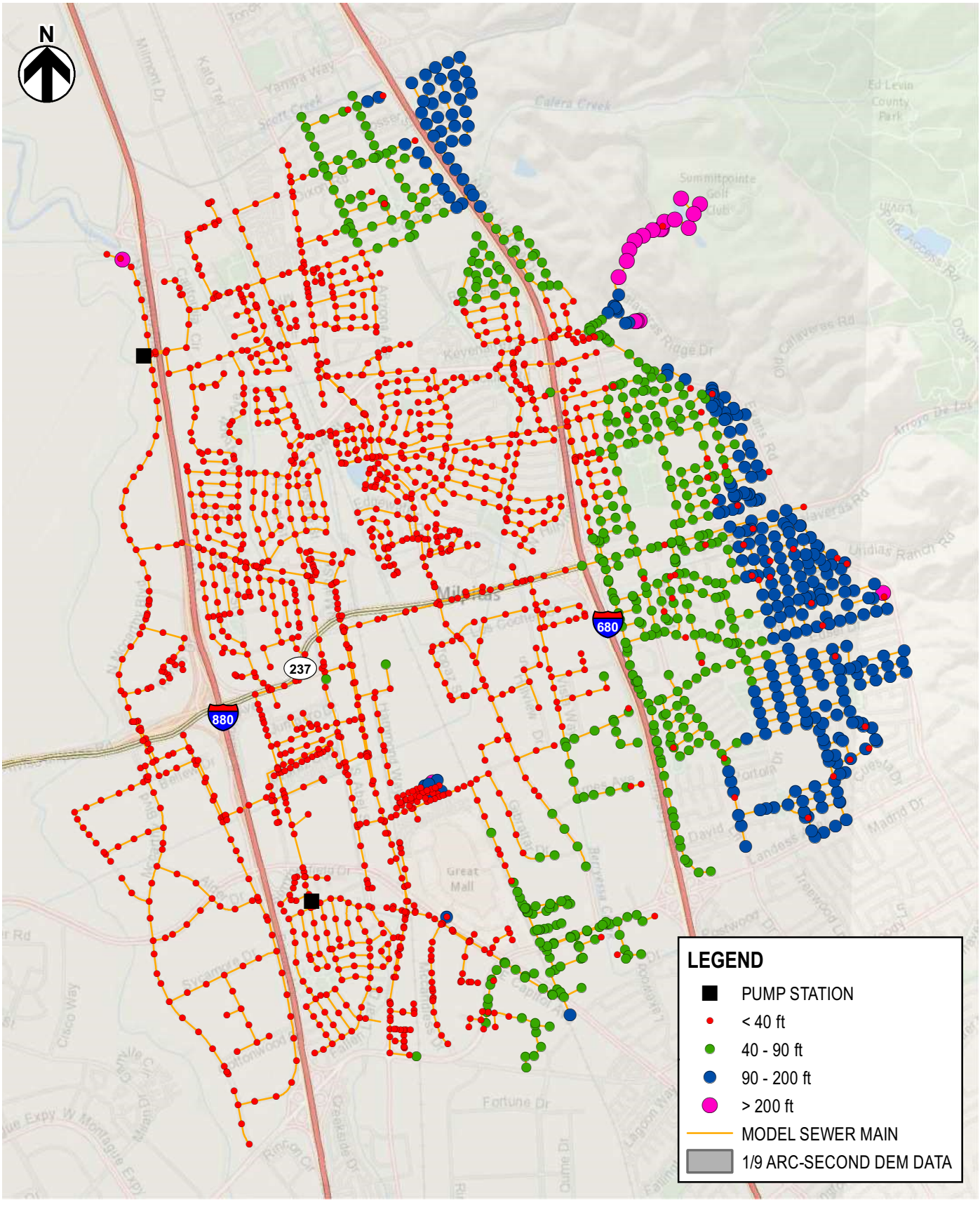


FIGURE 6-2
CITY OF MILPITAS
SEWER MASTER PLAN
MANHOLE RIM ELEVATIONS

HydroScience

Appendix F

Sanitary Sewer Pipe Ages Map

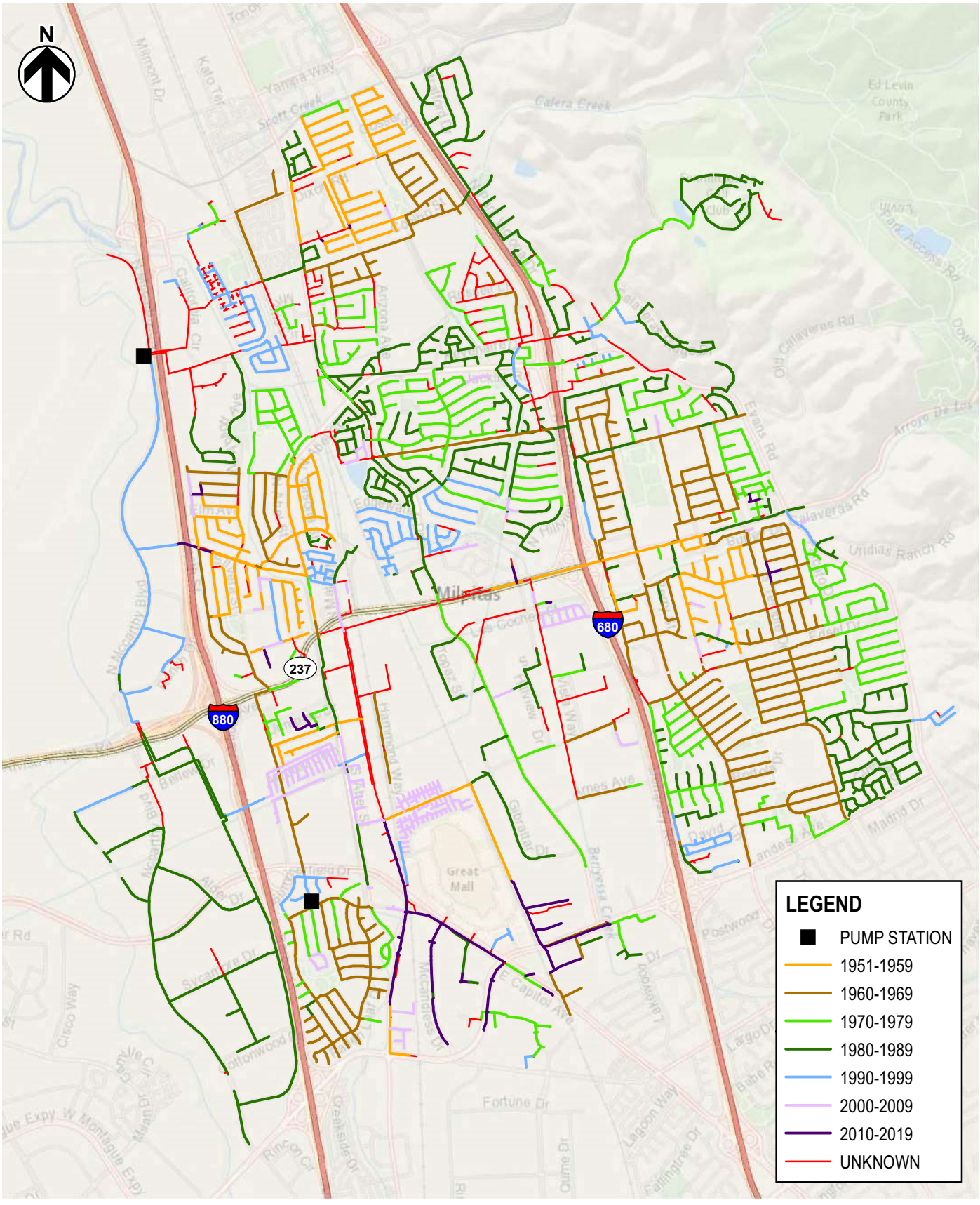


FIGURE 3-4
CITY OF MILPITAS
SEWER MASTER PLAN
COLLECTION SYSTEM PIPELINE AGE

HydroScience

Appendix G

Sanitary Sewer Pipe Materials Map

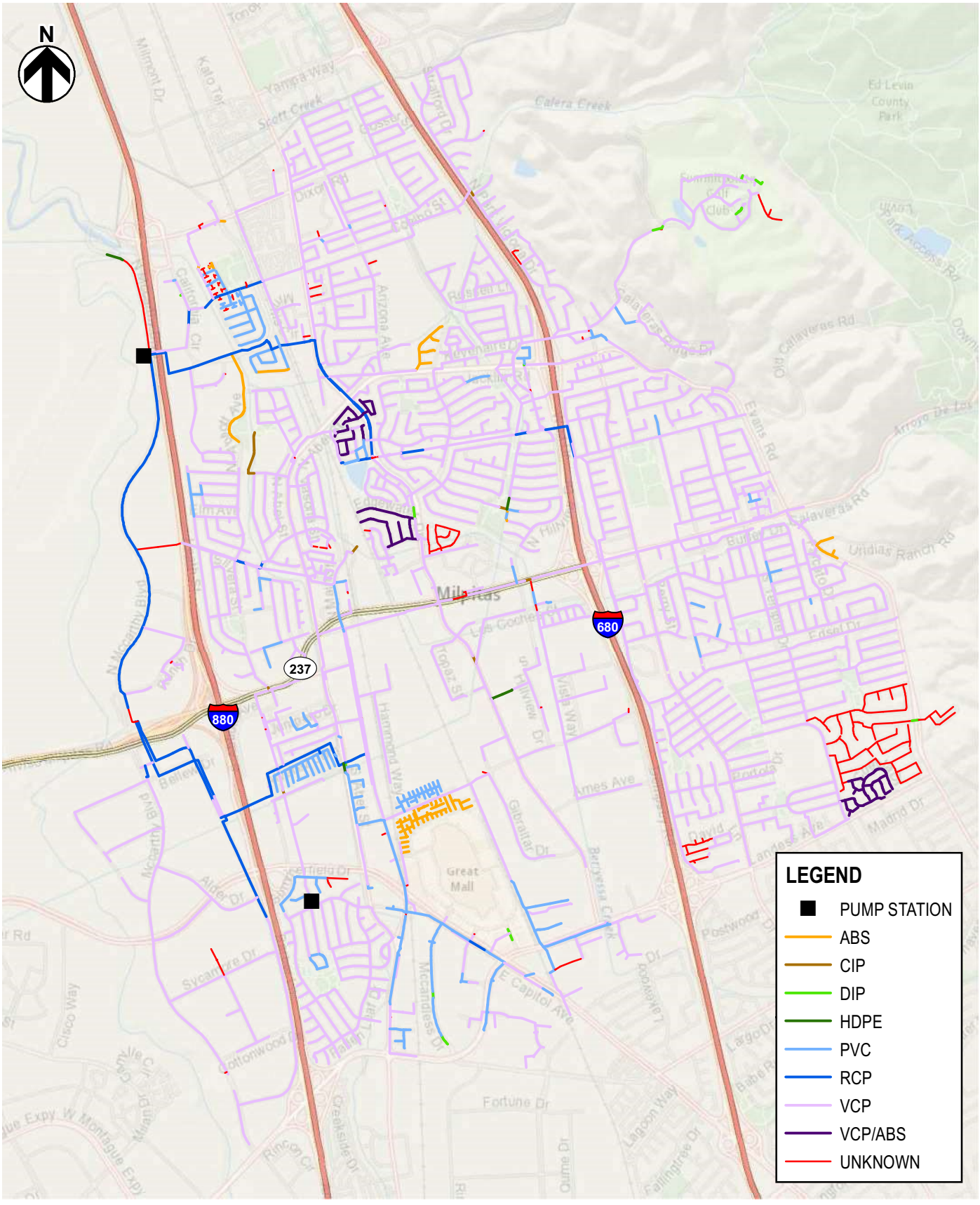


FIGURE 3-2
CITY OF MILPITAS
SEWER MASTER PLAN
COLLECTION SYSTEM PIPELINE MATERIAL

HydroScience

Appendix H

Storm Drain Facilities Map

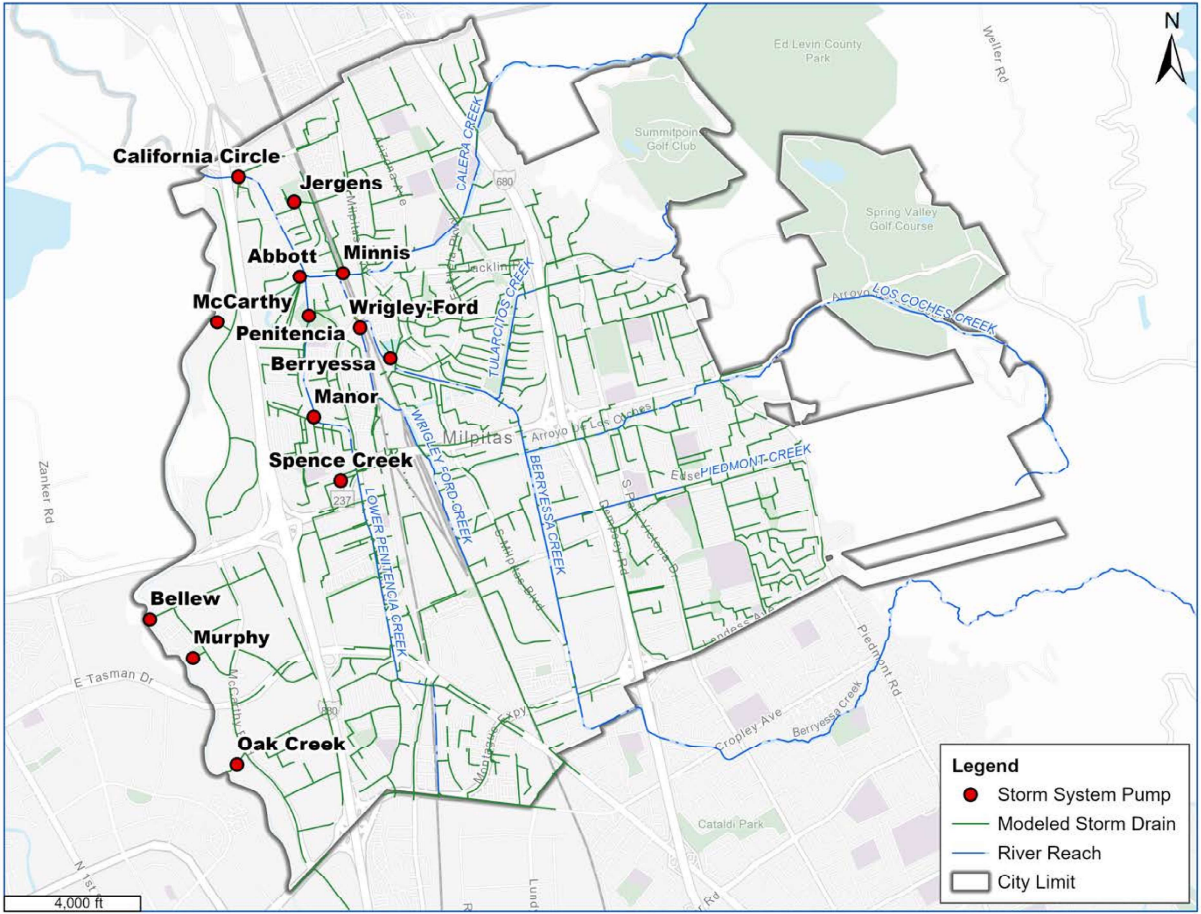


Figure 2-8: Pump Station Locations

Appendix I

Five-Year Capital Improvement Program

FY 2022 - 2026

SEWER IMPROVEMENT PROJECTS

2022-26 Summary of Estimated Costs

Pg.	No.	Project Name	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total Cost
306	6118	SJ/SC Regional Waste Water Facility	70,452,245	5,730,000	11,890,000	13,277,000	11,308,000	3,381,000	116,038,245
308	6119	Sanitary Sewer Condition Assessment Program	621,000	0	0	0	0	0	621,000
310	6121	BART Project - Sewer Improvements	243,323	0	0	0	0	0	243,323
312	6124	Sewer Pump Station Rehab. Program	252,000	100,000	100,000	0	0	0	452,000
314	6126	Minor Sewer Projects	113,000	50,000	50,000	50,000	50,000	50,000	363,000
316	6127	Sanitary Supervisory Control & Data Acquisition	316,600	0	0	0	0	0	316,600
318	6130	Main Lift Station Odor Emissions Control	2,450,000	0	0	0	0	0	2,450,000
320	6131	Sanitary Sewer Cathodic Protection Imprv.	2,025,000	600,000	0	0	0	0	2,625,000
322	6132	Sewer Master Plan 2019	750,000	0	0	0	0	0	750,000
324	6134	On-Call Sewer Maintenance & Repair Services	98,000	0	0	0	0	0	98,000
326	Plan	Sewer Line Replacement at E. Curtis	0	0	0	300,000	1,250,000	0	1,550,000
		Total Cost	**$77,321,168**	**$6,480,000**	**$12,040,000**	**$13,627,000**	**$12,608,000**	**$3,431,000**	**$125,507,168**

Funding Summary

Wastewater Revenue Bonds	2,062,755	0	0	0	0
Sewer Infrastructure Fund	4,417,245	4,505,737	7,286,000	50,000	50,000
Sewer Treatment Fund	0	7,534,263	0	0	0
TASP Impact Fees	0	0	300,000	1,250,000	0
Total Financing Available	6,480,000	12,040,000	7,586,000	1,300,000	50,000
No Funding Source	0	0	6,041,000	11,308,000	3,381,000
Total	**$6,480,000**	**$12,040,000**	**$13,627,000**	**$12,608,000**	**$3,431,000**

