SEWER SYSTEM MANAGEMENT PLAN







City of San Mateo

Public Works Department

Updated May 2025

Prepared by

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& ASSOCIATES

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LIST OF ACRONYMS

CCTV	Closed-Circuit Television
CIP	Capital Improvement Plan
CITY	City of San Mateo
CIWQS	California Integrated Water Quality System
CMMS	Computerized Maintenance Management System
CWP	Clean Water Program
DPW	Department of Public Works
EHS	Environmental Health Services
EMID	Estero Municipal Improvement District
FOG	Fats, Oils and Grease
FSE	Food Service Establishments
GIS	Geographical Information System
GPM	Gallons per Minute
GWDR	Statewide General Waste Discharge Requirements
I&I	Inflow & Infiltration
LRO	Legally Responsible Official
NASSCO	National Association of Sewer System Companies
NPDES	National Pollution Discharge Elimination System
SERP	Spill Emergency Response Plan
OES	California Office of Emergency Services (Previously Cal-EMA)
PACP	Pipeline Assessment and Certification Program
PM	Preventive Maintenance
PPE	Personal Protective Equipment
RWQCB	Regional Water Quality Control Board
SSMP	Sewer System Management Plan
Spill	Sanitary Sewer Spill
SPB	Sewer Pipe Blockage
SWRCB	State Water Resources Control Board
WDR	General Waste Discharge Requirements, also called the Statewide WDR
WWTP	Wastewater Treatment Plant

LIST OF TERMS

Blockage – An object that partially or fully hinders flow through a sewer pipeline. The blockage can be caused by debris in the sewer, grease buildup, root intrusion, or a partial or full collapse of the pipeline. Also known as a stoppage.

California Integrated Water Quality System (CIWQS) – A computer system used by the State and Regional Water Quality Control Boards to track information about SSOs, among other information. CIWQS is the tool used for online submittal of SSO details, which are then made available to the public. Website: http://www.swrcb.ca.gov/ciwqs/

Enrollee – The legal public entity that owns a sanitary sewer system, as defined by the Statewide WDR. Also known as a sewer system agency or wastewater collection system agency.

FOG Control Program –Program implemented at the discretion of the agency, based on the identified causes of sewer overflows, to reduce the discharge of fats, oils and grease into the sewer system.

Geographic Information System (GIS) – A database linked with mapping that records sewer system information. The GIS database could include sewer features such as pipe location, diameter, material, condition, or last date cleaned or repaired. GIS maps also typically contain base information such as streets and parcels.

Infiltration – The seepage of groundwater into a sewer system, including from service connections. Seepage frequently occurs through defective or cracked pipes, pipe joints, connections or manhole walls and joints.

Inflow – Water discharged into a sewer system from such sources as roof leaders, cellars, yard and area drains, foundation drains, through holes in manhole covers, cross connections from the storm system or street wash waters. Inflow differs from infiltration in that it is a direct discharge into the sewer rather than a leak through defects in the sewer.

Lateral or Private Lateral – The privately-owned sewer pipeline that conveys wastewater from the premises of a user to the City's sewer system. The upper lateral extends from the building to property line (or easement line). The lower lateral extends from the property or easement line to the connection to the City-owned sewer main pipe.

Spill Emergency Response Plan (SERP) – This document identifies measures that are needed to respond to sanitary sewer overflows in a way that maximizes the protection of public health and the environment.

Rehabilitation and Replacement Plan (also referred to as a Capital Improvement Plan) – Identifies and prioritizes system deficiencies and implements short-term and long-term rehabilitation actions to address each deficiency.

San Francisco Bay Regional Water Quality Control Board – Also known as Region 2 or RWQCB. This regulatory agency preserves, enhances and restores the quality of California's water resources, and ensures their proper allocation and efficient use for the benefit of present and future generations. Website: http://www.waterboards.ca.gov/sanfranciscobay

Spill- A spill is a discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system overflow, operational failure, and/or infrastructure failure.

Exfiltration of sewage is not considered to be a spill under this General Order if the exfiltrated sewage remains in the subsurface and does not reach a surface water of the State.

Sanitary Sewer System – Any 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 wastewater treatment plant.

Sewer System Management Plan (SSMP) – A series of written programs that address how a collection system owner/operator conducts daily business. Each SSMP is unique for an individual discharger. The plan includes provisions to provide proper and efficient management, operation, and maintenance of sanitary sewer systems, while taking into consideration risk management and cost benefit.

State Water Resources Control Board – Also called the State Board. This agency developed and passed the Statewide Waste Discharge Requirements for collection systems and maintains the SSO reporting web site.

System Evaluation and Capacity Assurance Plan – A required component of an agency's SSMP that provides 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.

Statewide Waste Discharge Requirements – The Statewide General Waste Discharge Requirements for Sanitary Sewer Systems was adopted by the SWCRB in 2006 to provide a structure and guidance for SSMP development. Initially known as Order No. 2006-0003-DWQ, this Order has was replaced in May 2023 by the current order..

Waters of the State – Waters of the State are surface water or groundwater within boundaries of the state as defined in Water Code section 13050(e). They include, but are not limited to, groundwater aquifers, surface waters, saline waters, natural washes and pools, wetlands, sloughs, and estuaries, regardless if flow or water exists during dry conditions. Waters of the State include waters of the United States.

Waters of the United States – Waters of the United States are surface waters or waterbodies that are subject to federal jurisdiction in accordance with the Clean Water Act.

Wastewater Collection System – See Sanitary Sewer System.

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ELEMENT 1: SSMP GOAL AND INTRODUCTION

i. INTRODUCTION

The purpose of the City of San Mateo's Sewer System Management Plan (SSMP) is to provide a plan and schedule to:

- Properly manage, operate, and maintain all parts of the City's sanitary sewer system
- Reduce and prevent sanitary sewer spills
- Contain and mitigate spills that do occur
- Maintain and improve the condition of the collection system infrastructure in order to provide reliable service into the future

Objectives of City's Sewer Maintenance Preventative Maintenance Program include:

1. Implement Preventative Maintenance on the collection system to minimize spills.
    a. Clean sewer mainlines within the identified required maintenance period
    b. Continue with scheduled preventative maintenance cleaning of identified sewer mainline target (problem) areas
    c. Maintain a video-based sewer collection condition assessment program
    d. Maintain Root Control Program and conduct root-foaming of identified areas on a rotating basis
    e. Refer mainlines with repeat non-scheduled maintenance to engineering for evaluation
    f. Conduct appropriate analysis/evaluation of spills utilizing historical maintenance and activity data and records and provide recommendations to reduce future risk
2. Identify collection system blockages and develop strategies to decrease backups.
3. Mitigate the impact of spills on public health and the environment.
4. Operate pump stations efficiently and perform required preventive maintenance on equipment at all sanitary sewer pump stations.
5. Maintain records of the sanitary sewer system and respond to inquiries.
6. Assist with the development of a capital improvement program directed at maintaining the current sewer assets, improving system reliability and providing adequate future capacity.

7. Be available and responsive to the needs of the public and work cooperatively with local, state, and federal agencies to reduce, mitigate impacts of, and properly report spills.

ii. REGULATORY CONTEXT

This SSMP has been prepared by City of San Mateo Department of Public Works staff in compliance with requirements of the San Francisco Bay Regional Water Quality Control Board (RWQCB) and State Water Resources Control Board (SWRCB) pursuant to Section 13267 of the California Water Code.

The SSMP is intended to meet the requirements of the Statewide General Waste Discharge Requirements General Order for Sanitary Sewers (GWDR), Order No. 2022-0103-DWQ.

The SSMP provides a general description of the City's sewer system management program and discusses SSMP implementation and updates. Per the GWDR, this SSMP has been adopted by City Council, uploaded to the California Integrated Water Quality System (CIWQS), and posted on the City's website on or prior to May 2, 2025.

The SSMP includes eleven elements as listed below. Each of these elements forms a section of this document.

SSMP ELEMENTS

1. SSMP Goal and Introduction.
2. Organization
3. Legal Authority
4. Operations and Maintenance Program
5. Design and Performance Provisions
6. Spill Emergency Response Plan
7. Sewer Pipe Blockage Control Program
8. System Evaluation, Capacity Assurance, and Capital Improvements
9. Monitoring, Measurement, and Program Modifications
10. Internal Audits
11. Communication Program

iii. SEWER SYSTEM MANAGEMENT PLAN UPDATE SCHEDULE

Table iii.1 presents a schedule for Plan updates, including the schedule for conducting internal audits. The schedule includes milestones for incorporation of activities addressing prevention of sewer spills.

Table iii.1. SSMP – Required Elements and Dates of Original Submittal/Adopted SSMP Update

UPDATE	REQUIRED DATE OF SUBMITTAL	ACTUAL COMPLETION DATE
3-Year SSMP Audit ending August 2, 2024	February 2, 2025	February 2, 2025
2025 SSMP Update including audit findings	May 2, 2025	May 2, 2025
3-Year SSMP Audit ending August 2, 2027	February 2, 2028	
Incorporation of 8/2/27 audit findings	May 2, 2028	
3-Year SSMP Audit ending August 2, 2030	February 2, 2031	
2031 SSMP Update including audit findings	May 2, 2031	
3-Year SSMP Audit ending August 2, 2033	February 2, 2034	
Incorporation of 8/2/33 audit findings	May 2, 2034	
3-Year SSMP Audit ending August 2, 2036	February 2, 2037	
2037 SSMP Update including audit findings	May 2, 2037	

iv. SEWER SYSTEM ASSET OVERVIEW

The City of San Mateo (City) is located in San Mateo County at the crossroads of Highway 101 and Highway 92. The City is situated with the City and County of San Francisco to the north, the City of San Jose to the south, and San Francisco Bay to the east. Figure iii.1 shows the City's service area boundary and sewer assets.[1]

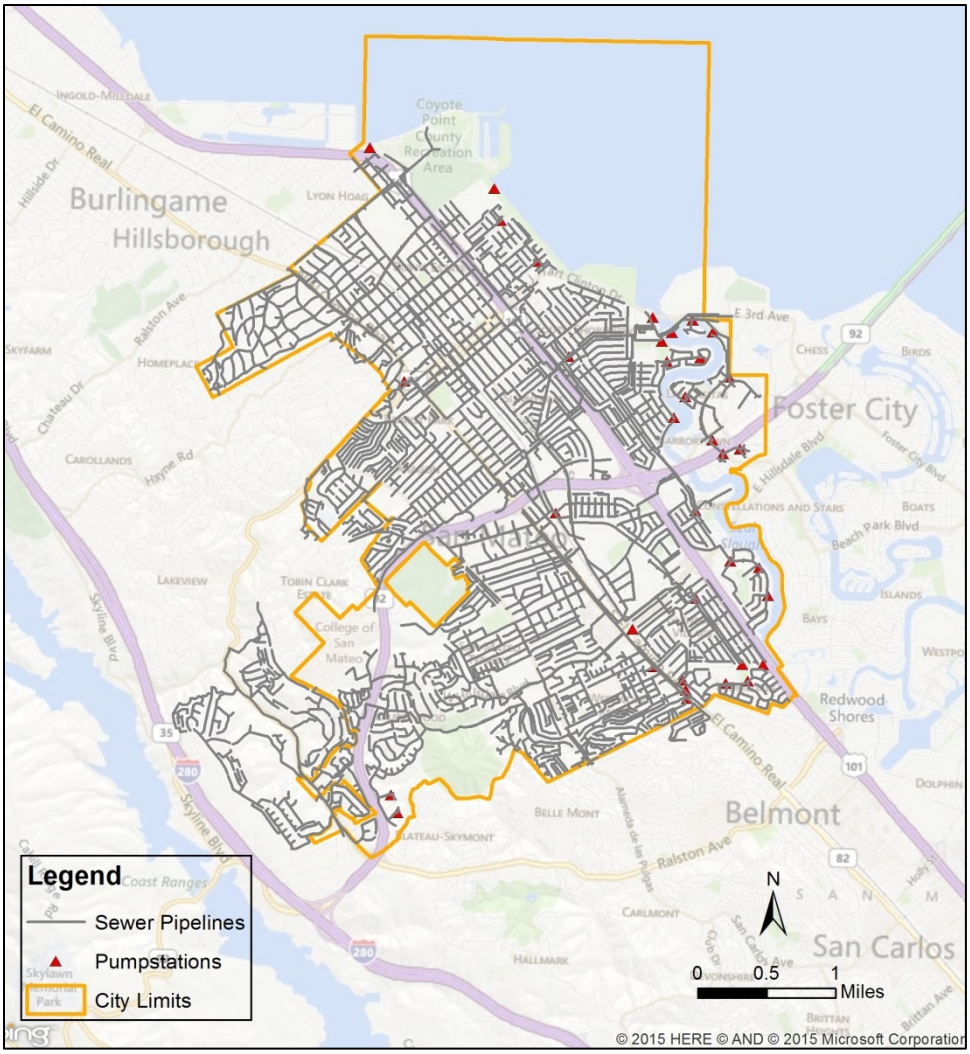
The City of San Mateo at a glance:

- The San Francisco to San Jose railroad track was completed in 1864 with its first service through San Mateo on October 17, 1863
- The first volunteer fire department was officially organized on March 18, 1889

[1] Additional information on the City's asset maps and computerized maintenance management system, Cartegraph, is included in Element 4, Operations and Maintenance program.

- The City was incorporated on September 3, 1894
- Incorporated area is 13 square miles
- The wastewater treatment plant (WWTP) has been operating since 1935
- Current population of the City of San Mateo (2020 Census) is 105,661 residents. The service area includes population outside of the City limits.
- The service area is built-out and mostly residential, single and multi-family, with some commercial business areas and a small amount of light industrial uses
- Temperatures vary from a mean average of 49 degrees Fahrenheit in January to a mean average of 72 degrees Fahrenheit in July. The mean annual rainfall is 13.4 inches.

Figure iii.1. City of San Mateo



The Department of Public Works (DPW) provides stewardship of the City's sanitary sewer assets. These include 230 miles of collection system mainlines, 5,789 manholes, 25 sewer lift stations, 11.6 miles of forcemains, and a 15.7 million gallon per day (MGD) WWTP. The system also includes three siphons. The City does not own or operate any private laterals, other than sewer laterals that serve the City's facilities. The private lateral begins at the building foundation and continues to and includes the connection to the public sewer main. There are no known structures that divert stormwater to the sanitary sewer system.

DPW is responsible for meeting the required level of service, including all permit requirements, in the most cost effective way through engineering, construction, maintenance, operation and rehabilitation of sanitary sewer assets to provide for present and future customers. The City's sanitary sewer collection system is predominantly made of vitrified clay pipe and the majority of the system was built in the mid-1900s. The collected water is conveyed to the WWTP for treatment and disposal.

The sanitary service area includes the City and receives flow from portions of the Town of Hillsborough, City of Belmont, County of San Mateo, the Crystal Springs Sanitation District, and the Estero Municipal Improvement District (EMID) (Figure iii.2). Sanitary flows from these neighboring agencies and municipalities enter the City's collection system at the jurisdictional boundaries and are conveyed for treatment at the WWTP. In total, the City handles sanitary flows from a population of 170,000 (2019 estimate). The distribution of service connections is approximately 96 percent residential, 3 percent commercial, 0.6 percent industrial, and 0.4 percent other.

On July 18, 1989, the City entered into a Sanitary Sewage Agreement between the Town of Hillsborough, the Crystal Springs County Sanitation District, and the County of San Mateo, which sets forth the arrangements and relationships regarding the use of the City's sewage conveyance and treatment facilities. A separate agreement was developed for the City of Belmont. A 2022 Agreement between the City of San Mateo and the Town of Hillsborough establishes capital cost sharing obligations between the parties. A 2024 Agreement between the City of San Mateo, CSCSD, and the County establishes capital cost sharing obligations between the parties. The agreements are included in SSMP Appendix 3.3. The neighboring agencies are responsible for the ownership and maintenance of their sanitary collection systems and pay for the sanitary flows that are discharged into the City's collection system for conveyance and treatment at the WWTP.

EMID conveys sanitary flows from its collection system directly to the WWTP. The WWTP is a jointly owned facility - approximately 75% is owned by the City and approximately 25% is owned by the EMID. The ownership agreement is through a joint powers agreement (JPA) that is included in the SSMP Appendix as Appendix 3.3.

Figure iii.2. City of San Mateo Service Area



Sanitary Sewer Collection System Assets

Tables iii.1 through iii.6 provide information about the City's sewer collection system assets. Some totals may not be exact due to rounding.

Table iii.1. Size and Distribution of Active Sewers

Pipe Size	Gravity Sewer Length (feet)	Forcemain Length (feet)	Total Length (feet)	Total Length (miles)	Percentage of Total
UNK	562	17	579	0.1	0.0%
4	1,939	1,690	3,629	0.7	0.3%
6	699,496	796	700,292	132.6	54.9%
8	277,381	4,275	281,656	53.3	22.1%
10	67,069	5,530	72,599	13.7	5.7%
12	39,133	6,131	45,264	8.6	3.6%
14	371	10,722	11,093	2.1	0.9%
15	36,677	0	36,677	6.9	2.9%
16	492	0	492	0.1	0.0%
18	32,649	0	32,649	6.2	2.6%
20	0	7,205	7,205	1.4	0.6%
21	7,968	4,119	12,087	2.3	1.0%
24	14,425	0	14,425	2.7	1.1%
27	8,837	0	8,837	1.7	0.7%
30	13,597	4,797	18,394	3.5	1.4%
33	4,061	2,553	6,614	1.3	0.5%
36	4,520	548	5,068	1	0.4%
39	5,018	0	5,018	1	0.4%
48	120	0	120	0.02	0.0%
54 (outfall)	0	13,109	13,109	2.5	1.0%
Total	**1,214,314**	**61,490**	**1,275,804**	**241.7**	**100%**

Notes:
(1) Quantities were taken from City's GIS maps. Total length shown in this table includes gravity sewer, forcemains, and outfall owned by the City. The outfall total is not included in the total length of gravity collector sewer assets.

Table iii.2. Distribution of Gravity and Forced Sewers

Pipe	Length (feet)	Length (miles)	Percentage of System (by length)
Forced	61,490	11.6	4.8
Gravity	1,214,314	230	95.2
TOTAL	1,275,804	241.6	100%

Table iii.3. Distribution of Sewer Mainlines in a Right-of-Way Versus Easement

Pipe	Length (feet)	Length (miles)	Percentage of System (by length)
Right-of-way	898,519	170.2	70%
Easement	377,285	71.4	30%
TOTAL	1,275,804	241.6	100%

Table iii.4. Breakdown of Sewer Collection System by Age

Pipe Age	Length (feet)	Length (miles)	Percentage of System (by length)
2020 – present	19,743.6	3.7	2%
2000 – 2019	54,275.9	10.3	4%
1980 – 1999	56,323.1	10.7	4%
1960 – 1979	202,453.3	38.3	16%
1940 – 1959	607,668.3	115.	48%
1920 – 1939	254,788.3	48.2	20%
1900 – 1919	52,791.3	9.9	4%
Unknown	27,760.5	5.3	2%
TOTAL	1,275,804	241.6	100%

Table iii.5. Breakdown of Sewer Collection System by Age & Type, & Pump Stations

Pipe Age	Length (miles) Gravity Sewer	Length (feet) Gravity Sewer	Length (feet) Forcemain	Number of Pump Stations
2020 – present	2.8	14,774	4,969	0
2000 – 2019	9.6	50,431	3,845	5
1980 - 1999	10.2	54,096	2,227	6
1960 - 1979	34.5	182,203	20,250	9
1940 - 1959	113	596,626	11,042	4
1920 - 1939	46.7	246,593	8,195.4	1
Before 1919	10	52,791.3	0	0
Unknown	3.2	16,799	10,962	0
TOTAL	230	1,214,314	61,490	25

Table iii.6. Sanitary Sewer Pump Station Names and Capacity

	Station	Address	# Pumps	Est. Capacity: GPM per Pump	Total Dynamic Head	Est. Daily Flow* (GPD)	Est. Daily Capacity (Gallons w/ One Pump)
01	Mongini	2005 Pacific	3	900	15	669,600	1,296,000
02	Arroyo	20 Arroyo	2	400	30	80,400	576,000
03	Parkwood	1932 Parkwood	2	50	90	10,350	72,000
04	Toyon	1629 Toyon	2	50	80	5,400	72,000
05	38th Ave	3796 El Camino Real	2	1200	46	127,200	1,728,000
06	42nd Ave	1 42nd Ave	2	1000	28	26,960	1,440,000
07	Woodbridge	95 Woodbridge Circle	2	750	36	123,620	86,000
08	Santa Clara	404 Santa Clara	3	1000	45	720,000	1,440,000
09	Los Prados #1	3000 Los Prados	2	760	21	307,800	1,094,400
10	Los Prados #2	3160 Los Prados	2	365	8	105,120	525,600
11	Los Prados #3	3301 Los Prados	2	250	10.5	63,000	360,000
12	Flint & Norfolk	2413 S. Norfolk	2	700	15	281,000	1,008,000
13	Kehoe & Kelly	2223 Kehoe	2	200	10	98,000	288,000
14	Kehoe & Scott	2444 Kehoe	2	200	10	24,000	288,000
15	2nd & Quebec	203 S. Quebec	2	100	13	10,800	144,000
16	Chatham East	205 N. Quebec	2	30	12	8,400	43,200
17	Mariners Island #1	408 Anchor	2	120	48	16,560	172,800
18	Mariners Island #2	635 Mariners Island	3	1,400	75	1,044,000	2,016,000
19	Mariners Island #3	894 Neptune	2	450	32	64,800	648,000
20	Mariners Island #4	Mariners Island Blvd / W. Cape	2	1000	5	114,000	1,440,000
21	Mariners Island #5	1659 Vista Del Mar (1801 M.I. Blvd)	2	300	15	109,800	432,000
22	Mariners Island #6	2021 Winward Way (2001 Gateway)	2	295	11.5	54,870	424,800

	Station	Address	# Pumps	Est. Capacity: GPM per Pump	Total Dynamic Head	Est. Daily Flow* (GPD)	Est. Daily Capacity (Gallons w/ One Pump)
23	41st Ave	3971 Pacific Blvd	2	1851	51	230,280	1,728,000
24	Dale Ave	Dale Ave / Patricia	5	13,194	81	8,090,000	19,000,000
25	Bay Meadows	28th Ave/ Saratoga Dr	3	650	95	584,520	936,000

* Estimated Daily flow is based on pump run-times, gpm of station, in dry weather (24 hr period).

The 25 sanitary sewer pump stations are located at various locations in the City to assist in the conveyance of wastewater to the WWTP. Pumps are programmed to alternate between lead and lag mode. Wet well operations are set to limit pump starts and stops and in-line storage of wet weather flows occurs automatically. Power outages occur infrequently and average about four per year. Seven portable generators (exercised under load annually) are assigned specifically to the pump crew for use in power outage situations. There are also nine onsite backup generators that were added during the rehabilitation of nine sanitary sewer pump stations.

Flint & Norfolk, Dale, and Bay Meadows pump stations receive most of the flow from the City's sewer collection system. The Dale Avenue pump station is operated and maintained by WWTP staff. Flows received by Dale Avenue pump station are delivered to the WWTP via one 30" and one 33" forcemain.

v. DEPARTMENT ORGANIZATION

DPW is comprised of several divisions. The divisions that engage in the updating of the SSMP on an on-going basis include Sewer Engineering, Field Maintenance, Data Management, WWTP, and Regulatory Compliance. Details about the organizational structure can be found in Element 2, "Organization," of this SSMP.

ELEMENT 2: ORGANIZATION

SWRCB Waste Discharge Requirement:

The Sewer System Management Plan (SSMP) must identify

- The name of the Legally Responsible Official as required in Section 5.1 of the GWDR;
- The position titles, telephone numbers, and email addresses for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP elements;
- Organizational lines of authority through an organization chart or similar narrative document; and
- The chain of communication for reporting spills, from receipt of a complaint or other information, including the person responsible for reporting spills to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, and/or State Office of Emergency Services (OES)).

2.1 RESPONSIBLE DIVISIONS

The DPW has several divisions that are responsible for operating, maintaining, and improving the City's sewer collection system, which include:

- Sewer Engineering, also known as Clean Water Program (CWP): encompasses the capital improvements to the sanitary sewer collection system and wastewater treatment plant necessary to replace aging infrastructure, provide wet weather capacity assurance, meet current and future regulatory requirements, and align with the City's sustainability goals.
- Field Maintenance: comprised of specialized programs to maintain the City's streets, flood control, and sewer collection infrastructure. This division provides repair and maintenance of streets, bridges, sidewalks, bike paths, signs and markings, sewer collection infrastructure, and storm drains; services all traffic signals and street lights; and provides street sweeping services.
- Data Management: responsible for the development of the Department's asset management platform and for building and maintaining the City's infrastructure database.
- WWTP: includes the administration, management, operation, and maintenance of the facility. As a sub-regional facility, the WWTP provides treatment of sanitary sewage from neighboring communities, and is partially owned by Estero Municipal Improvement District. The WWTP protects the public health and water environment of the community by providing high quality wastewater treatment services in compliance with the National Pollutant Discharge Elimination System

permit, and Stormwater Pollution Prevention Program as required by the State Industrial General Permit (IGP).

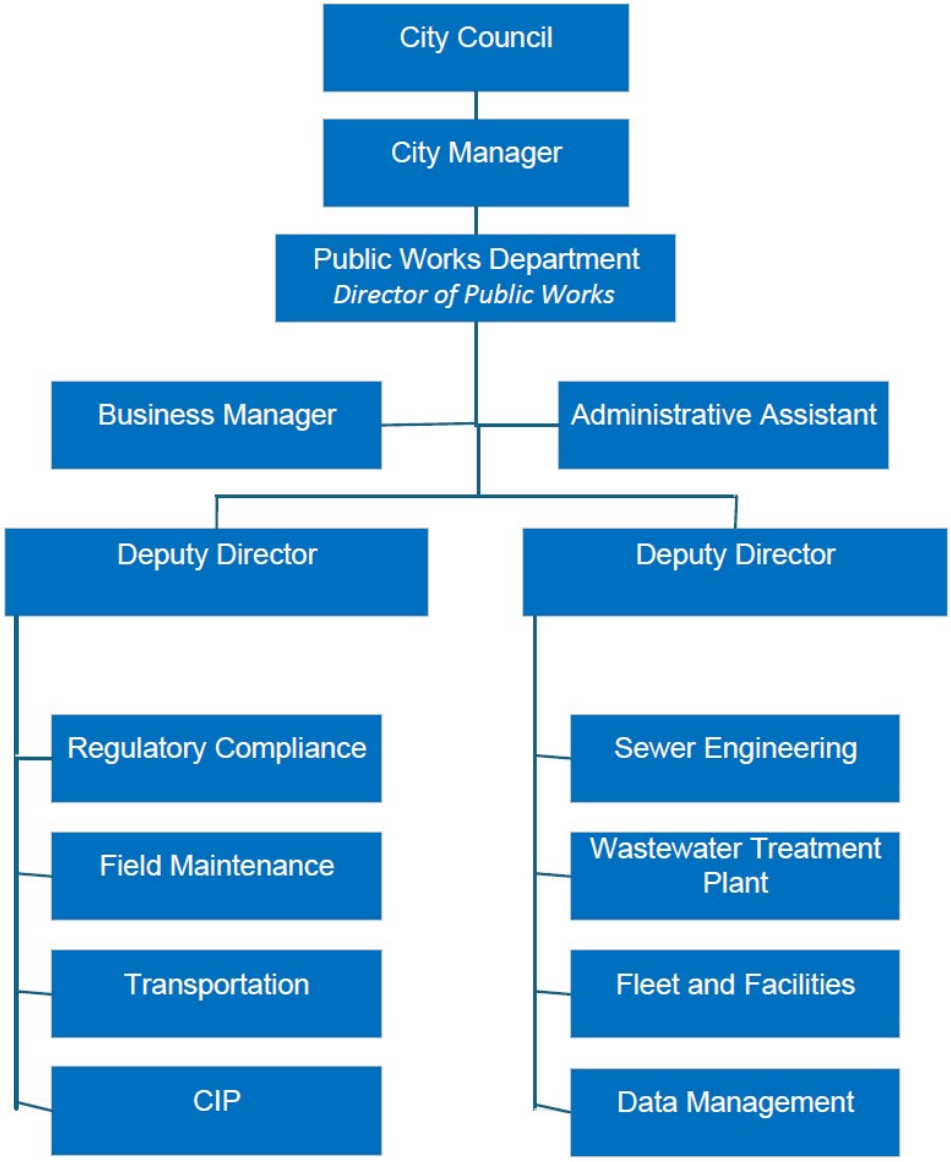
- Regulatory Compliance: manages and implements programs and provides compliance oversight to meet all regulatory requirements for wastewater, stormwater, solid waste, and air quality.

2.2 DEPARTMENT OF PUBLIC WORKS (DPW) ORGANIZATIONAL CHART

Figure 2-1 on the following page includes DPW's Organizational Chart as of March 2025. More information on the City's organization is included in the 2024-2026 business plan, which can be found here:

https://www.cityofsanmateo.org/DocumentCenter/View/96238/Adopted-Budget_2024-26_Online

Figure 2-1. Public Works Organizational Chart



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Figure 2-2. Detailed Public Works Department Organizational Chart – 1 of 2

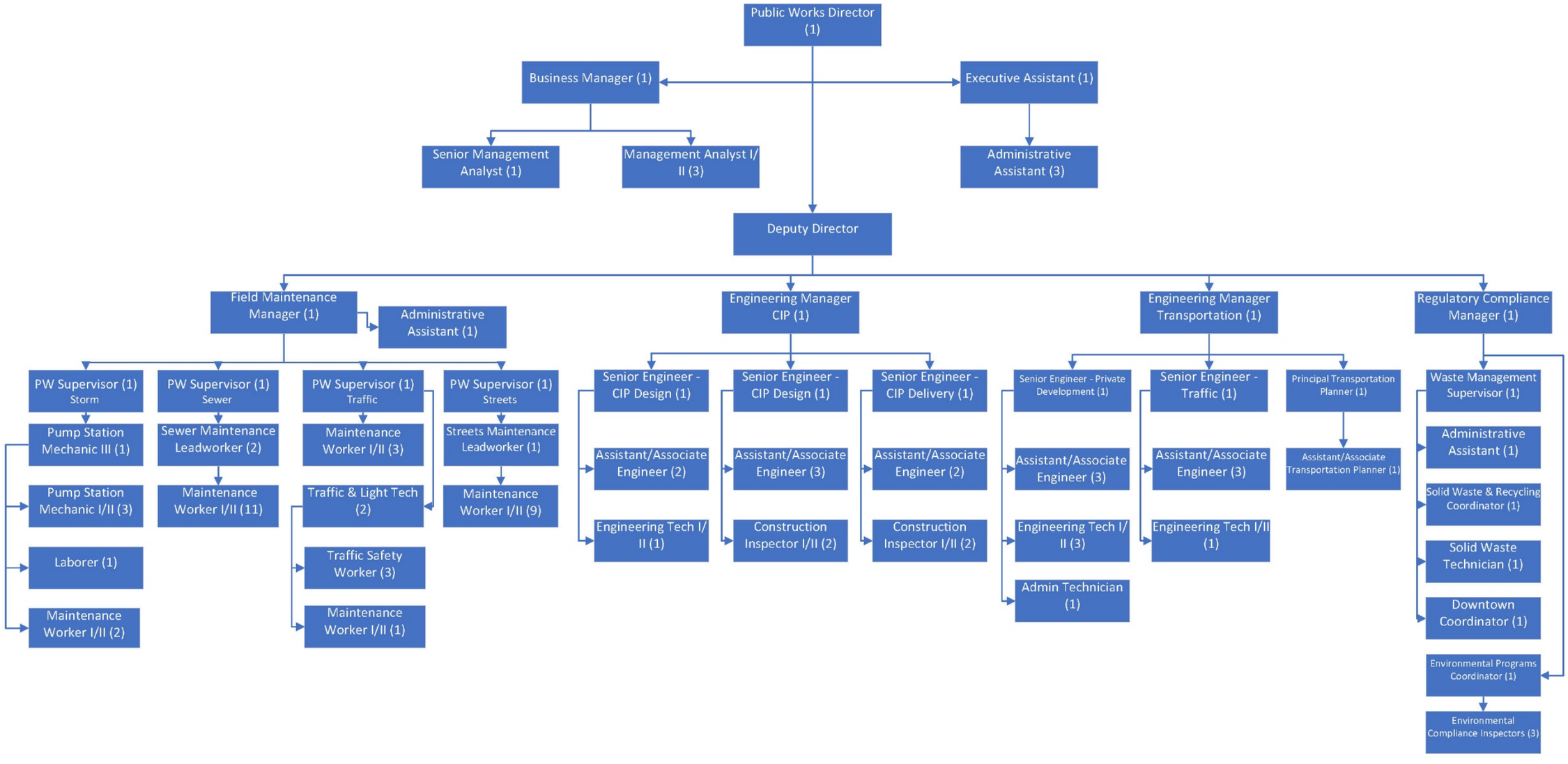
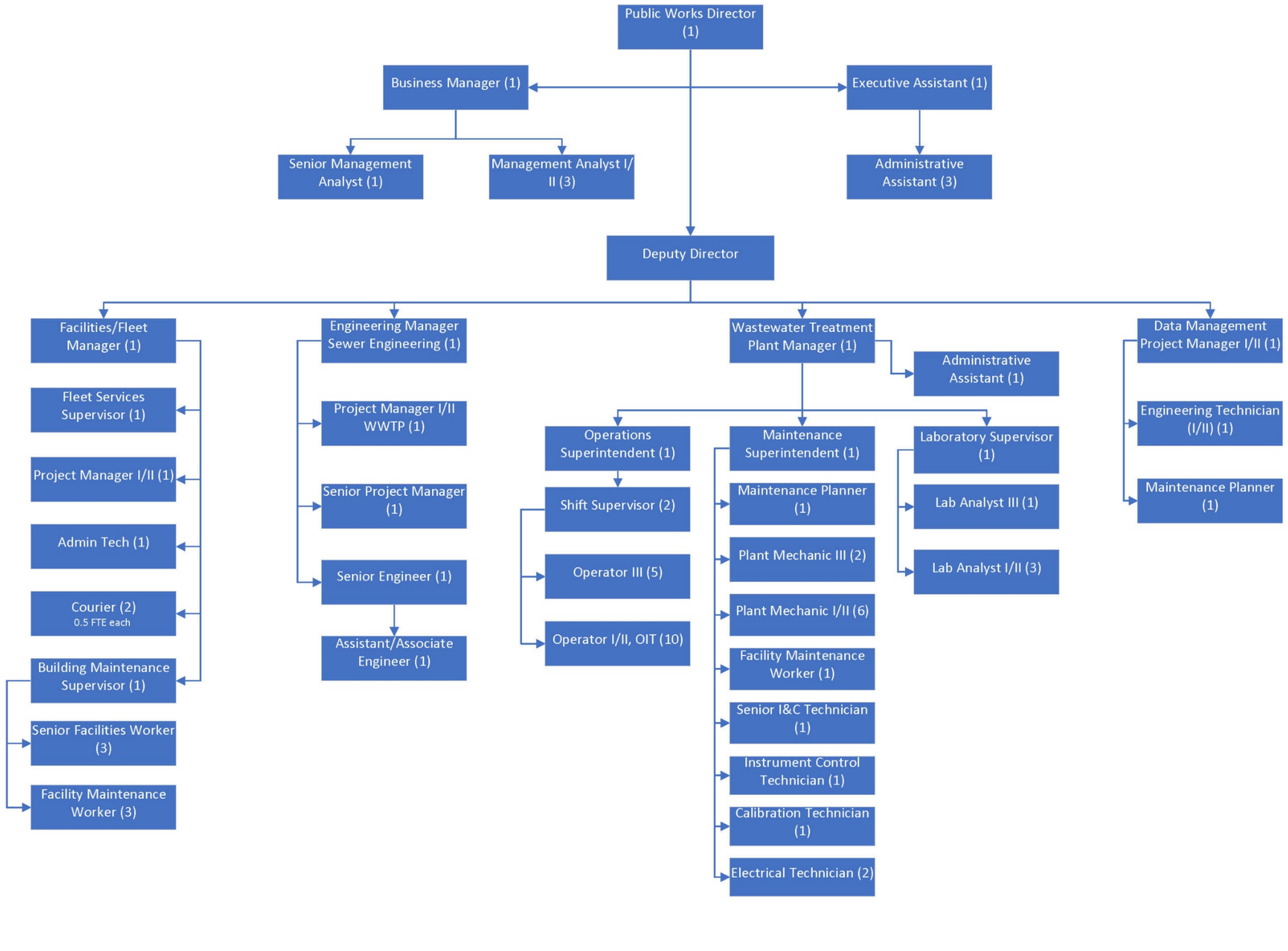


Figure 2-3. Detailed Public Works Department Organizational Chart – 2 of 2



2.3 PERSONNEL AND RESPONSIBILITY

The following descriptions define the role of the Council and staff as related to the SSMP.

CITY COUNCIL

Establishes policy.

CITY MANAGER

Assists in the development, planning and implementation of goals and objectives related to the overall administrative activities and operations of the City; Administers City policies and procedures. Reports to the City Council.

DIRECTOR OF PUBLIC WORKS, 650-522-7303

Assists in the development, planning and implementation of goals and objectives related to the Public Works Department. Administers Departmental policies and procedures. Reports to the City Manager.