Summary of Project Funding Sources FY 2021-22

Pg.	No.	Project Name	Wastewater Revenue Bonds	Sewer Infrastructure Fund
306	6118	SJ/SC Regional Waste Water Facility	2,062,755	3,667,245
308	6119	Sanitary Sewer Condition Assessment Program	0	0
310	6121	BART Project - Sewer Improvements	0	0
312	6124	Sewer Pump Station Rehab. Program	0	100,000
314	6126	Minor Sewer Projects	0	50,000
316	6127	Sanitary Supervisory Control & Data Acquisition	0	0
318	6130	Main Lift Station Odor Emissions Control	0	0
320	6131	Sanitary Sewer Cathodic Protection Imprv.	0	600,000
322	6132	Sewer Master Plan 2019	0	0
324	6134	On-Call Sewer Maintenance & Repair Services	0	0
326	Plan	Sewer Line Replacement at E. Curtis	0	0
		Subtotal by Funding Source	**2,062,755**	**4,417,245**
		Total	**$6,480,000**	

Summary of Project Funding Sources FY 2022-23

Pg.	No.	Project Name	Sewer Infrastructure Fund	Sewer Treatment Fund
306	6118	SJ/SC Regional Waste Water Facility	4,355,737	7,534,263
308	6119	Sanitary Sewer Condition Assessment Program	0	0
310	6121	BART Project - Sewer Improvements	0	0
312	6124	Sewer Pump Station Rehab. Program	100,000	0
314	6126	Minor Sewer Projects	50,000	0
316	6127	Sanitary Supervisory Control & Data Acquisition	0	0
318	6130	Main Lift Station Odor Emissions Control	0	0
320	6131	Sanitary Sewer Cathodic Protection Imprv.	0	0
322	6132	Sewer Master Plan 2019	0	0
324	6134	On-Call Sewer Maintenance & Repair Services	0	0
326	Plan	Sewer Line Replacement at E. Curtis	0	0
		Subtotal by Funding Source	**4,505,737**	**7,534,263**
		Total	**$12,040,000**	

Summary of Project Funding Sources FY 2023-24

Pg.	No.	Project Name	Sewer Infrastructure Fund	Sewer Treatment Fund	TASP Impact Fees	No Funding Source
306	6118	SJ/SC Regional Waste Water Facility	7,236,000	0	0	6,041,000
308	6119	Sanitary Sewer Condition Assessment Program	0	0	0	0
310	6121	BART Project - Sewer Improvements	0	0	0	0
312	6124	Sewer Pump Station Rehab. Program	0	0	0	0
314	6126	Minor Sewer Projects	50,000	0	0	0
316	6127	Sanitary Supervisory Control & Data Acquisition	0	0	0	0
318	6130	Main Lift Station Odor Emissions Control	0	0	0	0
320	6131	Sanitary Sewer Cathodic Protection Imprv.	0	0	0	0
322	6132	Sewer Master Plan 2019	0	0	0	0
324	6134	On-Call Sewer Maintenance & Repair Services	0	0	0	0
326	Plan	Sewer Line Replacement at E. Curtis	0	0	300,000	0
		Subtotal by Funding Source	**7,286,000**	**0**	**300,000**	**6,041,000**
		Total	**$13,627,000**			

Summary of Project Funding Sources FY 2024-25

Pg.	No.	Project Name	Sewer Infrastructure Fund	TASP Impact Fees	No Funding Source
306	6118	SJ/SC Regional Waste Water Facility	0	0	11,308,000
308	6119	Sanitary Sewer Condition Assessment Program	0	0	0
310	6121	BART Project - Sewer Improvements	0	0	0
312	6124	Sewer Pump Station Rehab. Program	0	0	0
314	6126	Minor Sewer Projects	50,000	0	0
316	6127	Sanitary Supervisory Control & Data Acquisition	0	0	0
318	6130	Main Lift Station Odor Emissions Control	0	0	0
320	6131	Sanitary Sewer Cathodic Protection Imprv.	0	0	0
322	6132	Sewer Master Plan 2019	0	0	0
324	6134	On-Call Sewer Maintenance & Repair Services	0	0	0
326	Plan	Sewer Line Replacement at E. Curtis	0	1,250,000	0
		Subtotal by Funding Source	**50,000**	**1,250,000**	**11,308,000**
		Total	**$12,608,000**		

Summary of Project Funding Sources FY 2025-26

Pg.	No.	Project Name	Sewer Infrastructure Fund	No Funding Source
306	6118	SJ/SC Regional Waste Water Facility	0	3,381,000
308	6119	Sanitary Sewer Condition Assessment Program	0	0
310	6121	BART Project - Sewer Improvements	0	0
312	6124	Sewer Pump Station Rehab. Program	0	0
314	6126	Minor Sewer Projects	50,000	0
316	6127	Sanitary Supervisory Control & Data Acquisition	0	0
318	6130	Main Lift Station Odor Emissions Control	0	0
320	6131	Sanitary Sewer Cathodic Protection Imprv.	0	0
322	6132	Sewer Master Plan 2019	0	0
324	6134	On-Call Sewer Maintenance & Repair Services	0	0
326	Plan	Sewer Line Replacement at E. Curtis	0	0
		Subtotal by Funding Source	**50,000**	**3,381,000**
		Total	**$3,431,000**	

PROJECT NO.
6118

SJ/SC Regional Waste Water Facility

Category:	Sewer Improvement
City Council Priority:	Governance and Administration
Project Location:	San Jose/Santa Clara Regional Waste Water Facility
Managing Department:	Public Works
Contact Person:	Tony Ndah [2602]/ Harris Siddiqui [3358]
Project Stage:	Construction
Estimated Schedule	
Design:	Ongoing
Construction:	Ongoing
Recurring Project:	Yes

Description

The City pumps sewage to the San Jose/Santa Clara Regional Waste Water Facility for waste water treatment before it can be discharged into the San Francisco Bay. The facility was originally constructed in 1956 and is reaching the end of its useful life. The City of San Jose, who operates the facility, is undergoing an estimated $2 billion rehabilitation project to completely overhaul the facility over the next 30 years. Since the City of Milpitas uses approximately 7%, it will be responsible for 7% of the cost of improvements which is approximately $140 million over the next 30 years. This project funds Milpitas' share of the rehabilitation costs.

Notes

The project costs were increased from anticipated debt service payments to "pay-as-go" total costs. Staff pursuing long term financing with other tributary agencies.

Uncommitted Balance as of 5/31/2021	Council Approval
$3,215,409	**7/1/2013**

SJ/SC Regional Waste Water Facility

Project No. 6118

Estimated Cost

Phase	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Improvements	70,452,245	5,730,000	11,890,000	13,277,000	11,308,000	3,381,000	116,038,245
TOTAL	**$70,452,245**	**$5,730,000**	**$11,890,000**	**$13,277,000**	**$11,308,000**	**$3,381,000**	**$116,038,245**

Funding Source

	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Wastewater Revenue Bonds	33,437,245	2,062,755	0	0	0	0	35,500,000
Sewer Fund	21,765,000	0	0	0	0	0	21,765,000
Sewer Infrastructure Fund	2,500,000	3,667,245	4,355,737	7,236,000	0	0	17,758,982
Sewer Treatment Fund	12,750,000	0	7,534,263	0	0	0	20,284,263
No Funding Source	0	0	0	6,041,000	11,308,000	3,381,000	20,730,000
TOTAL	**$70,452,245**	**$5,730,000**	**$11,890,000**	**$13,277,000**	**$11,308,000**	**$3,381,000**	**$116,038,245**

Finance Notes

Operating Impact Notes

There are no operating or maintenance expenses associated with this project.

PROJECT NO.
6119

Sanitary Sewer Condition Assessment Program

Category:	Sewer Improvement
City Council Priority:	Governance and Administration
Project Location:	Citywide
Managing Department:	Public Works
Contact Person:	Tony Ndah [2602]/ Glen Campi [2643]
Project Stage:	Planning
Estimated Schedule	
Design:	2021
Construction:	—
Recurring Project:	No

Description

This project provides for a condition assessment program of the City's sanitary sewer system.

Notes

CCTV system is used to view the integrity and flow conditions of underground pipes. Public Works purchased a panoramic camera in 2019 to conducted CCTV inspection of the City's trunk and force mains in conjunction with the Sewer Master Plan project (#6132). Inspections to be completed in FY2020/21.

Uncommitted Balance as of 5/31/2021	Council Approval
$3,805	**7/1/2014**

Sanitary Sewer Condition Assessment Program

Project No. 6119

Estimated Cost

Phase	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Administration	15,000	0	0	0	0	0	15,000
Inspection	30,000	0	0	0	0	0	30,000
Improvements	576,000	0	0	0	0	0	576,000
TOTAL	**$621,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$621,000**

Funding Source

	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Sewer Fund	621,000	0	0	0	0	0	621,000
TOTAL	**$621,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$621,000**

Finance Notes

City Council 6/4/2020 - prior years funding of $74k from Sewer Fund and $50k from Sewer Infrastructure Fund for a total of $124k were defunded for other projects in FY 2020-21.

Operating Impact Notes

There are no additional operating impacts anticipated from this project. Any additional maintenance costs that occur will be absorbed within the annual maintenance operating budget.

PROJECT NO.
6121

BART Project - Sewer Improvements

Category:	Sewer Improvement
City Council Priority:	Transportation and Transit
Project Location:	Milpitas BART
Managing Department:	Engineering
Contact Person:	Steve Erickson [3301]/ Steve Chan [3324]
Project Stage:	Post-Construction
Estimated Schedule	
Design:	Completed
Construction:	Completed
Recurring Project:	No

Description

The BART project will provide for the relocation of existing sewer pipelines and utilities along the BART corridor. The work to be completed by VTA's contractor. The City has identified additional sewer pipeline improvements based on the City's Sewer Master Plan to be completed as part of the BART utility relocation work. These additional improvements to be reimbursed by the City.

Notes

City Council initially accepted the improvements on December 3, 2019. City to reimburse VTA in 2021 after right-of-way acquisition is completed.

Uncommitted Balance as of 5/31/2021	Council Approval
$13,593	**7/1/2011**

BART Project - Sewer Improvements

Project No. 6121

Estimated Cost

Phase	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Improvements	243,323	0	0	0	0	0	243,323
TOTAL	**$243,323**	**$0**	**$0**	**$0**	**$0**	**$0**	**$243,323**

Funding Source

	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Sewer Fund	243,323	0	0	0	0	0	243,323
TOTAL	**$243,323**	**$0**	**$0**	**$0**	**$0**	**$0**	**$243,323**

Finance Notes

Operating Impact Notes

There are no additional operating impacts anticipated from this project. Any additional maintenance costs that occur will be absorbed within the annual maintenance operating budget.

Sewer Pump Station Rehab. Program

PROJECT NO.
6124

Category:	Sewer Improvement
City Council Priority:	Community Wellness and Open Space
Project Location:	Main and Venus Wastewater Lift Stations
Managing Department:	Public Works
Contact Person:	Tony Ndah [2602]/ Glen Campi [2643]
Project Stage:	Construction
Estimated Schedule	
Design:	Ongoing
Construction:	Ongoing
Recurring Project:	Yes

Description

This project provides for rehabilitation or replacement of wastewater pumps at Main and Venus Wastewater Lift Stations to safely discharge sewage. Work also includes rotational assessment of the City's six wastewater pumps and peripheral equipment replacement such as electrical control, flow equipment, and variable frequency drives and grinders.

Notes

Funding request in FY2021-22 is for Public Works to replace the grinders and Pump No. 3 at Main Lift Station.

Uncommitted Balance as of 5/31/2021	Council Approval
$95,202	**7/1/2017**

Sewer Pump Station Rehab. Program

Project No. 6124

Estimated Cost

Phase	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Administration	60,000	20,000	20,000	0	0	0	100,000
Improvements	92,000	80,000	80,000	0	0	0	252,000
Equipment	100,000	0	0	0	0	0	100,000
TOTAL	**$252,000**	**$100,000**	**$100,000**	**$0**	**$0**	**$0**	**$452,000**

Funding Source

	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Sewer Infrastructure Fund	252,000	100,000	100,000	0	0	0	452,000
TOTAL	**$252,000**	**$100,000**	**$100,000**	**$0**	**$0**	**$0**	**$452,000**

Finance Notes

City Council 6/4/2020 - $148K in prior years funding from Sewer Infrastructure Fund was defunded for other projects in FY 2020-21.

Operating Impact Notes

There are no additional operating impacts anticipated from this project. Any additional maintenance costs that occur will be absorbed within the annual maintenance operating budget.

Minor Sewer Projects

PROJECT NO.
6126

Category:	Sewer Improvement
City Council Priority:	Governance and Administration
Project Location:	Citywide
Managing Department:	Public Works
Contact Person:	Tony Ndah [2602]/ Glen Campi [2643]
Project Stage:	Construction
Estimated Schedule	
Design:	Ongoing
Construction:	Ongoing
Recurring Project:	Yes

Description

This project provides for ongoing analysis, engineering, and implementation of various minor modifications and improvements to existing sewer systems.

Notes

Public Works to replace transfer switch at Venus Lift Station in 2021. Funding request in FY2021-22 is for rehabilitation of the sump pump vaults at Main Lift Stations.

Uncommitted Balance as of 5/31/2021	Council Approval
$24,888	**7/1/2013**

Minor Sewer Projects

Project No. 6126

Estimated Cost

Phase	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Design	13,000	0	0	0	0	0	13,000
Improvements	100,000	50,000	50,000	50,000	50,000	50,000	350,000
TOTAL	**$113,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$363,000**

Funding Source

	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Sewer Fund	100,000	0	0	0	0	0	100,000
Sewer Infrastructure Fund	13,000	50,000	50,000	50,000	50,000	50,000	263,000
TOTAL	**$113,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$363,000**

Finance Notes

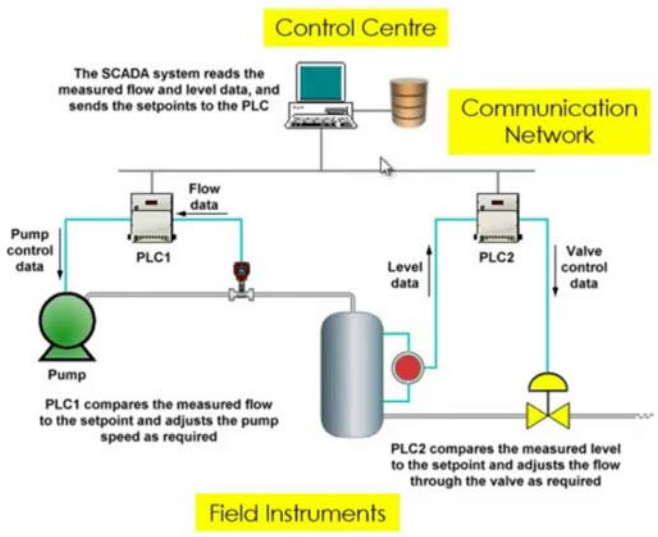
City Council 6/4/2020 - $37K in prior years funding from Sewer Infrastructure Fund was defunded for other projects in FY 2020-21.

Operating Impact Notes

There are no additional operating impacts anticipated from this project. Any additional maintenance costs that occur will be absorbed within the annual maintenance operating budget.

PROJECT NO.
6127

Sanitary Supervisory Control & Data Acquisition



Category:	Sewer Improvement
City Council Priority:	Governance and Administration
Project Location:	Citywide
Managing Department:	Public Works
Contact Person:	Tony Ndah [2602]/ Glen Campi [2643]
Project Stage:	Design
Estimated Schedule	
Design:	2021
Construction:	2022
Recurring Project:	No

Description

This project provides for the installation of Supervisory Control and Data Acquisition (SCADA) to the City's sanitary sewer infrastructure. Currently, Public Works relies on unsophisticated alarms at limited locations and customer complaints to become aware of sanitary sewer system issues. City staff then must investigate the issues at the location and implement corrective action which may prolong a system shutdown. SCADA allows operations to control, monitor, and maintain the sanitary sewer system more efficiency to help with making decisions and mitigate downtime. It provides for real-time data of wet well levels and pump operational status to be used to identify operational problems. It also allows for remote monitoring to interact with sensors, valves, pumps, and motors to implement corrective actions when there is a system problem.

Notes

City Council approved an agreement with Engie Service Inc. for the implementation of energy and water conservation measures. Engie to complete the project in 2022.

Uncommitted Balance as of 5/31/2021	Council Approval
$0	7/1/2013

Sanitary Supervisory Control & Data Acquisition

Project No. 6127

Estimated Cost

Phase	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Design	241,600	0	0	0	0	0	241,600
Administration	75,000	0	0	0	0	0	75,000
TOTAL	**$316,600**	**$0**	**$0**	**$0**	**$0**	**$0**	**$316,600**

Funding Source

Phase	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Sewer Fund	316,600	0	0	0	0	0	316,600
TOTAL	**$316,600**	**$0**	**$0**	**$0**	**$0**	**$0**	**$316,600**

Finance Notes

City Council 11/17/2020: Budget Appropriation of $133,400 in prior years funding from Sewer Fund was defunded.

Operating Impact Notes

This project is anticipated to impact operating expenses in future years. As the scope of this project is better defined through the design process, operating impacts will be reviewed and adjustments may be brought forward in future budgets.

PROJECT NO.
6130

Main Lift Station Odor Emissions Control

Category:	Sewer Improvement
City Council Priority:	Governance and Administration
Project Location:	Main Wastewater Lift Station
Managing Department:	Public Works
Contact Person:	Tony Ndah [2602]/ Elaine Marshall [2603]
Project Stage:	Design
Estimated Schedule	
Design:	2020
Construction:	2022
Recurring Project:	No

Description

This project provides for the installation of odor emission controls at the Main Lift Station to address concerns regarding elevated levels of hydrogen sulfide and other odorous compounds at the facility.

Notes

Construction started in June 2021.

Uncommitted Balance as of 5/31/2021	Council Approval
$2,064,401	**7/1/2018**

Main Lift Station Odor Emissions Control

Project No. 6130

Estimated Cost

Phase	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Design	225,000	0	0	0	0	0	225,000
Administration	75,000	0	0	0	0	0	75,000
Improvements	2,150,000	0	0	0	0	0	2,150,000
TOTAL	**$2,450,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$2,450,000**

Funding Source

	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Sewer Infrastructure Fund	1,050,000	0	0	0	0	0	1,050,000
Sewer Treatment Fund	1,400,000	0	0	0	0	0	1,400,000
TOTAL	**$2,450,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$2,450,000**

Finance Notes

Operating Impact Notes

This project is anticipated to impact operating expenses in future years. As the scope of this project is better defined through the design process, operating impacts will be reviewed and adjustments may be brought forward in future budgets.

Sanitary Sewer Cathodic Protection Imprv.

PROJECT NO.
6131

Category:	Sewer Improvement
City Council Priority:	Governance and Administration
Project Location:	Main Wastewater Lift Station
Managing Department:	Engineering
Contact Person:	Steve Erickson [3301]/ Michael Silviera [3303]
Project Stage:	Design
Estimated Schedule	
Design:	2021
Construction:	2022
Recurring Project:	No

Description

This project provides for the assessment, design, and installation of a cathodic protection system along the City's steel sewer force main from the City's Pump Station to SJ Regional Wastewater Treatment Plant. Soils within the City have been found to be highly corrosive and are detrimental to steel pipelines. Cathodic protection systems use sacrificial anodes and other means to protect the metal pipeline. Work also includes abandonment of the existing corrode diverter valve and its vault located within the Coyote Creek floodplain, CCTV inspection, replacement of two existing magnetic flow meters at the main pump station with proper isolation to prevent reading interference, the evaluation of existing pinch valve vaults near Zanker Road, and the evaluation of the soils around the existing force main pipeline.

Notes

Assessment and design started in FY2019-20 and is to be completed in 2021. During the CCTV inspection of Force Main, staff discovered various unforeseen conditions preventing the inspection to proceed. Additional funding request in FY2021-22 is for the increase cost to perform the CCTV inspection.

Uncommitted Balance as of 5/31/2021	Council Approval
$1,186,511	**7/1/2017**

Sanitary Sewer Cathodic Protection Imprv.

Project No. 6131

Estimated Cost

Phase	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Design	500,000	0	0	0	0	0	500,000
Administration	125,000	0	0	0	0	0	125,000
Inspection	100,000	0	0	0	0	0	100,000
Improvements	1,300,000	600,000	0	0	0	0	1,900,000
TOTAL	**$2,025,000**	**$600,000**	**$0**	**$0**	**$0**	**$0**	**$2,625,000**

Funding Source

	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Sewer Fund	625,000	0	0	0	0	0	625,000
Sewer Infrastructure Fund	1,400,000	600,000	0	0	0	0	2,000,000
TOTAL	**$2,025,000**	**$600,000**	**$0**	**$0**	**$0**	**$0**	**$2,625,000**

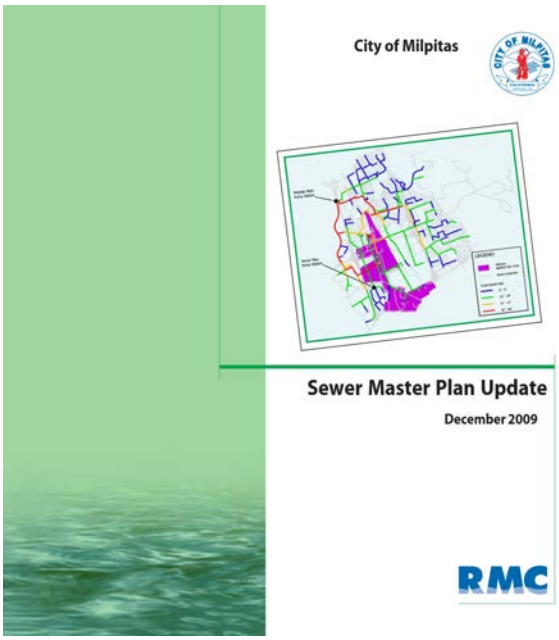
Finance Notes

Operating Impact Notes

This project may impact operating expenses in future years. As the scope of this project is better defined through the design process, operating impacts will be reviewed and adjustments may be brought forward in future budgets.

Sewer Master Plan 2019

PROJECT NO.
6132



Category:	Sewer Improvement
City Council Priority:	Governance and Administration
Project Location:	Public Works Department
Managing Department:	Public Works
Contact Person:	Tony Ndah [2602]/ Harris Siddiqui [3358]
Project Stage:	Design
Estimated Schedule	
Design:	2021
Construction:	—
Recurring Project:	No

Description

This project provides for the update of the City's 2009 Sewer Master Plan to incorporate miscellaneous general plan amendments, Midtown Specific Plan and Milpitas Metro Specific Plan needs, and provide CEQA environmental clearance. It also identifies deficiencies in the sewer system, recommends corrective actions, prioritizes improvements, and provides budgetary cost estimates.

Notes

Sewer Master Plan Update started in October 2019 and is to be completed by fall 2021.

Uncommitted Balance as of 5/31/2021	Council Approval
$13,009	**7/1/2016**

Sewer Master Plan 2019

Project No. 6132

Estimated Cost

Phase	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Design	640,000	0	0	0	0	0	640,000
Administration	110,000	0	0	0	0	0	110,000
TOTAL	**$750,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$750,000**

Funding Source

	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Sewer Fund	450,000	0	0	0	0	0	450,000
Sewer Infrastructure Fund	300,000	0	0	0	0	0	300,000
TOTAL	**$750,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$750,000**

Finance Notes

Operating Impact Notes

This project may impact operating expenses in future years. As the scope of this project is better defined through the design process, operating impacts will be reviewed and adjustments may be brought forward in future budgets.

On-Call Sewer Maintenance & Repair Services

PROJECT NO.
6134

Category:	Sewer Improvement
City Council Priority:	Public Safety
Project Location:	Citywide
Managing Department:	Public Works
Contact Person:	Tony Ndah [2602]/ Glen Campi [2643]
Project Stage:	Construction
Estimated Schedule	
Design:	Ongoing
Construction:	Ongoing
Recurring Project:	Yes

Description

This project provides for on-call maintenance and repair services of all City sewer infrastructure, assets, and appurtenances. Work may include, but is not limited to, repair and replacement of electrical and mechanical systems (VFD & generators), motors and pumps, pipelines, aboveground/underground storage tanks, and other related improvements. All work will be performed on a priority and funding availability basis.

Notes

Uncommitted Balance as of 5/31/2021	Council Approval
$31,710	**7/1/2020**

On-Call Sewer Maintenance & Repair Services

Project No. 6134

Estimated Cost

Phase	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Improvements	98,000	0	0	0	0	0	98,000
TOTAL	**$98,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$98,000**

Funding Source

	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Sewer Fund	74,000	0	0	0	0	0	74,000
Sewer Infrastructure Fund	24,000	0	0	0	0	0	24,000
TOTAL	**$98,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$98,000**

Finance Notes

Operating Impact Notes

There are no additional operating impacts anticipated from this project. Any additional maintenance costs that occur will be absorbed within the annual maintenance operating budget.

PROJECT NO.

Plan

Sewer Line Replacement at E. Curtis

Category:	Sewer Improvement
City Council Priority:	Community Wellness and Open Space
Project Location:	East Curtis Avenue
Managing Department:	Engineering
Contact Person:	Steve Erickson [3301]/ Michael Silviera [3303]
Project Stage:	Planning
Estimated Schedule	
Design:	2023
Construction:	2024
Recurring Project:	No

Description

This project provides for the design and construction of the sanitary sewer main replacement/upgrade on E. Curtis Avenue from S. Main Street to the E. Curtis Ave. cul-de-sac as recommended in the 2009 Sewer Master Plan.

Notes

The City's sewer collection system is at full capacity within the Metro Specific Plan area. The project will increase the size and capacity of the sanitary sewer main along E. Curtis Avenue. (Not in 2014 TADIF)

Uncommitted Balance as of 5/31/2021	Council Approval
$0	7/1/2019

Sewer Line Replacement at E. Curtis

Project No. Plan

Estimated Cost

Phase	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
Design	0	0	0	200,000	0	0	200,000
Administration	0	0	0	100,000	0	0	100,000
Inspection	0	0	0	0	50,000	0	50,000
Improvements	0	0	0	0	1,200,000	0	1,200,000
TOTAL	**$0**	**$0**	**$0**	**$300,000**	**$1,250,000**	**$0**	**$1,550,000**

Funding Source

	Prior Year	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	Total
TASP Impact Fees	0	0	0	300,000	1,250,000	0	1,550,000
TOTAL	**$0**	**$0**	**$0**	**$300,000**	**$1,250,000**	**$0**	**$1,550,000**

Finance Notes

Operating Impact Notes

There are no additional operating impacts anticipated from this project. Any maintenance costs that arise will be absorbed within the available maintenance schedule and annual operating budget.


CITY OF MILPITAS
CALIFORNIA
INCORPORATED
JANUARY 26, 1954

Appendix J

Excerpt from City of Milpitas

Engineering Plans and Map Procedures and Guidelines

Engineering Plans, Map Procedures and Guidelines

Link: https://www.ci.milpitas.ca.gov/milpitas/departments/engineering/design-guidelines/

Appendix K

Excerpt from City Of Milpitas

Standard Specifications for Sanitary Sewers

Appendix K

Standard Specifications

XXII. CITY OF MILPITAS STANDARD SPECIFICATIONS

A. STANDARD SPECIFICATIONS FOR SANITARY SEWERS

SECTION S

S1 GENERAL

S1.01 SCOPE OF WORK: The work shall include the furnishing of all materials, labor, tools, implements, and equipment necessary to construct and test the sewers with all appurtenances, complete and ready to operate, including final cleanup job of site; all construction to be in accordance with the details show in the plans, the standard drawings of the City of Milpitas, and with the provisions of these specifications.

S1.02 Definitions:

S1.02.01 "State Specifications" refers to the Standard Specifications of the State of California, Department of Transportation, latest edition.

S1.02.02 "ASTM" refers to ASTM International, the successor organization of the American Society for Testing and Materials.

S1.02.03 "City Engineer" shall mean the Engineer of the City of Milpitas, acting personally or through his or her designated representatives acting within the scope of the particular duties entrusted to them.

S1.02.04 "Owner" shall mean the party entering into the contract for whom the performance of the work covered by this contract is being done when the City is not a contracting agency.

S1.02.05 "Owner's Engineer" shall mean the Engineer engaged by the Owner, acting within the scope of the particular duties assigned by the Owner.

S1.02.06 "Inspector" shall mean the Engineering or technical inspector or inspectors duly authorized and appointed by the City Engineer, limited to the particular duties entrusted to them.

S1.02.07 "Contractor" shall mean the party entering into contract for the performance of the work covered by this contract and his authorized agents or legal representatives.

S1.02.08 Phrase "or approved equal" shall mean only that which has been approved as equal in writing by the City Engineer in response to a written request to consider an alternate as being equal. Such a request shall be made by the Contractor when the City is the contracting agency, or by the Owner when the City is not the contracting agency.

S1.02.09 "A.B.S. Pipe" shall mean acrylonitrile-butadiene-styrene sewer pipe.

S1.02.09 "PVC Pipe" shall mean polyvinyl chloride sewer pipe.

S1.03 Safety Provisions: The Contractor shall conform to the rules and regulations pertaining to safety established by the California Division of Industrial Safety.

S1.04 Special Conditions: Special Engineering consideration shall be given to a special specification written for any pipe construction with a ditch depth of less than 5 feet or greater than 15 feet. Where sewers cross or approach any other underground utility or structure within one foot, special encasement of the sewer line is required, and details of such crossing or approach must be approved by the City Engineer.

S1.05 Inspection: As the work progresses, each phase of the work must be inspected and approved before the next phase of construction is started. This condition is not meant to restrict the Contractor from carrying on simultaneous operations of several phases of construction in different areas of location within the project. The Contractor will notify the City Engineer at least 24 hours in advance when inspection will be needed, and shall keep the City Engineer informed of the schedule of work.

S1.06 Construction Staking: The Contractor will notify the City Engineer (or the Owner's Engineer, when the City is not the contracting agency) at least 48 hours in advance of needing construction stakes.

S1.07 Material Guaranty: Before any contract is awarded, the bidder may be required to furnish a complete statement of the origin, composition, and manufacture of any or all materials to be used in the project, subject to the tests provided for in these specifications to determine their quality and fitness of the work.

S1.08 Interpretation: The general plans, standard drawings, details and specifications are intended to depict, without requiring interpretation, the work and working conditions of the contract. Should interpretation be required, such interpretation shall be made by the City Engineer as provided for in the General Conditions.

S1.09 Authority of City Engineer: The City Engineer shall decide all questions which may arise as to the quality and acceptability of materials furnished and work performed and as to the manner of performance and rate of progress of work; all questions which may arise as to interpretation of the plans and specifications; all questions as to the acceptable fulfillment of the contract on the part of the Contractor; and, when the City is the contracting agency, all questions as to the compensation. His decision shall be final and he shall have authority to enforce and make effective such decisions and orders which the Contractor fails to carry out promptly.

S1.10 Superintendence: The Contractor shall keep on this work, during its progress, a competent superintendent and any necessary assistants, all satisfactory to the City Engineer. The Superintendent shall not be changed except with the City Engineer's consent, unless the Superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ. The Superintendent shall represent the Contractor in his absence and all directions given to him shall be binding as if given to the Contractor. The Contractor shall furnish the City Engineer the names and phone numbers of two

responsible men, one of whom may be reached at all times that the work is not in progress, to be called in case of any emergency on the work.

S1.11 Connection System: Only service connections conforming to established standards of the City may be connected to sewers.

S1.12 Changes in Work: If, in the opinion of the City engineer, the strict application of these specifications is impractical and will not provide the results desired, then the City Engineer may prescribe such alternate methods deemed necessary.

S1.13 Abandoned Pipes, Wells, Etc.: When, in the course of the work, a Contractor encounters or discovers in the work area any abandoned pipes, conduits, sumps, septic tanks, wells, or any condition that could cause failure to any part of the work, or constitute a threat to the public health or safety, that condition shall be rendered harmless by the Contractor to the satisfaction of the City Engineer.

S1.14 A.B.S. Pipe Allowed: A.B.S. Composite Sewer Pipe shall only be allowed for residential sewage flows. All pipes transporting commercial sewage, full strength industrial sewage or commercial/industrial sewage from other connected sewer lines shall not be A.B.S. Composite Sewer Pipe.

S2 MATERIALS

The Contractor shall furnish all materials required to complete the work. The materials furnished and used shall be new except as may be specifically provided elsewhere in these specifications, on the plans or in the special provisions. The materials shall be manufactured, handled, and used in a workmanlike manner to ensure complete work in accordance with the plans and specifications. Damaged or defective material shall be removed from the work or job site whenever discovered.

S2.01 Portland Cement Concrete: Portland Cement Concrete shall conform to all applicable provisions of State Specifications, Section 90.

S2.01.01 Class A Concrete (6-sack) shall be used for all construction except pipe encasement.

S2.01.02 Class B Concrete (5-sack) shall be used for pipe encasement or for protective cover slab over encasement as required by Standard Drawing 220.

S2.01.03 Class C Concrete (4-sack) shall be used for protective cover slab over encasement as required by Standard Drawing 222, where pipe trench does not involve street breakout.

S2.02 Polyvinyl Chloride (PVC) Pipe and ABS Composite and ABS Solid Wall Pipe.

S2.02.01 Extent: The specifications shall govern the furnishing of all PVC pipe, ABS composite pipe, and ABS solid wall pipe to be installed by the Contractor in the locations shown on the plans and in the manner hereinafter stipulated.

S2.02.02 Pipe Quality and Manufacture: PVC sewer pipe and fittings shall be manufactured in accordance with one of the following Standard Specifications:

a. ASTM D3034, "Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings"

b. ASTM F679, "Standard Specification for Poly (Vinyl Chloride) (PVC) Large- Diameter Plastic Gravity Sewer Pipe and Fittings"

c. ASTM F794, "Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter"

d. ASTM F949, "Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe With a Smooth Interior and Fittings"

e. ASTM F1336, "Standard Specification for Poly(Vinyl Chloride) (PVC) Gasketed Sewer Fittings"

f. ASTM F1760, "Standard Specification for Coextruded Poly(Vinyl Chloride) (PVC) Non-Pressure Plastic Pipe Having Reprocessed-Recycled Content"

g. ASTM F1803, "Standard Specification for Poly (Vinyl Chloride) (PVC) Closed Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter"

ABS composite sewer pipe and fittings shall conform to ASTM D2680. ABS solid wall pipe shall conform to ASTM D2751. Standard Diameter Ratio (SDR) of any ABS solid wall pipe shall not exceed 23.5.

PVC pipe and fittings, ABS composite pipe and fittings, and ABS solid wall pipe and fitting shall be of the bell and spigot type. The ends of the pipe shall be formed so that when the pipes are laid together and joined, the pipe will form a continuous line with a smooth interior surface. All fittings shall be compatible with the pipe to which they are attached.

Caps shall be furnished with branch pipes that are to be left unconnected. Caps shall consist of the same materials as the pipe. Caps of the type recommended by the pipe's manufacturer shall be used.

All pipe furnished under these specifications shall be first quality. Each length of pipe shall be sound and durable, free from objectionable defects. All pipe shall be free from cracks, warps, and blisters. The pipe shall be smooth and the ends of each length shall be square with longitudinal axis. The City Engineer reserves the right to test sections of pipe at the site of manufacture and the supplier will furnish all materials and equipment, necessary to conduct such tests.