DEPUTY DIRECTORS OF PUBLIC WORKS

The DPW has two Deputy Directors. Each Deputy Director manages four department divisions, plans O&M strategies, leads staff, allocates resources, and delegates responsibilities; perform and/or manage professional engineering work in the design, investigation, and construction of public works and related projects; acts as project manager in assigned capital projects and does related work as required; participates in the planning, checking, review, and processing of plans; develops revised design and construction standards; and administers and enforces City Codes and standards on engineering projects.

Both Deputy Directors Reports to the Director of Public Works. The divisions assigned to each Deputy Director, along with phone numbers, are as follows:

> 650-522-7303 manages the Field Maintenance, Regulatory Compliance, Capital Improvement Projects, and Transportation divisions.
>
> 650-522-7309 manages Sewer Engineering (Clean Water Program), WWTP, Fleet and Facilities, and Data Management divisions.

FIELD MAINTENANCE MANAGER, 650-522-7359

Manages collection system field operations and maintenance activities, provides relevant information to management; prepares contingency plans. Investigates spills and plans strategy to minimize non-capacity related repeat spills. Responsible for implementing, managing and updating the SSMP. Reports to the Deputy Director of the Field Maintenance Division. Legally Responsible Official.

PUBLIC WORKS SUPERVISOR, SEWER, 650-522-7373

The DPW has two Public Works Sewer Supervisors. Each supervisor recommends and assists in the implementation of program goals and objectives and standard operating

procedures. Organizes and supervises crews of skilled and semi-skilled personnel. Reports to the Field Maintenance Manager.

SEWER MAINTENANCE LEADWORKERS, 650-522-7286

Directs preventative maintenance activities, trains field crews, and prepares and implements contingency plans. Reports to the Public Works Supervisor.

MAINTENANCE WORKERS, 650-522-7300

Operates maintenance equipment and tools. Installs and repairs underground pipes and removes blockages from sewer. Performs routine preventative maintenance on equipment used for sewer operations. Assists pump crew when needed. Performs emergency response on sewer related issues. Reports to the Sewer Leadworker.

PUMP LEAD MECHANIC, 650-477-5681

Directs preventative maintenance activities for pump stations, trains pump mechanics, and prepare contingency plans. Reports to the Public Works Supervisor.

PUMP MECHANIC, 650-522-7356

Responsible for maintenance and operations of the City's lift stations; implements preventative maintenance at pump stations and provides 24-hour emergency response. Reports to the Public Works Supervisor.

REGULATORY COMPLIANCE MANAGER, 650-522-7385

Coordinates permits, laws, and regulations related to stormwater management and pretreatment programs; manages FOG program. Reports to the Deputy Director of the Regulatory Compliance Section.

ENGINEERING MANAGER – CLEAN WATER PROGRAM, 650-522-7287

Responsible for planning and overseeing the sewer collection system capital improvements. Participates in the planning, checking, review, and processing of plans. Develops revised design and construction standards. Enforces City Codes and standards on engineering projects. Reports to the Deputy Director of the Sewer Engineering (Clean Water Program) division.

DATA MANAGEMENT PROJECT MANAGER, 650-522-7312

Responsible for the management of the computerized maintenance management system (CMMS) and ensures sewer maintenance activities are captured electronically in the CMMS. Reports to the Deputy Director of the Data Management division.

Table 2-1 on the following page lists the responsible staff person for each of the SSMP Elements.

Table 2-1. List of City Staff Responsible for SSMP Elements

SSMP Element	Responsible Position
I. Goals	The City Manager leads staff in the implementation of the City's goals. The Deputy Directors lead their respective divisions in meeting SSMP goals.
II. Organization	The Deputy Directors recommend updates to the Public Works Director and City Manager related to the organizational structure.
III. Legal Authority	The City Manager upholds the City Ordinance.
IV. Operations & Maintenance	The Deputy Directors manage the City's sewer-related resources and budget. The Field Maintenance Manager, under direction of the Deputy Director, manages the outreach program; prioritizes preventive maintenance; maintains a current collection system map; and schedules inspections and condition assessments. The Field Maintenance Manager maintains contingency equipment and replacement inventories and schedules sewer-related training.
V. Design and Construction Standards	The Engineering Manager – Clean Water Program develops design and construction documents related to the City's sewer collection system, ensures that all projects meet the City's standards, and also updates standards for installation, rehabilitation and repair, as needed. The Engineering Manager manages the inspection of all construction projects to ensure the City's construction standards have been followed. All projects receive final approval by the Public Works Director.
VI. Overflow Emergency Response Plan	The Field Maintenance Manager maintains the Overflow Emergency Response Plan. The Sewer Maintenance Supervisor implements the plan, makes revisions, and oversees regular training for maintenance crew members.
VII. FOG Control Program	The Field Maintenance Manager identifies grease hot spots and maintains an effective cleaning program for grease problem sewers with the assistance of the Regulatory Compliance Manager. Regulatory Compliance Manager and/or Environmental Compliance inspectors enforce discharge regulations, as needed.
VIII. System Evaluation and Capacity Assurance	The Public Works Director and Deputy Directors establish and assess capacity requirements for the City's collection system and manages preparation and implementation of the City's System Evaluation and Capacity Assurance

SSMP Element	Responsible Position
	Plan. The Clean Water Program Engineering Manager develops and implements the City's long-term Capital Improvement Plan including updating budgets and schedules.
IX. Monitoring, Measurement and Program Modifications	The Deputy Directors monitor implementation and assess success of the overall SSMP program elements.
X. SSMP Audits	The Field Maintenance Manager with the assistance of the Regulatory Compliance Manager performs a biennial audit of the sections of the SSMP.
XI. Communication Plan	The City Council, City Manager, Public Works Director, and Deputy Directors communicate with the public and nearby agencies of the City's SSMP.

2.4 CHAIN OF COMMUNICATION FOR SPILL REPORTING

To facilitate consistent reporting procedures for the public, the Department of Public Works (DPW) has implemented a one-stop call center. Emergency sewer calls are directly dispatched to the sewer response crew. Off-hours, the emergency sewer telephone number rolls over to dispatch.

DPW has a process for receiving, responding to and reporting spills. The Sewer Response Crew arrives first and assesses the situation. If the event is an spill, the response crew calls the First Responder/Spill Response Crew. After the event, the First Responder is responsible for communicating the details of the event to management and ensuring all necessary paperwork is completed in full.

Additional information about the Chain of Communication for Spill Reporting is as follows:

- The DPW customer service phone line (650-522-7300) is staffed Monday through Friday 8am to 5pm to receive all incoming calls. After normal business hours, the Public Works general number is forwarded to Police Dispatch staffed to receive all incoming calls.
- Emergency Response Crew (Utility 5) receives call from DPW staff or dispatch and arrives on site. If spill is confirmed, Emergency Response Crew calls:
    - Normal working hours – Sewer Lead Worker
    - During off hours – Sewer Lead Worker and PW Supervisor

  Contact information is provided in Table 2-2.

- At site, Spill Response Crew will call a PW Supervisor. Additional crews and/or the pump crew will be dispatched if necessary for assistance with mitigation, blockage clearing, water sampling and clean-up. The PW Supervisor will immediately contact the Field Maintenance Manager if the spill is CAT1 (See Element 6 for spill categories).
- First Responder contacts appropriate agencies, completes appropriate forms, submits online report within required timeframes, and compiles all information and photos for submittal to Public Works Supervisor. First Responder is responsible for contacting OES at (800) 852-7550 within 2 hours for a CAT1 Spill.
- Public Works Sewer Lead or Sewer Supervisor enters data in the SWRCB California Integrated Water Quality System (CIWQS) online portal, Sewer Maintenance Supervisor or Field Maintenance Manager certifies the online Spill Report to the Water Board, and updates electronic asset management/CMMS information and GIS data.

2.5 EMERGENCY CONTACT PERSONNEL

Table 2-2 on the following page lists contact information for sewer spill response staff.

EMERGENCY CONTACT PHONE NUMBERS
Collection System Responsible Parties

Table 2-2. Emergency Response Crew
Phone # (650) 522-7300

Group	Staff	Position	Work # and Email (Area Code 650)	Mobile # (Area Code 650)
Field Maintenance Supervisors	Jose (Tony) Baltodano	Field Maintenance Manager*	522-7359 baltodan@cityofsanmateo.org	483-5839
	Eric Morkve	Sewer Supervisor*	522-7373 emorkve@cityofsanmateo.org	823-8286
Sewer Lead Workers	John DiMatteo	Lead Worker	522-7286 jdimatteo@cityofsanmateo.org	925-872-4029
	Position in Recruitment	Lead Worker	To be determined	To be determined
Pump Crew	Noel Padilla	Pump Lead Mechanic	522-7356 npadilla@cityofsanmateo.org	477-5681
	Eduardo Valdivia	Pump Mechanic	522-7356 evaldivia@cityofsanmateo.org	435-1896
	Mario Rodriguez	Pump Mechanic	522-7356 mrodriguez@cityofsanmateo.org	622-7596
	Manuel Fuentes	Pump Mechanic	522-7356 mfuentes@cityofsanmateo.org	759-0233
Regulatory Compliance	Sven Edlund	Regulatory Compliance Manager	488-3262 sedlund@cityofsanmateo.org	488-3262

* Legally Responsible Official

2.6 APPENDIX 2 – SUPPORTING DOCUMENTS FOR ELEMENT 2

There are no Appendix Items for Element 2

ELEMENT 3: LEGAL AUTHORITY

SWRCB Waste Discharge Requirement:

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

- Prevent illicit discharges into its sanitary sewer system from inflow and infiltration (I&I); unauthorized stormwater; chemical dumping; unauthorized debris; roots; fats, oils, and grease; and trash, including rags and other debris that may cause blockages;
- Collaborate with storm sewer agencies to coordinate emergency spill responses, ensure access to storm sewer systems during spill events, and prevent unintentional cross connections of sanitary sewer infrastructure to storm sewer infrastructure;
- Require that sewers and connections be properly designed and constructed;
- Ensure access for maintenance, inspection, or repairs for portions of the service lateral owned or maintained by the Public Agency;
- Enforce any violation of its sewer ordinances, service agreements, or other legally binding procedures; and
- Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable.

3.1 GENERAL

The City of San Mateo's Municipal Code has a comprehensive sewer use ordinance. Chapter 7.38 of Title VII, Health and Sanitation, pertains to Sanitary Sewer Use. This Municipal Code Chapter is available at this City of San Mateo webpage: https://law.cityofsanmateo.org/us/ca/cities/san-mateo/code/7.38

Chapter 3.54 of Municipal Code Title III, Taxation and Finance, pertains to Sewer Service Charges and Connection Fees. This Municipal Code Chapter is available at this City of San Mateo webpage: https://law.cityofsanmateo.org/us/ca/cities/san-mateo/code/3.54

3.2 SEWER USE CODE REQUIRED ELEMENTS

The following sections provide requirements related to sewer system management.

i. Prevent illicit discharges into its sanitary sewer system (examples may include I/I, storm water, chemical dumping, unauthorized debris, roots, fats, oils, and grease, trash, etc.).

Illicit discharges are controlled through requirements established in the following sections of the Municipal Code:

7.38.030 Definition of "Food Service Facility" and "Grease"

7.38.080 Approval of Plans for Sewer Construction

7.38.090 New Sources

7.38.100 Pretreatment+ Requirements

7.38.110 General Discharge Prohibition

7.38.120 Specific Discharge Prohibitions

7.38.130 Limitations on Point of Discharge

7.38.140 Prohibition against Dilution

7.38.160 Requirements for Food Service Facilities

7.38.210 Waste Discharge Permits

Satellite wastewater collection systems are included in these prohibitions by reference. Person is defined as any individual, partnership, firm, associations, or "public agency."

Satellite agencies that contribute flow to the San Mateo collection system include:

- Crystal Springs County Sanitation District (CSCSD)
- Town of Hillsborough (Town)
- County of San Mateo (County)
- City of Belmont

There is a 1989 Sanitary Sewage Agreement between the City of San Mateo, the Town, CSCSD, and the County that establishes the legal obligations of these parties. A 2022 Agreement between the City of San Mateo and the Town establishes capital cost sharing obligations between the parties. A 2024 Agreement between the City of San Mateo, CSCSD, and County establishes capital cost sharing obligations between the parties. A separate sewer service agreement with the City of Belmont is also established. The agreements are included in the Appendices of this Element 3.

ii. Collaborate with storm sewer agencies to coordinate emergency spill responses, ensure access to storm sewer systems during spill events, and prevent unintentional cross connections to sanitary sewer infrastructure to storm sewer infrastructure.

The City manages the storm sewer system; sewer and stormwater divisions collaborate to coordinate response efforts during sewer spills. A separate ordinance is not required for collaboration with outside storm sewer agencies.

iii. Require that sewers and connections be properly designed, constructed and maintained.

7.38.080 Approval of Plans for Sewer Construction

This section requires that all construction or alteration of any building sewer, sanitary sewer, public sewer, side sewer, or other facility shall require approval by the City. This approval is accomplished by requiring an encroachment permit and/or building permit. The permit requires that the work be done in accordance with City standards or as specifically approved by the Director of Public Works or his or her designee.

iv. Ensure access for maintenance, inspection, and repairs of the sanitary sewer system and for any portions of the service lateral owned or maintained by the Enrollee.

7.38.430 Access to Sanitary Sewer System

This section requires that property owners must provide unobstructed access to sewer lines and manholes located in easements on their property. For further information on easement access procedures, refer to Chapter 6, Overflow Emergency Response Plan, Section 6 Spill Response Field Procedures. The City does not own or maintain private sewer laterals.

v. Enforce any violation of its sewer ordinance, service agreements, and or other legally binding procedures.

Authority to enforce violations of the sewer ordinance is provided through the following sections:

7.38.270 Modification, Suspension or Revocation of Permit

7.38.350 Authority to Inspect and Monitor

7.38.440 Compliance with Chapter

7.38.460 Administrative Remedies

7.38.470 Violations deemed a Public Nuisance

7.38.480 Civil Penalties

7.38.485 Injunctive Relief

7.38.490 Criminal Penalties

7.38.500 California Code of Civil Procedure

7.38.510 Emergency Termination of Services

vi. Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable.

See Section 3.2.iv for legal authority regarding to access of operations and maintenance.

3.3 OWNERSHIP AND MAINTENANCE OF SEWERS

This section clarifies City policies related to ownership and maintenance of service laterals.

Section 7.38.432 establishes ownership requirements for service laterals.

7.38.432 PRIVATE SEWER LATERALS.

(a) Sewer Lateral Responsibility for Repair, Replacement and Maintenance. The owner of the property(ies) serviced shall be responsible for any portion of the private sewer lateral extending from a building to the public sewer main, including the wye connection which joins the private sewer lateral to the public sewer main. Any repairs, replacement or maintenance, such as the clearing of pipes using common industry hydro or mechanical cleaning tools, will not be provided by the City on private sewer laterals or in private sewer systems. Responsibility for such repairs, replacement and maintenance is that of the owner of the property(ies) serviced by the lateral.

(b) Mandatory Installation of Cleanout. When installing or replacing a sewer lateral connection from a building to the public main sewer, if not already present, the property owner shall install a cleanout near the property structure in accordance with the requirements of the Uniform Building Code, the California Plumbing Code, and any other applicable regulations adopted by the City, City standards, or plans and specifications approved by the City Engineer. (Ord. 2011-8 § 3, 2011).

(c) Sewer Lateral Inspections. The owner(s) of the property served by a private sewer lateral shall be responsible for inspecting, testing, the lateral as required by this subsection, and providing the results to the City. The Public Works Director shall establish standards and regulations for the manner and scope of sewer lateral inspections. (Ord. No. 2020-1 § 1; Ord. No. 2011-8 § 3.)

(1) When required.

(A) Upon the sale of real property served by a private sewer lateral.

(B) Prior to issuance of a building permit where the cost of the improvements for an addition or alteration/remodel project exceeds such amount as established by resolution of the City Council.

(C) For commercial or multifamily residential buildings, upon the occurrence of a sewer lateral backup or blockage resulting in a sanitary sewer overflow.

(D) Upon a change in sewer customer class, as defined by section 3.54.020.

(2) Exemptions. No inspection and testing of a sewer lateral shall be required if:

(A) The sewer lateral has been inspected within the 5 years immediately preceding one of the events listed above, and the results of such inspection showed that either no repairs were required, or only partial repairs were required, and those repairs were in fact completed; or

(B) The sewer lateral has been completely replaced within the past 25 years, as evidenced by a plumbing permit issued by the City; or

(C) Upon other exemption approved by the Director of Public Works.

3.4 SEWER USE FEES

Every parcel of land within the City of San Mateo connected to the sewer collection system by a service lateral is charged a sewer service fee for the privilege to use the system and to fund the operations and maintenance of the sewer collection system. Fees are based on winter water usage and base sewer service charge rates are reviewed and adopted by City Council annually through the Ordinance process. On July 20, 2023, the City approved sewer rates for FY23/24 through FY27/28. The most current information on sewer use fees is found here:

https://www.cityofsanmateo.org/1085/Sewer-Service-Charge

3.5 APPENDIX 3 – SUPPORTING DOCUMENTS FOR ELEMENT 3

- Appendix 3.1 – Estero Municipal Improvement District Agreement
- Appendix 3.2 – 1989 Town of Hillsborough, CSCSD, County of San Mateo Sewer Agreement
- Appendix 3.3 – 2022 Town of Hillsborough Capital Cost Agreement
- Appendix 3.4 – 2024 CSCSD and County of San Mateo Capital Cost Agreement
- Appendix 3.5 – City of Belmont Agreement

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ELEMENT 4: OPERATIONS AND MAINTENANCE PROGRAM

SWRCB Waste Discharge Requirement:

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

- An up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities;
- Scheduling and data collection system for preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular inspections and maintenance of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas including tree root areas;
- Regular visual and closed-circuit television (CCTV) inspections of manholes and sewer pipes;
- Internal and external training on a regular basis for staff and contractors in sanitary sewer system operations and maintenance; and
- Inventory of equipment and replacement parts, including identification of critical replacement parts.

4.1 COLLECTION SYSTEM MAPS AND INFORMATION

4.1.1 Information Management

The Department of Public Works strives to maintain accurate electronic records of our inventory of sewer assets as well as all work performed on those assets. This section describes the software programs utilized to maintain this information.

4.1.1.i Utility Underground Maps

Maps include parcels and streets along with sewer and storm assets. Sewer and storm maintenance staff utilize electronic tablets for map information when in the field. Maps are referenced for maintenance activities as well as for determining how storm drainage networks can be blocked in the event of a sewage spill.

4.1.1.ii GIS Computer Mapping Program

GIS is a computer mapping system that links graphic features on a map to databases of related information. The City has converted all of its sanitary sewer assets into a GIS database. GIS is utilized for storage/retrieval of asset information.

ArcSDE Sewer Layer (Feature Class) Structure

Sanitary sewer collection system information is maintained in an ArcSDE Geodatabase that contains the following sewer GIS layers and attribute data:

SS-MANHOLES:	Point features identifying the location of sewer manholes, abandoned manholes, clean- outs, wet-wells, valves and plugs
SS-MAINLINES:	Line features identifying the location of sewer gravity mainlines, forcemains, abandoned gravity mainlines and forcemains, upstream and downstream manhole numbers, upstream manhole address, use of sewer, owner and pipe shape.
SS-PUMPSTATIONS:	Polygon features identifying the location of sewer pumping station buildings, as well as data regarding wet wells, pumps and maintenance information
SS-BASINS:	Polygon layer for the City's five major sewer basins
SS-SUBBASINS:	Polygon layer outlining small sub-sections within each sewer basin
SS-CLEANINGAREAS:	Polygons further dissecting sub-basins. Cleaning areas identify how flow is carried from peripheral lines to major trunklines to help maintenance crews plan cleaning of the pipe networks. Polygons are snapped to the outside boundaries of parcels served at each small network to identify property owners within each cleaning area

4.1.1.iii CMMS – Cartegraph

The City utilizes Cartegraph computerized maintenance management (CMMS)/asset management system for planning and scheduling preventive maintenance work and for tracking maintenance history on sewer assets. This GIS-based application provides access to information pertinent to each asset (e.g. pipe diameter, length, material, etc.) as well as to maintenance activities (work orders), resident complaints and requests for work (service requests).

The primary functions of Cartegraph are:

- Maintain service request and maintenance history for each collection system asset
- Produce regularly updated maintenance schedules based on feedback from the operators
- Generate reports that support data analysis and decision making
- Provide documentation for use in regulatory compliance reporting
- Record line segments or structures that may be candidates for replacement or rehabilitation under the capital improvement program

The CMMS program includes the following key fields which are used throughout the GIS Layers.

Key Fields:

- ID – The ID field contains asset feature ID's (i.e. Manhole #s or Sewer Mainline ID's, which are the alpha-numeric upstream manhole # followed by the alpha-numeric downstream manhole #)
- LOCATION DESCRIPTION – This field is populated with an associated address or nearest address/intersection.

4.1.2 Map Update and Maintenance Procedures

Updating of sewer collection system maps is coordinated through the Data Management Division. The following actions are part of the program.

- Field personnel note discrepancies or errors on field maps. Mark ups are submitted to the Data Management Division for verification and GIS updates. Updates to the GIS system, including attribute information, are reflected in associated maps and the CMMS system.
- The Data Management Division, in conjunction with the Sewer Engineering Division, utilizes Pipeline Observation System Management (POSM) CCTV Inspection software and data to more readily identify and correct inaccuracies in the electronic versions of the sewer collection system as manholes are found and mainline lengths verified through CCTV.
- As-built AutoCAD (CAD) drawings for all City capital improvement projects are sent to the Data Management Division as part of the project close-out procedures, and updates are made in GIS. Updates to the GIS system, including attribute information, are reflected in associated maps and the CMMS system.
- Developers submit "as-builts" of final sewer system construction to the City. These mark ups are submitted to the Data Management Division to modify and update the GIS system. Updates to the GIS system, including attribute information, are reflected in associated maps and the CMMS system.

4.2 PREVENTIVE OPERATIONS AND MAINTENANCE

4.2.1 Overview

The Field Maintenance Division is responsible for the sewer collection system operations and maintenance and implements several maintenance approaches which include Citywide mainline cleanings, ongoing preventative maintenance of problem areas, and closed circuit camera inspections (CCTV) of mainlines, and activities to minimize FOG entering the collection system. The Field Maintenance Division relies on support from the Sewer Engineering, Regulatory Compliance, and Data Management Divisions to accomplish all these efforts to support the goals and objectives of the SSMP.

Sewer Maintenance is responsible for these collection system management goals:

1. Properly maintain, operate and manage the wastewater collection system in a manner that supports the City's objectives for cost effectiveness, reliability, and environmental compliance..
2. Minimize the frequency of sanitary sewer spills.
3. Mitigate the impact of spills.

Summary objectives of Sewer Maintenance Preventative Maintenance Program include:

1. Reduce spills through cleaning, video condition assessment, root control, and post-spill analysis/evaluation.
2. Identify collection system blockages, including those caused by fats, oil and grease (FOG), and develop strategies to decrease backups.
3. Operate pump stations at peak efficiency and perform scheduled preventive maintenance.
4. Maintain records of the sanitary sewer system and respond to inquiries.
5. Assist with the development of a capital improvement program directed at maintaining the current sewer assets, improving system reliability and providing adequate future capacity.

Tables listing the equipment and personnel dedicated to maintenance of the sewer collection system, including backup equipment, replacement part inventories, and/or critical replacement parts, can be found in Appendix 4.7 of this document.

4.2.2 Citywide Routine Sewer Cleaning and CWP Cleaning and CCTV

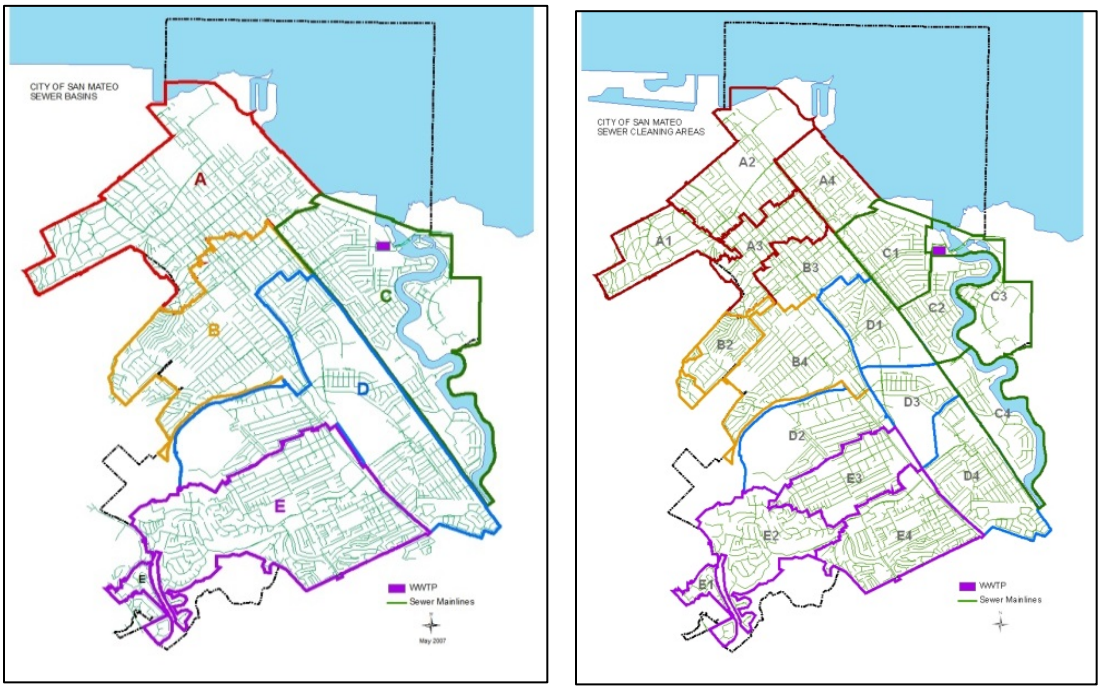
One goal of the City is to clean every sewer mainline within an identified required time period. A system has been developed to schedule and track these efforts, and to document the problems found in the system.

The City currently implements three coordinated cleaning schedules: routine cleaning and target cleaning is facilitated by Field Maintenance, and contracted cleaning and CCTV is facilitated by the Sewer Engineering Division. Together, these programs result in the cleaning of every District pipe at least once every three years.

The collection system is divided into five major sewer basins and then further divided into subbasins that identify how pipe networks converge into trunk lines and flow is carried to the wastewater treatment plant.

Basin and subbasin boundaries were created in the GIS system and are currently stored as GIS layers. Snapshots of the layers are shown in Figure 4-1 below.

Figure 4-1. District Basin and Subbasin Maps



BASINS SUBBASINS

Staff uses information from the overall collection system basin map, previous cleaning results, terrain of the city, crew knowledge, and the history of logged calls, to develop and update the cleaning frequency for each collection system basin.

Staff focuses on completing routine cleaning of one basin each year as part of a 5-year routine cleaning cycle. In recent years, routine cleaning has occurred on a 3-year cycle, thereby exceeding the 5-year goal.

Field Maintenance staff clean pipes up to 21-inches in diameter and contract out cleaning of pipes 24-inches and larger.

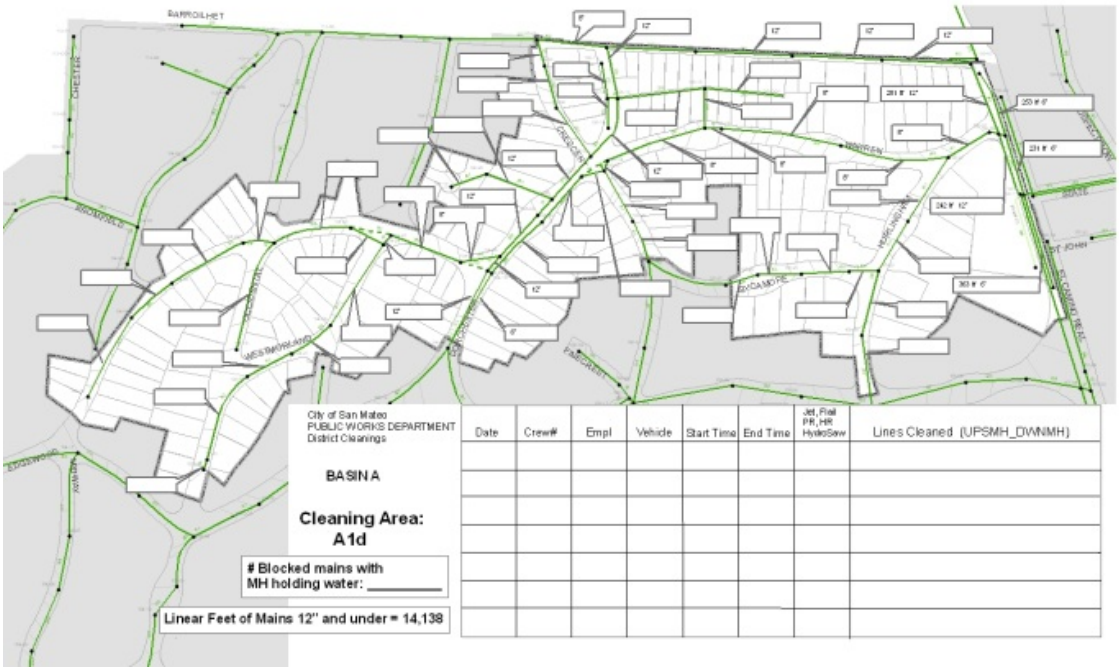
The order of routine pipe cleaning by basin is shown below:

1. Basin B
2. Basin C
3. Basin D
4. Basin A
5. Basin E

The cleaning frequencies are dynamic and the cleaning map is updated and maintained by City staff. The cleaning maps follow flow so that crews can clean outlying pipes and work down as mainlines converges into trunk lines.

Individual subbasin cleaning area maps are utilized to manage crew activities. These maps provide space for crews to note the dates, time spent, vehicles used, type of cleaning performed (e.g. jet, power-rod, hydro-saw, etc.), and the names of the operators, as well as document any problems found in each pipe segment. The subbasin cleaning schedule is flexible and adjusted to accommodate the contracted cleaning and CCTV, and root foaming projects discussed below. A snapshot of the cleaning area map is shown in figure 4-2 below.

Figure 4-2. Example Subbasin Cleaning Area Map



The Contracted Cleaning and CCTV project is implemented in parallel to routine sewer cleaning. The Contracted Cleaning and CCTV inspection for a basin is completed annually with the entire system completed on a 5-year cycle.

Root foaming is also conducted in parallel with cleaning and CCTV efforts. The root control program treats pipelines areas with significant root intrusion. The City has defined two basins to be treated in alternate years: the area west of El Camino Real and north of Highway 92 (known as the North Basin) and the area west of El Camino Real and south of Highway 92 (known as the South Basin).

Routine sewer cleaning work orders are developed to avoid overlap with the Contracted Cleaning and CCTV program and the root control program. The routine cleaning is scheduled three to four months before, and three to four months after, pipes are root foamed.

Since the Contracted Cleaning and CCTV program covers one fifth of the City annually and the root foaming program covers one of two large sections of the system annually

(which determines the internal Citywide cleaning program schedule), most of the system mainlines are cleaned more frequently than on the scheduled 5-year basis.

4.2.3 Target Cleaning of Problem Areas

The Field Maintenance Division - Sewer Maintenance has a preventive maintenance (PM) program for identified problem areas ("hot-spots") of the sewer collection system. Sewer mainlines that have a history of blockages caused by hardened FOG, root intrusion, poor grade, or sags are referred to as sewer "hot-spots." The list of hot-spot problem areas (target areas) was developed over the years through historical knowledge and experience of operators, tracking locations of repeat sewer blockages and surcharges, and through CCTV inspection findings. Hot-spot sewer mainlines are put on a monthly, quarterly or bi-annual preventive maintenance cleaning schedule. This list is regularly updated as new target areas are identified. The City has discussed the need for consolidation of historical and written documentation of cleaning and CCTV findings that define the hot spot mainlines. This documentation would supplement and memorialize historical knowledge and experience. The information and method of documentation will be discussed and formalized by City staff and included in the next SSMP update.

The Field Maintenance Division - Sewer Maintenance meets at least annually to evaluate the effectiveness of certain types of cleanings, discuss whether the frequency of cleaning is appropriate at each location, and identify if other problem areas have surfaced that should be added to the PM list.

Crews also evaluate on a more frequent basis the effectiveness of PM cleaning and increase or decrease the length of time between cleanings based on field knowledge and experience as well as with the assistance of CCTV inspections. For example, after CCTV, if it is determined that rehabilitation or replacement of the inspected line may be necessary, sewer engineering staff is notified. Sewer engineering staff evaluate CCTV findings and implement warranted rehabilitations or replacements. If the CCTV results identify an opportunity to remove the inspected line from the PM list, Sewer Engineering and Data Management Divisions are also notified.

Hot-spots will remain on a preventative maintenance schedule until subsequent observations determine that the potential for obstruction or blockage has been reduced or eliminated. Sewer Maintenance staff review the Hot-Spots list and make updates as necessary. Locations are also CCTV inspected every five years. These records are reviewed and discussed with the Sewer Engineering Division to determine if rehabilitation is required and may alleviate the need for more frequent cleanings than once a year.

A representative preventive maintenance schedule and list of target areas, as well as a map depicting hot-spot locations, are attached as Appendix 4.6 of this document. These schedules are dynamic and a more recent schedule may be in use by City staff.

4.2.4 Cleaning Procedures

Sewer Maintenance staff are trained on line-cleaning procedures. Various cleaning methods are used to ensure adequate cleaning of sewer mainlines, including hydro-jet,

hydro-saw, power-rod, and chain flail. Standard operating procedures for sewer mainline cleaning and related safe practices are attached as Appendix 4.2 of this document.

4.2.5 Collection System Performance

Objectives of preventive maintenance activities include the decrease in sewer mainline blockages and spills. Performance indicators are used in assessing the effectiveness of these activities. Table 4-1 reflects sewer maintenance performance over the last five years.

Table 4-1. Sewer Maintenance Performance Indicators

Calendar Year	# Wet Weather Spills	# Dry Weather Spills	Total # per 100 miles	Total Spill Volume (gal)	Total Vol Recover (gal)	Total Vol Reached Surface Water
2020	0	17	1.74 (Cat 1) 0.43 (Cat 2) 3.63 (Cat 3)	154,061	25,503	127,435
2021	3	22	2.42 (Cat 1) 0.61 (Cat 2) 4.54 (Cat 3)	370,960	6,067	364,061
2022	2	5	1.30 (Cat 1) 0.00 (Cat 2) 1.74 (Cat 3)	506,665	1,240	505,425
2023	5	5	3.04 (Cat 1) 0.00 (Cat 2) 1.30 (Cat 3)	2,210,792	80,267	2,130,525
2024	0	7	2.61 (Cat 1) 0.00 (Cat 2) 0.43 (Cat 3)	36,650	500	35,950

Notes: Dry weather is defined as March 15 through October 14; Wet weather is defined as October 15 through March 14

4.3 REHABILITATION AND REPLACEMENT PLAN

4.3.1 Condition Assessment and Inspection

The DPW has a goal of conducting a video condition assessment of sewer mainlines approximately every five years. An approximate five-year period will provide information needed to trend the condition of the lines and more effectively plan repairs.

The CCTV inspection is performed by contracted services. Information from the CCTV inspection is recorded into the Pipeline Observation System Management (POSM) software and is utilized in prioritizing annual mainline repair projects. To provide consistency in data collection and review of pipe conditions, the department utilizes a standard operating procedures manual for CCTV inspections along with standardized rating system (SSMP Appendix 4.1). The manual is intended for use in conjunction with National Association of Sewer Service Companies (NASSCO) Standards for sewer mainline and manhole condition assessments.

4.3.2 Prioritization of Repair and Rehabilitation

The City budgets currently range from $9 to $13 million/year for annual pipeline rehabilitation and repair. This funding is in addition to major line replacements or pump station upgrades identified in the five-year capital improvement programs. This budget is used to maintain pipes in a state of good repair.

4.3.3 Five Year Rehabilitation and Replacement Program

The City has a business plan (Budget) that includes a Five-Year Capital Improvement Program (CIP). The approved Five-Year CIP can be found on pages 243-251 of the City's adopted FY2023-24 Budget, which is found on the City website at the following url:

https://www.cityofsanmateo.org/DocumentCenter/View/92507/2023-24-Adopted-Budget?bidId=

Individual CIP projects can begin before and continue beyond the budget cycle. The Five-Year CIP will only identify funds being newly allocated to the existing project. Revenues from annual sewer use fees are used to fund operations and maintenance programs, as well as CIP projects identified to rehabilitate the collection system.

Table 4-2 summarizes annual expenditures for major sewer repair and rehabilitation projects for the past five fiscal years.