S2.03 Joints: All PVC pipe joints shall be gasketed, bell-and-spigot, push-on type conforming to ASTM D3212, "Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals." Since each pipe manufacturer has a different design for push-on joints, gaskets shall be part of a complete pipe section and purchased as

such. Gaskets may be factory installed or field installed as recommended by the pipe manufacturer. Lubricant shall be as recommended by the pipe manufacturer.

S2.04 Castings: All castings for manhole rings, covers and other purposed castings shall conform accurately to the form and dimensions shown on the detailed drawings. They must be of workmanlike finish, free from blow and sand holes or defects of any kind, and shall possess a tensile strength of not less than sixteen thousand (16,000) pounds per square inch.

Before leaving the foundry, they shall be thoroughly cleaned and coated with asphalt applied in such a manner as to provide a firm, durable and tenacious coating.

The bottom rim of the cover and the seat of the frame shall be so matched that the cover shall set evenly and firmly in the frame, without movement or noise when driven over with a rubber-tired vehicle.

S2.05 Precast Manholes: Manhole sections, tapered sections and adjustment rings shall conform to the applicable requirements of State Specifications, Section 70, and Standard Drawing 230, 1 of 4.

S2.06 ABS Composite and Solid Wall Pipe Joints: Except where otherwise specified or directed, the Contractor shall provide solvent welded joints on all ABS sewer lines under this contract. Solvent cement compound must conform to ASTM D2680.

S3 CONSTRUCTION PROCEDURE

S3.01 Excavation: Trenches shall be excavated, either by hand or by machine, beginning at the outlet and proceeding upgrade. All trenches shall be excavated vertically and shall be of open construction. Tunneling will not be permitted except where permission is given by the City engineer and the dimensions and method of construction and backfilling have been definitely approved by him.

All trenches shall be of sufficient width to provide free working space on each side of the pipe, but in no case shall it be wider than 3/2 diameter + 12" except that 4 or 6-inch pipe may be laid in a 2-foot trench. Where bracing or shoring is necessary, an additional width as directed by the City engineer will be allowed. In all cases, there shall be sufficient space between the pipe and the sides of the trench to thoroughly backfill and compact around the pipe.

The Contractor shall undercut the trench to a depth of at least 2" below the final position of the bell of the pipe. The trench shall then be thoroughly cleaned of all loose material, after which the trench shall be backfilled to a depth of 2" above the invert of the pipe. Backfill material shall be sand or granular material of the quality specified as suitable for encasement material for water mains and sewers in City of Milpitas Standard Drawing No. 222. The pipe bed shall then be formed by hand to final grade and the bell holes excavated. In excavating bell holes, care shall be taken not to mix earth with casement material.

No pipe shall be laid until the City Engineer or his Inspector inspects and approves the condition of the bottom of the trench.

S3.02 Bracing and Shoring: The Contractor shall at all times furnish, install and maintain sufficient bracing and shoring in trenches in conformity with requirements of the California Division of Industrial Safety to ensure the safety of workmen and to protect and facilitate the work. Where practical, all such bracing and shoring shall be removed from the trench as the backfilling proceeds.

S33.03 Removal of Water and/or Unstable Material from Trenches: The Contractor shall furnish and install all sheet piling required and shall furnish, install and operate such pumps or other device as may be necessary for removing water from trenches during construction of the sewer lines. Ground water shall be removed by laying drain rock or gravel on the bottom of the trench or by other means which will prevent ground water from softening the bottom of the trench. If unstable material is encountered at excavation grade, such unstable material shall be removed to the depth directed by the City Engineer. The cost of dewatering and/or stabilizing the trench bottom shall be considered to be included in the bid price for the work, unless specifically provided for otherwise.

S3.04 Laying of Sewer Pipe: Pipe and fittings should be installed in accordance with ASTM D2321, "Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications."

In view of the fact that in the operation of the City's system of sewers and appurtenances, it will be necessary to treat the sewage, it is particularly important that sewer lines constructed under this contract be substantially watertight.

The Contractor shall take note of this fact and shall exercise every precaution to secure watertightness throughout the component parts of the system, particularly as regarding the joining of all pipe lengths, the use of sound pipe only, the capping of all unconnecting ends, and the sealing of all pipes to structure joints. The Contractor shall follow the detailed specifications and shall conform with the intent, thereof, to secure the highest quality of workmanship in the laying of all sewer lines under the contract. All jointing of pipe shall be subject to rigorous inspection by the City Engineer or his Inspector.

S3.04.01 Bedding the Pipe: The concave bed shall be cut in the granular material by hand in a careful manner. The line and grade shall be strictly adhered to, without wedging or blocking. Should the Contractor, through his negligence or other fault, excavate below or beyond the designated lines or grades, he shall replace such excavation with approved bedding materials at his own expense.

S3.04.02 Bell Holes: As laying of pipe with bell and gasket joints proceeds, bell holes shall be excavated at each joint to facilitate the jointing operations and shall be only of sufficient size for that purpose. In order that the bell holes may be properly located, not more than six (6) bell holes shall be excavated ahead of actual pipe laying on account of the variations in joint construction operations.

S3.04.03 Solvent Cemented Joint Installation: Prior to application of solvent cement, the pipe ends must be free of dirt or other foreign matter. Solvent cement shall be applied to the inside of the socket and to the outside of the spigot end. Enough solvent cement shall be applied that when the spigot is fully inserted into the socket, a bead of excess cement will form around the entire circumference of the outside juncture of said spigot and socket. The Contractor shall apply a coating of cement to all pipe ends of ABS composite pipe whether within a coupling or not. The spigot shall then be inserted into the socket.

S3.04.04 Laterals: The term "Lateral" as used in these specifications, on the Plans, or other drawings, is used to designate the branch sewers laid from the main sewer to points on the property lines from which sewer services can be obtained by proper extensions.

All provisions for sanitary sewers of these specifications are applicable to this item and shall be adhered to as if specifically enumerated herein.

Laterals shall be laid either from the upper end of a wye branch or "T" saddle connected to the main sewer to the property, and shall have a minimum slope of 1/4" per foot. Wye branch connections must be used on main sewers 12" in size or less. "T" saddles may be used to connect laterals to trunk sewers larger than 12" in size. Where "T" saddle fittings are used, the hole in the trunk sewer shall be made of the proper size to receive the saddle. Where laterals are tapped onto existing VCP mains, machine taps shall be made.

ABS saddles shall be installed as recommended by the manufacturer. No concrete support shall be used for ABS saddles.

The lateral pipe shall be laid to a grade of on-fourth inch (1/4") vertical rise to one foot (1') run of pipe, but this grade may be increased in order that the depth at the property line shall be approximately five feet (5'), unless otherwise directed by the City Engineer. Laterals shall be installed in compliance with Standard Drawing No. 620. ABS pipe of same dimensions may be used instead of the vitrified clay pipe called out in these drawings in residential sewer lines only.

The letter "S" shall be stamped or chiseled on the face of the curb opposite the end of the lateral at the property line. If no sidewalk or curb exists, a 2" x 3" by 3" redwood marker, with a stamped "S" on the side of the stake, shall be placed at the end of the lateral. Where only the wye is placed, as in an easement, it will be marked the same as a lateral.

S3.04.05 Wyes: Each wye branch shall be of the same material as that of the main sewer in which it is placed. Exact location of all wye branches shall be determined in the field by the property owner or his representative with the cooperation of the Contractor. Particular car shall be used in placing encasement around wyes to assure that the wye is fully supported.

S3.04.06 Caps or Stoppers: Stoppers, referred to in these plans and specifications as "stoppers" or "caps" shall be placed and secured in all openings into the upstream end of sewers including wyes and laterals. Temporary "stoppers" shall be used at the end of each day's work or whenever the work has been interrupted. When mechanical compression joints are used, stoppers of the same joint material may be used. "Stoppers" shall be of material similar to the pipe itself. They shall be of a type supplied or recommended by the pipe manufacturer.

S3.05 Manholes: Pre-case concrete manholes shall be built at the places shown upon the plans and shall be of form and dimensions shown upon the detailed drawings. The base or foundation shall consist of concrete. Material for the concrete shall conform to the specifications herein before given. Pipe to manhole joints and manholes shall be sealed as needed to meet leakage tests. . Joints on pre-cast manholes shall be bituminous type such as "Ram Neck" or approved equal. PVC or ABS pipe entering or leaving a manhole shall have a rubber "O" ring water stop. These water stops shall be of the type recommended by the pipe manufacturer.

The bases shall be carefully formed so as to make invert channels for the sewers. The depth and the top width of the invert channel shall be equal to, and not greater than, the internal diameter of the pipe.

Bases for pre-cast manholes shall be formed, using circular metal form to provide a key or socket of proper cross section, into which the pre-cast manhole section can be placed.

All mortar used in construction of manholes shall consist of one (1) PART Portland Cement and two (2) parts sand. Hydropel or equal shall be used as an admixture in the amount of one and one-half (1-1/2) gallons per sack of cement. Pipe to manhole joints and manholes shall be sealed as needed to meet leakage test.

S3.06 Backfilling: After the pipe is satisfactorily laid in place, the pipe encasement shall be placed and compacted by hand. Pipe shall be covered to a height of 6" above the top of the pipe by encasement material. Encasement material shall be of the quality specified as encasement material for sewer and water mains in Standard Drawing No. 222.

Above the encasement, backfill shall conform the provisions of standard Drawing Nos. 220 and 222. Material placed within one foot of subgrade shall be compacted to 90% relative density by rolling or other "dry" methods. Above subgrade the standard roadway construction method shall govern.

S3.07 Removal and Replacing Culverts, Poles, Etc.: Wherever existing culverts, power, telephone or guy poles or other such existing facilities interfere with the construction of the sewer lines or appurtenances, the Contractor shall be responsible for their removal and also for their relocation. The cost of removing and relocating all such existing facilities shall be included in the bid price for sewer and no additional allowance shall be made therefore.

S3.08 Restoring Pavements, Curbs, Gutters, Sidewalks, Etc.: Whenever such existing improvements as pavements, curbs, gutters, sidewalks, driveways, utilities, etc., have

been cut or damaged in order to construct sewer lines, the backfill shall be thoroughly compacted and all improvements restored to the condition in which they were before the excavation was made. The cost of restoring all original improvements shall be included in the unit bid price for sewer and no additional allowance shall be made therefore. All street breakout shall be in accordance with Standard Drawing No. 220.

S3.09 Disposal of Excess Material: Excess materials which have been excavated from trenches, and which cannot be utilized for backfill shall be removed by the Contractor and shall be deposited as directed by the City engineer where work is in public land, or by Owner's Engineer where work is newly developed land where the City is not the contracting agent.

S3.10 Flushing of sanitary sewer Lines: The sanitary sewer line will be flushed with water to the satisfaction of the City engineer or his representatives. The Contractor will provide rubber plugs for the main line to be used to build a hydraulic pressure prior to flushing. During the flushing, a rubber sphere with a diameter equal to the pipe diameter will be passed through the main. Failure to pass will necessitate removal of the cause of the stoppage. The Contractor will provide the necessary rubber spheres. Flushing of sewers is to be done after manholes are raised.

S3.11 Testing of Sanitary Sewer Lines: All newly constructed sewer mains and laterals adjacent thereto shall be tested for leakage as described in the Engineering Guidelines for sewers.. The Contractor shall furnish all materials, equipment, tools and labor necessary to make leakage tests and to perform any work incidental thereto.

Leakage test shall be performed on the entire sanitary sewer installed, with the length of each test section limited to the pipe segment between adjacent manholes.

The Contractor shall follow the detailed specifications and shall conform with the intent thereof to secure the highest quality of workmanship in the laying of all sewer lines under the contract. All jointing of pipe shall be subject to rigorous inspection by the City Engineer or his representative.

When a sewer is constructed as part of the improvements of a street or road testing of the lines shall be done at such time that the subbase has been compacted and accepted by the City Engineer.

The Low Pressure Air Test shall be the accepted method used to determine watertight integrity of all sanitary sewers. The Hydrostatic Leakage Test method will only be used when specifically authorized by the City Engineer.

In addition to the Low Pressure Air Test, ABS sewer lines shall also be tested for deflection by passing a rigid mandrel through them.

The Low Pressure Air Test shall be done in the presence of the City's Inspector and in accordance with the following procedure:

(1) Plug and securely brace the ends of each reach of pipeline to be tested.

(2) Pressurize scaled line until internal air pressure reaches 4.0 pounds per square inch gauge. When prevailing water is above the sewer line being tested, increase all pressures used in this test by 0.43 psi for each foot the water is above the flow line of the pipe.

(3) Allow at least two minutes for the air pressure to stabilize, adding additional air as required to maintain 4.0 psig.

(4) The Inspector shall observe the pressure gauge attached to the pipeline and when the pressure decreases to 3.5 psig, a timing period shall be started. The timing period shall be stopped when the pressure has decreased to 2.5 psig or until the portion of line being tested is found to be "Acceptable."

(5) The portion of line being tested shall be termed "Acceptable" if the time required in minutes for the pressure to decrease from 3.5 psig to 2.5 psig is not less than the time shown for the given pipe diameters in the following table:

Pipe Diam. In Inches	Minutes
4	2.0
6	3.0
8	4.0
10	5.0
12	6.0
15	7.5
18	8.5
21	10.0
24	11.5
27	13.0
30	14.5
33	16.0
36	17.5
39	19.0
42	21.5

(6) If adjoining laterals are tested concurrently with the sanitary sewer main, one-half of the above listed respective time for the largest lateral tested shall be added to the respective required time listed for the sanitary sewer main.

(7) If the line fails to meet the above requirements, the source of the leak shall be located and corrected to the satisfaction of the Inspector. After the leak or leaks are corrected and the trench is rebackfilled and compacted, the section of the line shall then be retested to compliance.

Because of the inherent danger involved in air testing, extreme care shall be exercised in placing and bracing the pipe plugs, and no one shall be allowed in the manhole during testing. Caution shall also be taken to avoid over-pressurizing and damaging an otherwise acceptable line.

When Hydrostatic Leakage Test, in lieu of the air test, is authorized by the City Engineer, it shall be done in the presence of the City's Inspector and in accordance with the following procedure:

Each section of the sewer main to be tested shall be sealed by inserting stoppers in the lower end of the sewer segment, the inlet pipe of the upper manhole and any side sewers. The pipe and upstream manhole shall be filled with water to a point not less that four (4) feet above the invert of the pipe or prevailing ground water elevation, whichever is higher. The line shall e tested for at least two (2) hours, maintaining the head specified above by measured additions of water. The sum of the additions of water added shall be the amount of leakage for the test period.

When the amount of leakage, in a section, exceeds the allowable, the Contractor shall locate the source of the leak or leaks and correct such leaks to the satisfaction of the inspector. After the leak or leaks are corrected and the trench backfilled and compacted, the section of the line shall ten be retested to compliance.

The maximum leakage allowed shall be 200 gallons per inch of pipe diameter per mile per 24 hours (0.0263 gallons per minute per inch of pipe diameter per 1000 feet of pipe).

PVC and ABS pipe shall be tested for deflection in the presence of the City's Inspector and in accordance with the following:

1) Immediately after flushing, a solid mandrel undersized 5% shall be pulled through all lines, excluding laterals.

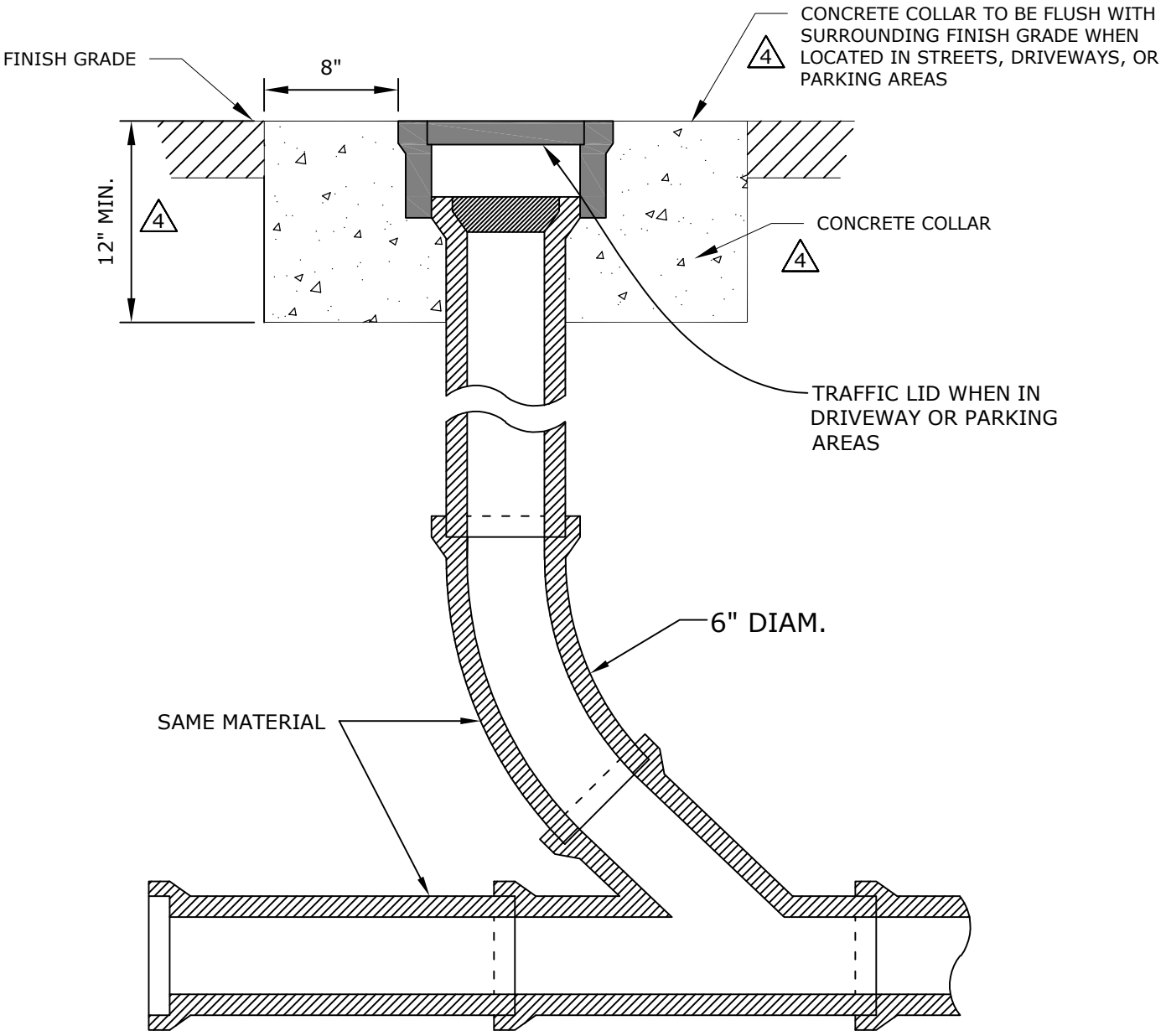
2) Any section of pipe through which the mandrel cannot be pulled will be considered defective and shall be placed by the Contractor at his expense. The replaced section of line shall be rebackfilled and compacted, this work meeting City specifications. The section shall then be retested to compliance.