Table 4-2. Total Expenditures on Major Sewer Projects by Fiscal Year

Fiscal Year (FY)	Total Expenditures ($)
FY19-20	40,349,000
FY20-21	49,984,000
FY21-22	46,702,000
FY22-23	34,154,000
FY23-24	32,135,000
5-YEAR TOTAL:	**$203,322,000**

In addition, staff prepares a longer-term planning document that identifies probable long-term financial needs and targets future projects. This document is used to develop sewer

rates and help plan for the issuance of necessary bonds or pursuits of loan/grant opportunities. The City approved 5-year sewer rate increases for FY23-24 to FY27-28. The San Mateo Sewer Enterprise, owned and operated by the City under the administration of the Public Works Department, releases and updates Financial Projections that provide direction on rate setting strategies. The most current information on sewer rates and administrative regulations are found here:

https://www.cityofsanmateo.org/1085/Sewer-Service-Charge

4.4 PUMP STATION MAINTENANCE

The Field Maintenance Division's pump crew, consisting of one Lead Pump Mechanic, three Pump Mechanic I's, and one laborer, are in charge of the operations and maintenance of twenty-four of the City's pump stations. The Dale Avenue pump station is operated and maintained by the Wastewater Treatment Plant Division. Of the twenty-five pump stations, all have pumps that alternate automatically and there are lead / lag pumps. Wet well operations are set to limit pump starts and stops and in-line storage of wet weather flows occurs automatically. Power outages occur infrequently and average about three per year. Seven portable generators (exercised under load annually) are assigned specifically to the pump crew for use in power outage situations. The pump station inventory, including backup equipment, replacement part inventories, and critical replacement parts is found in Appendix 4.3 of this document.

25 pump stations are inspected quarterly as part of the sewer maintenance pump station preventive maintenance program. Work activities are developed and prioritized based on these inspections and completed prior to the next inspection. The Dale Avenue pump station is inspected daily by the WWTP. Preventive maintenance inspections cover the items listed in Table 4-3.

Table 4-3. Preventative Maintenance Inspection List

Lubrication	Inspection	Leak Checks	Exercise	Housekeeping
Motors	Sump Pumps	Fuel/Oil lines	Motors	Clean Interior
Main Pumps	Belts	Valves	Isolation Gate Valves	Clean Exterior
Drive Shafts	Flap Gates	Packing		Leaf/Debris Pickup/Vegetation Removal
Valves	Backflow Preventors	Seals		Vacuum and Clean MCC Electrical Panels
Locks & Padlocks	Controls/Alarms	Lubricators		Wash Down Wet Wells
Latches & Hinges	Wet Wells	Air Systems		
	Exhaust Systems			
	Motor Control Panels			

Where appropriate, the pump crew forwards recommendations to the Sewer Engineering Division for major rehabilitation or formal engineering inspection of specific stations.

The pump crew utilizes a SCADA system to monitor pump run-times. Alarms sent to the pump crew include, but are not limited to: high and low wet well levels, pump overload, dry pit flooding, and power failure.

4.5 PRIVATE SEWER LATERAL COST SHARING PROGRAM

In addition to sewer and pump station maintenance, the City promotes private lateral replacements by property owners through a Private Sewer Lateral Cost Sharing Program (PSLCSP) established in 2011. The program was initially funded with a combination of the fine monies and 10% of the annual sewer maintenance and repair budget.

A revised PSLCSP was approved by the City Council in June 2013, to be funded annually, at the beginning of each fiscal year. The program provided cost sharing of 50% of the cost of full lateral replacements only, up to a maximum of $5,000, based on the lowest of the three written estimates required to be submitted by the property owner. In FY24/25, the cost sharing limits changed. Additional information on program changes will be discussed in a future SSMP update.

In 2018, the City enhanced the program with additional outreach and by limiting eligibility of applications to a three-month time frame; this new timeframe allows for more owners to participate in the program rather than waiting for inactive applications to complete the process. Once the program budget for the given year has been exhausted, the City discontinues the program until funding for the following year has been allocated.

Spot repairs and partial repairs are not included in the cost sharing program. All types of properties (residential, commercial, multi-family, etc.) that are in the City are eligible for the full lateral replacement cost sharing.

Program materials and public outreach post-cards can be found on the City website at the following URL: https://www.cityofsanmateo.org/1910/Citywide-Private-Lateral-Cost-Sharing-Pr

4.6 SEWER MAINTENANCE STAFF TRAINING

The City's maintenance staff is required to complete various types of training as listed below in Table 4-4. Maintenance staff is encouraged to study, prepare for and take CWEA Certification testing. Specific training dates for employees can be found in Appendix 4.4 Sewer Crew training.

Table 4-4. Sewer Maintenance Staff Training - List of Classes

CORE	Customer Service
	Sexual Harassment
	Cultural Diversity
	Commercial Driver License
	Injury and Illness Prevention Program
	CWEA Certifications (optional)
	Fire Extinguisher
EQUIPMENT	Mainline Cleaning (Power rodder, Hydro jet/vac truck , Hydro Saw, Chain Flail)
	Chainsaw
	Forklift
	Tractor Loader/Backhoe
	Bobcat loader and attachments
OPERATIONS	Fall Protection
	Alternate Confined Space
	Lock Out Tag Out/Electrical Safety

	4 Gas Monitor usage (Detection)
	Excavation safety
	Work Zone safety (Traffic Control)
	USA Locating
	SSO Prevention
	SPCC
	Incident Command Systems 100, 200, 700
	STOPPP
PUMP CREW	Electrical Training
	SCADA
	Mechanical Applications (Pump Repairs)
	Mobile Crane Truck Safe Operation
	Mobile Electrical Generator
	Alternate Confine Space
EMERGENCY	Hazmat
	Emergency Action Plan (Evacuations)
	Sanitary Sewer Overflow Emergency Response Plan (OERP)
MEDICAL TRAINING	Blood Borne Pathogen
	Dehydration / Heat Stroke
	CPR-First Aid- AED

4.7 APPENDIX 4 – SUPPORTING DOCUMENTS FOR ELEMENT 4

- Appendix 4.1 – CCTV Standards
- Appendix 4.2 – Sewer Pipe Cleaning Standard Operating Procedures
- Appendix 4.3 – Pumpstation Maintenance
- Appendix 4.4 – Sewer Maintenance Crew Training
- Appendix 4.5 – Manhole Inspection Program
- Appendix 4.6 – “Hot-Spots” & Leak Detection Program
- Appendix 4.7 – Sewer Maintenance Dedicated Equipment and Personnel

- Appendix 4.8 – Collection System Maps and Information
  - 4.8.A.i *Underground Utilities Map Page*
  - 4.8.A.ii *Sewer Pumpstations and Trunklines Map*
  - 4.8.A.iii *Sewer Collection System Pipe Sizes*
  - 4.8.A.iv *Sewer Collection System Terrain Map*
  - 4.8.A.v *Sewer Collection System Basin Map*
  - 4.8.A.vi *Sewer Collection System Subbasin Map*
  - 4.8.A.vii *Sewer Collection System Cleaning Areas Map (Current Snapshot)*
  - 4.8.A.viii *Sewer District Cleaning Schedule Maps (Current Snapshot)*
  - 4.8.A.ix *Sewer Root Foaming Schedule Map*

ELEMENT 5: DESIGN AND PERFORMANCE STANDARDS

SWRCB Waste Discharge Requirement:

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

5.1 STANDARDS FOR INSTALLATION, REHABILITATION, AND REPAIR

The City has referenced both the "Green Book" Standard Specifications for Public Works Construction and the Caltrans Standard Specifications for City public works construction. These specifications provide requirements for the installation of new sewer systems and for the rehabilitation and repair of existing sewer systems. In addition, the City maintains Sanitary Sewer Details and Appurtenances and recently updated its trench requirements as a component of Street Improvement Details. These documents are available on the City's website: https://www.cityofsanmateo.org/2081/Standard-Drawings

In 2014, the City developed an Integrated Wastewater 20-year Master Plan. The Master Plan established the design storm as having a 5-year recurrence interval and 6-hour duration. When applying the design storm to the City's hydraulic model, a pipe segment is determined to be capacity deficient and require replacement when 1) the pipe conveys maximum capacity, 2) surcharging in the adjacent manhole occurs, and 3) freeboard at the adjacent manholes is less than three feet. Freeboard is defined as the difference between modeled rim elevation and water surface elevation.

The City requires selected engineering consultants to develop criteria for pump station design on a station by station basis, following engineering best management practices.

5.2 STANDARDS FOR INSPECTION & TESTING OF NEW, REHABILITATED, AND REPAIRED FACILITIES

The standard specifications also provide requirements for the inspection and testing of all new, rehabilitated and repaired sewer assets, including pressure testing, mandreling, water exfiltration, and/or post construction closed circuit television inspection. Testing and inspection are overseen by a City construction inspector prior to accepting work.

5.3 APPENDIX 5 – SUPPORTING DOCUMENTS FOR ELEMENT 5

There are no appendix items for Element 5.

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City of San Mateo Department of Public Works

SEWER MAINTENANCE

SPILL EMERGENCY RESPONSE PLAN (SERP)

For

Outside Sanitary Sewer Spills

(Includes Contact Information for Inside Spills)

Updated May 2, 2025

CITY OF SAN MATEO

ENVIRONMENTAL SERVICES DIVISION

1949 Pacific Blvd., San Mateo CA 94403

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CITY OF SAN MATEO
SANITARY SEWER COLLECTION SYSTEM
SPILL EMERGENCY RESPONSE PLAN

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Appendix 6.1 – Contingency Equipment
Appendix 6.2 – Spill Field Procedures

Appendix 6.3 – Investigation and Documentation Forms

Appendix 6.4 – Spill Calculation and Estimation

Appendix 6.5 – Signage and Posting Procedures

Appendix 6.6 – Water Quality Monitoring Program Details

Appendix 6.7 – Spill Technical Report Template

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INTRODUCTION

6.1 PURPOSE

The purpose of the Sanitary Sewer Spill Emergency Response Plan (SERP) is to outline the City's sanitary sewer spill response activities, with the objective of minimizing the impacts of spills to the public and the environment. In achieving this goal, the SERP serves as a guideline for City of San Mateo personnel in cleaning and mitigating the effects of sanitary sewer spills, as well as in following proper sampling and reporting procedures.

6.2 STATEWIDE WDR REQUIREMENT

The Spill Emergency Response Plan shall include measures to protect public health and the environment. The City shall respond to spills from its system in a timely manner that minimizes water quality impacts and nuisance by:

- Immediately stopping the spill and preventing/minimizing a discharge to Waters of the State[1];
- Intercepting sewage flows to prevent/minimize spill volume discharged into Waters of the State;
- Thoroughly recovering, cleaning up and disposing of sewage and wash down water; and
- Cleaning publicly accessible areas while preventing toxic discharges to Waters of the State.

More specifically (also continued on the next page):

The Spill Emergency Response Plan shall ensure prompt detection and response to spills to reduce spill volumes and collect information for prevention of future spills. The Spill Emergency Response Plan must include procedures to:

- Notify primary responders, appropriate local officials, and appropriate regulatory agencies of a spill in a timely manner;
- Notify other potentially affected entities (for example, health agencies, water suppliers, etc.) of spills that potentially affect public health or reach waters of the State;
- Comply with the notification, monitoring and reporting requirements of this General Order, State law and regulations, and applicable Regional Water Board Orders;
- Ensure that appropriate staff and contractors implement the Spill Emergency Response Plan and are appropriately trained;
- Address emergency system operations, traffic control, and other necessary response activities;

[1] Waters of the State include any surface water or groundwater, including saline waters, within the boundaries of the state as defined in Water Code section 13050(e), and are inclusive of waters of the United States.

- Contain a spill and prevent/minimize discharge to Waters of the State or any drainage conveyance system;
- Minimize and remediate public health impacts and adverse impacts on beneficial uses of Waters of the State;
- Remove sewage from the drainage conveyance system;
- Clean the spill area and drainage conveyance system in a manner that does not inadvertently impact beneficial uses in the receiving waters;
- Implement technologies, practices, equipment, and interagency coordination to expedite spill containment and recovery;
- Implement pre-planned coordination and collaboration with storm drain agencies and other utility agencies/departments prior, during, and after a spill event;
- Conduct post-spill assessments of spill response activities;
- Document and report spill events as required in the Statewide WDR; and
- Annually, review and assess effectiveness of the Spill Emergency Response Plan, and update the Plan as needed.

SPILL CATEGORIES

6.3 SPILL CATEGORIES

***Definition of Spill*:** The SWRCB defines a spill as a discharge of sewage from any portion of a sanitary sewer system due to an operational failure, and/or infrastructure failure. Exfiltration of sewage is not considered to be a spill if the exfiltrated sewage remains in the subsurface and does not reach a surface water.

CATEGORIES OF SPILLS: The four categories of reportable spills are defined as follows.

- **Category 1** – A spill of any volume of sewage from or caused by the City of San Mateo sanitary sewer system (including laterals from City-owned buildings) that results in a discharge to:
  - A surface water, including a surface water body that contains no flow or volume of water; or
  - A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.

  Reporting Deadlines for Cat 1 Spill:

  - *If 1,000 gallons or greater, report to California Department of Emergency Services (Cal OES) within 2 hours of being aware of the spill.*
  - *For all other Category 1 spills, submit draft info in CIWQS within 3 days of becoming aware and certify within 15 calendar days after spill end date/time.*
- **Category 2 Spill** – A spill of 1,000 gallons or greater, from or caused by the City of San Mateo sanitary sewer system, that does not reach surface water.

  Reporting Deadlines for Cat 2 Spill:

  - *Submit draft report 3 days after being aware of spill. Certify within 15 days after spill end date.*
- **Category 3 Spill** – A spill equal or greater than 50 gallons and less than 1,000 gallons, from or caused by the City of San Mateo sanitary sewer system, that does not reach surface water.

  Reporting Deadlines for Cat 3 Spill:

  - *Submit certified report within 30 calendar days of the end of the month in which spill occurred.*
- **Category 4 Spill -** A spill of less than 50 gallons, from or caused by the City of San Mateo sanitary sewer system (including laterals from City-owned buildings), that does not reach surface water.

  Reporting Deadlines for Cat 4 Spill:

  - *Submit certified report within 30 calendar days of the end of the month in which spill occurred.*
  - *Upload and certify a report, in an acceptable digital format, of all Category 4 spills by February 1st after the end of the calendar year in which the spills occur.*

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NOTIFICATION PROCEDURES

6.4 INCIDENT NOTIFICATION

Figures 6-1 and 6-2 show the notification and reporting process for spills that occur during working hours and outside of working hours.

Figure 6-1 Notification Procedures for Spills between 7am and 3:30pm Mon thru Friday

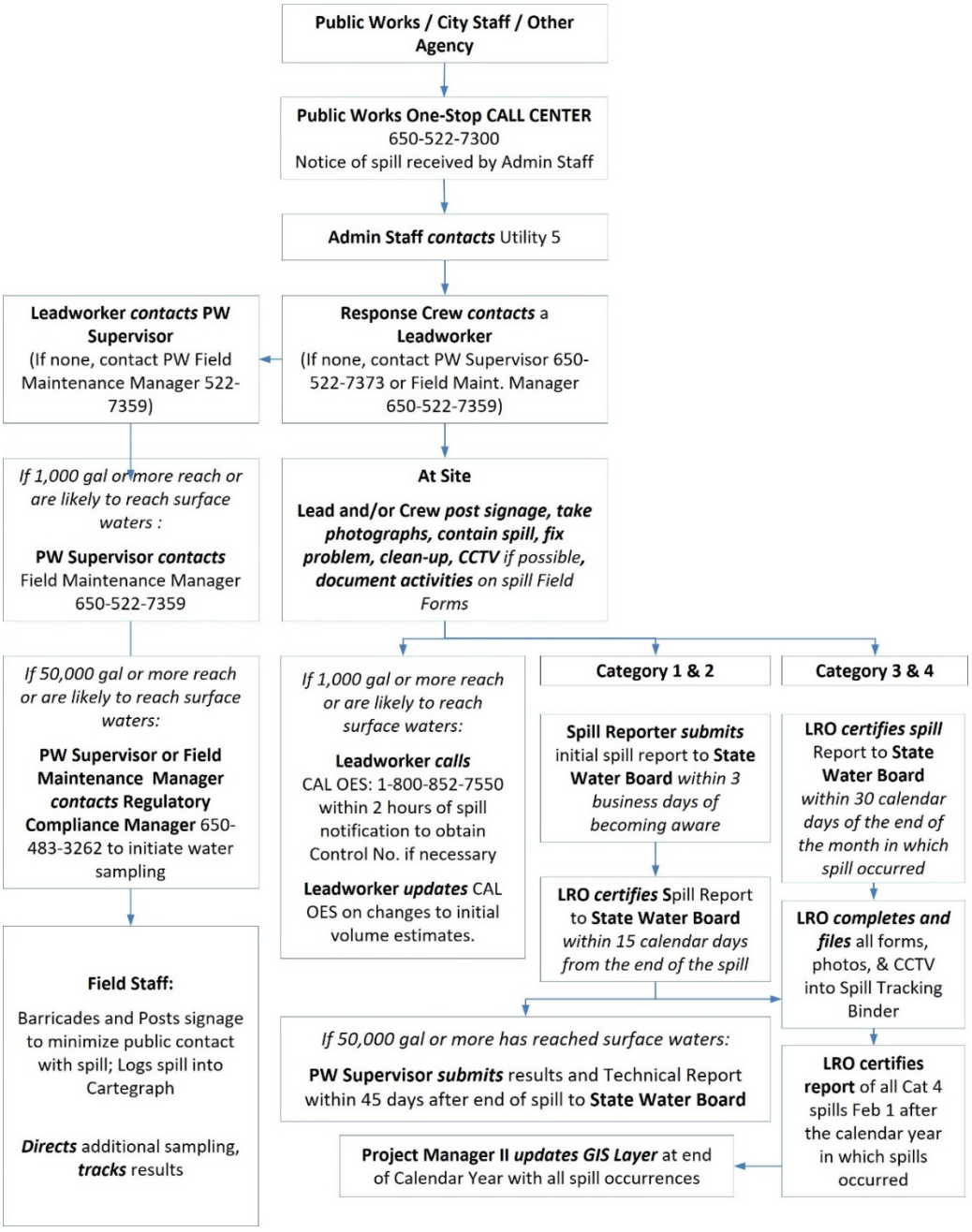
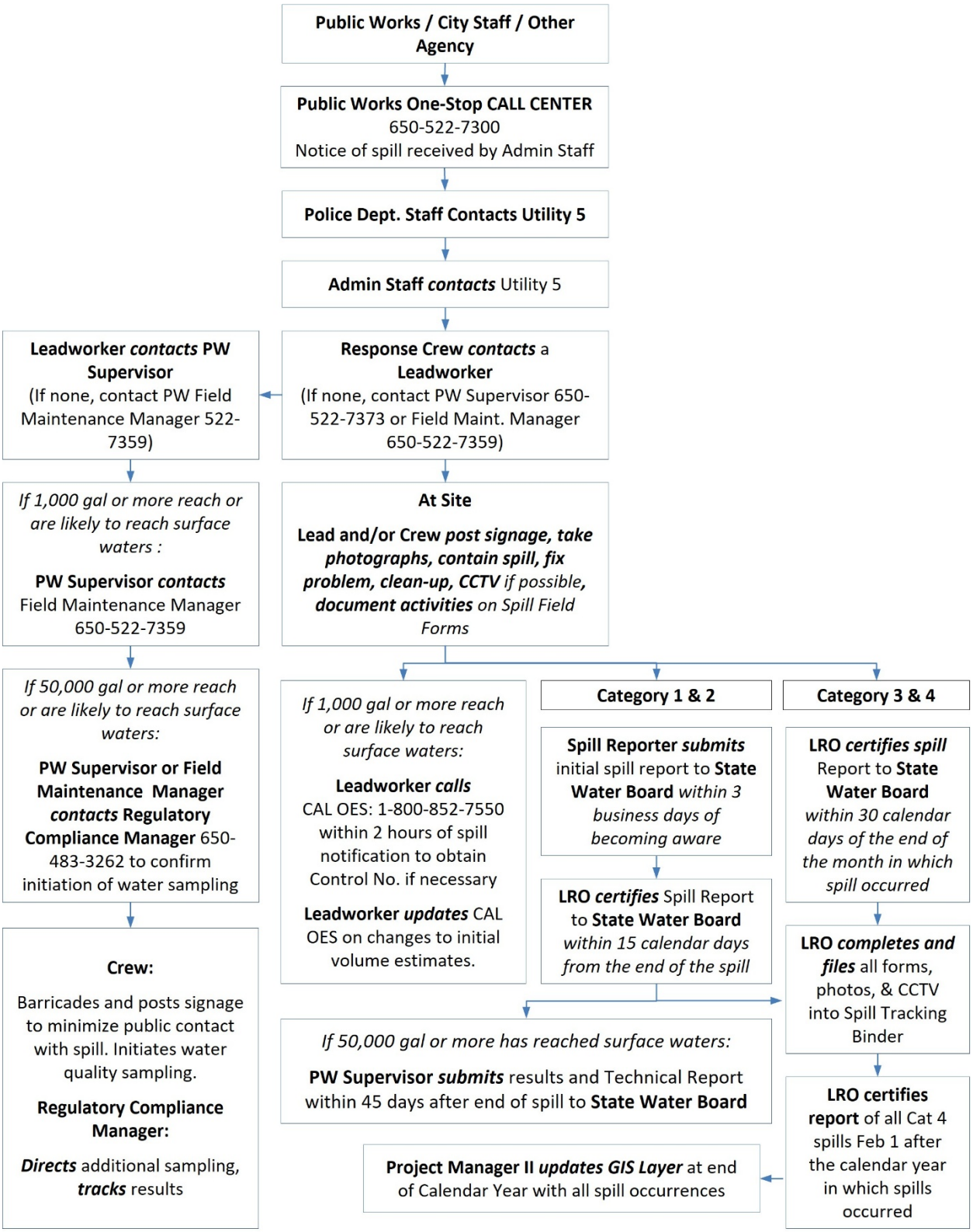


Figure 6-2 Notification Procedures for Spills – After Hours & Weekends



SPILL RESPONSE PROGRAM

6.5 ROLE OF RESPONDERS

The First Responder initiates coordination with the Sewer Leadworker who is responsible for directing the entire spill response including mitigation, cause removal, clean-up, and follow-up CCTV. The Spill Responders and/or the Sewer Leadworker are also responsible for ensuring proper event documentation and photographs, timely reporting to appropriate agencies, and arranging for the collection of water samples as necessary.

The Spill Responders are required to take the appropriate action to secure the wastewater spill area, relieve the cause of the spill, and ensure that the affected area is cleaned as soon as possible to minimize health hazards to the public and to protect the environment. **Every effort must be made to prevent sewage from reaching surface water.**

6.6 DESIGNATED EMERGENCY RESPONDERS

The list of the staff designated to spill response (i.e., Spill Responders) and their contact information is provided in Table 6-1.

Table 6-1. Spill Response Crew

Group	Staff	Position	Work # (Area Code 650)	Mobile # (Area Code 650)
Environmental Services Supervisors	Tony Baltodano	Field Maintenance Manager	522-7359 baltodan@cityofsanmateo.org	483-5839
	Eric Morkve	Sewer Supervisor	522-7373 emorkve@cityofsanmateo.org	823-8386
Sewer Leadworker	John DiMatteo	Lead Worker	522-7286 jdimatteo@cityofsanmateo.org	(925) 872-4029
Pump Crew	Noel Padilla	Pump Lead Mechanic	522-7356 npadilla@cityofsanmateo.org	477-5681
	Eduardo Valdivia	Pump Mechanic	522-7356 evaldivia@cityofsanmateo.org	281-5477
	Mario Rodriguez	Pump Mechanic	522-7356 mrodriguez@cityofsanmateo.org	622-7596
	Manuel Fuentes	Pump Mechanic	522-7356 mfuentes@cityofsanmateo.org	579-0233
Regulatory Compliance	Sven Edlund	Regulatory Compliance Manager	483-3262 sedlund@cityofsanmateo.org	483-3262

6.7 SPILL RESPONSE EQUIPMENT

The City has a variety of equipment used for clearing blockages and for impact mitigation and cleanup activities. City staffs are provided training to operate this equipment. A list of the City's sewer maintenance equipment can be found in Appendix 6.1 of this document.

6.8 FIELD PROCEDURES

The following field procedures provide guidelines for tasks to be completed during spill response. Actual tasks may need to be adjusted based on field conditions.

Separate City departments are responsible for sewer and stormwater facilities. The City departments work closely to protect and monitor its stormwater conveyance systems during and after a spill.

1. **PRE-TRIP:**
    - Follow SOP for vehicle pre-trip
    - Ensure trailer has all required contingency supplies (see Appendix 6.1)
        - 6" to 10" air plug
        - 10" to 24" air plug
        - Air tank and air compressor
        - Spill Kit (pads, gloves, etc.)
        - Two 6-foot booms
        - One 5-foot retrieval pole
        - Sampling Kit with Instructions

2. **ARRIVAL: Spill Response Crew must target arrival at site with hydro flush combo unit and contingency equipment ASAP – no more than <u>1 HOUR</u> after call.**

3. **ASSESS SITE OF SPILL**
    - Identify whether sewage has already reached surface water.
    - Check underground map books to determine best method for spill containment.
    - Call for backup if more-hydro flush combo unit trucks, crews or pump crew are required.
    - Take photographs close-up and of spill area for determination of volume.
    - Contact PW Supervisor. PW Supervisor contacts PW Field Maintenance Manager.
    - Spill Reporter <u>CALLS OES WITHIN 2 HOURS if CATEGORY 1</u> is spilled in a location that will likely flow to a surface water.

4. **BARRICADE AND POST**
    - Minimize public contact with spilled materials.

- Cone & barricade spill area and utilize signage to direct pedestrian and auto traffic around/away from spill area (Orange "Raw Sewage" and Arrow signs).
- Post flyers that states "DANGER RAW SEWAGE, Keep Children and Pets out of this area" together with contact information of Department of Public Works (see Appendix 6.5)
- Keep children and pets out of the area.
- Close street(s) as necessary. Sewer staff on call will coordinate with Police Department.
- If discharge has reached surface waters, refer to Sewage Spill Watersheds Map (see Appendix 6.5). Identify which watershed may be affected by sewage. Post "DANGER Contaminated Water" signs (see Appendix 6.5) at locations identified in this document as appropriate for the affected watershed (refer to Appendix 6.5 for watershed posting procedures).
- Photograph barricaded & posted area(s).

5. DIVERSION, CONTAINMENT AND RECOVERY

See Table 6-2 below for spill response steps and actions.

Table 6-2. Spill Response Steps and Actions

STEP	ACTIONS
1. Diversion & Containment	**WHERE FEASIBLE, DIVERT AWAY FROM SENSITIVE AREAS** (e.g., Schools, Daycares, Playgrounds, Intersections, Creeks, etc.) • Install air plugs on storm drains to contain the spill. • Divert using small berm to change direction of flow back to sewer. • Divert spill by pumping around spill and return to sewer. **WHERE FEASIBLE, CONTAIN SPILL & RETURN TO SYSTEM** • Contain spill by letting it collect in a naturally low area and recover sewage when time permits. • Dike/Dam (or sand bagging) spill by building dirt berm to collect spill. **PHOTOGRAPH DIVERSION & CONTAINMENT**
2. Clear Blockage	**RELIEVE CAUSE OF SPILL** • Relieve the stoppage as soon as possible by use of Sewer Rodder or Hydro-jet. Refer to SOP binder for proper use of equipment. • Have hydro flush combo unit set up downstream or use trap at downstream manhole to catch any debris that may get released.

STEP	ACTIONS
	• Refer to and follow all Safety Regulations.
3. Area Clean-Up	**CLEAN UP AND DISINFECTING** • Remove all signs of gross pollution (solids, TP, etc.) • Lightly spray disinfectant (and broom area). Wait 10 min. • Flush area with water. The amount of flush water should be at least three times that of the spill if practical. • Water shall be contained and returned to sewer. **PHOTOGRAPH AREA AFTER CLEAN-UP**

6. SAMPLING AND LAB TESTS

- If the estimated spill volume is 50,000 gallons or more, collect water samples **within 18 hours** following Section 6.10, Water Quality Sampling and Analysis Monitoring.

7. CCTV INSPECTION – CCTV should be performed as soon as possible and/or feasible to help determine the spill cause.

6.9 SEWAGE ESTIMATION

Use the methods outlined in Appendix 6.4 to estimate the volume of the spilled sewage. Use up to three methods of estimation to help validate results, where feasible.

Some spills may occur in locations where the wastewater can seep into the ground or flow away from the spill location. In such conditions, consider when the spill was first detected and observations from bystanders in order to determine the total spill volume.

6.10 WATER QUALITY SAMPLING AND ANALYSIS

Water quality sampling and testing must be completed for spills that are 50,000 gallons or greater and enter surface waters, where feasible and safe. The purpose of water quality sampling is to determine the extent and impact of the spill. The water quality sampling procedures must be conducted as follows:

- Spill Responders should attempt to collect samples as soon as possible after the discovery and mitigation of the spill event. The samples must be analyzed by the laboratory within 6 hours of collection. Therefore, it is best practice to collect the samples during laboratory hours. Sample collection should follow the procedures outlined in Appendix 6.6.
- Required sample locations are listed in Table 6-3. The County may require additional sample locations. The distance above and below the sample point should be selected by the City as appropriate for the spill location. Often, samples are taken 100 feet upstream

and downstream of the spill location, and also at the spill location in flowing water (e.g., creeks) where the safety of personnel would not be put at risk.

Table 6-3. Sampling Locations for Spills 50,000 Gallons or Greater That Enter Surface Waters

Sampling Location	Description
DCS-001	A point in a drainage conveyance system before the drainage conveyance system flow discharges into a receiving water.
RSW-001 Point of Discharge	A point in the receiving water where sewage initially enters the receiving water.
RSW-001U: Upstream of Point of Discharge	A point in the receiving water, upstream of the point of sewage discharge, to capture ambient conditions absent of sewage discharge impacts.
RSW-001D: Downstream of Point of Discharge	A point in the receiving water, downstream of the point of sewage discharge, where the spill material is fully mixed with the receiving water.

- The samples shall then be brought to the Wastewater Treatment Plant (WWTP) Laboratory for coliform analysis (Total coliform, E. coli and Enterococcus).
- In addition, Ammonia samples should be placed in the sample refrigerator for pickup by CalTest Laboratories (call to notify them samples are ready for pickup).
- If the WWTP Laboratory is unable to analyze the coliform samples, they must be transported to the San Mateo County Public Health Laboratory for analysis. The ammonia samples will remain in the refrigerator (WWTP Lab) for pickup by Caltest Laboratories. Lab contact information is listed in Table 6-4.

Table 6-4. Laboratory Information

Laboratory	Address	Contact Info
City of San Mateo Wastewater Treatment Plant Laboratory	2050 Detroit Drive San Mateo, CA 94404	(650) 522-7381
San Mateo County Public Health Laboratory	225 W. 37th Avenue San Mateo, CA 94403	(650) 573-2500
Caltest Laboratory	1885 N. Kelly Road Napa, CA 94558	(707) 258-4000

- If the County Public Health Lab is Closed:
    - If the County Health Lab will be opening within 5 hours from the time the samples were collected, keep samples in a refrigerator or in the cooler containing the cold packs/ice and immediately deliver samples as soon as the County Lab opens for business.
    - Otherwise, calls the County Health Lab's After Hours Contact List shown in Table 6-5 (starting with #1 – Office/Pager/Cell) and arrange to meet a lab analyst to receive samples during off-hours.

- Sample analysis must be conducted according to sufficiently sensitive test methods approved under 40 Code of Federal Regulations Part 136 for the sample analysis of pollutants. A method is considered sufficiently sensitive when the minimum level of the analytical method approved under 40 Code of Federal Regulations Part 136 is at or below the receiving water pollutant criteria; and
- The analysis of water quality samples must be performed by a laboratory that has accreditation pursuant to Article 3 (commencing with section 100825) of Chapter 4 of Part 1 of Division 101 of the Health and Safety Code. (Water Code section 13176(a).) The State Water Board accredits laboratories through its Environmental Laboratory Accreditation Program (ELAP).

Table 6-5 lists water quality sampling staff and contact information.

Table 6-5. Water Quality Sampling Contact Information

Location	Contact Person	Phone Number
City of San Mateo WWTP Lab Supervisor	Xiongbing Liang	650-522-7388 (office) 530-304-3376 (cell)
City of San Mateo WWTP Lab Analyst LAB HOURS 6:30am to 3:30pm	Mary Buffington	650-522-7293
Collection System Contact	Tony Baltodano	650-522-7359 (office) 650-483-5839 (cell)
San Mateo County Public Health Lab 225 W. 37th Ave, Room 113 LAB HOURS: MON – FRI 8am to 5pm 650-573-2500	June Wong	650-573-2456 (office) 650-339-2322 (cell)
	<u>After Hours</u>: June Wong Sangeeta Singh	650-632-1193 (pager) 650-339-2322 (cell) 650-594-1338 (home) 650-235-6755 (cell)

6.11 SPILL TECHNICAL REPORT

For Category 1 spills of 50,000 gallons or more, a Spill Technical Report must be prepared and submitted to the CIWQS online spill database within 45 calendar days of the spill end date. The Spill Technical Report must include, at a minimum, the following:

1. Spill causes and circumstances, including at a minimum:
   a. Complete and detailed explanation of how and when the spill was discovered;
   b. Photographs illustrating the spill origin, the spill flow path, the extent of the spill, drainage conveyance system entrance and exit, receiving water, and post-cleanup site conditions;
   c. Diagram showing the spill failure point, appearance point(s), and final destination(s);

d. Detailed description of the methodology employed, and available data used to calculate the discharge volume and, if applicable, the recovered spill volume; Detailed description of the cause(s) of the spill; Copies of the original field crew records used to document the spill; and

e. Historical maintenance records for the failure location.

2. Response to spill:
   a. Chronological narrative description of all actions taken to terminate the spill;
   b. Explanation of how the SERP was implemented to respond to and mitigate the spill; and
   c. Final corrective action(s) completed and/or planned to be completed, and a schedule for planned corrective actions, including:
      i. Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable;
      ii. Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences; and
      iii. Necessary modifications to the SERP to incorporate lessons learned in responding to and mitigating the spill.
3. Water Quality Monitoring, including at minimum:
   a. Description of all water quality sampling activities conducted including analytical results and evaluation of the results;
   b. List of pollutant and parameters monitored, sampled, and analyzed;
   c. Laboratory results, including laboratory reports;
   d. Detailed location map illustrating all water quality sampling points; and
   e. Other regulatory agencies receiving sample results (if applicable).
4. Evaluation of spill impact(s), including a description of short-term and long-term impact(s) to beneficial uses of the surface water.

The Public Works Supervisor is responsible for the development and certification of the Spill Technical Report. The Spill Technical Report template can be found in Appendix 6.7 of this document.

6.12 SPILL RESPONSE WITHIN PRIVATE PROPERTY

In the event that a spill occurs at a private property, the City will dispatch Maintenance crew and notify the resident of the need to access their property and inspect the sewer system located in the sewer easement. Residents should call the Department of Public Works Sewer Maintenance at ***(650) 522-7300*** for any questions or concerns with property access and work performed at the property. A summary of easement access procedures is located in Appendix 6.2 Exhibit C of this document.

If a spill is caused by a sewer lateral backup or blockage on commercial or multifamily residential buildings, the owner(s) of the property served by the private sewer lateral shall be responsible for inspecting, testing the lateral, and providing the results to the City. This is a requirement per City Municipal Code 7.38.432 PRIVATE SEWER LATERALS.

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INVESTIGATION & DOCUMENTATION

6.13 INVESTIGATION AND DOCUMENTATION PROCEDURE

The following items provide a guideline for the City's investigation and documentation procedure.

1. Photograph spill site throughout mitigation efforts as appropriate.
    i. Upon arrival (close-up to determine volume & further away to show location and affected areas).
    ii. After barricading/posting.
    iii. After containment.
    iv. After completing disinfection and clean-up.
2. Fill out the sewer Spill Field Form kept in all sewer vehicles (see Appendix 6.3).
3. Attempt to capture the time of the start of the spill if not already known.
4. Provide accurate flow measurements and duration of spill (see Appendix 6.4).
5. Provide map of problem location [manhole(s) involved] and where the spill discharged to (e.g., storm drain, field, stream; etc.).
6. CCTV mainline as soon as possible and/or feasible.
7. Ensure all photos, forms, maps & CCTV get logged in spill binder and into Cartegraph CMMS program.

6.14 POST-SPILL ANALYSIS

For each spill event that is a Category 1 spill, all participants involved in the response – from the person who received the call to the last person to leave the site – should meet as soon as feasible after the event to review and evaluate the incident and the City's response procedures. The objective of the post-spill analysis is to determine actions necessary, if any, to reduce the recurrence of spills and better mitigate the effects of spills.

The post-spill analysis is intended to determine if additional maintenance, repair/replacement or other follow-up actions or response procedures changes are needed to reduce or eliminate the likelihood of future spills. The procedures for investigating a spill are as follows:

- Review and complete the Sewer Spill Report.
- Review the incident timeline and other documentation regarding the incident.
- Review actions by all persons involved in the response, including the initial recipient of the complaint.
- Reviewing communications with all reporting parties and witnesses.
- Review volume estimate, volume recovered estimate, volume estimation assumptions, and associated drawings.
- Review available photographs.
- Interview staff that responded to the spill.

- Review past maintenance records of all affected manholes and pipe segments.
- Conduct a CCTV inspection to determine the condition of the line segment immediately following the spill and reviewing the video and logs.
- Review any FOG related information or results that identify any changes or additions needed to the SERP and SSMP following the event.

The product of the post-spill analysis should be the determination of the root cause of the spill to the best extent possible and identification of corrective actions.

SPILL REPORTING PROCEDURES/ REGULATORY NOTIFICATION

6.15 DOCUMENTATION

In accordance with the WDR, the City maintains records for each sanitary sewer spill.

1. Records are retained for at least five (5) years
2. Records are readily available, either electronic or hard copies, for review by Water Board staff during onsite inspections or through an information request
3. Records are retained for each of the following spill-related events and activities:
    a. Spill event complaints
    b. Category 4 spills (in addition to documentation needed for Cat 1 through 3 draft reports and certifications)
    c. Sewer system telemetry records
    d. Sewer system management plan implementation records
    e. Audit records
    f. Equipment Records
    g. Work orders

Specific requirements for recordkeeping are listed further in the sections below. The records are maintained at the City office and are also entered into the City's CMMS system. The City also maintains records of complaints received, even if the complaint does not relate to a City spill.

6.15.1 Spill Event Complaints

The City shall maintain records for each of the following spill-related events and activities:

- Spill event complaint, including but not limited to records documenting how the City responded to notifications of spills. Each complaint record must, at a minimum, include the following information:
    - Date, time, and method of notification;
    - Date and time the complainant first noticed the spill, if available;
    - Narrative description of the complaint, including any information the caller provided regarding whether the spill has reached surface waters or a drainage conveyance system, if available;
    - Complainant's contact information, if available; and
    - Final resolution of the complaint.
- Records documenting the steps and/or remedial action(s) undertaken by the City;
- Records documenting how estimate(s) of volume(s) and, if applicable, volume(s) of spill recovered were calculated;
- All California Office of Emergency Services notification records, as applicable; and
- Water quality monitoring records.

6.15.2 Recordkeeping of Category 4 Spills (in addition to other records needed for Cat 1 through 3 spills, as listed below under "Reporting")

The City shall maintain the following records for each individual Category 4 spill:

- Contact information: Name and telephone number of City contact person to respond to spill-specific questions;
- Spill location name;
- Description and GPS coordinates for the system location where the spill originated;
- Did the spill reach a drainage conveyance system? If Yes:
    - Description of drainage conveyance system location;
    - Estimated spill volume fully recovered within the drainage conveyance system;
    - Estimated spill volume remaining within the drainage conveyance system; and
    - Estimated total spill volume exiting the sanitary sewer system.
- Spill date and start time;
- Spill cause(s) (for example, root intrusion, grease deposition, etc.);
- System failure location (for example, main, pump station, etc.);
- Description of spill response activities including description of immediate spill containment and cleanup efforts;
- Description of how the volume estimation was calculated, including, at minimum:
    - The methodology and type of data relied upon, including supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered); and
    - The methodology and type of data relied upon to estimate the spill start time, on-going spill rate at time of arrival (if applicable), and the spill end time.
- Description of implemented system modifications and operating/maintenance modifications.

6.15.3 Recordkeeping for Total Annual Spill Information

The City shall keep the following records summarizing annual spills:

- Estimated total annual spill volume;
- Description of spill corrective actions, including at minimum:
    - Local regulatory enforcement action taken against the sewer lateral owner in response to a spill, as applicable; and
    - System operation, maintenance and program modifications implemented to prevent repeated spill occurrences at the same spill location.

6.15.4 Sewer System Telemetry Records

The City shall maintain the following sewer system telemetry records if used to document compliance with Statewide WDR (e.g., used to develop volume estimates):

- Supervisory control and data acquisition (SCADA) system(s);
- Alarm system(s);
- Flow monitoring device(s) or other instrument(s) used to estimate sewage flow rates, and/or volumes;
- Computerized maintenance management system records; and
- Asset management-related records.

6.15.5 Sewer System Management Plan Implementation Records

The City shall maintain records documenting the implementation of its Sewer System Management Plan, including documents supporting its Sewer System Management Plan audits, corrections, modifications, and updates to the Sewer System Management Plan.

6.15.6 Audit Records

The City shall maintain, at minimum, the following records pertaining to its Sewer System Management Plan audits, and other internal audits:

- Completed audit documents and findings;
- Name and contact information of staff and/or consultants that conducted or involved in the audit; and
- Follow-up actions based on audit findings.

6.15.7 Equipment Records (List)

The City shall maintain a log of all owned and leased sewer system cleaning, operational, maintenance, construction, and rehabilitation equipment. This list is included as Appendix 4.7.

6.15.8 Work Orders ‘

The City shall maintain record of work orders for operations and maintenance projects.

6.15.9 Spill Specific Monitoring (Documentation)

Spill-specific monitoring means the gathering of information and data for a specific spill event to be reported or kept as records. The WDR requires the following assessments, as a component of data gathering following a spill.

Spill Location and Spread

The City shall visually assess the spill location(s) and spread using photography, global positioning system (GPS), and other best available tools. The City shall document the critical spill locations, including:

- Photography and GPS coordinates for:

- The system location where spill originated; or
- For multiple appearance points of a single spill event, the points closest to the spill origin.

- Photography for:
  - Drainage conveyance system entry locations;
  - The location(s) of discharge into surface waters, as applicable;
  - Extent of spill spread; and
  - The location(s) of clean up.

Spill Volume Estimation

The City shall estimate the total spill volume using updated volume estimation techniques, calculations, and documentation for electronic reporting. The City shall update its notification and reporting of estimated spill volume (which includes spill volume recovered) as further information is gathered during and after a spill event.
Initial service call information

- Spill Report Form
- Copies of the certified CIWQS report forms including volume estimate
- CCTV inspection if completed
- Water quality sampling and test results, if applicable
- Spill Technical Report if prepared

Other Records

In addition to the abovementioned records, the following additional records should also be retained for all spills when available and as applicable:

- All original recordings for continuous monitoring instrumentation
- Service call records and complaint logs of calls received by the City for the previous five years that are associated with spills
- Work orders, work completed, and any other maintenance records from the previous five years that are associated with spills
- Documentation of performance and implementation measures for the previous five years

6.16 REGULATORY REPORTING

The City shall report any information that is protected by the Homeland Security Act by email to ciwqs@waterboards.ca.gov, with a brief explanation of the protection provided by the Homeland Security Act for the subject report to be protected from unauthorized disclosure and/or public access, and for official Water Board regulatory purposes only.

The sections below summarize the regulatory reporting requirements for spill reporting and regulatory notification. Table 6-6 on the following page summarizes key deadlines to be aware of for spill reporting. Table 6-7 summarizes these deadlines by spill category.

Table 6-6 Key Deadlines for Spill Reporting

2 HOURS of being aware of spill	**Call Office of Emergency Services & Health Department if Category 1 sewer main spill is 1000 gallons or more**
3 BUSINESS DAYS of being aware of spill	Submit draft reports to CIWQS for Category 1 and sewer main or Category 2 sewer main spills
15 CALENDAR DAYS from spill end date	Certify Category 1 and Category 2 spills
30 CALENDAR DAYS from end of month if applicable	Certify Category 3 and/or Category 4 sewer main spills or submit “No Spill” report
45 CALENDAR DAYS from spill end date	Submit Spill Technical Report for spills 50,000 gallons or larger that reach Waters of the State
90 CALENDAR DAYS from spill end date (Cat 1 or 2) or certified spill report due date (Cat 3)	Submit amended spill report for Category 1 through 3 spills
FEBRUARY 1 of each year	Submit Category 4 spill summary report

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Table 6-7 Summary of Spill Reporting Requirements

ELEMENT	REQUIREMENT	METHOD
NOTIFICATION	• **Category 1 Spill Greater than 1,000 Gallons:** ○ Notify OES within **two hours of becoming aware** of any Category 1 Spill (i.e., greater than or equal to 1,000 gallons discharged to Waters of the State. **Obtain an OES notification control number.** ○ Also notify the County Health Department.	• Call Cal OES at: **(800) 852-7550 and** San Mateo County Environmental Health at **(510) 267-8000**,
REPORTING	• **Category 1 Spill**: ○ Draft Report **within three business days** of becoming aware of the spill ○ LRO certifies within **15 calendar days** of spill end date • **Category 2 Spill:** ○ Draft Report **within 3 business** days of becoming aware of the spill ○ LRO certifies **within 15 calendar days** of the spill end date • **Category 3 Spill:** ○ Certified report **within 30 calendar days** of the end of month in which the spill occurred • **Category 4 Spill:** ○ Monthly certify the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills **within 30 calendar days** after the end of the calendar month in which the spills occurred ○ LRO certifies **annually** a report of all Category 4 spills, **by February 1** after the end of the calendar year in which the spills occurred • **Category 1 Spill Greater than 50,000 Gallons:** ○ LRO submits a Spill Technical Report **within 45 calendar days** after the spill end date • **"No Spill" certification :** ○ LRO certifies that no Spills occurred **within 30 calendar days** of the end of the month. • **Collection System Questionnaire (to be changed to Annual Report in 2024):** ○ City updates and **certifies every 12 months**, with the Annual Report deadline beginning on April 1, 2024.	• Enter data into the CIWQS Online Spill Database (http://ciwqs.waterboards.ca.gov/), certified by the Legally Responsible Official(s). • All information required by CIWQS should be captured in the Spill report. • Certified Spill reports may be updated by amending the report or adding an attachment to the Spill report within 90 calendar days after the Spill end date (for Category 1 and 2 spills) or the date of the certified report (for Category 3 spills), as applicable. After 90 days, the State and Regional Board must be contacted to request to amend a Spill report along with a justification for why the additional information was not available prior to the end of the 90 days.
WATER QUALITY MONITORING	• **Category 1 Spill Greater than 50,000 Gallons:** ○ City conducts water quality sampling **within 18 hours** after knowledge of the spill for Category 1 Spills in which 50,000 gallons or greater are spilled to a surface water.	• Water quality results will be uploaded into CIWQS for Category 1 Spills in which 50,000 gallons or greater are spilled to surface waters.

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6.16.1 Multiple Appearance Points – Single Spill

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

6.16.2 2-Hour Notification to Regulatory Agencies of Spills

Cal OES is only to be notified of a Category 1 spill greater than or equal to 1,000 gallons that discharges to surface water or spilled in a location where it probably will be discharged to surface water. The First Responder or designee is responsible for reviewing field data for reporting to regulatory agencies. If it is determined that the criteria for OES notification was met, then the First Responder or designee must notify OES of the event **no later than two (2) hours** after:

1. The City has knowledge of the spill;
2. Notification is possible; and
3. Notification can be provided without substantially impeding cleanup or other emergency measures.

The OES phone number is (800) 852-7550. The First Responder or designee is responsible for obtaining an OES Control number.

The following information should be reported to Cal OES, as applicable:

- Name and phone number of the person notifying the California Office of Emergency Services;
- Estimated spill volume (gallons);
- Estimated spill rate from the system (gallons per minute);
- Estimated discharge rate (gallons per minute) directly into waters of the State or indirectly into a drainage conveyance system;
- Spill incident description, which includes:
  - Brief narrative of the spill event, and
  - Spill incident location (address, city, and zip code) and closest cross streets and/or landmarks;
- Name and phone number of contact person on-scene;
- Date and time the Enrollee was informed of the spill event;
- Name of sanitary sewer system causing the spill;
- Spill cause or suspected cause (if known);
- Amount of spill contained;
- Name of receiving water body receiving or potentially receiving discharge; and

- Description of water body impact and/ or potential impact to beneficial uses.

Following the initial notification to OES and until the spill report is certified in the SWRCB online Spill Database, the LRO will provide updates (or provide direction for updates to be provided) to OES regarding substantial changes to the following information:

- Estimated spill volume (increase or decrease in gallons initially estimated);
- Estimated discharge volume discharged directly into waters of the State or indirectly into a drainage conveyance system (increase or decrease in gallons initially estimated); and
- Additional impact(s) to the receiving water(s) and beneficial uses.

6.16.3 Notification of Spill Report Updates

After the initial notification to the OES up until a certified report is certified in the online CIWQS Sanitary Sewer System Database, the City may provide updates to the OES regarding substantial changes to:

- Estimated spill volume (increase or decrease in gallons initially estimated);
- Estimated discharge volume discharged directly into waters of the State or indirectly into a drainage conveyance system (increase or decrease in gallons initially estimated); and
- Additional impact(s) to the receiving water(s) and beneficial uses

6.16.4 Detailed Reporting Requirements

This section provides details on the City's regulatory reporting process, which is also described below.

Spill Reporting for Category 1 Spills

- Cal OES shall receive notification of Category 1 spills of 1,000 gallons or more, as stated earlier in this Section.
- The Data Submitter must then submit the initial draft report to the SWRCB's CIWQS Online Spill database @ http://ciwqs.waterboards.ca.gov/ciwqs within 3 business days of becoming aware of the spill.
- Table 6-8 on the following page lists information that is required in the draft Category 1 spill report. This data must be supplemented further during the certification process, as discussed further below.
- Within 15 calendar days of the spill end date, the LRO must review and certify the report in the CWIQS Online spill database @ http://ciwqs.waterboards.ca.gov/ciwqs.
- The Certified Spill Report requires additional information to supplement the data provided in the draft Spill Report. Table 6-8 on the following page summarizes information that is required during spill certification.

Table 6-8 Category 1 and 2 CIWQS Draft Spill Report – Required Information

Required Information for Category 1 and 2 Draft Spill Reports
1. Contact information: Name and telephone number of contact person to respond to spill-specific questions; 2. Spill location name; 3. Date and time the City was notified of, or self-discovered, the spill; 4. Operator arrival time; 5. Estimated spill start date and time; 6. Date and time the City notified the California Office of Emergency Services, and the assigned control number; 7. Description, photographs, and GPS coordinates of the system location where the spill originated; 8. If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field; 9. Estimated total spill volume exiting the system; 10. Description and photographs of the extent of the spill and spill boundaries; 11. Did the spill reach a drainage conveyance system? If Yes: a. Description of the drainage conveyance system transporting the spill; b. Photographs of the drainage conveyance system entry location(s); c. Estimated spill volume fully recovered from the drainage conveyance system; d. Estimated spill volume remaining within the drainage conveyance system; e. Description and photographs of all discharge point(s) into the surface water; ** Items 12 and 13 are required for Category 1 spills only ** 12. Estimated spill volume that discharged to surface waters; and 13. Estimated total spill volume recovered.

Spill Reporting for Category 2 Spills

- Within 3 business days of becoming aware of the spill, the LRO must submit the initial report to the SWRCB's CWIQS Online Spill Database @ http://ciwqs.waterboards.ca.gov/ciwqs.
- The draft report shall include Items 1 through 11 from Table 6-8 above.
- Within 15 calendar days of the spill end date, the LRO must review and certify the report in the CWIQS Online Spill Database @ http://ciwqs.waterboards.ca.gov/ciwqs. The Spill Certification must include, in addition to the information provided in the draft report, Items 1 through 13 of Table 6-9.
- In addition, the Category 2 Spill Certification must include a new Item 14 - Whether or not the spill was located within 1,000 feet of a municipal surface water intake.

Table 6-9 Category 1 and 2 CIWQS Spill Certification – Required Information

Required Information for Category 1 and 2 Spill Certification
1. Description of the spill event destination(s), including GPS coordinates if available, that represent the full spread and reach of the spill; 2. Spill end date and time; 3. Description of how the spill volume estimations were calculated, including at a minimum: a. The methodology, assumptions and type of data relied upon, such as supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered); and b. The methodology(ies), assumptions and type of data relied upon for estimations of the spill start time and the spill end time; 4. Spill cause(s) (for example, root intrusion, grease deposition, etc.); 5. System failure location (for example, main, lateral, pump station, etc.); 6. Description of the pipe material, and estimated age of the pipe material, at the failure location; 7. Description of the impact of the spill; 8. Whether or not the spill was associated with a storm event; 9. Description of spill response activities including description of immediate spill containment and cleanup efforts; 10. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of major milestones for those steps; 11. Spill response completion date; 12. Detailed narrative of investigation and investigation findings of cause of spill; 13. Reasons for an ongoing investigation (as applicable) and the expected date of completion; ** Items 14 through 17 are required for Category 1 spills only ** 14. Name and type of receiving water body(s); 15. Description of the water body(s), including but not limited to: 16. Observed impacts on aquatic life; 17. Public closure, restricted public access, temporary restricted use, and/or posted health warnings due to spill; 18. Responsible entity for closing/restricting use of water body; and 19. Number of days closed/restricted as a result of the spill. 20. Whether or not the spill was located within 1,000 feet of a municipal surface water intake; and 21. If water quality samples were collected, identify sample locations and the parameters the water quality samples were analyzed for. If no samples were taken, “Not Applicable” shall be selected.

Monthly Certified Spill Reporting for Individual Category 3 and Category 4 Spills

Within 30 calendar days of the end of the calendar month in which the spill occurred, the LRO must submit and certify a report to the SWRCB's CWIQS Online Spill database @

http://ciwqs.waterboards.ca.gov/ciwqs. For each Category 3 spill, the report shall include the information shown in Table 6-10.

For each Category 4 spill, the report should include the estimated total spill volume exiting the sanitary sewer system and the total number of all Category 4 spills for the month.

If a spill starts in one calendar month and ends in a subsequent calendar month, and the City has no further spills of any category, in the subsequent calendar month, the LRO shall certify "no-spills" for the subsequent calendar month. If the City has no spills from its systems during a calendar month, but the City voluntarily reported a spill from a private lateral or a private system, the LRO shall certify "no-spills" for that calendar month.

Table 6-10 Category 3 CIWQS Spill Certification – Required Information

Required Information for Category 3 Spill Certification
1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions; 2. Spill location name; 3. Date and time the Enrollee was notified of, or self-discovered, the spill; 4. Operator arrival time; 5. Estimated spill start date and time; 6. Description, photographs, and GPS coordinates where the spill originated: 7. If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field; 8. Estimated total spill volume exiting the system; 9. Description and photographs of the extent of the spill and spill boundaries; 10. Did the spill reach a drainage conveyance system? If Yes: a. Description of the drainage conveyance system transporting the spill; b. Photographs of the drainage conveyance system entry locations(s); c. Estimated spill volume fully recovered from the drainage conveyance system; and d. Estimated spill volume discharged to a groundwater infiltration basis or facility, if applicable. 11. Estimated total spill volume recovered; 12. Description of the spill event destination(s), including GPS coordinates, if available, that represent the full spread and reaches of the spill; 13. Spill end date and time; 14. Description of how the spill volume estimations were calculated, including, at minimum: a. The methodology and type of data relied upon, including supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered); and b. The methodology and type of data relied upon to estimate the spill start time, on-going spill rate at time of arrival (if applicable), and the spill end time. 15. Spill cause(s) (for example, root intrusion, grease deposition, etc.);

Required Information for Category 3 Spill Certification

16. System failure location (for example, main, pump station, etc.);
17. Description of the pipe/infrastructure material, and estimated age of the pipe/infrastructure material, at the failure location;
18. Description of the impact of the spill;
19. Whether or not the spill was associated with a storm event;
20. Description of spill response activities including description of immediate spill containment and cleanup efforts;
21. Description of spill corrective actions, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of the major milestones for those steps; including, at minimum:
    a. Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable, and
    b. Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences at the same spill event location, including:
        i. Adjusted schedule/method of preventive maintenance;
        ii. Planned rehabilitation or replacement of sanitary sewer asset;
        iii. Inspected, repaired asset(s), or replaced defective asset(s);
        iv. Capital improvements;
        v. Documentation verifying immediately implemented system modifications and operating/maintenance modifications;
        vi. Description of spill response activities;
        vii. Spill response completion date; and
        viii. Ongoing investigation efforts, and expected completion date of investigation to determine the full cause of spill.
22. Detailed narrative of investigation and investigation findings of cause of spill.

Monthly Spill Reporting for No Spills

Within 30 calendar days of the end of the calendar month in which there are no spills, the LRO must submit and certify a "No Spill" certification to the SWRCB's CWIQS Online spill database @ http://ciwqs.waterboards.ca.gov/ciwqs.

Annual Spill Reporting for Category 4 Spills

By February 1st after the end of the calendar year in which any Category 4 spills occurred, the LRO must upload and certify a report, in an acceptable digital format, of all Category 4 spills for that year.

6.16.5 CIWQS Not Available

In the event that the CIWQS online Spill database is not available, the LRO must fax all required information to the RWQCB office at (510) 622-2460 and the SWRCB at ciwqs@waterboards.ca.gov in accordance with the time schedules identified above. In such an event, the City should then submit the appropriate reports using the CIWQS online spill 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 spill document file.

6.16.6 Amending Spill Reports

The LRO is responsible for amending Category 1, 2, and 3 spill reports. Certified Spill reports may be updated by amending the report or adding an attachment to the Spill report within **90 calendar days** after the Spill end date. After 90 days, the City must contact the State Water Board to request to amend a Spill report along with a justification for why the additional information was not available prior to the end of the 90 days.

For any no-spill certifications, spill event deletions or unlocking, and SSMP inquiries, these should be directed to: ciwqs@waterboards.ca.gov

6.16.7 CIWQS – Electronic Reporting to State Water Board

The California Integrated Water Quality System (CIWQS) is a computer system used by the State Water Resources Control Board to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities. CIWQS also allows online submittal of information by Permittees within certain programs and makes data available to the public through reports.

The City's LRO is responsible for submitting and certifying each Spill report in CIWQS. The CWIQS reporting procedure is outlined in the Discharger Workbook available at the State and Regional Water Quality Control Board website and at this link:

http://www.swrcb.ca.gov/water_issues/programs/sso/docs/discharger_workbook.pdf

Required timelines for reporting are repeated for clarity on Table 6-11 on the following page.

TABLE 6-11 REGULATORY REPORTING FLOWCHART AT SITE OF SPILL

LEADWORKER OR SPILL RESPONSE CREW:

1. Determine if spill reached or is likely to reach waterways.
2. CALL **PW Sewer Supervisor or Field Maintenance Manager** to let them know of the spill situation

   (PW Sewer Supervisor to call Sewer Maintenance Manager immediately after receiving notification.)
3. **If 1,000 gal or more have reached or are likely to reach surface water: Within 2 hours →** CALL: **CAL-OES** for **Control # 1-800-852-7550**

CREW:

1. Follow Spill Field Procedures for Assessment/Posting/Containment/Clear Blockage/Notification to Regulatory Compliance to Sample/Clean-Up and Documentation
2. CCTV Mainline

OFFICE

↓

LEADWORKER OR SPILL REPORTER (Backup = PW Supervisor or Field Maintenance Manager):

1. **Within 72 hrs → Enter Cat 1 & Cat 2 Spill Report to CIWQS: https://ciwqs.waterboards.ca.gov.**
2. Document spill.
3. Save pictures to Q/PW/corpyard/PW PHOTOS/Sewer/SSOs.
4. Review Spill Field Form with PW Sewer Supervisor.
5. Review CCTV – discuss reason for spill and best corrective actions to avoid repeat spill at location

↓

PW SUPERVISOR OR FIELD MAINTENANCE MANAGER):

1. *If 50,000 gal or more reached surface water* – contact Regulatory Compliance to collect samples within 18 hrs. Post and barricade to alert public.
2. **Within 15 days for Cat 1 & Cat 2 Spills → Certify Spill Report on CIWQS: https://ciwqs.waterboards.ca.gov**
3. **Within 30 days of the end of month in which Cat 3 or Cat 4 Spills occurred → Certify Cat 3 and/or Cat 4 Spill Reports on CIWQS: https://ciwqs.waterboards.ca.gov**

Additional Guidelines

4. **Within 1 to 15 days for all spills →** Follow-up on status of CCTV, corrective actions, sampling & posted signage.
5. **Within 5 days for all spills →** Create/Update WO w/ spill details, attach photos. Update spill Log & GIS Layer.

TRAINING

6.17 SPILL RESPONSE TRAINING

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

6.18 INITIAL AND ANNUAL REFRESHER TRAINING

Per the Statewide WDR, the City must ensure that appropriate staff and contracts implement the Spill Emergency Response Plan and are appropriately trained. All training is provided to City staff, as Contractors are not used during spill response, operations, or maintenance activities. See Element 3.

All City personnel who may have a role in responding to, reporting, and/or mitigating a sewer system spill must receive training on the contents of this SERP. All new employees must receive training before they are placed in a position where they may have to respond. Current employees receive refresher training on this plan and the procedures to be followed approximately annually.

The Sewer Maintenance Supervisor verifies that annual safety training requirements are current for each employee, and that employees are competent in the performance of all core competencies. The City addresses, through additional training/instruction, identified gaps in required core competencies.

6.19 SPILL RESPONSE DRILLS

Periodic training drills are 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 cover scenarios typically observed during sewer related emergencies. The results and the observations during the drills are recorded and action items are tracked to ensure completion. The Sewer Maintenance Supervisor collects sign-in sheet for every Spill Response Drill conducted.

6.20 SPILL TRAINING RECORD KEEPING

Records are kept of all training that is provided in support of this plan. The records for all scheduled training courses and for each spill emergency response training event include date, time, place, content, name of trainer(s), and names of attendees. The Sewer Maintenance Supervisor collects sign-in sheet for every spill response drill conducted.

6.21 APPENDIX 6 – SUPPORTING DOCUMENTS FOR ELEMENT 6

The following items are included as an Appendix to Element 6:

6.1 Contingency Equipment
6.2 Spill Field Procedures
6.3 Investigation and Documentation Forms
6.4 Spill Calculation and Estimation
6.5 Signage and Posting Procedures
6.6 Water Quality Monitoring Program
6.7 Spill Technical Report Template

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ELEMENT 7: SEWER PIPE BLOCKAGE CONTROL PROGRAM

SWRCB Waste Discharge Requirement:

Each Enrollee shall evaluate its service area to determine whether a sewer pipe blockage control program is needed to control fats, oils, and grease (FOG), rags, and debris. If an Enrollee determines that a sewer pipe blockage control program is not needed, the Enrollee must provide justification for why it is not needed. If a program is needed, it must include:

- An implementation plan and schedule for a public education outreach program that promotes proper disposal of pipe blockage substances;
- A plan and schedule for the disposal of pipe blocking substances 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 substances generated within a sanitary sewer system service area;
- The legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages;
- Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, best management practice (BMP) requirements, record keeping and reporting requirements;
- Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;
- An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning schedule for each section; and
- Implementation of source control measures for all sources of FOG reaching to the sanitary sewer system for each section identified above.

This chapter provides a description of the City's FOG Source Control Program and a discussion of pipe blockage control within the sewer system. This FOG Source Control Program and pipe blockage control processes are intended to be updated and modified by the City as necessary to more closely reflect operating conditions and changes that may occur in sewer management procedures.

7.1 BACKGROUND

A FOG Source Control Program was initiated in 1995 in an effort to reduce FOG-related sewer line cleaning, FOG buildup in lift stations, and grease collection / removal at the WWTP. At that time, a field survey determined that there were over 300 commercial food service facilities (i.e., FOG generators) in the service area, with and without grease control devices. Routine inspections of food service facilities began in 1996. In 1999, the City's Municipal Code was revised to require retroactively that food service facilities install grease control devices that conform to the current version of the Uniform Plumbing Code

(UPC). The City also began issuing Waste Discharge Permits in order to mandate service frequencies for the grease removal devices, and thereby further reduce discharges of FOG to the sanitary sewer system.

A list of food service establishments (FSEs) that includes inspection priority, inspection frequency, and the required frequency for cleaning out grease removal devices is included in Appendix 7.1, Exhibit 7.1I. The FSE must hire a private service provider to receive off-hauled grease, as discussed further in Section 7.3.

As related to other potential sources of pipe blockage, such as roots, rags or debris, the City has pre-existing programs that are discussed further in Element 4. These programs include the hot spot program, root control program, and repair and replacement program. The City uses data from CIWQS and from cleaning and CCTV operations to help develop, refine, and update these programs. In order to continue to improve these programs, the City is in the process of evaluating prior spills, spill cause, spill location, and locations with repeat spills in conjunction with the hot spot program, root control program, and pipe repair priorities to determine if these programs require adjustment to accommodate additional locations. Any changes to the hot spot program, root control program, or pipe repair priorities will be documented in future updates to the SSMP.

7.2 PUBLIC EDUCATION OUTREACH

The City distributes outreach materials developed internally and by other municipalities and/or programs as described below. Example outreach materials are included in Appendix 7.1, Exhibit 7.1A.

Outreach to Commercial Food Service Facilities. The City's Regulatory Compliance Inspectors distribute outreach materials, if necessary, during each commercial food service facility inspection; they encourage managers of food service facilities to use the information to train employees upon hire and at least annually thereafter. City Inspectors typically distribute a City-produced brochure titled *Required Best Management Practices for Food Service Facilities* that contains information on BMPs for the FOG and Stormwater programs. On the backside is *Municipal Code Applicable to Food Service Establishments* for reference. The brochure is provided in English, Spanish, and Chinese.

City inspectors also distribute a one-page handout provided by the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) titled, *Best Management Practices for Food Service Facilities*. This is available in English, Spanish and Chinese. A laminated poster for proper grease disposal titled *No Grease Down the Drain – Keep Drains Flowing* is provided during initial inspections for posting in the dishwash area of the kitchen. The poster is available in English, Spanish, Chinese, Korean and Vietnamese. Additional FOG control outreach materials are available and are distributed as opportunities arise

Residential Outreach. Outreach materials are available and on display at City Hall and are available online at the City's website:

https://www.cityofsanmateo.org/146/Best-Management-Practices

Public service announcements may be published prior to major holidays to remind City residents of prudent food waste handling practices. A FOG BMP poster and the WEF "Fat Free Sewers" brochure is mailed to apartment complexes as needed, and subsequent to finding a FOG buildup in the sewer at or immediately downstream of an apartment connection. If necessary, the FOG brochure is distributed to all homes upstream of a recurring blockage.

The City is developing similar outreach materials to educate the public about materials other than FOG, such as non-disposable "disposable" wipes, that should not be flushed into the sewer. When these outreach materials are available for distribution, a copy of the materials will be included in the SSMP appendices.

7.3 FOG DISPOSAL

FOG generators are responsible for hiring private service providers to haul off FOG wastes for disposal. Although City staff does not endorse services provided by any one service provider, the City provides a list of service providers that are commonly used by businesses in the service area. The lists of service providers are shown in Tables 7-1 and 7-2.

Table 7-1. Grease Waste Service Providers
Contractors with a (*) are also listed in Table 7-2

Service Provider	Phone Number	Website
A-1 Septic Tank Service	(510) 886-4455	https://ww.aitank.net
Able Septic	(408) 377-9990	https://www.ablesewer.com
All Valley Environmental*	(559) 498-8378	https://allvalleyenv.com
Ameriguard Maintenance Services*	(800) 347-7876	https://ameriguardsvc.com
Bay Area Restaurant Services	(888) 994-0753	http://www.bayarea restaurantsvcs.com
DAR PRO Solutions, Inc.*	(855) 327-7761	https://www.darpro-solutions.com/
Grease Trap Cleaners*	(510) 751-0286	https://www.thegreasetrapcleaners.com
Interstate Restaurant Services*	(844) 457-6572	https://www.interstateoil.com/interstate-restaurant-services/
KB Grease	(650) 660-5144	
Liquid Environmental Solutions*	(866) 694-7326	https://www.liquidenviro.com/
Mahoney Environmental*	(800) 447-3794	https://mahoneyes.com
Sacramento Rendering Co (SRC)	(800) 339-6493	http://srccompanies.com

Table 7-2. Accept Used Cooking Oil
Contractors with a (*) are also listed in Table 7-1

Service Provider	Phone Number	Website
All Valley Environmental*	(559) 498-8378	https://allvalleyenv.com
Ameriguard Maintenance Services*	(800) 347-7876	https://ameriguardsvc.com
DAR PRO Solutions, Inc.*	(855) 327-7761	https://www.darpro-solutions.com/
Grease Trap Cleaners*	(510) 751-0286	https://www.thegreasetrapcleaners.com
Interstate Restaurant Services*	(844) 457-6572	https://www.interstateoil.com/interstate-restaurant-services/
Liquid Environmental Solutions*	(866) 694-7326	https://www.liquidenviro.com/
Mahoney Environmental*	(800) 447-3794	https://mahoneyes.com
One More Time	(323) 526-3838	https://onemoretimeinc.com
Restaurant Technologies	(866) 399-3802	https://www.rti-inc.com

7.4 LEGAL AUTHORITY

The City's legal authority to prevent illicit discharges to the sewer system is discussed in Element 3.

The City of San Mateo manages the FOG control program throughout the City. In addition, the City inspects Estero Municipal Improvement District (EMID) food service facilities but does not maintain this infrastructure or provide outreach. The City and EMID Sanitary Sewer Use Ordinances, as contained in each entity's Municipal Code, are nearly identical; each provides the legal authority to implement a FOG Control Program. A summary of the enabling authority is summarized in Table 7-2 on the following page.

Table 7-2. FOG Legal Authority

CSM	EMID	Municipal Code Section Title
7.38.030	8.37.030	Definitions of “Food Service Facility” and “Grease”.
7.38.100	8.37.100	Pretreatment of Industrial Waste: (c) Food Service Facilities.
7.38.110	8.37.110	General Discharge Prohibitions: (a) any wastes that interfere with, inhibit damage or disrupt any wastewater conveyance.
7.38.120	8.37.120	Specific Discharge Prohibitions: (e) Solids or Viscous Materials; (h) Oil and Grease.
7.38.160	8.37.160	Requirements for Food Service Facilities: (a) Install a pretreatment system for grease removal which meets or exceeds minimum sizing requirements of the UPC by no later than January 1, 2001.
7.38.210	8.37.210	Waste Discharge Permits: (b) The City/District may require users to obtain waste discharge permits as necessary to carry out the purposes of the ordinance.
7.38.350	8.37.350	Authority to Inspect and Monitor: City/District is authorized to conduct all inspection, surveillance, and monitoring procedures necessary to assure compliance with the ordinance.
7.38.440	8.37.430	Compliance with the ordinance.
7.38.460	8.37.450	Administrative Remedies.
7.38.480	8.37.460	Civil Penalties.
7.38.490	8.37.460	Criminal Penalties.

Example permitting documents (including a permit), a list of Best Management Practices, and a Pretreatment Maintenance Log are included in Appendix 7.1, Exhibits 7.1B through 7.1F.

7.5 GREASE REMOVAL DEVICE REQUIREMENTS

The City’s Municipal Code section 7.38.160 (EMID Municipal Code section 8.37.160) requires that food service facilities must install a pretreatment system for grease removal that meets or exceeds minimum sizing requirements of the Uniform Building Code. Both entities’ codes further require that these pretreatment systems be permitted (Waste Discharge Permit), inspected monthly or more frequently as needed, and that a record be kept of the date of the inspection, any maintenance performed, and disposition of the contents (i.e., FOG) removed. Failure to operate or maintain the grease removal system in a way that ensures optimal efficiency, or failure to keep records of system maintenance, constitutes a violation of the ordinance.

7.6 BEST MANAGEMENT PRACTICES (BMPS)

The City’s FOG Control Program places emphasis on six major BMPs that should be implemented by food service facilities and other FOG generators within the service area. These BMPs are summarized as follows:

- Employee Training and Awareness: This BMP recommends that all employees and FOG-producing establishments be adequately trained on activities to reduce FOG disposal into the sanitary sewer system.
- Garbage Grinder Elimination/Limitation: This BMP recommends that FOG generators eliminate garbage grinders or limit their use to the greatest extent possible, thereby reducing the amount of food particles that enter the sanitary sewer system with the potential to clog the system. Additionally, the use of drain screens is recommended by this BMP to capture food and other particles in order to prevent them from being discharged into the sanitary sewer system. These screens should be cleaned frequently and emptied into the trash.
- Spill Cleanup: This BMP emphasizes the use of dry-cleaning methods for cleaning up spills. If dry methods are insufficient, water use and discharge to the sanitary sewer should be limited as much as possible.
- Equipment Cleaning and Maintenance: This BMP recommends that FOG generators limit the discharge of FOG to the sanitary sewer system to the greatest extent possible in the regular cleaning and maintenance of equipment.
- Grease Handling and Disposal: This BMP requires that oils, grease or other oily liquids (such as salad dressing) should not be discharged in large quantities to the sanitary sewer system. These materials should be recycled, if possible.
- Grease Removal Devices: This BMP requires that FOG generators install and maintain grease removal devices.

Because not all FOG problems are caused by food service facilities, residential and private dwelling customers are also urged to adopt the aforementioned BMPs, as applicable.

7.7 INSPECTION AND ENFORCEMENT PROCEDURES

City and EMID ordinances include provisions for the inspection of FOG-generating facilities, as well as enforcement actions available in the event of violations.

7.7.1 Inspection

The authority for City officials to inspect food service facilities and other FOG-generating facilities for compliance with this Program is provided in City Municipal Code Section 7.38.350 (EMID Municipal Code Section 8.37.350).

Inspections are conducted to assess compliance with waste discharge permit requirements, and it is the City's goal to inspect each FOG-generating facility a minimum of once every five-year permit term depending on compliance. Facilities given a designation of "High Priority" are subject to annual inspections. Facilities given a designation of "Low Priority" are subject to less frequent inspections (once per five-year term). Compliance status is determined by visual inspection of the pretreatment system, interview with the owner/staff about general operations and waste handling; and a review of documentation of pretreatment system maintenance, pretreatment system waste

disposal and employee training. Waste stream monitoring and analysis is not required and is not ordinarily used to determine compliance. It is the goal of the City to inspect new facilities within the first year of operation. An example inspection form is included in Appendix 7, Exhibit 7.1G.

An inspection may also be triggered by a line blockage determined to be the result of FOG accumulation, or preventive maintenance in which an accumulation of FOG is discovered. Potential FOG problem areas consist mainly of trunk line segments in commercial districts that serve a high concentration of food service facilities and also include areas with multi-family dwelling complexes. These areas are well-known and addressed by increased preventive maintenance of the sewer mains, as discussed in Section 7.8. Newly discovered sewer backups/blockages are usually due to a combination of factors, including grease, line sags, and roots.