S3.12 Maintenance Bond: The Contractor shall maintain the complete installation for a period of one year after acceptance of the installation by the City and shall furnish bond to guarantee such maintenance. Any discrepancies or failures in the work that appear during this period shall be remedied before the bond is released.

Appendix L

Excerpt from City of Milpitas

Standard Drawings



NOTES:

1. All castings to be asphalt coated by hot dip method.
2. Clean out shall be raised to finish surface.
3. Cleanout box and lid shall be Christy G5 BOX and G5C lid and G5GR Grade Ring or approved equal with C.O." or "S" marking.
4. For pipe material see City's Standard Specifications and approved plans.
4. P.C.C. shall be Class "A", with minimum compressive strength of 3,000 psi at 28 days.

NOT TO SCALE

CITY OF MILPITAS, ENGINEERING DIVISION

REVISION	DATE
1	1991
2	2001
3	2010
4	2021

STANDARD FLUSHING INLET

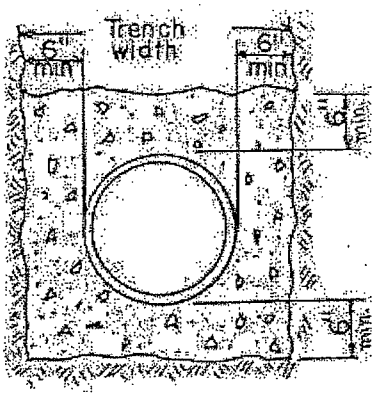
4 APPROVED BY: Steven Erickson June 10, 2021

ENGINEERING DIRECTOR / CITY ENGINEER RCE No. C57242

STANDARD DRAWING NO. 602

DATE Rev. 5/12/21

SHEET 1 OF 1



Class B Concrete

REV	DATE	APPROVED	DESIGN
			DRAWN
			CHECKED
			APPROVED BY: CITY ENGINEER
			DATE: 10/8/97

CITY OF MILPITAS

PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
STANDARD DRAWING

CONCRETE JACKET

NO. 606

ADOPTED
S-MINUTES
DATE 8-14-58
SHEET 1 OF 1

AIR TEST FORMULA

The contractor shall plug all lateral sewers. The sewer main ends shall be plugged and braced where needed, and if buildings have been connected, cleanouts shall be plugged also.

The Contractor will supply the necessary metering equipment and hoses for the test and a blower or compressor with adequate capacity to perform the test.

The line shall be supplied with air until 4p.s.i.g. has been reached, at which time the flow to the pipe shall be shut off. The Inspector will then accurately determine the time of loss of 1p.s.i. pressure in the range from 3.5p.s.i.g. to 2.5 p.s.i.g.

The minimum time allowable for loss of 1p.s.i. shall be computed by use of the following table or formula.

(Diameter of pipe in inches)^2 x 0.0109 = seconds per lin.ft. of pipe equals time required to lose one pound air pressure (from 3.5 pounds to 2.5 pounds) of a loss rate of 3c.f.m.

EXAMPLE: 400 lin.ft. 8" V.C.P., 8x8x.0109x400 = 279
+ 400 lin.ft. 4" V.C.P., 4x4x.0109x400 = 70
349 sec. = 5min.49sec.

If the time loss is less than 5min.49sec., there are one or more leaks that exceed 3cu.ft. per min.

For computation, the following table will apply:

Size of pipe	Seconds per lin.ft. of pipe
4"	.17
6"	.39
8"	.70
10"	1.09
12"	1.57
15"	2.45
18"	3.53
21"	4.81
24"	6.28
27"	7.95
30"	9.82
33"	11.88
36"	14.14

Any pipe test section losing a pound of air in less than this time will leak more than 3 c.f.m. and shall be rejected.

COMPARISON

The amount of water that will infiltrate at six foot head through this opening will vary from 10 to 60 gallons per hour, depending on the size and shape of hole or holes.

REV	DATE	APPROVED	DESIGN
			DRAWN
			CHECKED
			APPROVED BY: David M. Mitchell, CITY ENGINEER
			DATE 12/8/61

CITY OF MILPITAS
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
STANDARD DRAWING

AIR TEST FOR SEWER MAINS

NO. 610

ADOPTED
S# 59
DATE 2/9/61
SHEET 1 OF 2

DIRECTIONS

Use straight edge
Scales 1 & 4 give T values on scale 5
Scales 1 & 2 give T values on scale 3

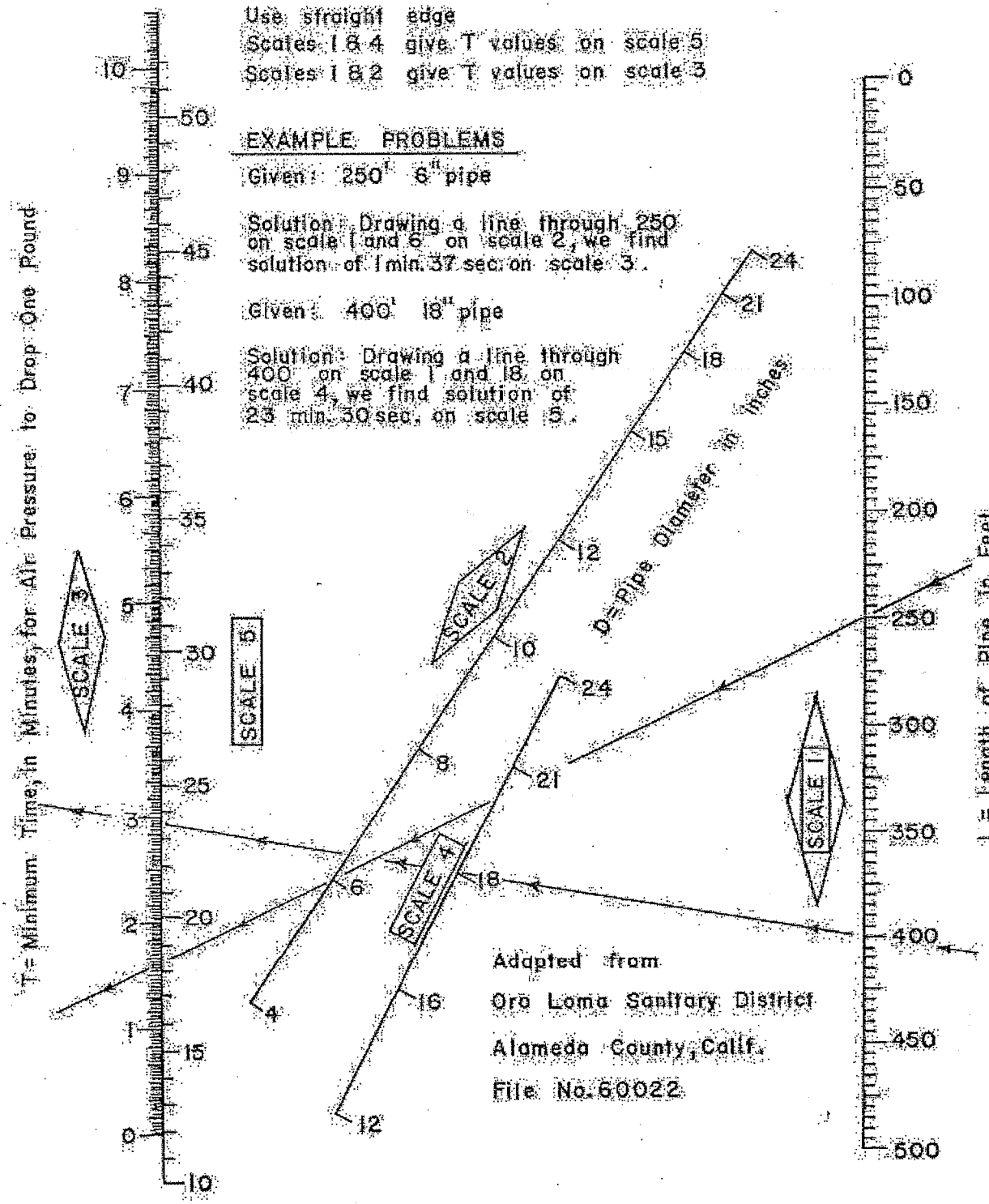
EXAMPLE PROBLEMS

Given: 250' 6" pipe

Solution: Drawing a line through 250 on scale 1 and 6" on scale 2, we find solution of 1 min. 37 sec. on scale 3.

Given: 400' 18" pipe

Solution: Drawing a line through 400 on scale 1 and 18 on scale 4, we find solution of 23 min. 30 sec. on scale 5.



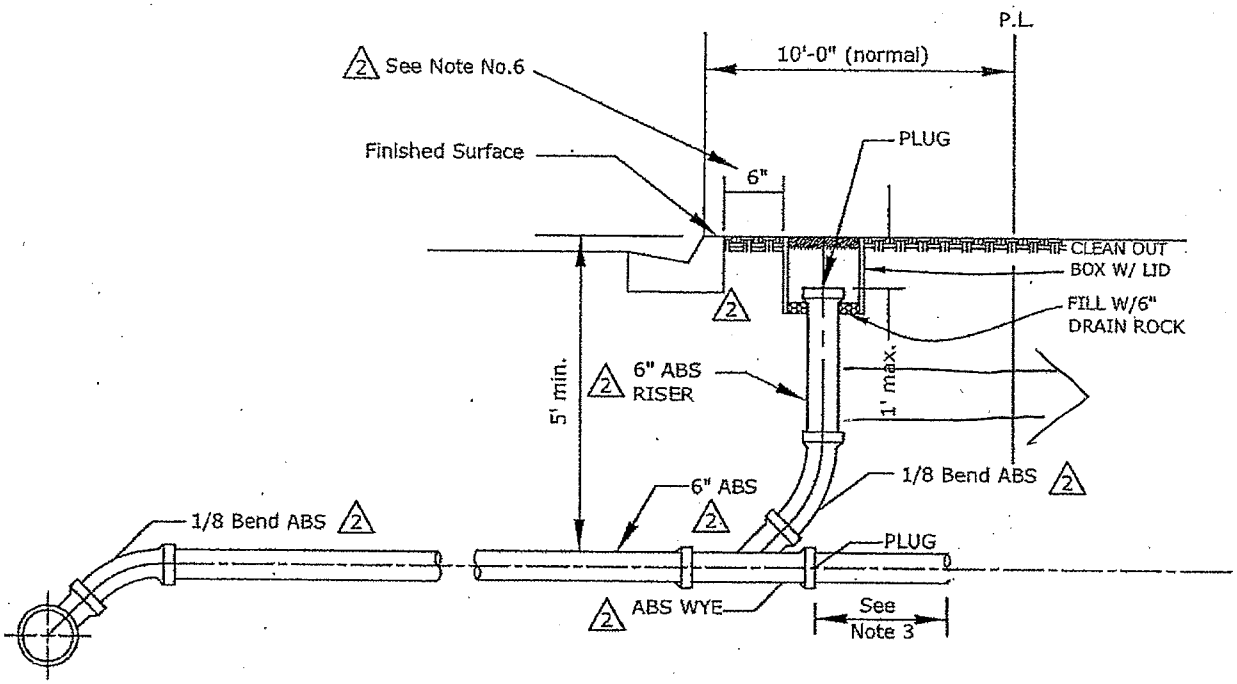
NOMOGRAPH FOR AIR PRESSURE TEST

REV	DATE	APPROVED	DESIGN
			DRAWN
			CHECKED
			APPROVED BY: Paul W. Ellis, CITY ENGINEER
			DATE 10/9/61

CITY OF MILPITAS
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
STANDARD DRAWING

AIR TEST FOR SEWER MAINS

NO. 610
ADOPTED
S # 59
DATE 2/9/61
SHEET 2 OF 2



LATERAL

Notes:

1. Cleanout box and lid shall be per Standard Drawing No. 602.
2. Plug shall be vitrified clay or rubber.
3. Customer service connection shall be made under the supervision of the Building department. (If on private property)
4. Riser shall be the same size as sewer lateral.
5. Minimum grade at lateral shall be 1/4" per foot.
2. 6. Pipe material shall be ABS from main to C.O.. Cleanout should be placed 6" behind street curb or as approved by City Engineer.

NOT TO SCALE

CITY OF MILPITAS, ENGINEERING DIVISION

REVISION	DATE
1	1991
2	2001
3	2010

SANITARY SEWER LATERAL
- COMM./INDUSTRIAL

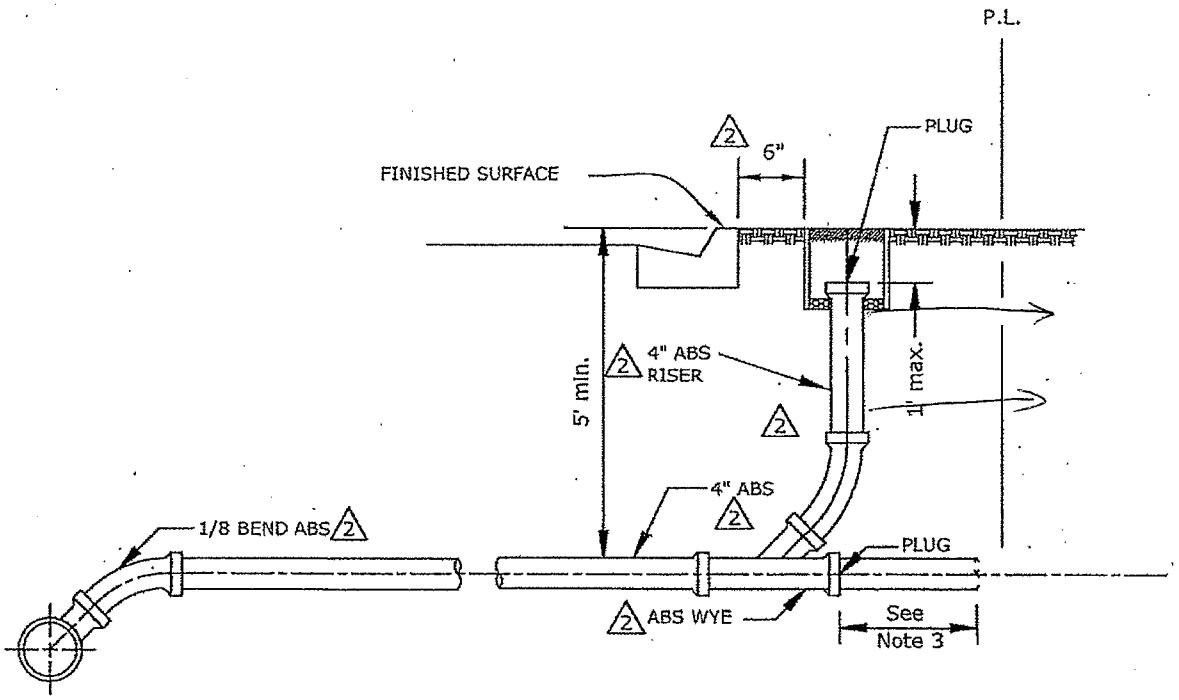
3 APPROVED BY:

PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283

STANDARD DRAWING
NO. 618

DATE : 6/15/10

SHEET 1 OF 1



LATERAL

Notes:

2 1. Clean out shall be installed as shown hereon. Clean out box shall be Christy G-5 BOX and G5C Lid and G5GR Grade Ring or approved equal with "C.O." or "S" marking. Cast iron traffic cover (Christy G-5 or approved equal) is required in sidewalk & driveway.

2. Plug shall be vitrified clay or rubber.

3. Customer service connection shall be made under the supervision of the Building department. (If on private property)

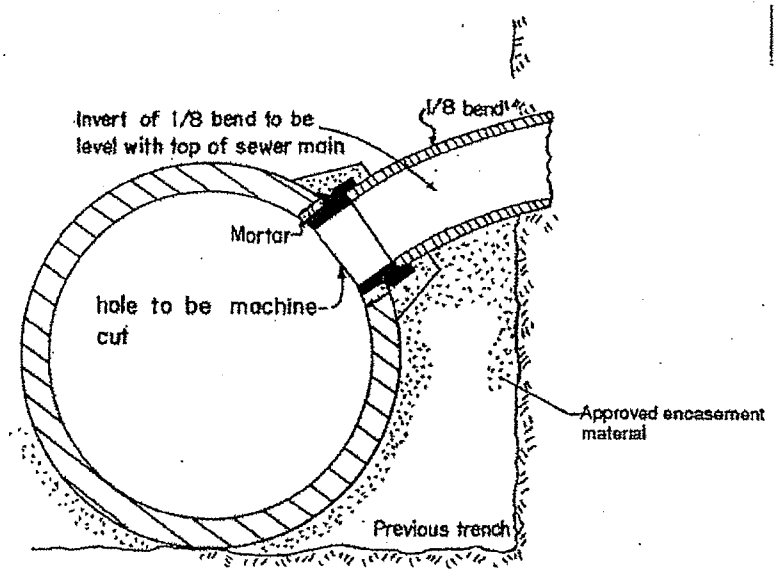
4. Minimum grade of lateral shall be 1/4" per foot.