7.7.2 Enforcement Actions

Enforcement remedies available in response to violations of City and EMID ordinances pertaining to FOG are detailed in each entity's ordinance and in the Enforcement Response Plan. Items typically found to be deficient during an inspection and the resulting enforcement action taken are summarized below in Table 7-3.

Table 7-3. FOG Findings and Response

Inspection Finding	Enforcement Response
Pretreatment system operation & maintenance (O&M) records not maintained.	Warning Notice
Inadequate Pretreatment System Maintenance	Warning Notice
No Wastewater Discharge Permit	Warning Notice
No Grease Removal Device	Warning Notice
First (and subsequent) follow-up inspection finds failure to comply with corrective action specified in Notice of Violation.	Notice of Violation, Failure to Comply with a Notice of Violation, or Administrative Citation (Fines/Fees)

The City may choose to issue a verbal warning for less serious offenses. In cases where a facility has a history of FOG buildup and/or blockages, both ordinances include a provision for requiring increased service frequency, installing additional pretreatment capacity or equipment, and/or reimbursement of City costs associated with increased preventative maintenance. Remedies described herein are not exclusive; the City may take a combination of actions specified in the Sewer Use Ordinance against a noncompliant User, as well as any other enforcement remedies that that the City may have available.

7.8 SERVICE AREA FOG EVALUATION

The identification of hot spots within the service area is ongoing; hot spots are identified based on reports of blockages and through closed-circuit television inspection (CCTV) findings. Known problem areas are prioritized based on qualitative findings of previous

preventive maintenance results, such as a surcharged condition, grease collection on the hydro-jetting nozzle, or through closed-circuit television inspection (CCTV) findings. A table listing problem areas and a map of high-priority FOG-related segments ("target areas") are included in Appendix 7.1, Exhibit 7.1H. High-priority FOG segments are put on a monthly, quarterly, or bi-annual preventive maintenance schedule. Findings are forwarded to the Environmental Compliance Program for follow-up inspection. The segment will remain on a quarterly preventative maintenance schedule until subsequent observations determine that the potential for obstruction or blockage has been reduced or eliminated. The preventive maintenance schedule for these line segments, as well as a map depicting problem areas, is provided in Appendix 7.1, Exhibit 7.1H.

7.9 APPENDIX 7 – SUPPORTING DOCUMENTS FOR ELEMENT 7

Exhibit 7.1A – Outreach Materials (commercial & residential)

Exhibit 7.1B – Waste Discharge Permit (WDP)

Exhibit 7.1C – WDP Standard Terms, Conditions & Requirements

Exhibit 7.1D – Best Management Practices for Food Service Facilities

Exhibit 7.1E – Pretreatment System Maintenance Log

Exhibit 7.1F – Waste Discharge Permits Q&A

Exhibit 7.1G – Inspection Form (Food Service Facility)

Exhibit 7.1H – Preventative Maintenance: FOG Hot Spots (Schedule and Map)

Exhibit 7.1I – City of San Mateo and EMID Food Service Establishment Inspection Frequency and Other Information

ELEMENT 8: SYSTEM EVALUATION, CAPACITY ASSURANCE AND CAPITAL IMPROVEMENTS

SWRCB Waste Discharge Requirement:

- The Plan must include procedures and activities for:
  - Routine evaluation and assessment of system conditions;
  - Capacity assessment and design criteria;
  - Prioritization of corrective actions; and
  - A capital improvement plan.
- Required components include:
  - System Evaluation and Condition Assessment
  - Capacity Assessment and Design Criteria
  - Prioritization of Corrective Action
  - Capital Improvement Plan

8.1 BACKGROUND

In March 2009, the Regional Water Quality Control Board (RWQCB) issued the City, Hillsborough, and Crystal Springs County Sanitation District (CSCSD) (collectively referred to as “Agencies”) a Cease and Desist Order (CDO) mandating elimination of sanitary sewer overflows (Spills) in their respective and collective collection systems, as well as requiring specific corrective actions to upgrade sewer capacity. In 2013, the Wastewater Treatment Plant (WWTP) was issued a new NPDES permit, with special provisions requiring a more integrated view of the collection system and WWTP including the development of WWTP and Collection System Master Plans and CIPs, and a Wet Weather Improvement Program. This permit was revised and reissued in 2018 under Order No. R2-2018-0016, NPDES No. CA0037541.

In response to the requirements established in the 2013 permit, City contracted with Carollo Engineers to develop an Integrated Wastewater Master Plan, which included a prioritized 20-year Capital Improvement Plan for the City’s collection system and WWTP. Tasks included flow projections, regulatory review, on-site storm water management, stress test, capacity analysis, energy analysis, treatment alternatives analysis, condition assessment, and prioritized capital improvement plan.

In 2014, the City created the Clean Water Program (CWP), a capital infrastructure improvement program to repair, replace, and upgrade aging sewage conveyance and wastewater treatment infrastructure. The City contracted with CH2M Hill (acquired by Jacobs) for program management support and to conduct a full review of the CWP through a Programmatic Environmental Impact Report (PEIR). In 2016, the City certified and adopted the Final PEIR and approved the underground flow equalization system programmatic approach. The approved programmatic approach also

established the CWP as a $1 billion capital improvement program, reduced Carollo Engineer's initial 20-year plan to a 10-year delivery timeframe, and repackaged the capital improvement projects to align with the revised timeline. The CWP is anticipated to be completed in 2026 and will meet the requirements of the Cease and Desist Order.

Information about the Clean Water Program, the various capital improvement projects that address capacity assurance, along with the Programmatic Environmental Impact Report can be found at this City website: https://cleanwaterprogramsanmateo.org/

8.2 PROJECT DRIVERS AND CAPACITY ASSESSMENT CRITERIA

There are several project drivers affecting the development of the integrated master plan, the resulting Capital Improvement Projects, and the prioritization of the projects. The drivers fall within several categories, and include capacity assessment as follows:

- Aging infrastructure requiring repair or replacement.
- Capacity to deal with dry and wet weather flows generated from the service area.
- Regulatory requirements (current and future).
- Policy decisions regarding sustainability initiatives.
- Potential effects of climate change.

The current population within the entire WWTP service area is estimated to be approximately 150,000, with 104,430 in the City limits based on the 2019 census. Projections within the next 20 years suggest an increase in City population to approximately 166,400 by the year 2035. After projecting future dry weather flows to the WWTP using a per capita method, expansion of permitted capacity for dry conditions is not anticipated over the next 20-year planning period.

The City has recently invested in updating the collection system model to be able to better estimate peak flows, reflect recent improvements, and to project flows through 2035. Sewer collection system projects were identified to address projected wet weather flow, including pump station capacity projects, storage requirements, and upsizing of pipelines and relief lines in the collection system that were predicted to have a hydraulic deficiency during the design storm. The analysis incorporated City knowledge of pipeline condition and spill history, and reviewed the capacity of system assets given increased infiltration and inflow that occurs under the design storm conditions.

The sewer collection system hydraulic model used a design storm with a 5-year recurrence interval and 6-hour duration for the capacity analysis. When applying the design storm to the City's hydraulic model, a pipe segment is determined to be capacity deficient and requires replacement when 1) the pipe conveys maximum capacity, 2) surcharging in the adjacent manhole occurs, and 3) freeboard at the adjacent manhole is less than three feet. Freeboard is defined as the difference between modeled rim elevation and water surface elevation.

8.3 SYSTEM EVALUATION AND CAPACITY ASSESSMENT

The Integrated Wastewater Master Plan implemented best management practices and includes discussion of the following:

- Evaluation the sanitary sewer system assets utilizing the best practices and technologies available;
- The entire system was included in the hydraulic model and assessed for capacity needs. The City plans to reassess system capacity approximately every 10 years if necessary.
- Capacity needs were prioritized that hold a high level of environmental consequences through predicted sewer spills. The City completes separate evaluations related to non-capacity issues for pipes vulnerable to failure due to other system deficiencies, as discussed in Element 4.
- The City plans to integrate additional analyses of potentially elevated risk for pipes located in the vicinity of surface waters, within steep terrain, in locations with known high groundwater elevations, and in other known environmentally sensitive areas. These analyses and associated documentation will become part of the City's repair and replacement prioritization program, which is addressed in Element 4.
- The City is considering ways to integrate potential effects of climate change, including but not limited to: sea level rise; flooding and/or erosion due to increased storm volumes, frequency, and/or intensity; wildfires; and increased power disruptions into the current capacity analysis. The hydraulic model is a flexible, working tool that can be used to run "what-if" scenarios related to predicted future events. City staff are actively involved in local industry organizations, such as CWEA, CASA, and BACWA, that are working to understand the potential data that is emerging regarding climate change and its effects on sanitary sewer facilities. As this information becomes known and accepted, the City is prepared to update the hydraulic model to further evaluate potential impacts.

8.4 CAPITAL IMPROVEMENT PROGRAM BUDGET AND SCHEDULE

The Clean Water Program is approximately $1 billion and is anticipated to be completed by fiscal year 2026/2027. The program has been ongoing and is fully funded, and includes project schedules including completion dates for all portions of the capital improvement program; joint coordination between operation and maintenance staff and engineering staff/consultants during planning, design, and construction of the capital improvement projects; and interagency coordination with other impacted utility agencies.

The City's capital improvement budgets can be viewed in the City's Adopted 2024-26 Business Plan, found at this webpage: https://www.cityofsanmateo.org/DocumentCenter/View/96238/Adopted-Budget_2024-26_Online

Table 8-1 summarizes annual expenditures for capacity-related collection system improvement projects for the past five fiscal years.

Table 8-1. Total Expenditures on Capacity-Related Projects by Fiscal Year

Fiscal Year (FY)	Total Expenditures ($)
FY19-20	40,349,000
FY20-21	49,984,000
FY21-22	46,702,000
FY22-23	34,154,000
FY23-24	32,135,000
5-YEAR TOTAL:	**$203,322,000**

8.5 APPENDIX 8 – SUPPORTING DOCUMENTS FOR ELEMENT 8

There are no appendix items for Element 8

ELEMENT 9: MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

SWRCB Waste Discharge Requirement:

The Enrollee shall include an Adaptive Management section that addresses Plan implementation effectiveness and the steps for necessary Plan improvement, including:

- Maintaining relevant information including audit findings, to establish and prioritize appropriate Plan activities;
- Monitor the implementation and measure the effectiveness of each Plan element;
- Update Plan procedures and activities, as appropriate, based on the results of monitoring or performance evaluations; and
- Identify and illustrate spill trends, including spill frequency, locations, and estimated volumes.

The Department of Public Works has established metrics to assess progress in maintenance, operations and management of the sanitary sewer collection system. The metrics are defined to identify successes and challenges in reducing spill frequency and impacts, improving collection system reliability, and providing capacity in the system to convey peak flows. The following information refers to data that is collected by staff, and how that data is used to help analyze sewer collection system performance, structural and maintenance related problems, crew productivity, and overall success of maintenance and capital improvement programs.

A discussion of how each performance metric indicates the level of success of the preventive maintenance program is included in the relevant subsections below. This assessment is also reflected in the City's bi-annual audit process, which is discussed in Element 10.

9.1 ADAPTIVE MANAGEMENT

The City includes adaptive management principles to ensure effective implementation and continuous improvement, as discussed below.

i. Maintaining relevant information, including audit findings, to establish and prioritize appropriate Plan activities. The City conducts 3-year audits as discussed in Element 10. Recommendations from the audits are incorporated into Plan updates, as shown on the schedule in Element 1.

ii. Monitoring the implementation and measuring the effectiveness of each Plan Element is completed through the Plan audits. Performance metrics are tracked in this Element 9.

iii. Assessing the success of the preventive operation and maintenance activities. The effectiveness of preventive operation and maintenance activities is assessed

through the Plan audits and recommendations from the audits are included I SSMP updates per the schedule shown in Element 1.

iv. Updating Plan procedures and activities, as appropriate, based on results of monitoring and performance evaluations.

No significant deficiencies or modifications have been identified beyond necessary administrative updates, which are outlined in the most recent audit. Any recommended updates are incorporated into subsequent updates to the Plan.

v. Identifying and illustrating spill trends, including spill frequency, locations and estimated volumes.

Thee remaining information provides information on spill trends, frequency, locations, and estimated volumes.

9.2 DATA COLLECTION

The City utilizes a CMMS program, Cartegraph software, which provides the means to capture, retrieve and track collection system maintenance activities. “How-To” documents have been created for data entry with examples specific to San Mateo’s collection system. Staff is trained on use of this program with administration and quality control provided by the CMMS administrator (Data Management Division).

Sewer crew daily records provide information that assists staff analyze the sanitary sewer collection system. Included on crew daily log and work order sheets are: location of work; pipe or manhole ID#; length of pipe worked on, whether activities were part of an emergency response or preventative maintenance (citywide district cleanings and/or “hot spot” repetitive cleaning); any structural or maintenance problems discovered in the pipe and their severity; whether additional follow-up is needed; staff names; equipment and material used; and start and end times.

Field staff enter all information into the CMMS program with assistance from office staff on a case by case basis. Using data stored in the CMMS, together with discussions between management, crew and engineering, the City updates maintenance activities as appropriate.

Contractors are sometimes utilized in addition to internal staff for completing targeted and district-wide condition assessment projects. Closed-circuit video (CCTV) investigations are used to identify problems within sewer pipes and to provide an overall condition rating of each pipe. Modifications to cleaning schedules can be made using the results from this analysis. Capital improvement projects are also identified as needed to rehabilitate specific pipelines and reduce cleaning cycle frequency.

CCTV data and condition scores are also used to determine specific rehabilitation methods, and to coordinate repairs with other public works efforts, such as road rehabilitation/reconstruction.

Pipeline Observation System Management (POSM) CCTV software is utilized to further assist with the condition assessment of pipes and reduce the amount of time between receipt of video and repair of pipes.

Through accurate and timely updates to asset data, preventive maintenance activities, and pipeline inspection activities and results, City staff have the tools needed to make informed decisions related to sewer management. This proactive approach to sewer management has contributed to effective management of maintenance-related spills through a consistent and systematic cleaning schedule .

9.3 DATA REPORTING

Performance indicator information is generated on an annual basis. Primary criteria tracked are shown in the Table 9-1 below.

Table 9-1. Cleaning Performance Indicators

	2024	2023	2022	2021	2020
Dry Weather Sanitary Sewer Spills	7	3	5	22	17
Miles Sewer Mainline Cleaned	355	310	264	266	192
% of Total Sewer Mainline Cleaned	**100%**	**100%**	**100%**	**100%**	**79%**

Note that the City sometimes cleans sewer mainlines multiple times, which is why the miles of sewer mainline cleaned vary but the percentage of total sewer mainline cleaned may remain at 100%. The data presented in Table 9-1 shows that the spills vary between less than two to nine spills per 100 miles of pipe. The City has a robust routine CCTV and cleaning program, CWP cleaning and CCTV, and root foaming.

9.4 SANITARY SEWER SPIILLS

The City tracks detailed information pertaining to sanitary sewer collection system spills. Tables 9-2 through 9-4 provide a synopsis of the number, volume and cause of spills.

Table 9-2. Number of Spills by Total Volume Spilled

Size of Spill (gallons)	2024	2023	2022	2021	2020
Greater than or equal to 1,000	6	7	3	5	3
From 100 to 999	1	2	2	12	5
From 10 to 99	0	1	2	6	8
Less than 10 (can include in line above)	0	0	0	2	1
Total	**7**	**10**	**7**	**25**	**17**

Table 9-2 shows a decreasing trend in the number of spills in all size categories over the period shown. The exception to this trend is the number of spills greater than 1,000 gallons in 2023, which were due to wet weather events that have since been resolved through the completion of the City's Underground Flow Equalization Storage ("UFES") capital improvement project in December 2023, which constructed a 5.3 million gallon flow equalization basin in the collection system to improve overall flow management in the system.

Table 9-3. Volume of Spills

	2024 (gal)	2023 (gal)	2022 (gal)	2021 (gal)	2020 (gal)
Total volume contained and returned to sewer system for treatment	500	80,267	1,240	6,067	25,503
Total volume reaching waters of the United States	35,950	2,130,525	505,425	364,061	127,435
Total volume not contained but not reaching waters of the United States (everything else)	200	0	0	832	1,123
Total	**36,650**	**2,210,792**	**506,665**	**370,960**	**154,061**

Table 9-3 shows a substantial decrease in the volume of spills in 2024 as compared to prior years. This change is primarily due to the completion of the City's UFES capital improvement project, along with several other capital improvement projects that facilitate diversion of flows to UFES during wet weather scenarios. Additional information on spills that occurred in 2023 and prior is available via the spill reports that were submitted to CIWQS.

Table 9-4. Causes of Spills

Cause of Spill	# in 2024	# in 2023	# in 2022	# in 2021	# in 2020
Blockage:					
Roots	1	2	4	8	10
Grease	2	1	0	9	3
Debris	1	0	1	2	1
Subtotal for Blockage	**4**	**3**	**5**	**19**	**14**
Infrastructure Failure	0	0	0	3	3
Flow Capacity Deficiency	0	6	2	3	0
Bypass	0	1	0	0	0
Other	3	0	0	0	0
Total	**7**	**10**	**7**	**25**	**17**

Table 9-4 shows a decreasing trend in the number of spills in all categories over the period shown. The exception to this trend is the number of spills related to capacity deficiencies, which increased in 2023. The City's most significant capacity issues at 25th and Delaware have been addressed through completion of the City's UFES project.

9.5 APPENDIX 9 – SUPPORTING DOCUMENTS FOR ELEMENT 9

There are no appendix items for Element 9..

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ELEMENT 10: SSMP PROGRAM AUDITS

SWRCB Waste Discharge Requirement:

As part of the Sewer System Management Plan (SSMP), the Enrollee shall include internal audit procedures, appropriate to the size and performance of the system, for the Enrollee to comply with section 5.4 (Sewer System Management Plan Audits) of this General Order.

At a minimum, these audits must occur every two three 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, including identification of any deficiencies in the SSMP and steps to correct them. The audit must:

- Evaluate the implementation and effectiveness of the Enrollee's Sewer System Management Plan in preventing spills;
- Evaluate the Enrollee's compliance with the most updated General Order;
- Identify Sewer System Management Plan deficiencies in addressing ongoing spills and discharges to waters of the State; and
- Identify necessary modifications to the SSMP Plan to correct deficiencies;

The Enrollee shall submit a complete audit report that includes:

- Audit findings and recommended corrective actions;
- A statement that sewer system operators' input on the audit findings has been considered; and
- A proposed schedule for the Enrollee to address the identified deficiencies.

10.1 SUMMARY

The City audits and updates its SSMP on a 3-year basis. Updates may occur more frequently if the Inspection Superintendent recommends modifications, or if regulations change between audits. The audit process is documented in the SSMP Audit Form shown in Appendix 10. The audit form provides structure for a systematic review of each SSMP element in order to ensure the SSMP contains current information, regulatory requirements are satisfied, and programs are effective and meeting City's goals for the operation of the collection system stated in Element 1. If updates or changes are required, the content and timeline to complete those change will should be described in the audit form. The most recent audit showing the results of the City's SSMP evaluation was completed in February 2025 and is included in Appendix 10.3. The City's audit form is shown in Appendix 10.2 of this document.

As part of the audit process, City staff develops a timeline for updates to critical information in the SSMP, such as contact information, names of the key staff in the response chain of communication, or other similar data as needed. A comprehensive SSMP update will occur every 6 years, as required by the WDR.

Changes made to the SSMP are documented in the Change Log located in Appendix 10.1.

10.2 APPENDIX 10 – SUPPORTING DOCUMENTS FOR ELEMENT 10

- Appendix 10.1 – SSMP Change Log
- Appendix 10.2 – SSMP Audit Blank Form
- Appendix 10.3 – Recent SSMP Audit Reports

ELEMENT 11: COMMUNICATION PROGRAM

SWRCB Waste Discharge Requirement:

- The Enrollee shall communicate on a regular basis with the public for spills and discharges resulting in closures of public areas, or that enter a source of drinking water; and the development, implementation, and update of its Plan (i.e., SSMP), including opportunities for public input to Plan implementation and updates;
- The Enrollee shall also create a plan of communication with owners/operators of systems that connect into the Enrollee's system, including satellite systems, for system operation, maintenance, and capital improvement-related activities.

The Department of Public Works realizes the importance of clear and informative communication with our residential and commercial customers. Ongoing outreach programs include annual mailings, targeted letters and door hangers to increase awareness of how sewer fees are used, sewer operations and maintenance and best management practices, and information and programs for maintaining and rehabilitating private sewer laterals.

The City's SSMP is available for access by the public and is published in the Public Works page of the City's website. SSMP attachments including documents related to the communication program, such as the Private Sewer Lateral Cost Sharing Program (PSLCSP) program application, reimbursement grant form, etc., are also available in the City's website.

11.1 SEWER FEES AND SEWER FUND

On an annual basis, the City reviews its Sewer Enterprise Fund revenues and the funding required to operate, maintain, rehabilitate, and improve its sewer infrastructure. As part of the annual review, the City evaluates the need for potential sewer fee rate increases. If a rate increase is proposed, staff mails a Public Hearing Notice, in compliance with Proposition 218 (Section 6 of Article XIIID of the Constitution of the State of California), explaining a proposed increase to sewer fees and why the rate increase is necessary. In 2023, the City implemented a five-year sewer rate increase beginning in fiscal year 2023/2024 through 2027/2028. The Proposition 218 Rate Increase Notice can be found on this City webpage: https://www.cityofsanmateo.org/1085/Sewer-Service-Charge.

11.2 PRIVATE SEWER LATERAL COST SHARING PROGRAM

The City promotes private lateral replacements by property owners through a PSLCSP, established in 2011. In 2013, the City Council approved a revised sewer lateral cost sharing program. The revised program provided cost sharing of 50% of the cost of a full lateral replacement only, up to a maximum of $5,000, based on the lowest of the three written estimates required to be submitted by the property owner. The property owner must also submit finalized permits in order to be eligible for the cost sharing. In 2018, the City enhanced the program to maintain the same cost sharing methods as approved in 2013, while improving outreach of the program and limiting eligibility of applications to a three-month time frame. This new timeframe allows for more owners to participate in the

program rather than waiting for inactive applications to complete the process. In 2024, the maximum reimbursement for cost sharing was reduced to $2,500.

Program materials can be found at this City webpage:
https://www.cityofsanmateo.org/1910/Citywide-Private-Lateral-Cost-Sharing-Pr

11.3 SEWER MAINTENANCE PUBLIC OUTREACH

Staff from the Field Maintenance Division (Sewer Maintenance) meet with residents daily while responding to emergency sewer calls. Crews take this opportunity to talk with residents about the public sewer collection system and private sewer lateral maintenance concerns. In addition to in-person outreach approaches, the City utilizes various communication channels, including mailers, post cards, signage on A-frames, social media, e-newsletters, and community meetings.

Sewer crews utilize door-hangers as part of response activities as well. Crews document the condition of the sewer mainline, actions taken, and planned follow up activities. These door-hangers are left at the affected properties and include a phone number for the public to call in case there are further questions.

The City is developing outreach materials to advise residents not to discharge items to the sanitary sewer such as non-disposable “disposable” wipes and other products other than toilet paper. These materials will be included in a future update to this SSMP and added to the City’s website.

As part of the City’s Spill Emergency Response Plan (SERP), staff developed a public notification e-mail system to advise residents along waterways after a spill may have impacted water quality (please refer to Element 6, SERP of this SSMP document). Staff mails public notices to properties adjacent to waterways to maintain updated e-mail distribution lists.

11.4 FOG PROGRAM OUTREACH

Regulatory Compliance Division staff attend public venues/events to distribute information to residents about the importance of keeping sewers free of fats, oils and grease (FOG), as well as best management practices for sewer systems. FOG Program outreach materials can be found in Appendix 7.1, FOG Program, Public Outreach Exhibits.

Sewer maintenance crews work in coordination with Regulatory Compliance Inspectors to provide outreach materials to residents in San Mateo. After a sanitary sewer spill has occurred from a blockage caused by FOG, the Regulatory Compliance staff mails a cover letter and WEF brochure “Fat Free Sewers” to these residents (Appendix 7.1).

11.5 APPENDIX 11 – SUPPORTING DOCUMENTS FOR ELEMENT 11

There are no appendix items for Element 11.

SSMP
ELEMENT 3 – LEGAL AUTHORITY

Appendix 3.1 – Estero Municipal Improvement District Agreement

Appendix 3.2 – 1989 Town of Hillsborough, CSCSD, County of San Mateo Sewer Agreement

Appendix 3.3 – 2022 Town of Hillsborough Capital Cost Agreement

Appendix 3.4 – 2024 CSCSD and County of San Mateo Capital Cost Agreement

Appendix 3.5 – City of Belmont Agreement

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SSMP

ELEMENT 3 – LEGAL

AUTHORITY APPENDIX 3.1

Estero Municipal Utility

District Agreement

COPY

JOINT POWERS AGREEMENT

BETWEEN THE CITY OF SAN MATEO AND THE ESTERO MUNICIPAL IMPROVEMENT DISTRICT

FOR OPERATION OF THE CITY OF SAN MATEO WASTEWATER TREATMENT PLANT AND CONSTRUCTION OF CAPITAL IMPROVEMENTS UNDER THE CLEAN WATER PROGRAM

This AGREEMENT, made and entered into this 11th day of April, 2017, by and between the CITY OF SAN MATEO, here and after called "City" or "San Mateo" and the ESTERO MUNICIPAL IMPROVEMENT DISTRICT, hereinafter called "Estero" or "EMID", pursuant to the Joint Exercise of Powers Act, Government Code 6500 et seq.

RECITALS:

WHEREAS, the parties have previously entered into two joint powers agreements dating back to 1974 which set forth the apportionment of capacities, maintenance and operations costs, and capital improvement costs for shared wastewater treatment facilities and wish to continue a mutually beneficial arrangement under a new joint powers agreement; and

WHEREAS, the parties' most recent agreement is the Joint Powers Agreement made and entered into July 17, 1989, as amended on January 17, 1990 and September 5, 2000 ("1989 Joint Powers Agreement"); and

WHEREAS, the 1989 Joint Powers Agreement rescinded the previous joint powers agreement entered into on June 3, 1974 and amended February 4, 1976 ("1974 Joint Powers Agreement"); and

WHEREAS, the parties now wish to rescind the 1989 Joint Powers Agreement and enter into a new Joint Powers Agreement for ongoing operation of the Wastewater Treatment Plant and to reflect the "Clean Water Program," a comprehensive suite of capital improvements, replacements, new treatment processes, and rehabilitation of the parties' Jointly Owned Facilities that are necessary for capacity assurance, reliability, and to meet regulatory compliance requirements, as defined in the 2015 validation studies completed by CH2M, the Program Management Team, on the 2014 Draft Integrated Wastewater Master Plan prepared by Carollo Engineers and any modification thereto; and

WHEREAS, the Joint Powers Agreement is intended to define and clarify the parties' respective purchased capacities in the Wastewater Treatment Plant upon completion of the Clean Water Program, and the distribution of capital improvement costs incurred in connection with the Clean Water Program; and

WHEREAS, the parties wish to preserve the ongoing operation and maintenance provisions as set forth in the 1989 Joint Powers Agreement, as amended, and restated herein, and

NOW, THEREFORE, IT IS AGREED BY THE PARTIES HERETO

The agreement entitled "Joint Powers Agreement between City of San Mateo and the Estero Municipal Improvement District for Construction and Operation of the Water Quality Control Plant" dated July 17, 1989, and any and all amendments thereto, is hereby rescinded.

In consideration of the mutual promises set forth herein, the City of San Mateo and Estero Municipal Improvement District agree as follows:

SECTION 1

DEFINITIONS

The following definitions apply to terms used in this agreement:

1.1 Basis of Design

"Basis of Design" is the criteria, based on engineering and assumed water quality, used to design the Jointly Owned Facilities and establish the design capacity of a Unit Process.

1.2 Capital Improvement Costs

"Capital Improvement Costs" shall mean all costs incurred by the Lead Agency to develop, implement, and complete construction of Clean Water Program improvements of the WWTP Jointly Owned Facilities, including costs of construction contracts, professional consultant services, material and equipment procurement, compliance with regulatory requirements and mitigation measures, and Staff Costs of the Lead Agency. Such Capital Improvement Costs include, but are not limited to, program, project and construction management, planning, validating, testing, modelling, and technical studies, architectural design, legal services, fiscal or economic studies, right of way acquisition, commissioning and placing facilities into service, contingencies, change orders, and indirect collection system and pump station operating costs incurred by Estero in connection with Clean Water Program work. In addition, Capital Improvement Costs include any liability the Lead Agency incurs in prosecuting the program work and any claims adjusting, claims investigation, and costs incurred in defending claims (including reasonable attorney fees) brought by any consultant, contractor or third party for damages arising out of the prosecution of the program work.

1.3 Design Capacity

"Design Capacity" is the maximum capacity, expressed in millions of gallons per day (MGD), at which a Jointly Owned Facility or Unit Process is designed to operate, based on the Basis of Design and assumed water quality, and to meet National Pollutant Discharge Elimination System (NPDES) requirements.

1.4 Jointly Owned Facilities

As used in this Agreement, "Jointly Owned Facilities" is defined as all WWTP treatment, conveyance and disposal facilities from the point of entry of the influent sewage lines into the WWTP facilities to the effluent outfall point in the San Francisco Bay, including associated buildings (laboratory, administration building, etc.) which are used for treatment of wastewater to comply with regulatory requirements.

The sanitary sewer collection and conveyance systems independently owned by the City of San Mateo and Estero which deliver sewage to the WWTP are not Jointly Owned Facilities and are not subject to this Agreement.

1.5 Lead Agency

"Lead Agency" is the agency responsible for performance of tasks required to develop, implement and complete construction of Clean Water Program Improvements, or any portion thereof, on behalf of the parties, and to administer this Agreement by and through its program management office, elected and appointed officials, employees, and agents, in accordance with the Program Management Plan.

1.6 Maximum Allowable Flow

"Maximum Allowable Flow" is the maximum flow expressed in millions of gallons per day (MGD) that each party is authorized to convey to the WWTP upon commissioning and completion of all WWTP Clean Water Program projects and shall not exceed the Purchased Capacity. The Maximum Allowable Flow for Jointly Owned Facilities is shown in Exhibit 1.

1.7 Operating and Maintenance Costs

The term "Operating and Maintenance Costs" shall mean any all costs and expenses, whether direct or indirect, incurred for the administration, including the administration of the pretreatment program, operation, maintenance, improvement, and repair of the Jointly Owned Facilities, including but not limited to supplies, equipment and materials, labor, services, power, chemicals, regulatory requirements including fines, mitigations, laboratory control and monitoring, insurance and liabilities, administration, legal costs, and incidental items incurred during normal operations.

1.8 Overload

The term "Overload" means hydraulic loads, organic loads, and/or solids loads, that cause a Unit Process or processes to exceed the Design Capacity and/or cause Jointly Owned Facilities to not meet NPDES requirements.

1.9 Partner Agency

"Partner Agency" is the agency not serving as Lead Agency

1.10 Plant

The terms "Plant", "WWTP", and "Wastewater Treatment Plant" are interchangeable and shall mean the Wastewater Treatment Plant located within the City of San Mateo.

1.11 Purchased Capacity

"Purchased Capacity" is the maximum capacity of the Jointly Owned Facilities to process sewage expressed in millions of gallons per day (MGD) that each party has purchased by payment of its proportionate share of the Jointly Owned Facilities and Unit Processes as shown in Exhibit 1.

If, upon completion of the Clean Water Program Improvements or thereafter, a Unit Process(es) of the Jointly Owned Facilities are operated within discharge requirements at actual flows lesser than Design Capacity or Purchased Capacity, the Purchased Capacity ratios shall remain unchanged.

1.12 Staff Costs

"Staff Costs" are the actual costs incurred by Lead Agency staff for hours spent in direct participation in activities to develop, implement, and complete Clean Water Program Improvements. Staff Costs include but are not limited to costs associated with preliminary planning, validation, and testing to determine the feasibility and parameters of treatment works, engineering, project and program management,

environmental, architectural, legal, fiscal or economic investigations or studies, surveys, designs, plans and construction management and inspections associated with the Clean Water Program Improvements.

1.13 Unit Process

"Unit Process" is a physical, chemical, biological or mechanical treatment function which serves a specific purpose or treatment objective in the advancement of the quality of wastewater and associated byproducts.

SECTION 2

CLEAN WATER PROGRAM IMPROVEMENTS

2.1 Clean Water Program Improvements

The Clean Water Program includes all improvements, replacements, new treatment processes, expansion and rehabilitation of the Jointly Owned Facilities necessary for capacity assurance, reliability, and to meet regulatory compliance requirements, as defined in 2015 validation studies completed by CH2M, the Program Management Team on the 2014 Draft Integrated Wastewater Master Plan prepared by Carollo Engineers and any modification thereto, hereinafter "The Clean Water Program" and includes all work to demolish, remove, replace, build, modify, expand, and construct new Jointly Owned Facilities. The work shall include but not be limited to, preliminary planning and engineering, implementing and maintaining the program management office (PMO), environmental, architectural, legal, fiscal, and/or economic investigations and/or studies, surveys, designs, plans, working drawings, public outreach activities, specifications, procedures, or other necessary actions, construction, erection, roadway, environmental or other mitigations, right of way acquisition, alternatives, alteration, remodeling, improvement, or extension of treatment works, including inspections or supervision of any of the foregoing items and all other work for possible unforeseen changed regulatory requirements and field conditions, project administration and Clean Water Program administration by San Mateo, engineering and arbitration support for claim resolutions and lawsuits against third parties other than San Mateo and Estero.

The Clean Water Program includes the construction of new dry and wet weather processes and storage facilities including but not limited to the following: new headworks, new equalization basins for WWTP influent equalization storage, biologically and chemically enhanced bioreactor, and associated equipment and chemical additions; new dual use clarifiers and associated equipment, piping, primary sludge/scum pump stations, and chemical additions; advanced activated sludge processes (including Biological Nutrient Removal (BNR) facilities), membrane filtration, associated equipment and chemical additions, disinfection using either ultraviolet light for dry weather flow or chlorine for wet weather flow, distribution, and storage, blowers, equipment, and other modifications to existing Jointly Owned Facilities and miscellaneous improvements associated with the dry and wet weather treatment facilities and water reclamation facilities to meet NPDES compliance requirements, supply recycled water, and replace aging infrastructure requiring rehabilitations or replacements. The miscellaneous improvements include site improvements, roadways, building structures, and other features common to the plant site and surrounding area, parking lots, community related walkways and/or a meeting learning center, artistic features, parks, fencing, WWTP security, chemical handling, storage and distribution facilities and equipment, odor control facilities, and electrical, IT, and SCADA-related and associated equipment, facilities, and both software and hardware products.

2.2 Lead Agency

San Mateo is designated and shall serve as the Lead Agency for the Clean Water Program Improvements of the Jointly Owned Facilities.

2.3 Power and Duties of San Mateo

San Mateo shall have the following powers and duties:

a. To select the Clean Water Program Manager and Program Manager Advisor consultant to oversee the day-to-day activities of the planning, design, program implementation, communications, costs and schedule tracking, and construction of the Clean Water Program.

b. To solicit bids, award, and enter into contracts for the Clean Water Program.

c. To review and provide comments on contracts for Program Management Advisor consultant, engineering and related designs services, awards of contract for Clean Water Program construction work, change orders, claim resolutions, and acceptance of the completed construction of the Jointly Owned Facilities.

d. To pay its share of Clean Water Program Capital Improvement Costs.

e. To administer the construction, and review and approve construction contract progress payments and change orders as needed.

f. To determine the adequacy of performance during the construction of the projects.

g. To apply for and receive any permits or consents required from other public agencies and entities for Jointly Owned Facilities under the Clean Water Program.

h. To acquire by purchase, lease, gift, condemnation, or otherwise, any real property or interest therein which it finds to be reasonably necessary for the Jointly Owned Facilities construction laydown, materials storage or general construction activities during and after The Clean Water Program. Any property that is reused or repurposed that is not associated with the Clean Water Program will result in Lead Agency refunding the Parties' contributions using cost sharing ratios in Exhibit 1 or agreed upon by Lead Agency and Partner Agency if different than ratios established in Exhibit 1.

i. To approve, reject, or modify contracts for management, engineering and related studies and construction work, change orders, claim resolutions, and the acceptance of the completed construction of the Jointly Owned Facilities.

j. To manage Clean Water Program budgets including contingency funds.

k. To establish and implement administrative procedures and Program Management Plan for the administration of this Agreement and management of the Clean Water Program.

l. To provide to Estero final staff reports and notices, reports and studies, and subsequent approved contracts, change orders, and cost accounting, for any significant actions or approvals taken by the San Mateo City Council in execution of the Clean Water Program.

m. To take other actions necessary to implement and complete construction of the Clean Water Program, including leading all Clean Water Program Public Outreach Activities.

n. To provide an Estero representative access to the Clean Water Program Office to allow the representative to participate in and oversee the operation of the Clean Water Program upon the direction of the Estero Public Works Director.

2.4 Power and Duties of Estero

Estero shall have the following powers and duties:

a. To review and provide comments prior to execution of contracts for Program Management Advisor consultant, engineering and related design services, awards of contract for Clean Water Program construction work, change orders, claim resolutions, and acceptance of the completed construction of the Jointly Owned Facilities.

b. To pay its share of Clean Water Program Capital Improvement Costs.

c. To participate in the Clean Water Program public outreach activities.

d. To attend progress meetings to receive program and project briefings, share timely information and program status, including change orders.

e. To attend partnering meetings with the Clean Water Program designers and contractors on the design and construction of the Clean Water Program.

f. To meet and confer whenever necessary to reach consensus on recommendations to San Mateo and Estero.

g. To participate in pre-qualification processes for professional and construction services.

2.5 Financial Participations and Commitments

a. Financial Participation

Each party agrees to pay its proportionate share of the Clean Water Program Capital Improvement Costs based on Purchased Capacity in accordance with the designated proportions shown in Exhibit 1.

b. Budgeting

On or about December 1st of each year, San Mateo shall provide Estero with the preliminary capital improvement budget for Clean Water Program Improvements for the fiscal year beginning July 1st of the next year. The parties shall review the preliminary budgets and respond in writing by June 1st of each year to one another any objections and reasons therefore. In the absence of any such notification, it shall be deemed that the preliminary budget is acceptable. San Mateo shall prepare a final budget by July 1st of each year. The parties shall endeavor to resolve all conflicts that may arise concerning that budget. The provisions of Section 6.11 shall apply to unresolved disputes.

c. Payments

Progress Payments: San Mateo shall invoice Estero quarterly for its proportionate share of actual Capital Improvement Costs incurred by San Mateo during the quarter preceding the invoice based on the cost sharing percentages shown in Exhibit 1. Estero shall make Progress Payments as follows: Estero shall pay to San Mateo within 30 days of delivery of an invoice to Estero's Public Works Department all moneys designated in said invoice, even if any or all amounts are disputed. Invoices shall provide reasonable documentation of costs. Interest will accrue on any amount that remains unpaid after 30 days from delivery of bills at the prime rate.

d. Billing Disputes

The parties will make a good faith effort to reconcile any amounts that are disputed within 15 working days of notice of the dispute. Any mutually agreed adjustment shall be applied to the next invoice. If the parties are unable to reconcile the dispute, it shall be subject to the provisions of Section 6.11 Dispute Resolution.

SECTION 3

PURCHASED CAPACITY AND USAGE

3.1 Purchased Capacity

For cost and ownership sharing purposes, Purchased Capacity is equal to the Maximum Allowable Flow from each party as defined in Exhibit 1. Actual flows and loads delivered to the Plant shall not exceed the Basis of Design for the Jointly Owned Facilities as shown in Exhibit 1 or cause an Overload. Purchased Capacities of Jointly Owned Facilities are shown in Exhibit 1 to this Agreement.

3.2 Usage in Excess of Purchased Capacity

Either party may temporarily utilize any unused Purchased Capacity in the Jointly Owned Facilities to the extent available and unused by the party owning that capacity. Purchased Capacity is unused when the actual flows (Peak Wet Weather or Average Day Maximum Month) from the party owning such capacity is less than the Purchased Capacity for a particular Jointly Owned Facility. Either party may enter agreements to allow non-parties to utilize its Purchased Capacity. The party entering the outside agreement shall not require consent of the other party to this Agreement. Any capacity used by a non-party pursuant to such an outside agreement shall be considered, for purposes of this section, Purchased Capacity being used by the party, and therefore unavailable to the other party of this Agreement. Any and all flow delivered to the Plant which originates from a non-party shall be considered flow delivered from the party with whom the non-party is under agreement to utilize capacity and such flow will be included in the proportional usage for purposes of calculating each party's share of the Jointly Owned Facilities' Operating and Maintenance Costs.

A party utilizing capacity in excess of its existing Purchased Capacity for three (3) separate occurrences (3 exceedances of the Peak Wet Weather Flow or 3 months where the Average Flow exceeds the Average Day Maximum Month) in one calendar year, or a party desiring capacity in excess of its Maximum Allowable Flow, can either purchase the capacity from the other party at replacement cost depreciated or shall request that San Mateo initiate a Plant expansion forthwith to provide the needed Purchased Capacity or Maximum Allowable Flow increase. For Peak Wet Weather Flow capacity an occurrence is defined as an exceedance of the Peak Wet Weather Flow within a 24 hour period.

Nothing in this section shall be interpreted to require a party to sell its share of the unused Purchased Capacity. Unless legally prohibited, San Mateo shall initiate said Plant expansion upon agreement of San Mateo and Estero. The exhibits shall be amended in the event that the parties modify the Purchased Capacities.

If the parties cannot reach either an agreement for the purchase and sale of capacity or an agreement to expand the Plant, the party in need of additional capacity may solely fund Plant expansion and take ownership of the additional capacity created by the expansion. In such an instance, the Plant

expansion undertaken by one party may not reduce or otherwise impact the Purchased Capacity of the other party. The Plant expansion also may not disrupt the Plant's operation or inhibit the ability of the parties to utilize their existing Purchased Capacity.

3.3 Metering

San Mateo has established a metering station and will establish a sampling station that measures actual flows delivered to the Plant to calculate capacity usage of San Mateo and Estero. Sampling shall be performed if wastewater flows exceed treatment loading capacity that causes an Overload. The metering and sampling station are open to Estero during regular business hours for purposes of checking the metering system and obtaining wastewater samples. The meter shall be calibrated according to the manufacturer's recommended schedule and documentation of each calibration shall be provided to Estero.

3.4 Consequences of Overload

If a party causes an Overload, the parties must convene to address any significant harm to the environment, overflows and/or non-compliance with NPDES permit requirements. Any resultant capital investments will be the contributing party's or parties' responsibilities and allocated in accordance with Exhibit 1, based on the identified cause through a determination process led by the Lead Agency in coordination with all impacted partners/parties. San Mateo shall lead the investigation into any Overload that caused permit compliance issues, recommend and implement solutions, and allocate costs based on both or either party's contribution to exceeding the Basis of Design and noncompliance event. San Mateo will share results of any such investigation with Estero. Disputes regarding the finding or outcome of any investigation shall be resolved according to Section 6.11 – Dispute Resolution.

3.5 Treatment Cost Loading Factor

This loading factor addresses any additional Plant operational, storage, energy, and/or treatment costs or usage needs. The treatment cost loading factor shall be determined based on the required additional Plant wastewater treatment and/or extra utilities expenses needed to meet a revised Basis of Design to treat the additional load. The need for a treatment cost loading factor shall be determined by sampling the flow that causes the need for additional treatment or greater energy requirements to meet a revised Basis of Design. If the Design Capacity is exceeded due to either or both parties' wastewater loading, then an additional wastewater pollutant treatment cost loading factor may be applied to either party.

3.6 Use of By-Products

Either party may use any by-products of the treatment processes for their own use. If both parties wish to use the by-product, it shall be shared in accordance with the parties' ownership and cost distribution of the process generating the by-product as shown in Exhibit 1. If neither party wishes to use the by-product or there is remaining by-product after the parties' use, it may be sold to a third party; the parties shall share the proceeds of the sale in accordance with their Purchased Capacities. If in the future either or both parties wish to construct facilities to further process the byproducts for other beneficial uses by the parties or a third party, the parties agree to amend this agreement upon terms agreed to by the parties.

The Compressed Natural Gas (CNG) processing facility and fueling station constructed in 2016 are owned and operated solely by City of San Mateo, and San Mateo is entitled to usage of 100% of the refined byproduct from this facility.

SECTION 4

ONGOING OPERATION AND MAINTENANCE OF JOINTLY OWNED FACILITIES

4.1 General

San Mateo agrees to operate and maintain the Jointly Owned Facilities in a reasonable and prudent manner.

4.2 Powers and Duties of San Mateo

San Mateo shall have the following powers and duties relating to the Jointly Owned Facilities:

a. To maintain, repair, replace, improve, and operate the facilities, and to do any and all things which it shall find reasonable in order to treat and dispose of the wastewater and sewage of the parties in a manner authorized by law and permits.

b. To solicit bids, award, and enter into contracts with third parties for services related to replacement, modification, or repair of the facilities, or parties thereof.

c. To annually prepare a budget including proposed non-Clean Water Program capital improvements and operation, maintenance, and replacement costs; and to provide for the distribution of these costs between the Agencies.

d. To operate and maintain the Jointly Owned Facilities in a reasonable and prudent manner.

e. To schedule meetings at least quarterly for senior management staff from San Mateo and Estero to discuss operation and maintenance of the Jointly Owned Facilities.

f. To comply with applicable laws and regulations and to act reasonably and prudently.

4.3 Powers and Duties of Estero

Estero shall have the following powers and duties relating to the Jointly Owned Facilities:

a. To review the proposed budget as stated in section 4.4.

b. To attend scheduled senior management staff meetings.

c. To comply with applicable laws and regulations and to act reasonably and prudently.

d. To pay bills as stated in Section 4.5.

e. To make inquiries where Estero has questions concerning the operation of the Jointly Owned Facilities.

4.4 Annual Budget

San Mateo shall prepare an annual Jointly Owned Facilities preliminary budget and submit the preliminary budget to Estero by February 1st of each year for review, approval, and inclusion in Estero's annual operating budget. San Mateo shall provide the adopted budget to Estero. The budget shall include San Mateo's Operating and Maintenance Costs. Concurrent with San Mateo's preparation of the budget Estero shall prepare a budget for its Public Works costs and indirect costs; the budget may be reviewed by San Mateo.

The parties shall review the preliminary budgets and respond in writing by June 1st of each year to one another any objections and reasons therefore. In the absence of any such notification, it shall be

inferred that the preliminary budget is acceptable. San Mateo shall prepare a final budget by July 1st of each year. The parties shall endeavor to resolve all conflicts that may arise concerning that budget. The provisions of Section 6.11 shall apply to unresolved disputes.

4.5 Billing and Payments

The parties shall pay their respective share of budgeted costs to operate and maintain the Jointly Owned Facilities in accordance with each party's share of the metered flow. Bills shall be sent quarterly and shall be based upon the actual costs for the quarter and in accordance with the metered flow for that quarter. Costs for the fiscal year shall be adjusted if necessary in the fourth quarter. Bills shall provide reasonable documentation of costs. The costs incurred by Estero associated with periodic pump station shutdowns required for plant operations and maintenance shall be considered as an Indirect Operating and Maintenance Cost, and shall be invoiced to San Mateo within a month of the cost being incurred.

It shall be the responsibility of each party to bill and collect from its individual users. Amounts payable by Estero to San Mateo shall be rendered no later than thirty (30) days after the bill is received by Estero and shall carry a charge of 7% per annum interest rate, or the prime rate if it is lesser than 7%, for late payments. If Estero disputes the amount of a bill, it shall specify the reason for the disagreement in writing to San Mateo within 120 days after the bill is received or its objection shall be deemed waived, unless within 18 months the parties concur there has been an error in a bill. The parties shall timely pay any amounts that are not disputed.

SECTION 5

LIABILITY

5.1 Shared Liability

The parties agree that any liability incurred to a non-party shall be apportioned based upon each parties' ownership and cost distribution share of the Jointly Owned Facilities, and calculated as the average of the ownership and cost distribution shares of the Jointly Owned Facilities as shown in Exhibit 1. For the purposes of this section liability includes any liability arising under tort or contract principles as well as liability for violations of any state or federal laws or regulations related to wastewater treatment or discharge or water quality standards.

In the event that either party recovers insurance proceeds from third party insurers, including commercial carriers and joint powers insurance pools, all recovered moneys shall be shared in accordance with the parties' respective liability shares. The parties shall pay their respective shares of any deductibles or self-insured retentions and any amounts exceeding then-existing limits of coverages.

5.2 Good Faith

San Mateo and Estero shall both conduct themselves with respect to this Agreement and to the construction, maintenance, operation, and administration of the Jointly Owned Facilities in good faith and in a prudent, professional manner.

5.3 Compliance with Federal and State Laws and Regulations

The parties agree to comply with any and all laws, rules, regulations, standards, and requirements of any Federal or State board, commission, agency, or similar body, and the decisions of any court of competent jurisdiction.

5.4 Insurance

San Mateo shall purchase and maintain insurance against loss or damage to the Jointly Owned Facilities, including workers' compensation insurance and general liability insurance. The general liability policy shall cover, to the extent reasonably available, the ownership, maintenance, operation, and use of the Jointly Owned Facilities and all incidental activities including but not limited to structural alterations, construction, and demolition and associated hazards. The policy(-ies) shall name the Estero Municipal Improvement District, its elected and appointed officials, employees, and agents as additional insureds. The cost of such policies shall be considered operating costs and part of the annual budget for the Jointly Owned Facilities, notwithstanding any self-insured retentions and deductibles.

SECTION 6

GENERAL PROVISIONS

6.1 Fiscal Year

The fiscal year applicable to this agreement shall be from July 1st of each year to and including the following June 30th.

6.2 Access to Records

Any and all books, documents, papers, and records prepared and/or maintained by either party for any activity undertaken under this Agreement shall be made accessible to the other party upon request or to any outside party as may be required by law.

6.3 Pretreatment Industrial Permit Requirements and Sewer Use Ordinances

Each party shall maintain sewer use regulations, including pretreatment programs, permit requirements, and enforcement procedures to ensure compliance with the discharge restrictions and limitations set forth herein and as required by any and all Federal State and regional laws, rules, regulations and standards.

Neither party shall knowingly permit any entity, within or outside its jurisdiction, to discharge sewage into its wastewater collection system unless that entity complies with the pretreatment program as required by the parties' respective sewer use regulations and any regulatory agency with enforcement authority for pretreatment regulations and waste discharge requirements. If any party learns that any entity, within or outside its jurisdiction, is discharging sewage into its wastewater collection system in contravention of the pretreatment program, that party shall immediately take steps to either obtain compliance with the pretreatment programs or halt further such discharges. All current sewer use regulations imposed upon the City and Estero by regulatory agencies are considered to be a part of this Agreement and shall be binding upon the parties.

If San Mateo duly authorizes any individual to inspect and enforce industrial pretreatment requirements of Federal, State, or Regional Agencies or local limitations and standards, Estero shall allow that authorized individual access to discharger facilities and enable the individual through ordinance or resolution to sample, inspect, and enforce applicable regulations regarding illegal discharges. The individual shall notify Estero before the inspection or enforcement action is performed. Costs of this inspection and sampling program incurred by San Mateo shall be included as a cost of the operation and maintenance expenses of the Jointly Owned Facilities.

6.4 Ownership

San Mateo shall retain title to all presently owned lands for the Jointly Owned Facilities and Estero shall have no interest in said lands. Either party may acquire real property at its sole expense or either party may request that the other concur in the joint purchase of real property which it jointly believes is needed for the operation of the Jointly Owned Facilities. The parties, through a separate agreement, may purchase real property as undivided interests based on Exhibit 1.

The Jointly Owned Facilities shall be jointly owned as undivided interests based upon the ownership and cost distribution as defined in Exhibit 1.

6.5 Separate Agreements and Facilities

Nothing in this Agreement shall prohibit the parties from entering into separate agreements concerning sewerage facilities which are not a part of the Jointly Owned Facilities as defined herein. Nothing in this Agreement shall prohibit the parties from entering into an agreement(s) to provide sewer services to areas outside of their respective service boundaries provided that such agreement(s) does not cause a party to exceed its Purchased Capacity.

Each party shall be responsible for ensuring full compliance with the terms of this Agreement by any other entity to which that party provides sewer service.

6.6 Notification of New Significant Dischargers

Either party shall notify the other party in writing 30 days prior to the connection of any user or wastewater treatment services whose need for treatment capacity in the Jointly Owned Facilities is anticipated to exceed 100,000 gallons per day or otherwise cause an Overload.

6.7 Termination and Withdrawal

a. Termination.

The parties may mutually agree to terminate this agreement at any time by written agreement. Estero's right to obtain wastewater treatment services from San Mateo shall survive termination of this Agreement, provided that Estero shall be required to pay for the costs of such treatment based on actual flows and treatment costs on a quarterly basis.

b. Withdrawal.

A party may withdraw from this Agreement at any time upon giving the other party five years written notice prior to the proposed date of withdrawal. Notice may be given with fewer than five years notice if such withdrawal would be consistent with the NPDES permitting cycle, subject to the consent of the non-withdrawing party. The withdrawing party may not sell, lease, or transfer its rights, or be relieved of its obligations under this Agreement, without the consent of the other party. As used in this section, the term "obligations" shall include, but not be limited to, bonded indebtedness, capital contributions, and Operating

and Maintenance Costs. The non-withdrawing party shall have the option of purchasing the withdrawing party's aliquot share of Purchased Capacity at a price equal to the market value of the assets comprising the Jointly Owned Facilities.

6.8 Notices

Unless otherwise designated in writing by the respective parties, all notices, correspondence, claims, bills or other documents transmitted by one party to the other shall be addressed as follows with copies to the respective directors of Public Works:

CITY OF SAN MATEO	ESTERO MUNICIPAL IMPROVEMENT DISTRICT
City Manager	District Manager
City of San Mateo	E.M.I.D.
330 West 20th Avenue	610 Foster City Boulevard
San Mateo, CA 94403	Foster City, CA 94404

6.9 Severability

Should any part, term, or provision of this Agreement be decided by a court of competent jurisdiction to be illegal or in conflict with any law of the State of California, the United States, or otherwise be rendered unenforceable or ineffectual, the validity of the remaining portions or provisions shall not be affected thereby.

6.10 Successor; Assignment

This Agreement shall be binding upon, and shall inure to the benefit of the successors of the parties. Except to the extent expressly provided herein, neither party may sell, convey, or assign any right or obligation hereunder without the consent of the other.

6.11 Dispute Resolution

This section governs all disputes over the parties' respective rights and obligations under this Agreement or arising out of the ongoing operation or maintenance of the Jointly Owned Facilities.

a. Mediation. After providing written notice in accordance with section 6.8 Notices, either party may submit any dispute for mediation. The parties shall meet in mediation within 30 days of receiving notice. The mediator may be any person or entity deemed mutually acceptable by the parties, including a consultant or expert specializing in the subject matter of the dispute. In the absence of an agreement, the parties shall each submit one name from a mediators listed by either the American Arbitration Association, the State Mediation and Conciliation Service, or other agreed-upon service. The mediator shall be selected by a blind draw. The cost of mediation shall be borne equally by the parties. Neither party shall be deemed the prevailing party. The mediation process, once commenced by a meeting with the mediator, shall last until agreement is reached by the parties but not more than 60 days, unless the maximum time is extended by the parties. The decision of the mediator shall not be binding unless agreed upon in writing by the parties. No party shall be permitted to file a legal action without first meeting in mediation and making a good faith attempt to reach a mediated settlement.

b. Each party shall bear its own costs and attorneys' fees incurred in connection with the mediation process, provided however that the mediator's fees shall be shared equally by the parties.

c. Performance required during dispute. The parties shall comply with their respective obligations under the Agreement, including payment of capital contributions and Operating and Maintenance Costs, while resolution of any dispute under this Agreement is pending.

6.12 New and Unforeseen Conditions

In the event there are new or unforeseen conditions not covered by this Agreement or conditions that may cause any portion of this Agreement to become obsolete or underfinanced, the parties agree to meet, discuss, and reach a written agreement to resolve those new and unforeseen circumstance effects.

6.13 Days

When the term "day(s)" is used, it shall mean calendar days unless otherwise specifically stated to be working days.

6.14 Future Expansions

In future expansions the parties agree to use the provisions of Exhibit 1 as the base document for designation of the interests of the parties and as the underlying arrangements for the expansion.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective officers thereunto duly authorized and placed into effect the day and year first above written.

CITY OF SAN MATEO, a Municipal Corporation

ATTEST: By: _____

Mayor

_____

City Clerk, San Mateo

APPROVED AS TO FORM:

_____

City Attorney, San Mateo

ESTERO MUNICIPAL IMPROVEMENT DISTRICT, A Public Corporation

By: _____

ATTEST:

_____

Secretary, Estero

APPROVED AS TO FORM:

_____

Attorney, Estero

Joint Powers Agreement

EXHIBIT 1

PURCHASED CAPACITY FOR CLEAN WATER PROGRAM IMPROVEMENTS

MAXIMUM ALLOWABLE FLOW5

Flow	San Mateo	EMID	Basis of Design
Peak Wet Weather	65.8 MGD	12.2 MGD	78.0 MGD
Average Day Maximum Month	15.0 MGD	6.0 MGD	21.0 MGD

OWNERSHIP AND COST DISTRIBUTION OF JOINTLY OWNED FACILITIES

	San Mateo	EMID
Clean Water Program Capital Improvements and Miscellaneous Facilities	75.5%	24.5%
Pre-2015 Existing Facilities, Outfall Pipes & Demolition of Existing Facilities	75.0%	25.0%

Clean Water Program Improvements and Miscellaneous Facilities are defined in Section 2.1.

Pre-2015 Existing Facilities, Outfall Pipes & Demolition of Existing Facilities:

Includes Jointly Owned Facilities existing at the Wastewater Treatment Plant prior to January 1, 2015 and previously described in the "Joint Powers Agreement between City of San Mateo and the Estero Municipal Improvement District for Construction and Operation of the Water Quality Control Plant" dated July 17,

1989, and any and all amendments thereto; and cost of demolition of any of these Pre-2015 Existing Facilities and Outfall Pipes, or portions thereof.

ORIGINAL

AMENDMENT TO THE JOINT POWERS AGREEMENT BETWEEN THE CITY OF SAN MATEO AND THE ESTERO MUNICIPAL IMPROVEMENT DISTRICT FOR OPERATION OF THE CITY OF SAN MATEO WASTEWATER TREATMENT PLANT AND CONSTRUCTION OF CAPITAL IMPROVEMENTS UNDER THE CLEAN WATER PROGRAM

This Amendment is entered into this 19 day of Feb, 2019, by and between the City of San Mateo, hereinafter called "San Mateo", and the Estero Municipal Improvement District, hereinafter called "Estero".

RECITALS

WHEREAS, on April 17, 2017, the parties adopted the Joint Powers Agreement Between the City of San Mateo and the Estero Municipal Improvement District for Operation of the City of San Mateo Wastewater Treatment Plant and Construction of Capital Improvements under the Clean Water Program (JPA).

WHEREAS, the parties now wish to amend the JPA to:

1. Revise and simplify the parties' cost sharing and payment obligations during the Clean Water Program
2. Specify the term and duration of the Clean Water Program
3. Clarify the parties' cost sharing obligations for operating and maintenance costs and capital improvement costs after the completion of Clean Water Program Improvements
4. Specify a date by which the parties will commence discussion and negotiation of a future amendment to the JPA.

Now, therefore, the parties agree as follows:

1. Section 2.5.a "Financial Participation" is replaced with the following:

Each party agrees to pay its proportionate share of Clean Water Program Capital Improvement Costs and other capital improvement costs incurred between January 1, 2015 and the recording of the Notice of Completion of the construction of Clean Water Program Capital Improvements by San Mateo, which shall not be unreasonably delayed.

The parties' proportionate shares of Clean Water Program Capital Program Improvement Costs and all other capital improvement costs shall be:

	San Mateo	Estero
Capital Improvement Costs	75.88%	24.12%
Program Management Office Costs	87.94%	12.06%

After the recording of the Notice of Completion of the construction of Clean Water Program Capital Improvements by San Mateo, the parties' proportionate shares of capital improvements shall be determined in accordance with section 4.5 Billing and Payments.

2. Section 2.5.e "Disbursement of Funds obtained through the San Mateo-Foster City Public Financing Authority" is added to the JPA as follows:

The parties have formed the San Mateo-Foster City Public Financing Authority ("PFA") to obtain financing for the Clean Water Program Capital Improvement Costs. San Mateo is authorized and responsible for authorizing payments for Clean Water Program Capital Improvement Costs using funds obtaining by and through the PFA.

San Mateo shall provide, or cause to be provided, all copies of invoices and payments requisitions to EMID on a monthly basis. EMID shall notify San Mateo within thirty (30) days of any dispute over the allocation of costs included in those invoices.

3. Section 6.15 "Future Amendments to this Agreement" is added as follows:

The parties shall commence discussion and negotiation of a further amendment to this Agreement no later January 31, 2029.

4. The parties further agree that this Amendment will sunset on June 30, 2030.

In witness whereof, the parties hereto have caused this Amendment to be executed by their respective officers and placed into effect the day and year first above written.

CITY OF SAN MATEO

Diane Papan, Mayor

ATTEST

City Clerk

APPROVED AS TO FORM

City Attorney

ESTERO MUNICIPAL IMPROVEMENT DISTRICT

Sam Hindi, President of the Board of Directors

ATTEST

District Secretary

APPROVED AS TO FORM

District Counsel

SSMP

ELEMENT 3 – LEGAL AUTHORITY

APPENDIX 3.2

Town of Hillsborough, CSCSD, County of San Mateo Sewer Agreement

cc: Dept of Public Works

ORIGINAL

[6/27/89]

SANITARY SEWAGE AGREEMENT
BETWEEN THE TOWN OF HILLSBOROUGH,
CITY OF SAN MATEO, CRYSTAL SPRINGS
COUNTY SANITATION DISTRICT, AND
THE COUNTY OF SAN MATEO

THIS AGREEMENT, made and entered into this 18th day of July, 1989, by and between the TOWN OF HILLSBOROUGH, a municipal corporation in the County of San Mateo, State of California, hereinafter called "Town"; the CITY OF SAN MATEO, a municipal corporation in the County of San Mateo, State of California, hereinafter called "City"; the CRYSTAL SPRINGS COUNTY SANITATION DISTRICT, a sanitation district in the County of San Mateo, State of California, hereinafter called "District"; and the COUNTY OF SAN MATEO, a political subdivision of the State of California, hereinafter called "County".

R E C I T A L S:

WHEREAS, the parties have previously entered into agreements dated May 3, 1955, March 20, 1962, and October 1, 1979, which set forth their arrangements and relationships regarding the discharge, pumping, transmission, and treatment of sewage; and

WHEREAS, the parties now wish to rescind said earlier agreements and designate their present and future relationships with respect to the use of sewage conveyance and treatment facilities by Town, District, County, and City;

ORIGINAL

NOW, THEREFORE, IT IS HEREBY AGREED as follows:

Section 1. Definition of Service Areas and Trunk Sewers

a. Polhemus Trunk Sewer. For purposes of this Agreement, there is hereby designated the Polhemus Trunk Sewer, which is defined as follows:

> All sanitary sewerage conveyances and appurtenances necessary to convey sanitary sewerage from the beginning of the trunk sewer in Polhemus Road 50 feet, more or less, southeasterly of Tower Road, northwesterly along Polhemus Road, to the intersection of the Polhemus Trunk Sewer with the northerly boundary of Service Area B, at or near the District's Measuring Device (as defined below), all as generally shown on Exhibit A hereto.

b. Crystal Springs/El Cerrito Trunk Sewer. For purposes of this Agreement, there is hereby designated the Crystal Springs/ El Cerrito Trunk Sewer, which is defined as follows:

> All sanitary sewerage conveyances and appurtenances necessary to convey sanitary sewerage from the intersection of the Polhemus Trunk Sewer with the northerly boundary of Service Area B, northerly along Crystal Springs Road to El Cerrito Avenue to the intersection of the Crystal Springs/El Cerrito Trunk Sewer with the corporate city limits of City and the northerly boundary of Service Area C, at or near the El Cerrito Measuring Device, all as generally shown on Exhibit A hereto.

c. Tilton/Idaho Trunk Sewer. For purposes of this Agreement, there is hereby designated the Tilton/Idaho Trunk Sewer, which is defined as follows:

Those sanitary sewerage conveyances or appurtenances necessary to convey sanitary sewerage from the intersection of the Crystal Springs/El Cerrito Trunk Sewer with the corporate city limits of the City and the northerly boundary of Service Area C to the Dale Avenue Pump Station, generally east down Tilton Avenue, south along Idaho Street, and east across U.S. Highway 101 at or near Sunnybrae Avenue to the intake side of the Dale Avenue Pump Station, all as generally shown on Exhibit A hereto.

d. Yew/Borel Trunk Sewer. For purposes of this Agreement, there is hereby designated the Yew/Borel Trunk Sewer, which is defined as follows:

Those sanitary sewerage conveyance or appurtenances necessary to convey sanitary sewerage from various collection points at the corporate city limits boundaries of the Town and the City from the Tobin Clark Estates area (Service Area E) to the Dale Avenue Pump Station, generally east along Yew Street and other neighboring streets, to Borel Avenue, east along Borel Avenue, then east along Sixteenth Avenue, and across U.S. Highway 101 at or near Sixteenth Avenue, to the intake of the Dale Avenue Pump Station, generally as shown on Exhibit A hereto.

e. Service Area A. Service Area A encompasses a portion of the County, as generally shown in Exhibit A hereto. The Polhemus, Crystal Springs/El Cerrito, and Tilton/Idaho Trunk Sewers serve Service Area A.

f. Service Area B. Service Area B encompasses a portion of the District and a portion of the City, as generally shown in Exhibit A hereto. The Polhemus, Crystal Springs/El Cerrito, and Tilton/Idaho Trunk Sewers serve Service Area B.

g. Service Area C. Service Area C encompasses a portion of the Town, as generally shown in Exhibit A hereto. The Crystal Springs/El Cerrito and Tilton/Idaho Trunk Sewers serve Service Area C.

h. Service Area D. Service Area D encompasses a portion of the City, as generally shown in Exhibit A hereto. The Crystal Springs/El Cerrito and Tilton/Idaho Trunk Sewers serve Service Area D.

i. Service Area E. Service Area E encompasses a portion of the Town, as generally shown in Exhibit A hereto. The Yew/Borel Trunk Sewer serves Service Area E.

Section 2. Definition of Jointly Used Facilities

a. Once the sewage from Service Areas A, B, C, D, and E reaches the intake to the Dale Avenue Pump Station, it flows in common through the Dale Avenue Pump Station, through the trunk sewers connecting the Dale Avenue Pump Station and the Water Quality Control Plant (hereinafter WQCP), through the WQCP for treatment, and then through an outfall line to San Francisco Bay. The scum, grit, and ash removed from the sewage at the WQCP is transported to disposal sites.

b. All of the facilities, equipment, personnel, and processes used in the conveyance and disposal of wastewater described in Subsection (a) above is defined for purposes of this Agreement as Jointly Used Facilities.

Section 3. Ownership of Trunk Sewers and Jointly Used Facilities

a. Those portions of the Polhemus Trunk Sewer that are within the boundaries or corporate limits of the District, County,

or City, respectively, hereby remain under the ownership of the District, County, or City, respectively.

b. The Crystal Springs/El Cerrito Trunk Sewer hereby remains under the ownership of the Town.

c. The Tilton/Idaho and Yew/Borel Trunk Sewers remain under the ownership of the City.

d. The Jointly Used Facilities remain under the ownership of the City, except as may be otherwise defined by agreement between the City and Estero Municipal Improvement District [hereinafter EMID]; however, no portion or section of any agreement between the City and EMID shall be construed as creating any ownership rights in the Jointly Used Facilities by County, District, or Town.

e. Whenever the boundaries of one of the parties to this Agreement are altered through annexation or deannexation so that a portion of a trunk sewer now lying within the boundaries of a party then lies within the boundary of another party to this Agreement, that portion of the trunk sewer shall come under the ownership of the party within which the trunk sewer then lies.

Section 4. Maintenance, Repair, Reconstruction, and Improvement Responsibility of Trunk Sewers and Jointly Used Facilities

a. Each party to this Agreement shall be responsible for and shall perform any necessary maintenance, repair, reconstruction, replacement, enlargement, or improvement on the portion of the trunk sewers under their ownership as defined in Section 3 above.

b. The City shall be responsible for and shall perform any necessary maintenance, repair, reconstruction, or improvement

on the Jointly Used Facilities; it is expressly understood by the parties that agreement between the City and the Estero Municipal Improvement District [EMID] may permissibly delegate or share this responsibility with EMID as to the WQCP, disposal and outfall portions of the Jointly Used Facilities.

c. District shall construct, operate, maintain, and own a flow measuring device measuring the total flow from Service Areas A and B [hereinafter District Measuring Device] at or near the intersection of the Polhemus Trunk Sewer and the northerly boundary of Service Area B, as generally shown on Exhibit A hereto. District shall calibrate and verify the District Measuring Device not less than twice each fiscal year.

d. City shall construct, operate, maintain, and own a flow measuring device at or near the city limits boundary between the Town and the City at or near the point of connection between the Crystal Springs/El Cerrito and Tilton/Idaho Trunk Sewers [hereinafter El Cerrito Measuring Device]. City shall calibrate and verify the El Cerrito Measuring Device at least twice each fiscal year.

e. Should any party install any other flow measuring device in order to measure flows pursuant to this Agreement, the installing party shall verify and calibrate the measuring device at least twice each fiscal year.

Section 5. Calculation of Flows

a. Extraneous Sewer Flow.

For purposes of this Agreement, Extraneous Sewer Flow is the difference between the total yearly flow measured at the District Measuring Device and the flows determined by multiplying twelve (12) times the average monthly amount of domestic water delivered to all properties in Service Areas A and B for the five

(5) winter months of November, December, January, February, and March. The total Extraneous Sewer Flow shall be pro-rated between the City, County, and District in the same ratio as each party's share of total domestic water deliveries in Service Areas A and B is to the total domestic water deliveries in the two Service Areas.

b. Service Area A.

(i) County. The total County flow from Service Area A shall be twelve (12) times the average monthly amount of domestic water delivered to properties in Service Area A in the unincorporated area of the Service Area for the five (5) winter months of November, December, January, February, and March, plus the County's share of the Extraneous Sewer Flow.

c. Service Area B.

(i) City. The total City flow in and from Service Area B shall be twelve (12) times the average monthly amount of domestic water delivered to properties in Service Area B in the corporate City limits area of the Service Area for the five (5) winter months of November, December, January, February, and March, plus the City's share of the Extraneous Sewer Flow.

(ii) District. The total District flow in and from Service Area B shall be the total yearly flow measured at the District's Measuring Device, less the sum of the total flows calculated for the County flow from Service Area A and the City flow from Service Area B.

(iii) County. The total County flow in and from Service Area B shall be the County flow from Service Area A.

d. Service Area C.

(i) Town. The total Town flow in and from Service Area C shall be the total yearly flow measured at the El Cerrito Measuring Device, less the sum of the total flows measured at the District's Measuring Device and the City flow from Service Area D.

(ii) County. The total County flow in and from Service Area C shall be the County flow from Service Area B.

(iii) District. The total District flow in and from Service Area C shall be the District flow from Service Area B.

(iv) City. The total City flow in and from Service Area C shall be the City flow from Service Areas B and D.

e. Service Area D.

(i) City. The total City flow from Service Area D shall be twelve (12) times the average monthly amount of domestic water delivered to properties in Service Area D in the corporate city limits area of the Service Area for the five (5) winter months of November, December, January, February, and March.

f. Service Area E.

(i) Town. The total Town flow from Service Area E shall be twelve (12) times the average monthly amount of domestic water delivered to properties in Service Area E within the corporate Town limits area of the Service Area for the five (5) winter months of November, December, January, February, and March.

g. Tilton/Idaho Trunk Sewer.

(i) City. The total City flow in the Tilton/Idaho Trunk Sewer shall be the total flow measured at the intake to the Dale Avenue Pump Station from the Tilton/Idaho Trunk Sewer, less the total flow measured at the El Cerrito Measuring Device, and plus the City flow from Service Area C.

(ii) County, District, and Town. The respective flows of County, District, and Town shall be each party's flows from Service Area C.

h. Yew/Borel Trunk Sewer.

(i) City. The total City flow in the Yew/Borel Trunk Sewer shall be either:

(a) Twelve (12) times the average monthly amount of domestic water delivered to properties in the corporate City limits served by the Yew/Borel Trunk Sewer for the five (5) winter months of November, December, January, February, and March; or

(b) The total flow measured at the intake to the Dale Avenue Pump Station from the Yew/Borel Trunk Sewer, less the Town flow from Service Area E.

(ii) Town. The total Town flow in the Yew/Borel Trunk Sewer shall be the Town flow from Service Area E.

i. Jointly Used Facilities Flow.

(i) Flow from Intake to Dale Avenue Pump Station to Intake of the WQCP.

(a) County and District. The County and District flows shall be each party's flows as determined for the Tilton/Idaho Trunk Sewer.

(b) Town. Town flow shall be the Town's flows determined for the Tilton/Idaho and Yew/Borel Trunk Sewers.

(c) City. City flow shall be the total metered flow at the intake of the WQCP, less the total metered flow at the Mariners Island #2 Pump Station, the total metered flow from EMID, and the total County, District, and Town flows described in Subsections (a) and (b) above.

(ii) Flow through WQCP and Disposal and Outfall System.

(a) County, District, and Town. The County, District, and Town flows shall be the same as calculated under Subsection (i) above.

(b) City. City flows shall be the total metered flow at the intake to the WQCP, less the total metered flow from EMID and the County, District, and Town flows described in Subsection (a) above.

j. If metered flows are available for any of the flows that are to be measured by domestic water delivery pursuant to this Section and the metered flows have been measured by the same five (5) months or more, then those metered flows shall be substituted for the domestic water delivery measurements for the applicable flows.

Section 6. Records and Reports of Flows and Costs Regarding the Trunk Sewers

a. The Town, the District, and the County shall

separately maintain and provide records to the City of domestic water consumption for properties in the Town, District, and County limits, respectively, in Service Areas A, B, C, and E, pursuant to Section 5.

b. The District shall maintain and provide records to the City from the District Measuring Device.

c. From the records provided and its own records for City consumption and flows, including the El Cerrito Measuring Device, the City shall calculate domestic water consumption and flows pursuant to the provisions of Section 5.

d. Each party shall maintain records of the costs of capital replacements and enhancements to, debt service for, and operation and maintenance of, that portion of each Trunk Sewer defined in Section 1 above so owned and maintained by that party.

e. The operation, maintenance, and capital costs shall include any necessary labor, equipment, or materials used in the performance of the work, plus any mutually agreed-upon overhead or markup charges not-to-exceed 15% and normally levied by that party for such services. Each party shall notify the other parties to the Agreement before initiating any change in the computation of overhead or markup charge and obtain their approval before applying the change to the computations under this Agreement.