2 5. Riser shall be the same size as sewer lateral.

2 6. Pipe material shall be ABS from main to C.O.. Cleanout should be placed 6" behind street curb or as approved by City Engineer.

NOT TO SCALE

CITY OF MILPITAS, ENGINEERING DIVISION			
REVISION	DATE	SANITARY SEWER LATERAL - RESIDENTIAL	STANDARD DRAWING NO. 620
1	1966		
2	2001		DATE : 6/15/10
3	2010	3 APPROVED BY: PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283	SHEET 1 OF 1



CITY OF MILPITAS, ENGINEERING DIVISION

REVISION	DATE
1	1958
2	2001
3	2010

CONNECTION TO EXISTING VCP SANITARY MAIN

3 APPROVED BY:

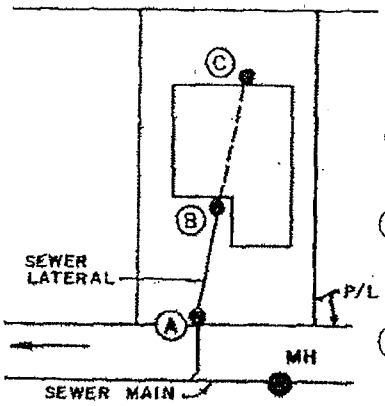
PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283

STANDARD DRAWING NO. 622

DATE : 6/15/10

SHEET 1 OF 1

BACKFLOW DEVICE LOCATION

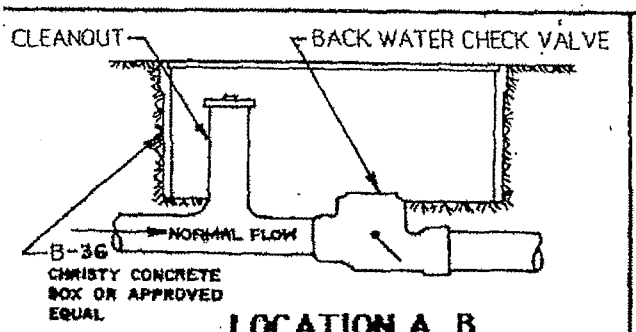


BACKFLOW DEVICE MAY BE LOCATED AT POINT (B) OR (C) AS APPROVED BY THE BUILDING OFFICAL ALL BACK FLOW OR OVERFLOW SHALL BE INSTALLED BELOW GRADE

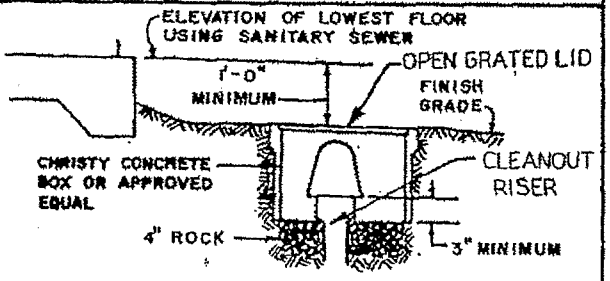
(A) PER STANDARD DETAIL No.618 AND 620.

(B) CLEANOUT AT JUNCTION OF BUILDING DRAIN AND SEWER LATERAL DEVICE SHALL BE INSTALLED BELOW FINISH GRADE.

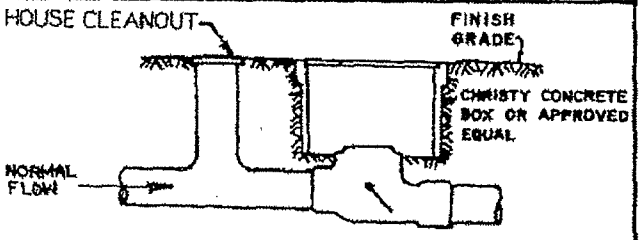
(C) TERMINAL UPPER CLEANOUT OEVICE SHALL BE INSTALLED BELOW FINISH GRADE



LOCATION A, B



OVERFLOW DEVICE INSTALLATION (BELOW GRADE) LOCATION A, B, C



BACKWATER CHECK VALVE INSTALLATION
LOCATION A, B

NOTE

THE TYPE OF DEVICE USED SHALL BE AS DETERMINED BY THE BUILDING OFFICIAL IN ACCORDANCE WITH THE FOLLOWING CRITERIA

1. A BACKFLOW PROTECTION DEVICE SHALL BE INSTALLED WHEN THE ELEVATION OF THE LOWEST FLOOR CONTAINING GRAVITY WASTE DRAINAGE IS LESS THAN ONE FOOT ABOVE THE SURFACE ELEVATION OF NEAREST UPSTREAM PUBLIC SEWER STRUCTURE (MANHOLE, ETC.)

2. A BACKWATER CHECK VALVE (AMERICAN FOUNDRY NO 52A OR APPROVED EQUAL) SHALL BE INSTALLED WHERE SEWAGE CANNOT OVERFLOW ONTO THE SURROUNDING AREA

3. AN OVERFLOW DEVICE (AS MANUFACTURED BY REAM MACHINE SHOP, LAFAYETTE, CALIFORNIA, OR APPROVED EQUAL) MAY BE INSTALLED WHERE SEWAGE CAN OVERFLOW ONTO THE SURROUNDING AREA WITHOUT DAMAGE TO PROPERTY

DEPTH	BOX SIZE
2' OR UNDER	B-9 10" X 17"
2' TO 3'	B-36 17" X 30"
3 OR UP	AS APPROVED

CITY OF MILPITAS, ENGINEERING DIVISION

REVISION	DATE
1	1966
2	2001
3	2010

SEWAGE BACKFLOW PROTECTION DEVICE

3 APPROVED BY:

PUBLIC WORKS DIRECTOR / CITY ENGINEER RCE No. 40283

STANDARD DRAWING NO. 624

DATE : 6/15/10

SHEET 1 OF 1

Appendix M

SSMP Self-Audit Record

2021 SSMP Biennial Audit Report Form

City of Milpitas

Significant Changes Since Last SSMP Update:

1. Purchased new CCTV Truck for videoing sewer lines.

2. Equipped vactor truck to be able to perform root foaming

Introduction	**Yes**	**No**
A. Is the current system description complete and up to date?	☒	☐
B. Are all infrastructure statistics current and complete?	☒	☐

Discussion:

System description and statistics are current and complete.

Element 1 – Goals	**Yes**	**No**
Are the goals stated in the SSMP still appropriate and accurate?	☒	☐

Discussion:

Goals are stated on page 2 and focus on maintenance program, preventing SSOs, and responding quickly in the event of an SSO. This includes management of the system, the FOG program, and ensuring Corrective Actions are taken in a timely manner.

Element 2 – Organization	**Yes**	**No**
A. Is the Sanitary Sewer Overflow (SSO) Contact List in Table 2-1 current?	☐	☒
B. Is the Organization Chart in Figure 2-1 of the SSMP current?	☒	☐
C. Are the position descriptions an accurate portrayal of staff responsibilities?	☒	☐
D. Is the chain of communication for reporting and responding to SSOs accurate and up-to-date?	☒	☐

Discussion:

The City SSO Contact List in Table 2-1 needs to be updated.

Element 3 – Legal Authority:	**Yes**	**No**
A. Does the City have legal authority to prevent illicit discharges into the sewer?	☒	☐
B. Were any changes or modifications made in the past year or since the last SSMP audit to City Ordinances, Regulations, or standards?	☒	☐
Does the SSMP accurately cite the City's Code documenting the City's legal authority to:		
C. Prevent illicit discharges?	☒	☐
D. Require proper design and construction of sewers and connections?	☒	☐
E. Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the City?	☒	☐
F. Limit discharges of fats, oil and grease?	☒	☐
G. Enforce any violation of its sewer ordinances?	☒	☐

Discussion:

This section cites all required City Code. Changes to the Sanitary Code cited were made on 1/21/2021. Additional changes planned in 3Q 2021 to clarify responsibilities for Maintenance by User, increase administrative citations, and to accurately reflect the City's FOG Program.

Element 4 – Operations and Maintenance	**Yes**	**No**
Collection System Maps		
A. Does the SSMP reference the current process and procedures for maintaining the City's sanitary sewer system maps?	☐	☒
B. Are the City's wastewater collection system maps complete, current, and sufficiently detailed?	☒	☐
Prioritized Preventive Maintenance		
C. Does the SSMP describe current preventive maintenance activities and the system for prioritizing the cleaning of sewer lines?	☒	☐

D. Based upon the SSO information in CIWQS and the Annual SSO Report, are the City's preventive maintenance activities sufficient and effective in minimizing SSOs and blockages?	☒	☐
Rehabilitation and Replacement Program		
E. Is there an ongoing condition assessment program sufficient to rank the condition of sewer pipes and schedule rehabilitation?	☒	☐
F. Are the current components of this program documented in the SSMP?	☐	☒
G. Does the rehabilitation and replacement plan include a capital improvement plan that addresses proper management and protection of the infrastructure assets?	☒	☐
H. Does the plan include a time schedule for implementing the short and long-term plans plus a schedule for developing the funds needed for the capital improvement plan?	☒	☐
Contingency Equipment and Replacement Inventory		
I. Does the SSMP list the major equipment currently used in the operation and maintenance of the collection system?	☐	☒
J. Are contingency equipment and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance?	☒	☐
Training		
K. Are training records current?	☐	☒
L. Does the SSMP document current training expectations and programs?	☒	☐

Discussion:

Collection System Maps: Wastewater collections maps are in the process of being updated in the GIS system. The city is currently developing a plan for each department to update maps in their area.

Prioritized Preventative Maintenance: The City's program has shown effectiveness in preventing or minimizing SSOs. This is supported by the limited number of SSOs occurring: 2016: Two; 2017: Zero; 2018: Two; 2019: One.

Rehabilitation and Replacement Program: Rehabilitation and inspection plan description needs update based on new CCTV program.

Contingency Equipment and Replacement Inventory Update the list of the major equipment currently used in the operation and maintenance of the collection system (new camera truck).

Training: Training records are being migrated into a new online system and upgraded at this time.

Element 5 – Design and Performance Standards	Yes	No
A. Does the SSMP reference current design and construction standards 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. Does the SSMP document current procedures and standards for inspecting and testing the installation of new, rehabilitated and repaired sewer facilities?	☐	☒

Discussion:

The current design and construction standards referenced in 5.1 are undergoing updates to include HDPE as pipe substance, among other updates: 1. *Engineering Plans and Map Procedures and Guidelines*, *Section VIII* and 2. *Standard Specifications for Sanitary Sewers*.

Element 6 – Overflow and Emergency Response Plan	Yes	No
A. Does the City maintain proper notification procedures so that the primary responders and regulatory agencies are informed of all sanitary sewer overflows (SSOs)?	☒	☐
B. Does the OERP have a program to ensure an appropriate response to all overflows?	☒	☐
C. Does the OERP contain procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities?	☒	☐
D. Does the SSMP identify the officials who will receive immediate notification of such SSOs?	☒	☐
E. Are staff and contractor personnel aware of and appropriately trained on the procedures of the OERP?	☒	☐
F. Does the OERP contain procedures to address emergency operations such as traffic control and other necessary response activities?	☒	☐
G. Does the OERP ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States?	☒	☐
H. Considering SSO performance data, is the OERP effective in handling SSOs in order to safeguard public health and the environment?	☒	☐
I. Is the Water Quality Monitoring Plan current and has it been trained on and practiced by staff that would be involved in an SSO of large volume?	☒	☐
J. Was sampling conducted within 48 hours for all SSOs greater than 50,000 gallons and were results entered for these SSOs through the CIWQS website?	☒	☐

K. Has the City prepared a Technical Report for all SSOs larger than 50,000 gallons? Have all Technical Reports been filed on the CIWQS website as required?	☒	☐

Discussion:

One spill over 50,000 gallons occurred on 2/24/2016. A technical report was prepared and sampling was conducted within 24 hours in accordance with the SSMP and OERP.

A refresher training was conducted with staff on January 12, 2021 to review the OERP. Online SSO training has been conducted in the past through DKF Solutions.

Element 7 – Fats, Oils, and Grease (FOG) Control Program	**Yes**	**No**
A. Does the Fats, Oils, and Grease (FOG) Control Program include a description of public education outreach efforts that promote proper handling and disposal of FOG?	☒	☐
B. Does the FOG program include a plan for the proper disposal of FOG generated within the sewer system service area?	☒	☐
C. Does the City have sufficient legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG?	☒	☐
D. Are there requirements to install grease removal devices (such as traps or interceptors), best management practices (BMP) requirements, record keeping, maintenance requirements and reporting requirements established in the City's FOG Control Program?	☒	☐
E. Does the City have authority to inspect grease producing facilities and have sufficient staff to inspect and enforce the FOG ordinance?	☒	☐
F. Does the FOG control program identify sections of the collection system subject to FOG blockages, establish a cleaning schedule and address source control measures to minimize these blockages?	☒	☐
A. Does the FOG control program implement source control measures for all sources of FOG discharged to the collection system?	☒	☐
G. Is the current FOG program effective in minimizing blockages of sewer lines resulting from discharges of FOG to the system?	☒	☐

Discussion:

FOG Control Program: This section of the SSMP and the City's Municipal Code requires update on procedures to require grease removal devices and inspection. The City no longer works with the City of San Jose Environmental Services Department to size grease removal devices or conduct FOG inspections. The City has taken over responsibility for these activities.

Element 8 – System Evaluation and Capacity Assurance Plan	Yes	No
A. Does the City evaluate hydraulic deficiencies in the system and provide estimates of peak flows associated with conditions similar to those causing overflow events, if applicable?	☒	☐
B. Does the City's capital improvement program (CIP) establish a schedule of approximate completion dates for both short-term and long-term improvements and is the schedule reviewed and updated to reflect current budgetary capabilities and activity accomplishment?	☒	☐
C. Does the City take steps needed to establish a short and long-term CIP to address hydraulic deficiencies, including prioritization, alternatives analysis, and schedules?	☒	☐
D. Are repair and replacement projects developed based upon condition assessment and/or field maintenance results?	☒	☐

Discussion:

A project to install real time monitoring and modeling for system flows and hydraulic capacity has been conducted as part of the Sewer Master Plan.

Element 9 – Monitoring, Measurement, and Program Modifications	Yes	No
A. Does the City maintain relevant information that can be used to establish and prioritize appropriate SSMP activities?	☒	☐
B. Does the City monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP?	☒	☐
C. Does the City assess the success of the preventive maintenance program?	☒	☐
D. Does the City update program elements, as appropriate, based upon monitoring or performance evaluations?	☒	☐
E. Does the SSMP identify and illustrate SSO trends, including frequency, location and volume of SSOs?	☒	☐
F. Does the City maintain five years of records for all documentation relevant to identifying SSO trends?	☒	☐

Discussion:

The City 's continuously monitors the program to identify areas for improvement. The new online work order system will allow for further tracking of sewer maintenance and records.

Element 10 – SSMP Audits	Yes	No
A. Are updates to the SSMP needed, based on the results of the audit?	☒	☐
B. Were the audit results shared with the City Council? And the public, via the City website?	☒	☐
C. Will the SSMP Audit be completed, reviewed, and filed as an Appendix to the SSMP on a biennial basis?	☒	☐
D. Do any proposed changes to the SSMP require Board approval as they have a substantial change in the policies and procedures for collection system operations and maintenance?	☐	☒

Discussion:

We will share audit results with the City Council and the public via the City website.

Element 11 – Communication Program	Yes	No
A. Does the City communicate on a regular basis with the public and other agencies about the development and implementation of the SSMP?	☒	☐
B. Does the communication system provide the public the opportunity to provide input as the program is developed and implemented?	☒	☐
C. Were annual progress reports and metrics of implementation of the SSMP provided to the City Council?	☒	☐

Discussion:

Progress reports and metrics of the implementation of the SSMP are provided to the City council and the City will provide the opportunity for public input on the SSMP development. SSMP and SSO metrics are also included in the department's monthly performance metrics tracking.

Change Log	Yes	No
Is the SSMP Change Log current and up to date?	☒	☐

Discussion:

The SSMP Change Log was up to date at the time of audit.

Recommendation Summary

In the elements above, recommendations were included in the discussions to maximize the efficiency of the SSMP in reducing the number of sanity sewer overflows. A summary of those recommendations are listed below.

1. Update SSO Contact List, distribute necessary organizational charts, and review the chain of command with the department.
2. Review and update the Overflow Emergency Response Plan as needed.
3. Update the SSMP to reflect new location of wastewater collections maps and plan for keeping the maps up to date.
4. Update the rehabilitation and inspection plan and contingency equipment and replacement inventory based on the 2020 Sewer Master Plan, and the new CCTV Program.
5. Update the design and constructions standards in *Engineering Plans and Map Procedures and Guidelines, Section VIII* and *Standard Specifications for Sanitary Sewers* to reflect the new permitted materials.
6. Update the FOG Control Program section to reflect the City's new responsibilities and procedures.
7. When real time monitoring and modeling for system flows and hydraulic capacity is completed make sure that is reflected in the SSMP.
8. Establish a regular training schedule and train employees on current Overflow Emergency Response Plan.
9. Share the audit results and SSMP update with City Council and engage the public via the City Website.