Section 7. Proration of Trunk Sewer Costs

a. No later than July 30 of each year, each party shall submit to the City an accounting of the domestic consumption, flows, and costs calculated and recorded pursuant to Sections 5 and 6 above for the preceding 12-month period of July 1 to June 30.

b. City will then calculate and prorate these costs in the ratio that each party's flow through each of the five (5) trunk

sewers defined in Section 1 above bear to the total flows passing through that trunk sewer.

Section 8. Proration of Sewage Treatment Charges

a. City shall annually adopt a budget for the operation, maintenance, repair, and improvement of the Jointly Used Facilities, including all costs and expenses, whether direct or indirect, incurred for the operation, maintenance, repair, and improvement of the Jointly Used Facilities, including but not limited to, supplies and materials, labor, services, power, chemicals, regulatory requirements, fines, mitigations, laboratory control and monitoring, insurance and liabilities, judgments, administration, legal costs, repair and replacement costs, and capital improvement costs.

b. Sewage treatment charges for conveyance and treatment of wastewater through the Jointly Used Facilities and emanating from Service Areas A, B, C, D, and E shall be charged to and paid by each of the parties to this Agreement as follows:

(i) For pumping and conveyance from the intake of the Dale Avenue Pump Station to the intake to the WQCP, in the ratio that each individual party's flows of wastewater as measured and reported pursuant to Section 5 of this Agreement bears to the total flows through this portion of the sewage system; and

(ii) For treatment, discharge, and disposal through the WQCP, disposal and outfall systems of the Jointly Used Facilities, in the ratio that each party's flows of wastewater as calculated pursuant to Section 5 bears to the total flows of wastewater through the WQCP.

c. City shall calculate the ratios and costs assigned pursuant to this Section.

Section 9. Notice of Expenditures and Method of Payment

a. Any party that initiates a new capital expenditure, other than those identified in Section 12 below, or increases its level of maintenance that results in an impact to any other party of greater than $20,000 in any fiscal year pursuant to this Agreement shall meet, discuss, and reach agreement on the scheduling of the proposed project and payments. Nothing in this Subsection, however, shall affect the method of proration of any project's costs as provided by this Agreement. This Subsection shall not apply to the undertaking of emergency repairs so long as notice is immediately given to the affected parties.

b. Not later than April 1 of each year and in coordination with the other parties to this Agreement, the City shall prepare a statement estimating the flows and costs for the coming fiscal year as calculated pursuant to Sections 7 and 8 above for the Trunk Sewers and Jointly Used Facilities, including any capital additions, and the proportionate amount to be paid by each party to this Agreement during the coming fiscal year. This will be an estimate only for purposes of assisting the parties in budgeting and to make quarterly estimated payments. These cost estimates are not warranted to be actual costs for the fiscal year.

c. Quarterly on July 1, October 1, January 1, and April 1 of each year, the parties to this Agreement shall deposit with the City one-fourth of the estimated cost as provided pursuant to Subsection (b) above; however, the October 1 payment for each fiscal year shall be increased or decreased to adjust the amount payable by the party by the difference between the actual amount due from such party for the final Section 10 total invoice from the City for Jointly Used Facilities Charges and Trunk Sewers Costs and the estimated amounts billed and paid by parties hereto for the previous fiscal year.

Section 10. Invoicing of Parties to this Agreement

a. City shall issue a closing invoice or credit to each party for the respective costs of the trunk sewer maintenance costs and sewage treatment charges as calculated for the preceding fiscal year pursuant to Sections 7 and 8 above no later than September 1 of each year.

b. It is expressly agreed and understood by the parties to this Agreement that the City has no responsibility whatsoever nor is any warranty or guarantee whatsoever made by City that the measurements, calculations, or records made, maintained, or provided pursuant to this Agreement by the other parties are accurate, nor that the City offers to or will act as a guarantor, collector, or adjustor between the parties for sums or credits due between the parties. The City's compilation, calculation, and invoicing is only offered to facilitate the resolution of the various interests involved in this Agreement.

Section 11. Use Rights

a. Town, District, and County shall have a right to use capacity in the Jointly Used Facilities. These rights to use the Jointly Used Facilities are subject to the Joint Powers Agreement then in existence between the City and EMID (hereinafter JPA), including, but not limited to: (a) the rights of EMID under the JPA to use the WQCP, and the disposal and outfall systems of the Jointly Used Facilities; and (b) the reserved right of City to use 90.54% of its JPA share of capacity in the WQCP, and disposal and outfall systems of the Jointly Used Facilities.

b. The maximum shares of capacity in the Jointly Used Facilities are percentage shares of the City's rights pursuant to the JPA to a share of the capacity of the WQCP, and disposal and outfall systems of the Jointly Used Facilities: Town, 4.16%; District, 4.93%; County, 0.37%. The parties may exceed these

established capacities until such time that another party to this Agreement makes demand for its unused capacity; upon written demand of another party to return capacity, the using party shall take steps within twelve (12) months to return the capacity by conservation, pretreatment, or whatever other unilateral steps are necessary to reduce its excess flows to its assigned maximum share of capacity. However, at no time may any party other than the City cause or allow the flows comprising the City's share pursuant to the JPA in the capacity of the WQCP to be exceeded without the written consent of the City.

Section 12. Upgrading of Jointly Used Facilities

The parties are aware of and concur in the upgrading of the Jointly Used Facilities that is projected to occur during the coming five (5) years. The Town, District, and County shall pay to City the annual charges provided by Sections 8, 9, and 10 above that include each party's share of the cost of the upgrading and modification of Jointly Used Facilities. The parties are cognizant that City has agreed to finance such capital costs to the Town, District, and County through issuance of City bonds; City will obtain reimbursement for that financing through Section 9 annual charges. The costs for the upgrading shall be shared by the parties as provided in Section 8.

Section 13. Overloading

No party shall cause or permit any of the Jointly Used Facilities to be overloaded, whether hydraulically, biologically, chemically or otherwise.

Section 14. Limitation on Discharge

a. The parties agree not to discharge or to allow the discharge into any portion of the Jointly Used Facilities of any of the pollutants violating the standards or limitations established

by the Environmental Protection Agency, the State Water Resources Control Board, the Regional Water Quality Control Board, San Francisco Bay Region, or any other Federal, State, or Regional Agency, local standards or limitations established by the City pursuant to these Federal, State, or Regional Agencies' regulations, directions, orders, or requests, or standards and limitations established through or in the City's discharge permits from Federal, State, or Regional Agencies. In addition, the parties agree not to discharge or to allow to be discharged into any portion of the Jointly Used Facilities any wastewater with a sulfide content exceeding 0.2 parts per million total.

b. Each party agrees that it will prevent the introduction of pollutants into the Jointly Used Facilities that would cause interference or upset with the operation of those Jointly Used Facilities, including causing odor, poisoning of biota, nuisance, or interference with the use and disposal of sludge, ash, or other residual byproducts.

c. Each party shall perform or have performed reasonable sampling and analysis to ensure compliance with this Section.

d. Each party agrees it shall immediately pay the cost of correcting all damage caused, fines, or judgments, as well as all sampling or analytical costs and the cost of any protective measures necessary to neutralize, contain, divert, and/or remove, pollutants discharged by the party exceeding the limitations set forth herein.

Section 15. Compliance With Federal and State Laws and Regulations

The parties agree to comply with any and all Federal, State, and local laws, the rules, regulations, standards, mitigation, and requirements of any Federal, State, Regional, or local board, commission, agency, or similar body, and the decisions

of any court of competent jurisdiction which must be complied with to enable the City to safely and legally operate the Jointly Used Facilities and to qualify for and obtain Federal, State, or Regional permits or grants for the construction, improvement, administration, operation, maintenance, or repair of the Jointly Used Facilities.

Section 16. Pretreatment Industrial Permit Requirements and Sewer Use Ordinance

a. Each party shall maintain sewer use regulations, including a pretreatment program, permit process and enforcement procedures to ensure compliance with the discharge restrictions and limitations set forth herein and as required by any and all Federal, State, Regional, and local laws, rules, regulations and standards. Within sixty (60) days of a written request by the City to enact or amend the party's sewer use regulations to comply with this Section, the party shall do so.

b. No party shall knowingly permit any entity, within or without its jurisdiction, to discharge sewage into its wastewater collection system unless that entity complies with the pretreatment program in effect in City. If a party learns that any entity, within or without its jurisdiction, is discharging sewage into its wastewater collection system in contravention of the pretreatment program in effect in City, that party shall immediately take steps to either obtain compliance with the pretreatment program or halt further such discharges. The existing City Sanitary Sewer Use Rules and Regulations are attached to this Agreement as Exhibit B. It is expected that significant amendments to the City Sanitary Sewer Use Rules and Regulations will be made in the coming six (6) months. Whenever an amendment is made to the City Sanitary Sewer Use Rules and Regulations, City shall provide each of the parties with a copy of the amendment.

c. If the City duly authorizes any person to act as

Industrial Waste Inspector in order to inspect and enforce industrial pretreatment requirements of Federal, State, or Regional Agencies or local limitations and standards, each party shall allow that authorized person access to discharger facilities and enable the inspector through ordinance or resolution to sample, inspect, and police illegal discharges. The Inspector shall notify the agency in which the inspection or enforcement action is to be made before the inspection or enforcement action is performed. Costs of this inspection and sampling program incurred by City shall be included as a cost of the operation and maintenance expenses of the Jointly Used Facilities.

Section 17. Notification of New Significant Dischargers

Each party shall notify the City in writing thirty (30) days prior to the connection of any user of wastewater treatment services whose need for treatment capacity in the Jointly Used Facilities exceeds 100,000 gallons per day.

Section 18. Treatment of Wastewater

It is agreed by the parties that City neither guarantees nor warrants to the parties that the Jointly Used Facilities will be capable of adequately treating the parties' discharges. In no event shall City be liable to the other parties to this Agreement for any damage or injury resulting from the Jointly Used Facilities' inability or failure to satisfactorily receive, hold, treat, dispose, or otherwise handle or convey wastewater.

Section 19. Collection Systems and other Trunk Sewers

Each party to this Agreement shall maintain those portions of its collection and distribution systems and trunk sewers that are not designated as one of the five (5) Trunk Sewers in Section 1 or Jointly Used Facilities in Section 2 but that are within their jurisdiction, at no expense whatsoever to any of the other parties.

Section 20. Severability of Obligations

It is specifically understood that the obligations of each of the parties herein are several and not joint, and that neither one shall be obligated to pay any sum due from another.

Section 21. Good Faith

The parties shall both conduct themselves with respect to this Agreement and to the construction, maintenance, operation, and administration of the Trunk Sewers designated in Section 1 and the Jointly Used Facilities in good faith and in a prudent, professional manner. Additionally, each party shall timely and diligently keep the other parties informed about any and all matters occurring within its jurisdiction that bear functionally, financially, or in any other foreseeable way on the relationships or obligations of the parties as defined by this Agreement.

Section 22. Fiscal Year

For purposes of this Agreement, the fiscal year shall be the fiscal year of City, as may be established from time to time, being at the date of this Agreement the period from July 1 of each year to and including the following June 30.

Section 23. Access to Records

Any and all books, documents, papers, and records prepared and/or maintained by any party to this Agreement for any activity undertaken under this Agreement shall be made accessible to the other parties upon request or to any construction grant agency as may be required by law.

Section 24. Termination and Supercession of Agreements

It is mutually agreed by all parties hereto that

agreements heretofore entered into between City and Town, District, and/or County and any and all supplements, addendums, changes, or amendments thereto regarding sewage treatment are hereby superseded and terminated.

Section 25. Term

This Agreement shall become effective on the date the parties have executed same, and shall remain in full force and effect until amended or terminated. In the event any party requests termination, that party shall submit a written notice of withdrawal at least five (5) years preceding the proposed date of withdrawal; provided, however, that no voluntary withdrawal may occur during the period that any bonded indebtedness for the upgrading of the Jointly Used Facilities described in Section 12 is outstanding.

Section 26. Notices

Unless otherwise designated in writing by the respective parties, all notices, correspondence, claims, bills or other documents transmitted by one party to the other shall be addressed as follows:

To County: Director of General Services
County of San Mateo
County Government Center
Redwood City, CA 94063

To District: Director of Public Works
County of San Mateo
805 Veterans Boulevard, Suite 301
Redwood City, CA 94063

To Town: City Engineer
Town of Hillsborough
1600 Floribunda Avenue
Hillsborough, CA 94010

To City: Director of Public Works
City of San Mateo
330 W. 20th Avenue
San Mateo, CA 94403

Section 27. Performance and Time to be of the Essence

It is understood and agreed that full and faithful compliance with and performance of each and every covenant and provision of this Agreement by the party or parties required to comply with or perform each such covenant or provision is and shall be of the essence; also that time is and shall be of the essence; also that such full and faithful compliance with performance of each and every covenant and provision of this Agreement shall be deemed to be a material condition of this Agreement.

Section 28. Severability

Should any part, term, or provision of this Agreement be decided by a court or competent jurisdiction to be illegal or in conflict with any law of the State of California, the United States, or otherwise be rendered unenforceable or ineffectual, the validity of the remaining portions or provisions shall not be affected thereby.

Section 29. Successors; Assignment

This Agreement shall be binding upon, and shall inure to the benefit of the successors of the parties. Except to the extent expressly provided herein, no party may sell, convey, or assign any

right or obligation hereunder without the written consent of the other parties.

Section 30. Section Headings

All section headings and sub-headings contained herein are for convenience of reference only, and are not intended to define or limit the scope of any provisions of this Agreement.

Section 31. Disputes

If the parties to a dispute regarding a controversy or claim arising out of or relating to this Agreement, or the breach thereof, agree in writing, the dispute shall be settled by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association. Judgment upon the award rendered by the Arbitrator(s) may be entered in any Court having jurisdiction thereof.

Section 32. New and Unforeseen Conditions

In the event there are new or unforeseen conditions not covered by this Agreement or conditions that cause any portion of this Agreement to become obsolete, undefined, or underfinanced, the Parties agree to meet, discuss, and reach a written agreement to resolve those new and unforeseen circumstance effects.

Section 33. Waivers

Waivers of a breach or default under this Agreement shall not constitute a continuing waiver or a waiver of a subsequent breach of the same or any other provision of this Agreement.

Section 34. Modification

No modification, waiver, termination, or amendment of this

Agreement is effective unless made in writing signed by all 4 of the parties hereto.

ATTEST:

Eleanor M. Giorgi
Town Clerk

TOWN OF HILLSBOROUGH

Robert M. Dias
Town Manager

ATTEST:

Doris Christen
City Clerk

CITY OF SAN MATEO

Mayor

ATTEST:

Elaine S. Walton
Clerk of the District

CRYSTAL SPRINGS COUNTY SANITATION DISTRICT

Mary Griffin
President,
Board of Supervisors,
Ex-Officio Governing Board

ATTEST:

Elaine S. Walton

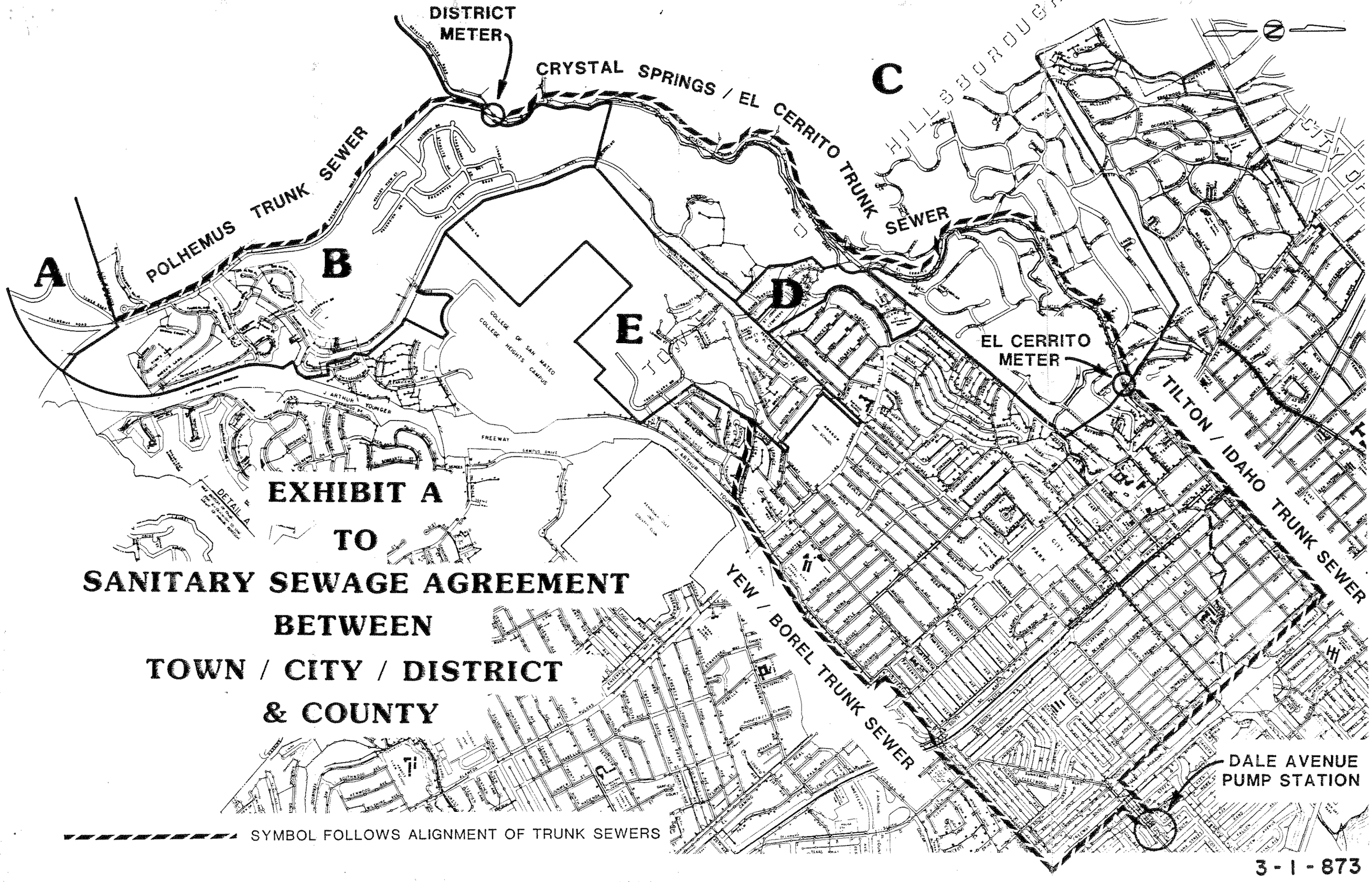
COUNTY OF SAN MATEO

Mary Griffin

Certificate of Delivery
(Government Code section 25103)

I certify that a copy of the original document filed in the Office of the Clerk of the Board of Supervisors of San Mateo County has been delivered to the President of the Board of Supervisors.

Elaine S. Walton
ELAINE S. WALTON, Assistant
Clerk of the Board of Supervisors


DISTRICT METER
CRYSTAL SPRINGS / EL CERRITO TRUNK SEWER
POLHEMUS TRUNK SEWER
A
B
C
D
E
HILLSBOROUGH
CITY OF
EL CERRITO METER
TILTON / IDAHO TRUNK SEWER
YEW / BOREL TRUNK SEWER
DALE AVENUE PUMP STATION
COLLEGE OF SAN MATEO
COLLEGE HEIGHTS CAMPUS
FREEWAY
CAMPUS DRIVE
J. ARTHUR YOUNGER
DETAIL A
CITY PARK
EXHIBIT A
TO
SANITARY SEWAGE AGREEMENT
BETWEEN
TOWN / CITY / DISTRICT
& COUNTY
SYMBOL FOLLOWS ALIGNMENT OF TRUNK SEWERS
3 - 1 - 873

SANITARY SEWER USE RULES AND REGULATIONS

ARTICLE I

GENERAL PROVISIONS

SECTION 1.01 Purpose and Policy. These Sanitary Sewer Use Rules and Regulations set uniform requirements for discharges into the wastewater collection and treatment system and enable the City of San Mateo to comply with the administrative provisions of the Clean Water Grant Regulations, the water quality requirements set by the Regional Water Quality Control Board and the applicable effluent limitations, national standards of performance, toxic and pretreatment effluent standards, and all other discharge criteria which are required or authorized by State or Federal law, and to derive the maximum public benefit by regulating the quality and quantity of wastewater discharged into the City of San Mateo's sewer system.

These Rules and Regulations provide a means for determining wastewater volumes, constituents and characteristics, the setting of charges and fees, and the issuance of permits to certain users.

Revenues derived from the application of these Rules and Regulations shall be used to defray the City's cost of operating and maintaining adequate wastewater collection and treatment systems and to provide sufficient funds for capital outlay, bond service costs, capital improvements, and depreciation. Charges and fees, as hereinafter referred to, are and have been established pursuant to City of San Mateo Ordinances.

These Rules and Regulations are not intended to be inconsistent with or repeal any provisions of said Ordinances or any amendments thereto, and in the event that any provision of these Rules and Regulations is found to be inconsistent with any provision of said Ordinances, the provisions of said Ordinances shall apply.

SECTION 1.02 Definitions.

1) ACT or "the Act." The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 U.S.C. 1251, et seq.

2) BOD or Biochemical Oxygen Demand. "BOD" or "biochemical oxygen demand" shall mean the measure of decomposable organic material in domestic or industrial wastewaters as represented by the oxygen utilized in decomposition over a period of incubation of five days at 20 degrees C. and as determined by the appropriate procedure in "Standard Methods".

3) COD or Chemical Oxygen Demand. "COD" or "chemical oxygen demand" shall mean the measure of chemically decomposable material in domestic or industrial wastewater as represented by the oxygen utilized as determined by the appropriate procedure described in "Standard Methods".

4) Discharger. "Discharger" shall mean any person who discharges or causes a discharge to a public sewer.

5) Dissolved Solids. "Dissolved solids" or "dissolved matter" shall mean the solid matter in solution in the wastewater and shall be obtained by evaporation of a sample from which all suspended matter has been removed by filtaration as determined by the procedures in "Standard Methods".

EXHIBIT B

6) Domestic Wastewater. "Domestic wastewater" shall mean the water-carried wastes and wastewater produced from non-commercial or non-industrial activities and which result from normal human living processes.

7) Effluent. "Effluent" shall mean the liquid outflow of any facility designed to treat, convey or retain wastewater.

8) Grab Sample. A sample which is taken from a waste stream on a one-time basis with no regard to the flow in the waste stream and without consideration of time.

9) Holding Tank Waste. Any waste from holding tanks such as vessels, chemical toilets, campers, trailers, septic tanks, and vacuum-pump tank trucks.

10) House Connection. "House connection" shall mean the sewer connecting the building sewer or building waste drainage system to the public sewer for the purpose of conveying domestic wastewater.

11) Industrial Connection Sewer. "Industrial connection sewer" shall mean the sewer connecting the building sewer or building waste drainage system to the public sewer for the purpose of conveying industrial wastewater.

12) Industrial Wastewater. "Industrial wastewater" shall mean all watercarried wastes and wastewater of the community excluding domestic wastewater and uncontaminated water, and shall include all wastewater from any producing, manufacturing, processing, institutional, commercial, agricultural, or other operation where the wastewater discharged includes significant quantities of wastes from non-human origin.

13) Inspector. "Inspector" shall mean a person authorized by the City Engineer to inspect wastewater generation, conveyance, processing, and disposal facilities.

14) Gravity Separation Interceptor. "Gravity separation interceptor" shall mean any facility designed, constructed and operated for the purpose of removing and retaining dangerous, deleterious or prohibited constituents from wastewater by differential gravity separation before discharge to the public sewer.

15) Lateral Sewer, Collecting Sewer, or Main Line Sewer. "Lateral sewer", "collecting sewer," or "main line sewer", shall mean the public sewer used to collect wastewater from house connection and industrial connection sewers and transport it to trunk sewers.

16) Peak Flow Rate. "Peak flow rate" shall mean the average rate at which wastewater is discharged to a public sewer during the highest 30 minute flow period in the preceding 12 months.

17) Pollution. The man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

18) Pre-Treatment or Treatment. The reduction of the amount of pollutants, or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing such chemical or biological processes, or process changes other means, except as prohibited by 40 CFR Section 403.6(d).

19) Public Sewer. "Public sewer" shall mean any sewer dedicated to public use and whose use is controlled by a public corporation.

20) Publically Owned Treatment Works (POTW). A treatment works as defined by Section 212 of the act, (33 U.S.C. 1292) which is owned in this instance by the City. This definition includes any sewers that convey wastewater to the POTW treatment plant, but does not include pipes, sewers or other conveyances not connected to a facility providing treatment. For the purposes of this ordinance, "POTW" shall also include any sewers that convey wastewaters to the POTW from persons outside

the (City) who are, contract or agreement with th (City) users of the (City's) POTW.

21) Sewage. "Sewage" shall mean wastewater.

22) Sewage Pumping Plant. "Sewage pumping plant" shall mean any facility designed and constructed to raise wastewater in elevation or to overcome head losses due to pipeline friction.

23) Sewerage. "Sewerage" shall mean any and all facilities used for collecting, conveying, pumping, treating and disposing of wastewater.

24) Sewerage System. "Sewerage system" shall mean a network of wastewater collection, conveyance, treatment and disposal facilities interconnected by sewers and owned by the City.

25) Standard Methods. "Standard methods" shall mean the current edition of "Standard Methods for the Examination of Water and Wastewater" as published by the American Public Health Association.

26) Suspended Solids. "Suspended solids" or "suspended matter" shall mean the insoluble solid matter suspended in wastewater that is separable by laboratory filtration in accordance with the procedures described in "Standard Methods."

27) Toxic Pollutant. Any pollutant or combination of pollutants listed as toxic in regulations promulgated by the administer of the Environmental Protection Agency under the provision of GWA 307(a) or other acts.

28) Trunk Sewer. "Trunk sewer" shall mean a sewer constructed, maintained and operated by the City that conveys wastewater to City's treatment facilities and into which lateral and collecting sewers discharge.

29) Uncontaminated Water. "Uncontaminated water" shall mean any wasted water of the community not contaminated or polluted with wastewater and which is suitable or could readily be made suitable for discharge to the municipal storm water drainage system.

30) Wastewater. The liquid and water-carried industrial or domestic wastes from dwellings, commercial buildings, industrial facilities, and institutions, together with may be present, whether treated or untreated, which is contributed into or permitted to enter the POTW.

SECTION 1.03 Abbreviations.

The following abbreviations shall have the designated meanings:

BOD - Biochemical Oxygen Demand
CFR - Code of Federal Regulations
COD - Chemical Oxygen Demand
EPA - Environmental Protection Agency
L - Liter
mg - Milligrams
mg/l - Milligrams per Liter
NPDES - National Pollutant Discharge Elimination System
POTW - Publicly Owned Treatment Works
SIC - Standard Industrial Classification
SWDA - Solid Waste Disposal Act, 42 U.S.C. 6901 et. seq.
USC - United States Code
TSS - Total Suspended Solids

ARTICLE II

REGULATIONS

SECTION 2.01 Approval of Plans for Sewerage Construction. No person, other than employees of the City, persons contracting to do work for the City, or maintenance workers of the City shall construct or cause to be constructed, or alter or cause to be altered, any public sewer, lateral sewer, house connection or industrial connection sewer, sewage pumping plant, pollution control plant, or other sewerage facility within the City where existing or proposed wastewater flows will discharge directly or indirectly to facilities of the City without first obtaining approval of sewerage construction plans from the City. No user shall contribute or cause to be contributed, directly or indirectly, any pollutant or wastewater which will interfere with the operation or performance of the POTW. These general prohibitions apply to all such users of a POTW whether or not the user is subject to national categorical pretreatment standards or any other national, state, or local pretreatment standards or requirements.

The applicant shall submit to the City for approval, construction plans and such specifications and other details as required to describe fully the proposed sewerage facility. The plans shall have been prepared under the supervision of and shall be signed by an engineer of suitable training registered in the State of California.

Plans for sewerage construction ~~shall conform~~ to the current design requirements and standard specifications of the City of San Mateo.

SECTION 2.02 Excessive Sewer Maintenance Expense. No person shall discharge or cause to be discharged to a public sewer any waste that creates a stoppage, plugging, breakage, any reduction in sewer capacity or any other damage to sewers or sewerage facilities of the City. Any sewer or sewerage maintenance expenses or any other expenses attributable thereto will be charged to the offending discharger by the City.

Any refusal to pay such maintenance expenses duly authorized by the City shall constitute a violation of these Rules and Regulations.

SECTION 2.03 Discharge of Rainwater or Uncontaminated Water Prohibited. No person shall discharge or cause to be discharged any rainwater, storm water, ground waste, street drainage, subsurface drainage, yard drainage, water from yard fountains, ponds or lawn sprays, or any other uncontaminated water into any sanitary sewerage facility which directly or indirectly discharges to facilities owned by the City.

SECTION 2.04 Prohibited Waste Discharges. In most cases, the concentration or amount of a particular constituent which will be judged to be excessive or unreasonable cannot be forseen but will depend on the results of technical determinations or the actions of regulatory agencies. The list of constituents which may be regulated provides specific limits only where they are now reasonably well established. The other constituents in the list are presented with the objective of enumerating the types of wastes which will be regulated from time to time.

Except as provided in Section 2.06, no person shall discharge or cause to be discharged to a public sanitary sewer the following wastes:

A) Any liquids, solids or gases which by reason of their nature or quantity are,

or may be, sufficient either alone or by interaction with other substances to cause fire or explosion or be injurious in any other way to the POTW or to the operation of the POTW. At no time, shall two successive readings on an explosion hazard meter, at any point in the system be more than five percent (5%) nor any single reading over ten percent (10%) of the lower explosive limit of the meter. Prohibited materials include, but are not limited to, gasoline, kerosene, naptha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides and sulfides and any other substances which the City, the State or EPA has notified the user is a fire hazard or a hazard to the system.

B) Any waste containing toxic or poisonous solids, liquids, or gases in such quantity that alone, or in combination with other waste substances, may create a hazard to humans, animals, or the local environment, interfere detrimentally with wastewater treatment processes, cause a public nuisance or cause any hazardous condition to occur in the sewerage system.

C) Any waste having a pH lower than 6.0 or having any corrosive or detrimental characteristic that may cause injury to wastewater treatment or maintenance personnel.

D) Any solids or viscous substances of such size or in such quantity that they may cause flow obstruction in the sewer or be detrimental to proper wastewater treatment plant operations. These objectionable substances include, but are not limited to, asphalt, dead animals, offal, ashes, sand, mud, straw, industrial process shavings, metal, glass, rags, feathers, tar, plastics, wood, whole blood, paunch manure, bones, hair and fleshings, entrails, paper dishes, paper cups, milk containers, or other similar paper products, either whole or ground.

E) Any rainwater, storm water, groundwater, street drainage, subsurface drainage, roof drainage, yard drainage, water from yard fountains, ponds or lawn sprays or any other uncontaminated water.

F) Any water added for the purpose of diluting wastes which would otherwise exceed applicable maximum concentration limitation.

G) Any nonbiodegradable cutting oils, commonly called soluble oil, which form persistent water emulsions.

H) Any excessive concentrations of nonbiodegradable oil, petroleum oil or refined petroleum products.

I) Any dispersed biodegradable oils and fats, such as lard, tallow or vegetable oil in excessive concentrations that would tend to cause adverse effects on the sewerage system.

J) Any unreasonably large amounts of undissolved or dissolved solids.

K) Any wastes with excessively high BOD, COD or decomposable organic content.

L) Any strongly odorous waste or waste tending to create odors.

M) Any wastes containing over 0.1 milligram/liter of dissolved sulfides.

N) Any wastes with a pH high enough to cause alkaline incrustations on sewer walls.

O) Any substance promoting or causing the promotion of toxic gases.

P) Any waste having a temperature of 120 degrees F. or higher.

Q) Any wastes requiring an excessive quantity of chlorine or other chemical compound used for disinfection purposes.

R) Any excessive amounts of chlorinated hydrocarbon or organic phosphorus type compounds.

S) Any excessive amount of deionized water, steam condensate or distilled water.

T) Any waste containing substances that may precipitate, solidify or become viscous at temperature between 50 degrees F. and 100 degrees F.

U) Any waste producing excessive discoloration of wastewater or treatment plant effluent.

V) Any garbage or waste that is not ground sufficiently to pass through a 3/8-inch screen.

W) Any wastes containing excessive quantities of iron, boron, chromium, phenols, plastic resins, copper, nickel, zinc, lead, mercury, camium, selenium, arsenic or any other objectionable materals toxic to humans, animals, the local environment or to biological or other wastewater treatment processes.

X) Any blow-down or bleed water from cooling towers or other evaporation coolers exceeding one-third of the makeup water.

Y) Any single pass cooling water.

Z) Any quantities of radioactive material wastes.

aa) Recognizable portions of the human anatomy.

No person shall discharge or cause to be discharged to any public sewer any wastes, if in the opinion of the City such wastes may have an adverse or harmful effect on sewers, maintenance personnel, wastewater treatment plant personnel or equipment, treatment plant effluent quality, public or private property, or may otherwise endanger the public, the local environment or create a public nuisance. The City, in determining the acceptability of specific wastes, shall consider the nature of the waste and the adequacy and nature of the collection, treatment and disposal system available to accept the waste.

The City shall from time to time prepare a list of the maximum permissible quantities or concentrations of certain constituents in industrial waste water flows and otherwise issue detailed directions for meeting the requirements of this Section.

SECTION 2.05 Hospital Wastes. Hospitals, clinics, offices of medical doctors, and convalescent homes:

A) May discharge, through a City approved grinder installation with inlet size and design features suitable for its intended use and so constructed that all particles pass through a maximum 3/8-inch opening, wastes of the following categories:

1) Wet organic kitchen wastes from food preparation and disposal but excluding all paper and plastic items.

2) Disposable hypodermic needles, syringes and associated articles following their use.

3) Infectious wastes, defined as:

a) Laboratory and surgical operating room wastes except as excluded in (B) (2) below.

b) Wastes from outpatient areas and emergency rooms similar to those included in (a) above.

c) Solid wastes generated in the rooms of patients who are not isolated because of a suspected or diagnosed communicable disease.

B) Shall not discharge to the sewer by any means:

1) Equipment, instruments, utensils and other materials of a disposable nature that may harbor or transmit pathogenic organisms and that are used in the rooms of patients having a suspected or diagnosed communicable disease which by the nature of the disease is required to be isolated.

2) Recognizable portions of the human anatomy.

3) Wastes excluded by other provisions of these Rules and Regulations except as specifically permitted in (A) above.

4) All solid wastes not included in (A) above.

Nothing in this Section shall be construed to limit the authority of the Health Officer of San Mateo to define wastes as being infectious and, with the concurrence of the City, to require that they not be discharged to the sewer.

SECTION 2.06 Limitations on Wastewater Strength. No person shall discharge wastewater containing in excess of:

0.1 mg/l arsenic
0.2 mg/l cadmium
2.0 mg/l copper
1.0 mg/l cyanide
1.0 mg/l lead
0.01 mg/l mercury
1.0 mg/l nickel
0.2 mg/l silver
0.5 mg/l total chromium
3.0 mg/l zinc

The City shall lower the concentration limitations for the above constituents if it is evident that the wastewater from any one or number of dischargers is causing the effluent from the Water Quality Control Plant to exceed the limits set forth in the City's NPDES permit.

SECTION 2.07 Pretreatment of Industrial Wastewaters. An industrial wastewater pretreatment system or device may be required by the City to treat industrial flows prior to discharge to the sewer when it is necessary to restrict or prevent the discharge to the sewer of certain waste constituents, to distribute more equally over a longer time period any peak discharges of industrial wastewaters or to accomplish any pretreatment result required by the City. All pretreatment systems or devices shall be approved by the City but such approval shall not absolve the industrial discharger of the responsibility of meeting any industrial effluent limitation required by the City. In special cases, the City may require construction of sewer lines by the discharger to convey certain industrial wastes to a specific City trunk sewer. All pretreatment systems judged by the City to require engineering design shall have plans prepared and signed by an engineer of suitable discipline licensed in the State of California.

Approval of plans and specifications of pretreatment facilities pursuant to this section shall not relieve the user from the responsibility of modifying such pretreat facilities as necessary to produce effluent therefrom complying with all pertinent provisions of this chapter, or any permit issued pursuant to this chapter, or any other requirements of law. Any proposed cessation of use, or alteration, modification or other change to approved pretreatment facilities or any portion thereof, or any change in method of operation thereof, shall be reported to the City prior to commencement thereof, and shall be subject to the approval of the City. Such approval may be withheld, granted, or granted subject to such terms, conditions or requirements as the City may reasonably require in order to ensure compliance with the provisions of this chapter, or any permit issued pursuant to the provisions of this chapter.

Normally a gravity separation interceptor, equalizing tank, neutralization chamber and control manhole will be required respectively to remove prohibited settleable and floatable solids, to equalize wastewater streams varying greatly in quantity and/or quality, to neutralize low or high pH flows and to facilitate inspection, flow measurement and sampling. Floor drains from commercial or manufacturing buildings, warehouses, or multi-use structures shall not discharge directly to the sewer, but shall first discharge to a gravity separation interceptor.