Prepared by: Matt Lambert Date of Audit: 7/31/2020

Reviewer Signature:  Date: 05/18/2021

Reviewed by: Elaine Marshall Title: Deputy Director of Public Works

Appendix N

Equipment –Material-Vendor List

Emergency Contacts :Other Agencies

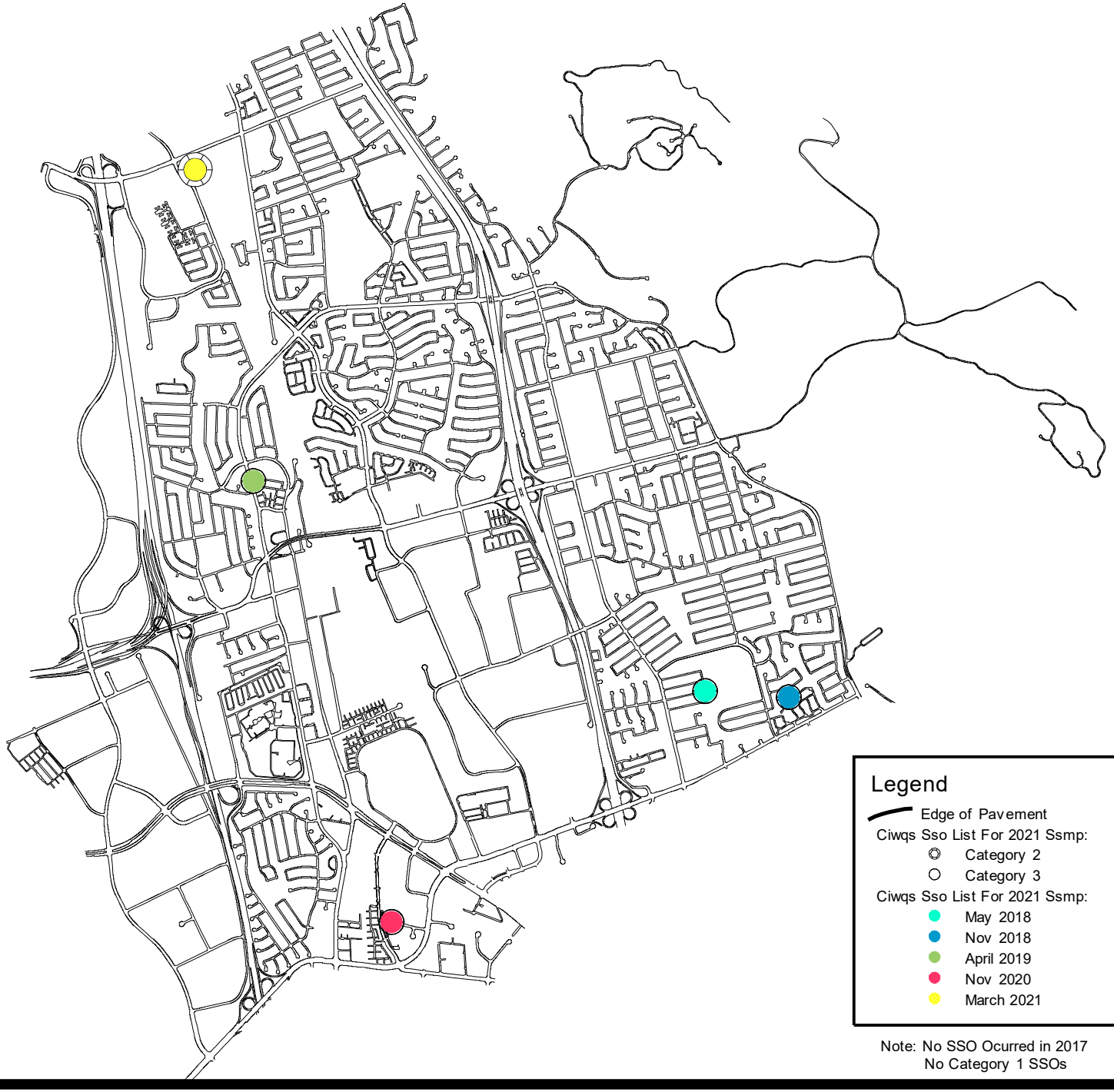
PG&E	**1-800-743-5000**
High Priority	**1-888-743-4911**
AT&T	**1-800-247-2020**
SFPUC	**1-650-872-5900**
SCVWD	**1-408-565-2607**
Inter-Tie	**1-408-586-0098**
DWR (South Bay Aqueduct)	**1-209-833-2180**
SJRWF (Wastewater Facility)	**1-408-877-4070**
	1-408-635-4000
On duty Supervisor cell	**1-408-945-5317**
UPRR	**1-888-877-7267**
USA Locate	**811**
VTA (Bus Route interruption)	**1-408-321-2300**

Contractor services

1. Electric motor/pump repairs	Koffler electric/Mechanical	510-567-0630
2. Pump repairs	Pump Repair service	415-467-2150
3. Fuel Supply	Valley Oil	650-967-2253 408-559-1839
4. Tire Repair	Bruce's Tires	408-295-1742
5. Underground repairs	Preston Pipelines	408-262-1418
6. Underground repairs	Sanco Pipelines After hours emergencies 408-640-1938 or	408-377-2793 408-358-3655
7. Equipment Rental	United rentals 24/7 service	408-251-7730 800-877-3687
8. Hydro Flusher	Able Plumbing Sewer & Drain	408-377-9990
9. Diesel repair	Peterson Cat	510-618-5575
10. Waste oil	World Oil Environmental Services	800-727-2879
11. Street lights/ Signals	Cal-West	408-640-7796

Appendix O

SSO Location Map



Note: No SSO Ocurred in 2017
No Category 1 SSOs

City of Milpitas SSO Location Map 2017-2021

This map is a product of the City of Milpitas GIS

0' 3458'

mlambert, 2021-10-01 12:11:39
(\\watis\GIS\Encompass\Admin\Meta\View.Mdb)

Appendix P

Preventative Maintenance Log

Preventative Maintenance

Quarterly Preventative Maintenance	Direction and Distance
Elmwood Facility	South 800'
Dempsey @ Chewpon	South 600', East 300'
Bart Station Intersection	South 480'
Petaluma Ct	North 120'
Eagle Ridge	Spray Off Shelf
Grocery Outlet parking lot	South 220'
Butler St.(Burger King)	South 500'
Spence to Butler	South 300', East 300'
Calaveras Blvd @ 680	North 450', South 500', East 300'

6 Month Siphon Preventative Maintenan	Direction and Distance
529 Main St NB	South 80' back flush 10'
529 Main St SB	South 50'
Milpitas Blvd Hetch Hetchy	South 800'
Marilynn/Barker/Penetencia	South 300', East 500', North 170', South 500'
Main St @ Apex apt	South 300'
Gil Park Syphon	East 550'
Curtis E of Main St	East 140'
Machado/Elmwood Facility	South 110'
Barber Ln	North 325'
PG&E Parking lot	South 800
Capitol Ave & Venus	East 500', West 500', North 100'
Norwich & Barker	East 300'
Curtis & Comet	South 700
Wrigley Creek	East 350'
Montegue, Sango Ct to Delano St	East 120'
Abel @ Corning	W250'
Abel @ Sylvia	W400'
Main St @ Greatmall Pkwy	East 80'
Main St/Greatmall Pkwy/Centria	East 200'
Santa Rita Dr to Tramway Dr	East 120', 2nd m/h East 300'
Jurgens @ Millmont	East 400'
Millmont @ Milkweed St	East 350'
River Rock Rd to Terra Mesa Way	East 350'

Root Foamer Planned	Direction and Distance
Mt Rainer	East 350'
Rosswell to Canton	East 500'
Big Bend @ Crater Lake	South 350'
Calaveras to Ayer St	North 500'
Mt Rainer/Grand Teton	East 600'
Grand Teton to Big Bend	North 600'
Clear Lake Ct	East 114'

Shiloh Ave	North237'
Westridge @ Crescent Terr	East 70'
Pinard/Chipman/Piedmont	East 1,050'
Cuesta/Calle Mesa Alta	East 350'

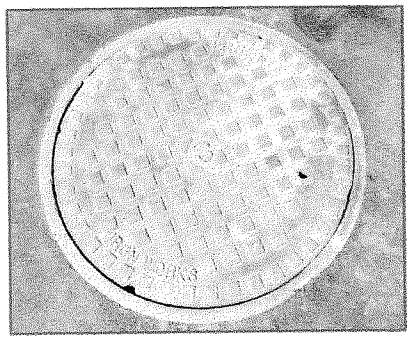
Root Foamer and Follow-Up CCTV Completed

400 S Main St @ Corning	South 415'
930 N Park Victoria	West 250', East 60'
Sunnyhills Ct to Arizona	East 730'
Rosswell and Edsel	East 350', North 500'
Calle Oriente/PV intersec	East 700'
Highland Ct at Butano	North 300'
Adams Apts	East 260', West 245'
Sequioa at Yosemite	East 350', South 350'
SB Hillview @ creek	East 800'
Canton @ Bixby	North, South, East 300'
751 Valencia	North 800'
1425 Saturn Ct	East 415'
196 Selwyn	East 320', South 200'
Russell @Hillview	North 350'
Vienna @ Fountainbleu	North 300'
Conway @ Coelho	North 300', East 200'
Conway @ Greathouse	East 350', South 375
Conway @ Dixon	South 200', East 250'
Calaveras Blvd to Jupitor Ct	South 250'

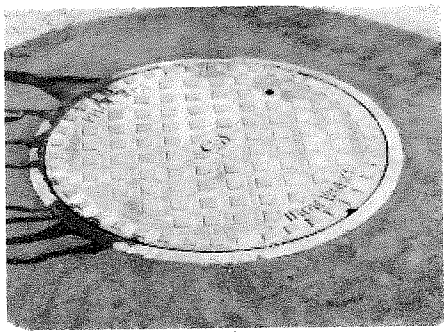
Appendix Q

Milpitas Manhole Flowrate Chart

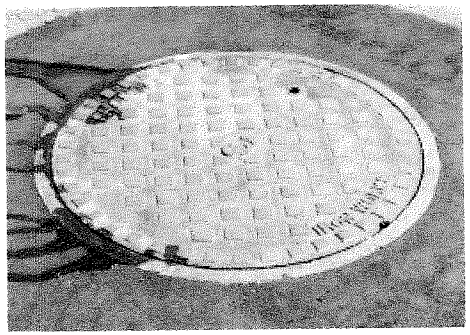
26 1/2" "A" Manhole, Page 1 of 2



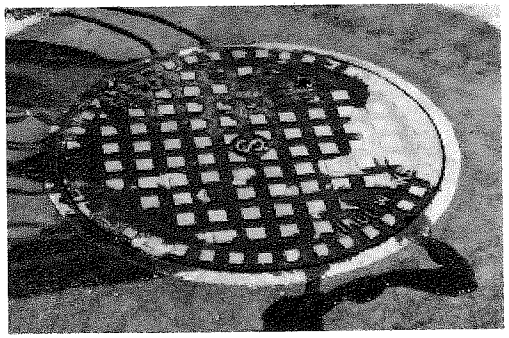
26 1/2" Manhole



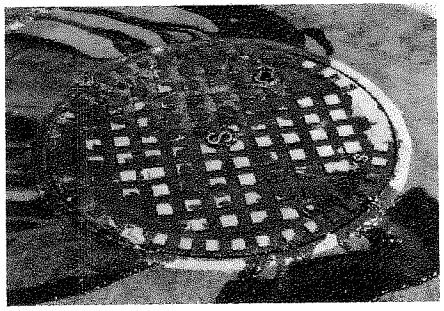
1 GPM



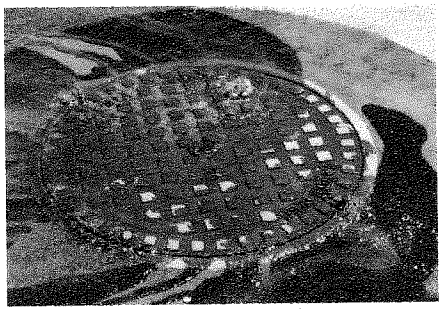
2 GPM



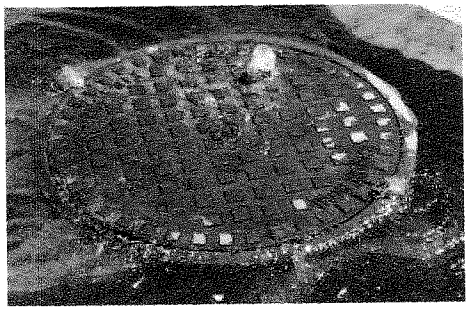
5 GPM



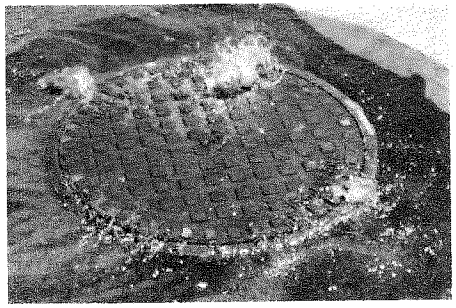
10 GPM



15 GPM



20 GPM

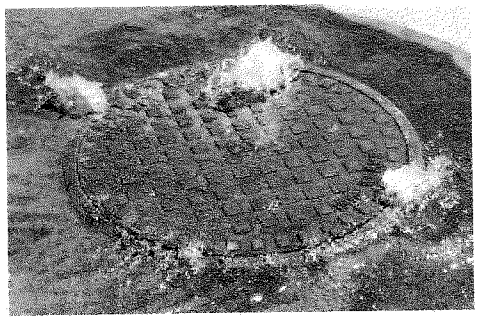


25 GPM

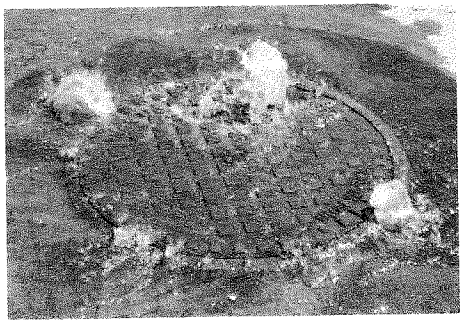
<u>Instructions:</u> **Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:**

1) **If you are able, take a picture of overflowing manhole/riser.**
2) **Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.**
3) **Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.**

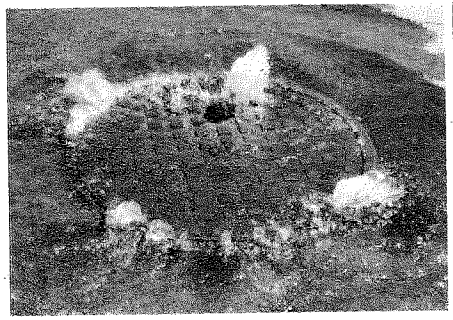
26 1/2" "A" Manhole, Page 2 of 2



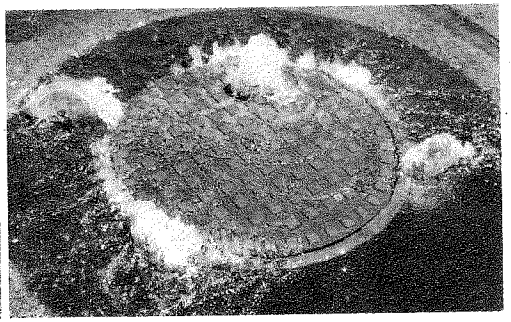
30 GPM



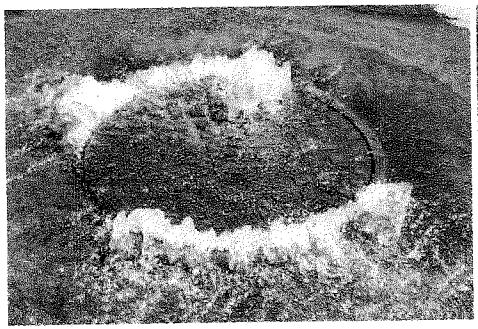
50 GPM



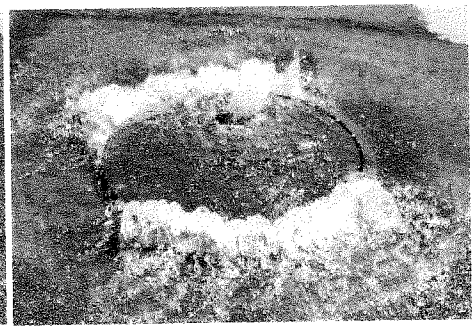
75 GPM



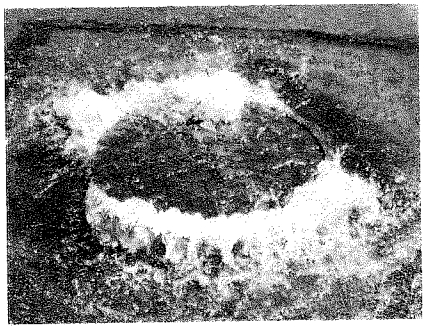
100 GPM



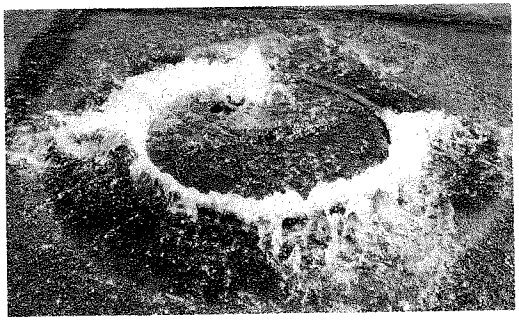
125 GPM



150 GPM



175 GPM



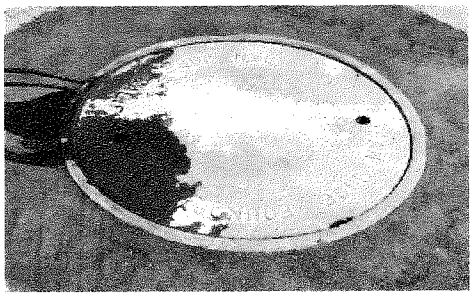
200 GPM

Instructions: **Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:**

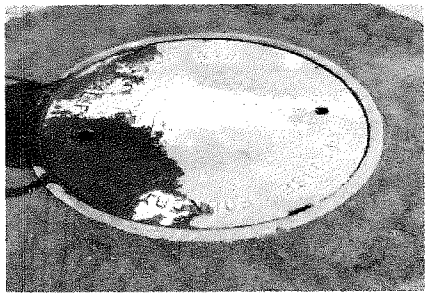
1) **If you are able, take a picture of overflowing manhole/riser.**
2) **Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.**
3) **Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.**

26 1/2" "B" Manhole, Page 1 of 2

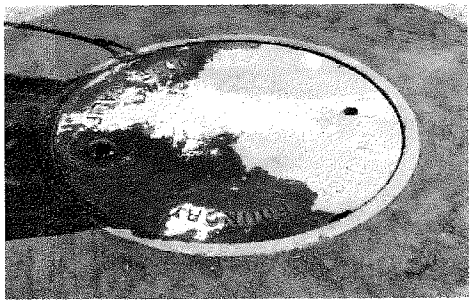
26 1/2" Manhole



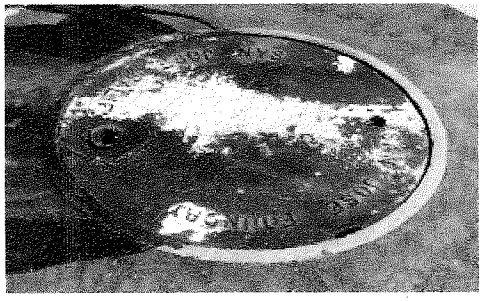
1 GPM



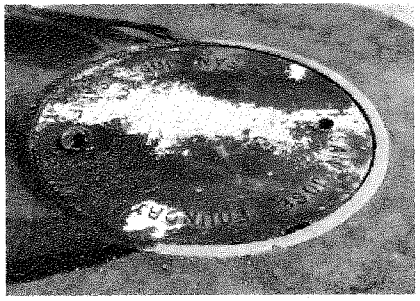
2 GPM



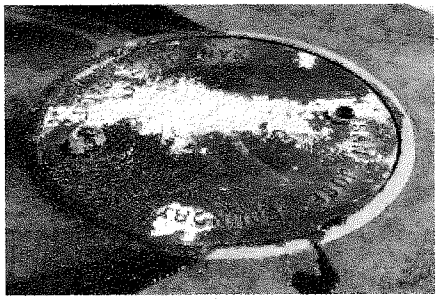
5 GPM



10 GPM



15 GPM



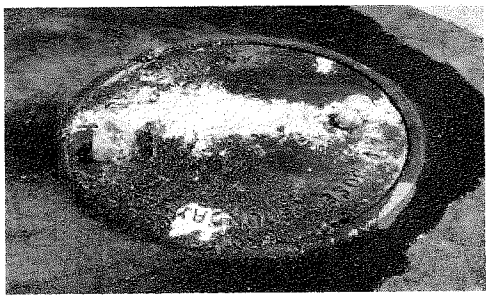
20 GPM

25 GPM

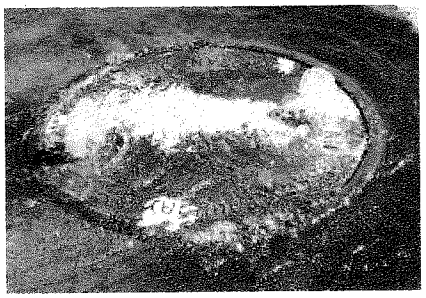
<u>Instructions:</u> **Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:**

1) **If you are able, take a picture of overflowing manhole/riser.**
2) **Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.**
3) **Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.**

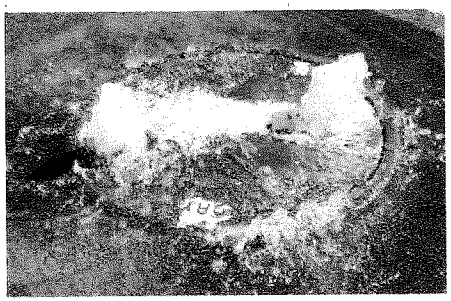
26 1/2" "B" Manhole, Page 2 of 2



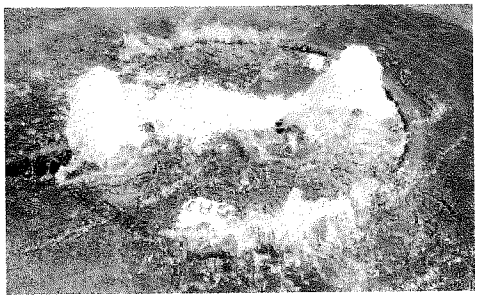
30 GPM



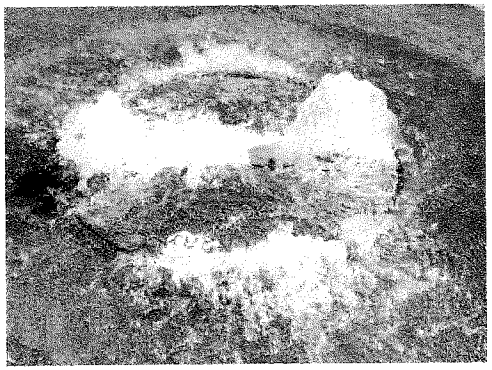
50 GPM



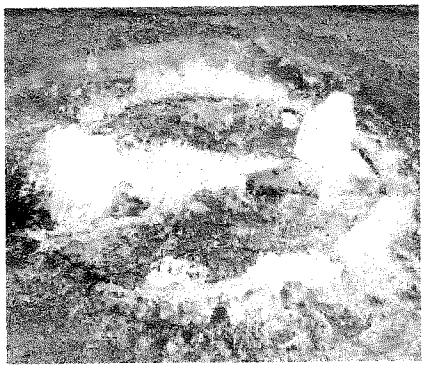
75 GPM



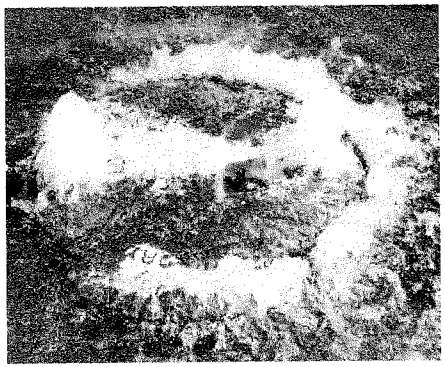
100 GPM



125 GPM



150 GPM



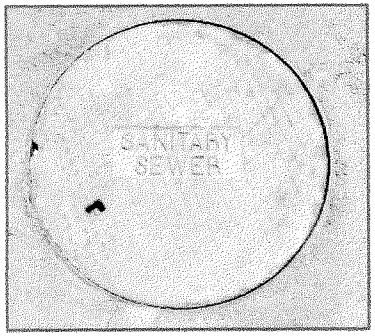
175 GPM

200 GPM

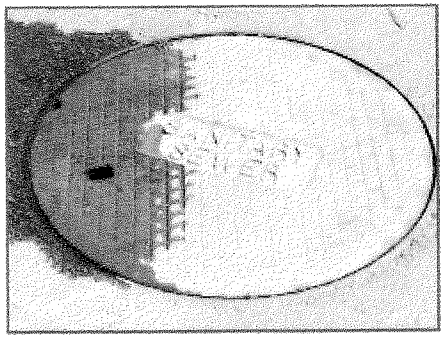
Instructions: **Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:**

1) **If you are able, take a picture of overflowing manhole/riser.**
2) **Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.**
3) **Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.**

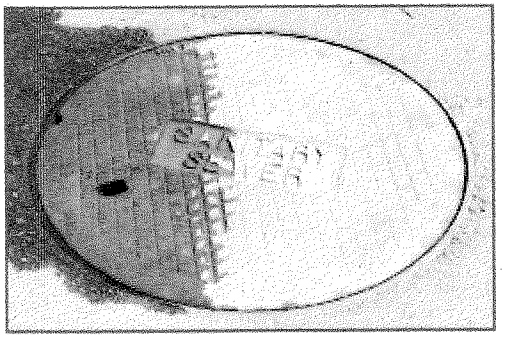
24" Manhole, Page 1 of 2



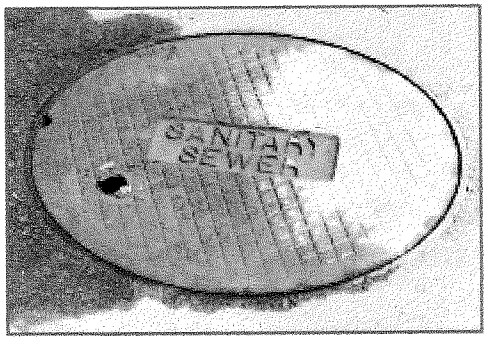
16 3/8" Riser



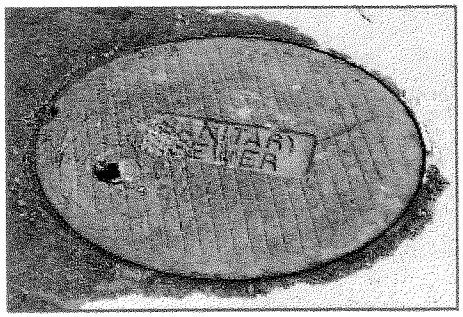
1 GPM



2 GPM

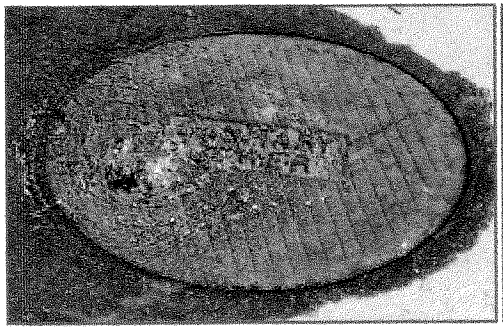


5 GPM

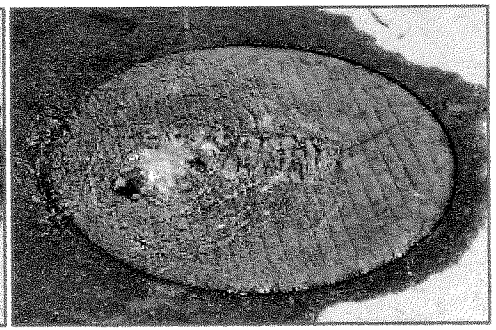


10 GPM

15 GPM



20 GPM

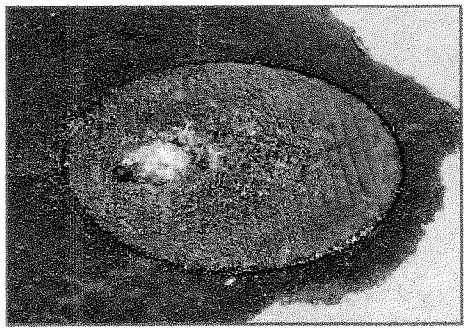


25 GPM

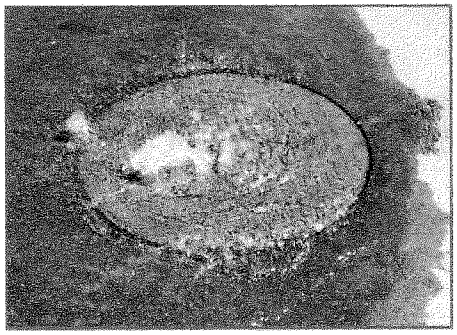
<u>Instructions:</u> Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:

1) **If you are able, take a picture of overflowing manhole/riser.**
2) **Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.**
3) **Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.**

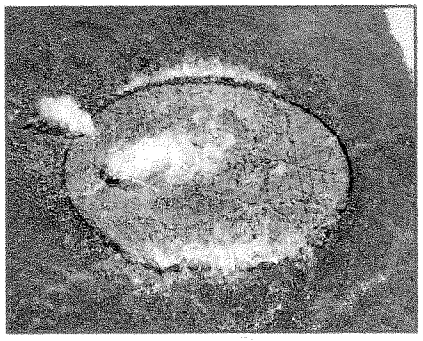
24" Manhole, Page 2 of 2



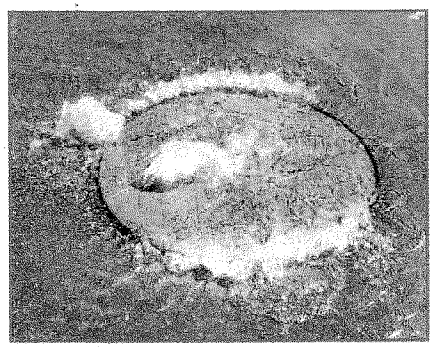
30 GPM



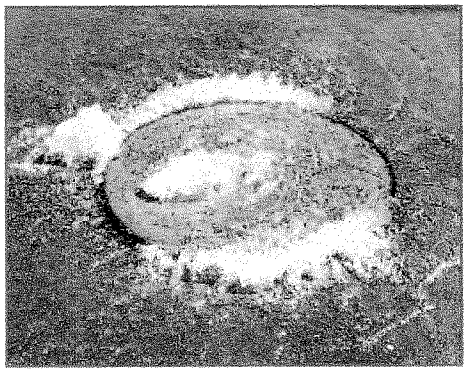
50 GPM



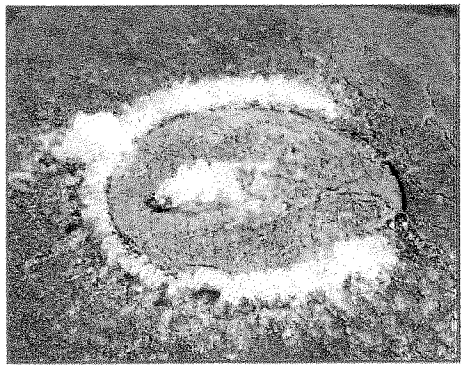
75 GPM



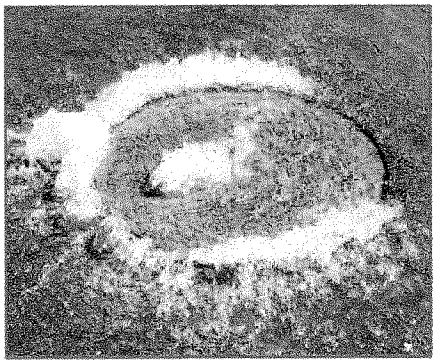
100 GPM



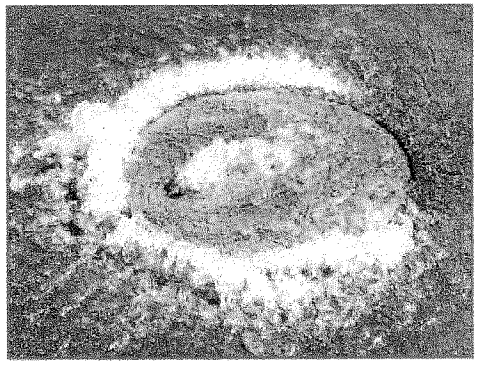
125 GPM



150 GPM



175 GPM



200 GPM

Instructions: **Since Milpitas has several different sizes of manhole lids varying in weight and number of pick holes, it is important to follow these steps when using this SSO flow rate estimating tool:**

1) **If you are able, take a picture of overflowing manhole/riser.**
2) **Measure lid diameter and select the correct chart to use. There are 4 different charts, one for each diameter. If you have a lid that is an odd size or does not match one of the charts, ask a coach for help. If the lid is stuck to the casting or any of the vent holes are plugged, make a note of that on the SSO estimation worksheet and take a picture.**
3) **Match overflowing lid to the closest picture on the correct chart, and use that as the rate of flow on the SSO estimation worksheet.**

Appendix R

Milpitas Sewer System Management Plan Change Log

City of Milpitas

Sewer System Management Plan (SSMP) Change Log

DATE	SSMP ELEMENT/ SECTION	DESCRIPTION OF CHANGE/REVISION MADE	CHANGE AUTHORIZED BY
1/24/2017	Appendix C – SSO and Backup Response Plan	Appendix C updated to align correctly with the 2016 SSMP/OERP. PB-1 corrected FG-7 and FG-8 updated RN-1 cannot be used – refer to 2016 OERP Pages 5 and 17 instead BP-5 updated to correct POCs	
1/24/2017	Appendices E, F, G and H	All updated from 2014 to current	
1/24/2017	Appendix J	Engineering plans link does not work. Use: http://www.ci.milpitas.ca.gov/milpitas/departments/engineering/plans-maps-specifications/	
9/22/2021	Element 2	Updated the SSO Contact List and Organization Flowchart	
9/22/2021	Element 4.1	Updated the SSMP to reflect new location of wastewater collections maps and plan for keeping the maps up to date.	
9/22/2021	Element 4.3	Updated the rehabilitation and inspection plan and contingency equipment and replacement inventory based on the 2020 Sewer Master Plan, and the new CCTV Program.	
9/22/2021	Element 7	Updated the FOG Control Program section to reflect the City's new responsibilities and procedures.	
9/22/2021	Element 8	Updated the Capacity Assessment section based on the 2020 Sewer Master Plan	
9/22/2021	Appendix C	Updated the Overflow Emergency Response Plan to reflect the new public observation and reporting work order generation system.	