SECTION 2.08 Discharges from Portable Sanitation Facility. No person shall discharge or cause to be discharged directly or indirectly to a public sewer any wastes originating from recreational vehicles, boats, campers, mobile homes, trailers, portable toilets, chemical toilets, or any temporary sanitation facility except as designated by the City Engineer.

The City shall designate the location, time, quantity and quality of discharge of wastes originating from portable sanitation facilities.

ARTICLE III

DISCHARGE REPORT, WASTEWATER DISCHARGE PERMITS, AND ADMINISTRATION

SECTION 3.01 Discharge Reports. The City may require that any person discharging or proposing to discharge wastewater into a community sewer file a periodic Discharge Report. The Discharge Report may include, but not be limited to, nature of process, volume, rates of flow, mass emission rate, production quantities, hours of operations, number and classification of employees, or other information which relates to the generation of waste including wastewater discharge. Such reports may also include the chemical constituents and quantity of liquid or gaseous materials stored on site even though they are not normally discharged. In addition to Discharge Reports, the City may require information in the form of Wastewater Discharge Permit applications and self-monitoring reports.

SECTION 3.02 Permit for Industrial Wastewater Discharge. No person shall discharge or cause to be discharged any industrial wastewaters directly or indirectly to sewage facilities owned by the City without first obtaining a City permit for industrial wastewater discharge.

The permit for industrial wastewater discharge may require pretreatment of industrial wastewaters before discharge, restriction of peak flow discharges, discharge of certain wastewaters only to specified sewers, relocation of point of discharge, prohibition of certain wastewater components, restriction of discharge to certain hours of the day, payment of additional charges to defray increased cost to the City created by the wastewater discharge and such other conditions as may be required to effectuate the purpose of these Rules and Regulations.

No person shall discharge industrial wastewaters in excess of the quantity or quality limitations set by the Permit for Industrial Wastewater Discharge. Any person desiring to discharge wastewaters or use facilities which are not in conformance with the Industrial Wastewater Permit should apply to the City for an amended Permit.

State requirements and limitations on discharges shall apply in any case where they are more stringent than federal requirements and limitations or those in this ordinance.

Upon the promulgation of the federal categorical pretreatment standards for a particular industrial subcategory, the federal standards for a particular industrial subcategory, if more stringent than limitations imposed under this ordinance for sources in that subcategory, shall immediately supersede the limitations imposed under this ordinance. The City Engineer shall notify all affected users of the applicable reporting requirements under 40 CFR Section 403.12.

SECTION 3.035 Permit Conditions.

Wastewater Discharge Permits shall be expressly subject to all provisions of this ordinance and all other applicable regulations, user charges and fees established by the City. Permits may contain the following:

a) The unit charge or schedule of user charges and fees for the wastewater to be discharged to a community sewer;

b) Limits on the average and maximum wastewater constituents and characteristics.

c) Limits on average and maximum rate and time of discharge or requirements for

flow regulations and equalization.

d) Requirements for installation and maintenance of inspection and sampling facilities;

e) Specifications for monitoring programs which may include sampling locations, frequency of sampling, number, types and standards for tests and reporting schedule;

f) Compliance schedules.

g) Requirements for submission of technical reports or discharge reports.

h) Requirements for maintaining and retaining plant records relating to wastewater discharge as specified by the City, and affording City access thereto;

i) Requirement for notification of the City for any new introduction of wastewater constituents or any substantial change in the volume or character of the wastewater constituents being introduced into the wastewater treatment system.

j) Requirements for notification of slug discharges.

k) The permits duration shall be for a specified time period. The terms and conditions of the Permit may be subject to modification by the City during the term of the permit as limitations or requirements as identified are modified or other just cause exists. The user shall be informed of any proposed changes in his permit at least 30 days prior to the effective date of change. Any changes or new conditions in the permit shall include a reasonable time schedule for compliance.

SECTION 3.03 Permit Application.

Users seeking an Industrial Wastewater Discharge Permit shall complete and file with the City, an application in the form prescribed by the City, and accompanied by the applicable fees. The applicant may be required to submit, in units and terms appropriate for evaluation, the following information:

a) Name and address of applicant;

b) Volume of wastewater to be discharged;

c) Wastewater constituents and characteristics including but not limited to those mentioned in Article II as determined by a laboratory approved by the City.

d) Time and duration of discharge;

e) Average and 30-minute minute peak wastewater flow rates, including daily, monthly and seasonable variations if any;

f) Site plans, floor plans, mechanical and plubming plans and details to show all sewers and appurtenances by size, location and elevation.

g) Description of activities, facilities and process on the premises including types of materials which are or could be discharged;

h) Each product produced by type, amount, and rate of production;

i) Number and type of employees, and hours of work;

j) Any other information as may be deemed by the City to be necessary to evaluate the permit application.

SECTION 3.04 Transfer of a Permit.

Wastewater Discharge Permits shall be issued to a specific user for a specific operation. A Wastewater Discharge Permit shall not be reassigned or transferred or sold to a new owner, new user, different premises, or a new or changed operation.

SECTION 3.045 Compliance Report

Within 90 days following the date for final compliance with applicable pretreatment standards or, in the case of a new source, following commencement of the introduction of wastewater into the POTW, any user subject to pretreatment standards and requirements shall submit to the City a report indicating the nature and concentration of all pollutants in the discharge from the regulated process which are limited by pretreatment standards and requirements and the average and maximum daily flow for these process units in the user facility which are limited by such pretreatment standards or requirements. The report shall state whether the applicable pretreatment standards or requirements are being met on a consistent basis and, if not, what measures are being taken to bring the user into full compliance with all applicable pretreatment standards or requirements. This statement shall be signed by an authorized representative of the industrial user, and certified to by a qualified professional.

SECTION 3.046 Periodic Compliance Report

1. Any user subject to a pretreatment standard, after the compliance date of such pretreatment standard, or, in the case of a new source, after commencement of the discharge into the POTW, shall submit to the City during the months of June and December, unless required more frequently by the City, a report indicating the nature and concentration, of pollutants in the effluent which are limited by such pretreatment standards. In addition, this report shall include a record of all daily flows which during the reporting period exceeded the average daily flow.

2. The City may impose mass limitations on users which are using dilution to meet applicable pretreatment standards or requirements, or in other cases where the imposition of mass limitations are appropriate. In such cases, the compliance report shall indicate the mass of pollutants regulated by pretreatment standards in the users effluent. These reports shall contain the results of sampling and analysis of the discharge, including the flow and the nature and concentration, or production and mass where requested by the City, of pollutants contained therein which are limited by the applicable pretreatment standards. The frequency of monitoring shall be prescribed in the applicable pretreatment standard. All analysis and sampling shall be performed in accordance with procedures established by the City.

SECTION 3.05 Administration.

Except as otherwise provided herein, the City shall administer, implement, and enforce the provisions of these rules and regulations. Any powers granted to the City may be delegated by the City to persons acting in the beneficial interest of, or employ, of the City.

SECTION 3.06 Monitoring Facilities.

The City shall require to be provided and operated at the user's own expense, monitoring facilities to allow inspection, sampling, and flow measurement of the building sewer and/or internal drainage systems. The monitoring facility should normally be situated on the user's premises, but the City may, when such a location would be impractical or cause undue hardship on the user, allow the facility to be constructed in the public street or sidewalk area and located so that it will not be obstructed by landscaping or parked vehicles.

There shall be ample room in or near such sampling manhole or facility to allow accurate sampling and preparation of samples for analysis. The facility, sampling, and measuring equipment shall be maintained at all times in a safe and proper operating condition at the expense of the user.

Whether constructed on public or private property, the sampling and monitoring facilities shall be provided in accordance with the City's requirements and all applicable local construction standards and specifications. Construction shall be completed within 90 days following written notification by the City.

SECTION 3.07 Inspection and Sampling.

The City shall inspect the facilities of any User to ascertain whether the purpose of this Ordinance is being met and all requirements are being complied with. Persons or occupants of premises where wastewater is created or discharged shall allow the City or their representative ready access at all reasonable times to all parts of the premises for the purposes of inspection, sampling, records examination or in the performance of any of their duties. The City, Approval Authority and (where the NPDES State is the Approval Authority) the EPA shall have the right to set up on the User's property such devices as are necessary to conduct sampling inspection, compliance monitoring and/or metering operations. Where a User has security measures in force which would require proper identification and clearance before entry into their premises, the User shall make necessary arrangements with their security guards so that upon presentation of suitable identification, personnel from the City, Approval Authority and EPA will be permitted to enter, without delay, for the purposes of performing their specific responsibilities.

SECTION 3.08 Pretreatment.

Users shall provide necessary wastewater treatment as required to comply with this Ordinance and shall achieve compliance with all Federal Categorical Pretreatment Standards within the time limitations as specified by the Federal Pretreatment Regulations. Any facilities required to pretreat wastewater to a level acceptable to the City shall be provided, operated, and maintained at the User's expense. Detailed plans showing the pretreatment facilities and operating procedures shall be submitted to the City for review, and shall be acceptable to the City before construction of the facility. The review of such plans and operating procedures will in no way relieve the User from the responsibility of modifying the facility

as necessary to produce an effluent acceptable to the City under the provisions of this Ordinance. Any subsequent changes in the pretreatment facilities or method of operation shall be reported to and be acceptable to the City prior to the User's initiation of the changes.

All records relating to compliance with Pretreatment Standards shall be made available to officials of the EPA or Approval Authority upon request.

SECTION 3.09 Confidential Information.

Information and data on a User obtained from reports, questionnaires, permit applications, permits and monitoring programs and from inspections shall be available to the public or other governmental agency without restriction unless the User specifically requests and is able to demonstrate to the satisfaction of the City that the release of such information would divulge information, processes or methods of production entitled to protection as trade secrets of the User.

When requested by the person furnishing a report, the portions of a report which might disclose trade secrets or secret processes shall not be made available for inspection by the public but shall be made available upon written request to governmental agencies for uses related to this Ordinance, the National Pollutant Discharge Elimination System (NPDES) Permit, State Disposal System Permit and/or the Pretreatment Programs; provided, however, that such portions of a report shall be available for use by the State or any State Agency in judicial review of enforcement proceedings involving the person furnishing the report. Wastewater constituents and characteristics will not be recognized as confidential information.

Information accepted by the City as confidential shall not be transmitted to any governmental agency or to the general public by the City until and unless a ten-day notification is given to the User.

SECTION 3.1 - Fees.

3.15 Purpose.

It is the purpose of this sect-on to provide for the recovery of costs from users of the City's Wastewater Disposal System for the implementation of the Program established herein. The applicable charges or fees shall be set forth in the City's schedule of charges and fees which is adopted by resolution, and is subject to periodic change to reflect changes in cost of operating the program.

3.20 Charges and Fees.

The City may adopt charges and fees which may include:

a) Fees for reimbursement of costs of setting up and operating the City's Pretreatment Program;

b) Fees for monitoring, inspections and surveillance procedures;

c) Fees for reviewing accidental discharge procedures and construction;

d) Fees for permit applications;

e) Fees for filing appeals;

f) Fees for consistent removal (by the City) of pollutants otherwise subject to federal pretreatment standards.

g) Other fees as the City may deem necessary to carry out the requirements contained herein; these fees relate solely to the matters covered by this ordinance and are separate from all other fees chargeable by the City.

ARTICLE IV

ENFORCEMENT

SECTION 4.01 Accidental Discharges.

SECTION 4.01.1 Notification of Discharge. Dischargers shall notify the City immediately upon accidentally discharging wastes in violation of these Rules and Regulations to enable countermeasures to be taken by the City to minimize damage to the community sewer, treatment facility, treatment processes and the receiving waters.

This notification shall be followed within 15 days of the date of occurrence by a detailed written statement describing the causes of the accidental discharge and the measures being taken to prevent future occurrence.

Such notification will not relieve dischargers of liability for any expense, loss or damage to the sewer system, treatment plant, or treatment process, or for any fines imposed on the City on account thereof under Section 13350 of the California Water Code or for violations of Section 5650 of the California Fish and Game Code.

SECTION 4.01.2 Notices to Employees. In order that employees of dischargers be informed of City requirements, dischargers shall make available to their employees copies of these Rules and Regulations together with such other wastewater information and notices which may be furnished by the City, from time to time, directed toward more effective water pollution control. A notice shall be furnished and permanently posted on the discharger's bulletin board advising employees who to call in case of an accidental discharge in violation of Rules and Regulations.

SECTION 4.01.3 Preventive Measures. Any direct or indirect connection or entry point for deleterious wastes to the discharger's plumbing or drainage system should be eliminated. Where such action is impractical or unreasonable, the user should appropriately label such entry points to warn against discharge of such wastes in violation of these Rules and Regulations.

SECTION 4.02 Enforcement. The City may suspend a permit for industrial wastewater discharge when such suspension is necessary in order to stop an actual or threatened discharge which presents or may present an imminent or substantial endangerment to the health or welfare of persons, to the environment, to the City's sewerage system, causes interference to the City's Water Quality Control Plant or causes the City to violate any condition of its NPDES Permit.

Any discharger notified of a suspension of his industrial wastewater permit shall immediately cease and desist the discharge of all industrial wastewater to the sewerage system. In the event of a failure of the discharger to comply voluntarily with the suspension, the City shall take such steps as deemed necessary, including immediate severance of the sewer connection, to prevent or minimize damage to the City's Water Quality Control Plant system or endangerment to any individuals.

The City shall reinstate the permit for industrial wastewater discharge upon proof of the elimination of the non-complying discharger. A detailed written statement

submitted by the User describing the causes of the harmful contribution and the measures taken to prevent any future occurrence shall be submitted to the City within 15 days of the date of the occurrence.

SECTION 4.03 Revocation of Permit. Any User who violates the following conditions of this Ordinance or applicable state and federal regulations is subject to having his permit revoked in accordance with the procedures of Section 4 of this Ordinance:

a) Failure of a User to factually report the wastewater constituents and characteristics of his discharge;

b) Failure of the User to report significant changes in operations or wastewater constituents and characteristics;

c) Refusal of reasonable access to the User's premises for the purpose of inspection or monitoring; or,

d) Violation of conditions of the permit.

SECTION 4.04 Notification of Violation. Whenever the City finds that any User has violated or is violating this Ordinance, wastewater contribution permit, or any prohibition, limitation of requirements contained herein, the City may serve upon such person a written notice stating the nature of the violation. Within 30 days of the date of the notice, a plan for the satisfactory correction thereof shall be submitted to the City by the User.

SECTION 4.05 Show Cause Hearing.

4.05.1 The City may order any User who causes or allows an unauthorized discharge to enter the Water Quality Control Plant to show cause before the City Council why the proposed enforcement action should not be taken. A notice shall be served on the User specifying the time and place of a hearing to be held by the City Council regarding the violation, the reasons why the action is to be taken, the proposed enforcement action, and directing the User to show cause before the City Council why the proposed enforcement action should not be taken. The notice of the hearing shall be served personally or by registered or certified mail (return receipt requested) at least (ten) days before the hearing. Service may be made on any agent or officer of a corporation.

4.05.2 The City Council may itself conduct the hearing and take the evidence, or may designate any of its members or any officer or employee of the (assigned department) to:

a) Issue in the name of the City Council notices of hearings requesting the attendance and testimony of witnesses and the production of evidence relevant to any matter involved in such hearings.

b) Take the evidence;

c) Transmit a report of the evidence and hearing, including transcripts and other evidence, together with recommendations to the City Council for action thereon

405.3 At any hearing held pursuant to this Ordinance, testimony taken must be under oath and recorded stenographically. The transcript, so recorded, will

be made available to any member of the public or any party to the hearing upon payment of the usual charges thereof.

4.05.4 After the City Council has reviewed the evidence, it may issue an order to the User responsible for the discharge directing that, following a specified time period, the sewer service be discontinued unless adequate treatment facilities, devices or other related appurtenances shall have been installed on existing treatment facilities, devices or other related appurtenances are properly operated. Further orders and directives as are necessary and appropriate may be issued.

SECTION 4.06 Legal Action. If any person discharges sewage, industrial wastes or other wastes into the City's wastewater disposal system contrary to the provisions of this Ordinance, Federal or State Pretreatment Requirements, or any order of the City, the City Attorney may commence an action for appropriate legal and/or equitable relief in the appropriate court.

SECTION 4.07 Submission of Time Schedule. When the City finds that a discharge of wastewater has been taking place, in violation of prohibitions or limitations prescribed in these Rules and Regulations, or wastewater source control requirements, effluent limitations or pretreatment standards, or the provisions of a Wastewater Discharge Permit, the City may require the User to submit for approval a detailed time schedule of specific actions which the User shall take in order to prevent or correct a violation of requirements.

SECTION 4.08 Penalty for Violation. Any person violating any provision of these Rules and Regulations, including the failure to pay any fees or charges imposed hereby, or any condition of a permit or plan approval issued pursuant thereto, is guilty of a misdemeanor punishable by a fine of not to exceed $500, and/or imprisonment not to exceed 6 months or both.

SECTION 4.09 Inspectors. Adequate identification will be provided by the City for all inspectors and other authorized personnel, and these persons shall identify themselves when entering any property for inspection purposes or when inspecting the work of any contractor.

Inspection of every facility that is involved directly or indirectly with the discharge of wastewater in the City's sewerage systems may be made by the City as deemed necessary. These facilities shall include but not be limited to sewers; sewage pumping plants; pollution control plants; all industrial processes; industrial wastewater generation conveyance and pretreatment facilities, devices and connection sewers; and all similar sewerage facilities. Inspections may be made to determine that such facilities are maintained and operated properly and are adequate to meet the provisions of these Rules and Regulations.

Access to all of the above facilities or to other facilities directly or indirectly connected to the City's sewerage systems shall be given to authorized personnel of the City at all reasonable times including those occasioned by emergency conditions. Any permanent or temporary obstruction to easy access to the sewerage facility to be inspected shall promptly be removed by the facility user or owner at the written or verbal request of the City and shall not be replaced.

No person shall interfere with, delay, resist or refuse entrance to an authorized city's inspector attempting to inspect any wastewater generation, convenance or treatment facility connected directly or indirectly to the city's sewerage systems.

ARTICLE V

INDUSTRIAL WASTEWATER TREATMENT SURCHARGE

SECTION 5.01 Surcharge Formula. An industrial wasterwater treatment surcharge shall be paid to the City annually, within six months of the end of the fiscal year in which charges accrue, by those industrial wastewater discharges whose contribution of flow, chemical oxygen demand, suspended solids, or peak flow create costs in excess of their annual sewer service charge. The treatment surcharge shall be based on the City's sanitary sewerage system's total maintenance, operation and capital expenditures for providing industrial wastewater collection, treatment and disposal services in the fiscal year for which charges are assessed as described in section 5.02.

The annual industrial wastewater treatment surcharge shall be computed by the following formula:

$$\text{Surcharge} = a\,(V) + b\,(COD) + c(SS) + dM(P) - \text{Sewer Service Charge}$$

Where:

Surcharge = Net annual industrial wastewater treatment surcharge in dollars. No refund will be made if a negative number results.

V = Total annual volume of flow, in millions of gallons.

COD = Total annual discharge of chemical oxygen demand, in thousands of pounds.

SS = Total annual discharge of suspended solids in thousands of pounds.

P = Peak discharge rate over a 30-minute period, occurring between the hours of 8:00 a.m. and 10:00 p.m. and determined by averaging a maximum of 10 substantiated peak flow rate measurements of the accrual year in gallons per minute. Values of "P" less than 10 gallons per minute shall be considered equal to zero.

A = Average discharge rate, determined by dividing "V" by the total annual hours of operation or working time of the industrial discharger, in gallons per minute (see M).

a,b,c,d = Unit charge rates adopted annually by the City of San Mateo based upon the projected annual costs for wastewater collection, treatment, and disposal, in dollars per unit as described in Section 5.02.

M = A multiplying factor accounting for increased city costs due to the ratios of industrial discharger peak - average flow rates (P/A); Factor "M" is obtained from Figure 1. ($M = 2.50 \log P/A$)

Sewer Service Charge = The annual sewer service charge paid to the City during the accrual year.

SECTION 5.02. Establishment of unit charge rates for industrial wastewater treatment surcharge.

The charge rates "a", "b", "c" and "d" in the industrial wastewater treatment surcharge shall be established annually by the procedure described herein.

Appropriate unit charge rate parameters for flow, COD and suspended solids - respectively designated "Q" (in dollars per million gallons), "b" (in dollars per 1000 pounds of COD) and "c" (in dollars per 1000 pounds of suspended solids) - shall be determined by the following method:

(A) The total capital outlay for construction of sewerage facilities including debt principal and interest over the next fiscal year less anticipated grant funds shall be estimated and distributed among the three parameters in accordance with the City's determination of the percentage of the total existing capital facilities of the sewerage system predominantly related to each parameter.

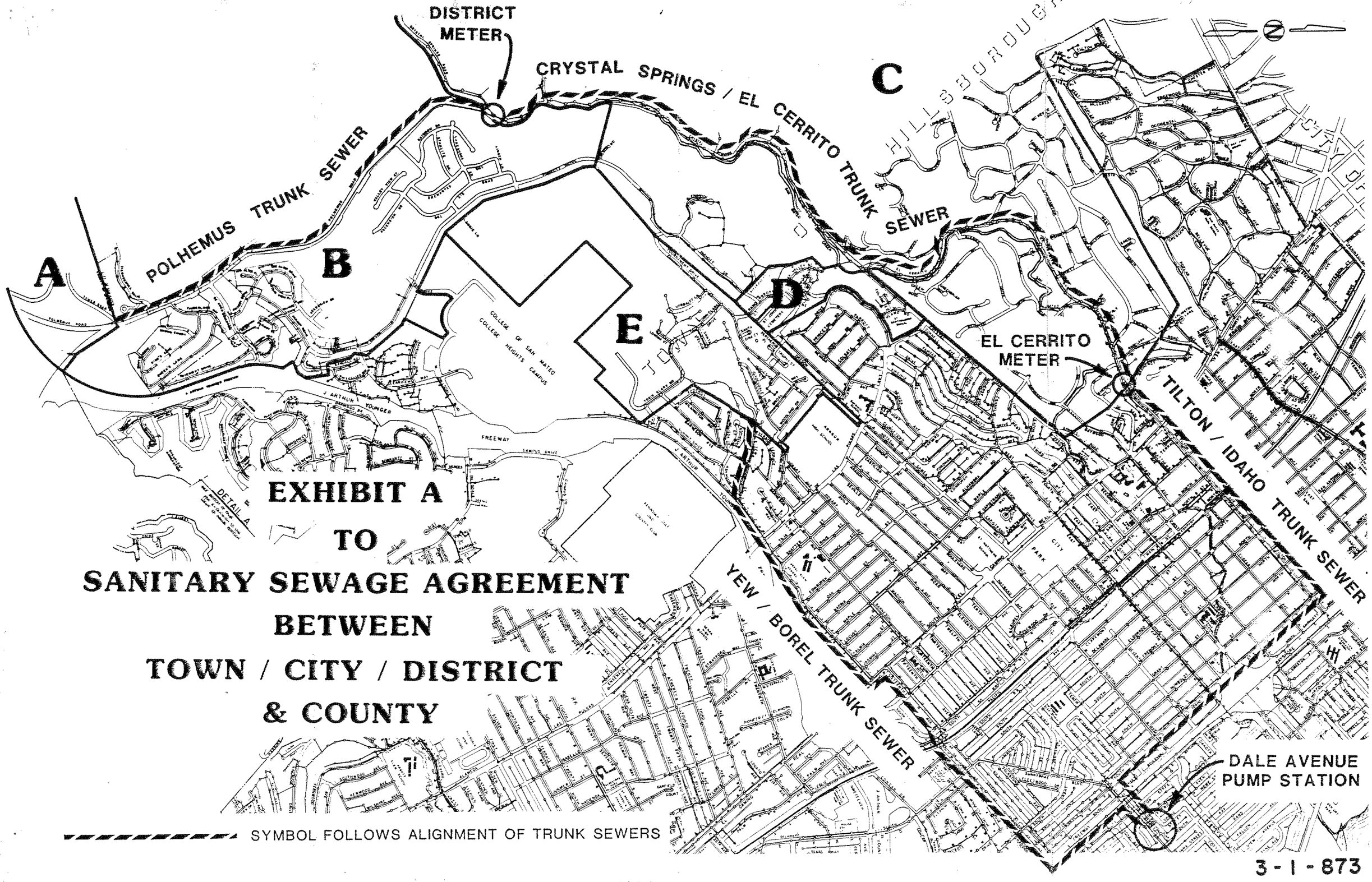
(B) The total operation and maintenance costs of the system shall be estimated for the next fiscal year and distributed among the three parameters in accordance with City's determination as to which charges are predominantly related to each parameter.

(C) The sum of the capital costs and operation and maintenance costs determined for each parameter in (A) and (B) above shall be divided by the projected one year total volume of wastewater and weight of COD and suspended solids to be treated by the sewerage system in order to obtain the unit charge rates "a", "b", "c", for the system.

The unit charge rate related to peak flow rate and designated "d" (in dollars per gallon per minute of peak flow) shall be determined by the following method:

(A) The total non-depreciated value of the historic capital investment in the serving (Collection and Treatment) system shall be divided by the total peak hydraulic capacity of the treatment facilities to determine a unit cost per million gallons per day of peak flow capacity.

(B) The unit cost determined in (A) above shall be amortized over thirty (30) years at seven (7) percent interest and converted to a gallon per minute basis to obain the unit charge rate "d".


DISTRICT METER
CRYSTAL SPRINGS / EL CERRITO TRUNK SEWER
POLHEMUS TRUNK SEWER
A
B
C
D
E
HILLSBOROUGH
CITY OF
EL CERRITO METER
TILTON / IDAHO TRUNK SEWER
YEW / BOREL TRUNK SEWER
DALE AVENUE PUMP STATION
COLLEGE OF SAN MATEO
COLLEGE HEIGHTS CAMPUS
FREEWAY
CAMPUS DRIVE
J. ARTHUR YOUNGER
DETAIL A
CITY PARK
EXHIBIT A
TO
SANITARY SEWAGE AGREEMENT
BETWEEN
TOWN / CITY / DISTRICT
& COUNTY
SYMBOL FOLLOWS ALIGNMENT OF TRUNK SEWERS
3 - 1 - 873

SANITARY SEWER USE RULES AND REGULATIONS

ARTICLE I

GENERAL PROVISIONS

SECTION 1.01 Purpose and Policy. These Sanitary Sewer Use Rules and Regulations set uniform requirements for discharges into the wastewater collection and treatment system and enable the City of San Mateo to comply with the administrative provisions of the Clean Water Grant Regulations, the water quality requirements set by the Regional Water Quality Control Board and the applicable effluent limitations, national standards of performance, toxic and pretreatment effluent standards, and all other discharge criteria which are required or authorized by State or Federal law, and to derive the maximum public benefit by regulating the quality and quantity of wastewater discharged into the City of San Mateo's sewer system.

These Rules and Regulations provide a means for determining wastewater volumes, constituents and characteristics, the setting of charges and fees, and the issuance of permits to certain users.

Revenues derived from the application of these Rules and Regulations shall be used to defray the City's cost of operating and maintaining adequate wastewater collection and treatment systems and to provide sufficient funds for capital outlay, bond service costs, capital improvements, and depreciation. Charges and fees, as hereinafter referred to, are and have been established pursuant to City of San Mateo Ordinances.

These Rules and Regulations are not intended to be inconsistent with or repeal any provisions of said Ordinances or any amendments thereto, and in the event that any provision of these Rules and Regulations is found to be inconsistent with any provision of said Ordinances, the provisions of said Ordinances shall apply.

SECTION 1.02 Definitions.

1) ACT or "the Act." The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 U.S.C. 1251, et seq.

2) BOD or Biochemical Oxygen Demand. "BOD" or "biochemical oxygen demand" shall mean the measure of decomposable organic material in domestic or industrial wastewaters as represented by the oxygen utilized in decomposition over a period of incubation of five days at 20 degrees C. and as determined by the appropriate procedure in "Standard Methods".

3) COD or Chemical Oxygen Demand. "COD" or "chemical oxygen demand" shall mean the measure of chemically decomposable material in domestic or industrial wastewater as represented by the oxygen utilized as determined by the appropriate procedure described in "Standard Methods".

4) Discharger. "Discharger" shall mean any person who discharges or causes a discharge to a public sewer.

5) Dissolved Solids. "Dissolved solids" or "dissolved matter" shall mean the solid matter in solution in the wastewater and shall be obtained by evaporation of a sample from which all suspended matter has been removed by filtaration as determined by the procedures in "Standard Methods".

EXHIBIT B

6) Domestic Wastewater. "Domestic wastewater" shall mean the water-carried wastes and wastewater produced from non-commercial or non-industrial activities and which result from normal human living processes.

7) Effluent. "Effluent" shall mean the liquid outflow of any facility designed to treat, convey or retain wastewater.

8) Grab Sample. A sample which is taken from a waste stream on a one-time basis with no regard to the flow in the waste stream and without consideration of time.

9) Holding Tank Waste. Any waste from holding tanks such as vessels, chemical toilets, campers, trailers, septic tanks, and vacuum-pump tank trucks.

10) House Connection. "House connection" shall mean the sewer connecting the building sewer or building waste drainage system to the public sewer for the purpose of conveying domestic wastewater.

11) Industrial Connection Sewer. "Industrial connection sewer" shall mean the sewer connecting the building sewer or building waste drainage system to the public sewer for the purpose of conveying industrial wastewater.

12) Industrial Wastewater. "Industrial wastewater" shall mean all watercarried wastes and wastewater of the community excluding domestic wastewater and uncontaminated water, and shall include all wastewater from any producing, manufacturing, processing, institutional, commercial, agricultural, or other operation where the wastewater discharged includes significant quantities of wastes from non-human origin.

13) Inspector. "Inspector" shall mean a person authorized by the City Engineer to inspect wastewater generation, conveyance, processing, and disposal facilities.

14) Gravity Separation Interceptor. "Gravity separation interceptor" shall mean any facility designed, constructed and operated for the purpose of removing and retaining dangerous, deleterious or prohibited constituents from wastewater by differential gravity separation before discharge to the public sewer.

15) Lateral Sewer, Collecting Sewer, or Main Line Sewer. "Lateral sewer", "collecting sewer," or "main line sewer", shall mean the public sewer used to collect wastewater from house connection and industrial connection sewers and transport it to trunk sewers.

16) Peak Flow Rate. "Peak flow rate" shall mean the average rate at which wastewater is discharged to a public sewer during the highest 30 minute flow period in the preceding 12 months.

17) Pollution. The man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

18) Pre-Treatment or Treatment. The reduction of the amount of pollutants, or the alteration of the nature of pollutant properties in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing such chemical or biological processes, or process changes other means, except as prohibited by 40 CFR Section 403.6(d).

19) Public Sewer. "Public sewer" shall mean any sewer dedicated to public use and whose use is controlled by a public corporation.

20) Publically Owned Treatment Works (POTW). A treatment works as defined by Section 212 of the act, (33 U.S.C. 1292) which is owned in this instance by the City. This definition includes any sewers that convey wastewater to the POTW treatment plant, but does not include pipes, sewers or other conveyances not connected to a facility providing treatment. For the purposes of this ordinance, "POTW" shall also include any sewers that convey wastewaters to the POTW from persons outside

the (City) who are, contract or agreement with th (City) users of the (City's) POTW.

21) Sewage. "Sewage" shall mean wastewater.

22) Sewage Pumping Plant. "Sewage pumping plant" shall mean any facility designed and constructed to raise wastewater in elevation or to overcome head losses due to pipeline friction.

23) Sewerage. "Sewerage" shall mean any and all facilities used for collecting, conveying, pumping, treating and disposing of wastewater.

24) Sewerage System. "Sewerage system" shall mean a network of wastewater collection, conveyance, treatment and disposal facilities interconnected by sewers and owned by the City.

25) Standard Methods. "Standard methods" shall mean the current edition of "Standard Methods for the Examination of Water and Wastewater" as published by the American Public Health Association.

26) Suspended Solids. "Suspended solids" or "suspended matter" shall mean the insoluble solid matter suspended in wastewater that is separable by laboratory filtration in accordance with the procedures described in "Standard Methods."

27) Toxic Pollutant. Any pollutant or combination of pollutants listed as toxic in regulations promulgated by the administer of the Environmental Protection Agency under the provision of GWA 307(a) or other acts.

28) Trunk Sewer. "Trunk sewer" shall mean a sewer constructed, maintained and operated by the City that conveys wastewater to City's treatment facilities and into which lateral and collecting sewers discharge.

29) Uncontaminated Water. "Uncontaminated water" shall mean any wasted water of the community not contaminated or polluted with wastewater and which is suitable or could readily be made suitable for discharge to the municipal storm water drainage system.

30) Wastewater. The liquid and water-carried industrial or domestic wastes from dwellings, commercial buildings, industrial facilities, and institutions, together with may be present, whether treated or untreated, which is contributed into or permitted to enter the POTW.

SECTION 1.03 Abbreviations.

The following abbreviations shall have the designated meanings:

BOD - Biochemical Oxygen Demand
CFR - Code of Federal Regulations
COD - Chemical Oxygen Demand
EPA - Environmental Protection Agency
L - Liter
mg - Milligrams
mg/l - Milligrams per Liter
NPDES - National Pollutant Discharge Elimination System
POTW - Publicly Owned Treatment Works
SIC - Standard Industrial Classification
SWDA - Solid Waste Disposal Act, 42 U.S.C. 6901 et. seq.
USC - United States Code
TSS - Total Suspended Solids

ARTICLE II

REGULATIONS

SECTION 2.01 Approval of Plans for Sewerage Construction. No person, other than employees of the City, persons contracting to do work for the City, or maintenance workers of the City shall construct or cause to be constructed, or alter or cause to be altered, any public sewer, lateral sewer, house connection or industrial connection sewer, sewage pumping plant, pollution control plant, or other sewerage facility within the City where existing or proposed wastewater flows will discharge directly or indirectly to facilities of the City without first obtaining approval of sewerage construction plans from the City. No user shall contribute or cause to be contributed, directly or indirectly, any pollutant or wastewater which will interfere with the operation or performance of the POTW. These general prohibitions apply to all such users of a POTW whether or not the user is subject to national categorical pretreatment standards or any other national, state, or local pretreatment standards or requirements.

The applicant shall submit to the City for approval, construction plans and such specifications and other details as required to describe fully the proposed sewerage facility. The plans shall have been prepared under the supervision of and shall be signed by an engineer of suitable training registered in the State of California.

Plans for sewerage construction ~~shall conform~~ to the current design requirements and standard specifications of the City of San Mateo.

SECTION 2.02 Excessive Sewer Maintenance Expense. No person shall discharge or cause to be discharged to a public sewer any waste that creates a stoppage, plugging, breakage, any reduction in sewer capacity or any other damage to sewers or sewerage facilities of the City. Any sewer or sewerage maintenance expenses or any other expenses attributable thereto will be charged to the offending discharger by the City.

Any refusal to pay such maintenance expenses duly authorized by the City shall constitute a violation of these Rules and Regulations.

SECTION 2.03 Discharge of Rainwater or Uncontaminated Water Prohibited. No person shall discharge or cause to be discharged any rainwater, storm water, ground waste, street drainage, subsurface drainage, yard drainage, water from yard fountains, ponds or lawn sprays, or any other uncontaminated water into any sanitary sewerage facility which directly or indirectly discharges to facilities owned by the City.

SECTION 2.04 Prohibited Waste Discharges. In most cases, the concentration or amount of a particular constituent which will be judged to be excessive or unreasonable cannot be forseen but will depend on the results of technical determinations or the actions of regulatory agencies. The list of constituents which may be regulated provides specific limits only where they are now reasonably well established. The other constituents in the list are presented with the objective of enumerating the types of wastes which will be regulated from time to time.

Except as provided in Section 2.06, no person shall discharge or cause to be discharged to a public sanitary sewer the following wastes:

A) Any liquids, solids or gases which by reason of their nature or quantity are,

or may be, sufficient either alone or by interaction with other substances to cause fire or explosion or be injurious in any other way to the POTW or to the operation of the POTW. At no time, shall two successive readings on an explosion hazard meter, at any point in the system be more than five percent (5%) nor any single reading over ten percent (10%) of the lower explosive limit of the meter. Prohibited materials include, but are not limited to, gasoline, kerosene, naptha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides and sulfides and any other substances which the City, the State or EPA has notified the user is a fire hazard or a hazard to the system.

B) Any waste containing toxic or poisonous solids, liquids, or gases in such quantity that alone, or in combination with other waste substances, may create a hazard to humans, animals, or the local environment, interfere detrimentally with wastewater treatment processes, cause a public nuisance or cause any hazardous condition to occur in the sewerage system.

C) Any waste having a pH lower than 6.0 or having any corrosive or detrimental characteristic that may cause injury to wastewater treatment or maintenance personnel.

D) Any solids or viscous substances of such size or in such quantity that they may cause flow obstruction in the sewer or be detrimental to proper wastewater treatment plant operations. These objectionable substances include, but are not limited to, asphalt, dead animals, offal, ashes, sand, mud, straw, industrial process shavings, metal, glass, rags, feathers, tar, plastics, wood, whole blood, paunch manure, bones, hair and fleshings, entrails, paper dishes, paper cups, milk containers, or other similar paper products, either whole or ground.

E) Any rainwater, storm water, groundwater, street drainage, subsurface drainage, roof drainage, yard drainage, water from yard fountains, ponds or lawn sprays or any other uncontaminated water.

F) Any water added for the purpose of diluting wastes which would otherwise exceed applicable maximum concentration limitation.

G) Any nonbiodegradable cutting oils, commonly called soluble oil, which form persistent water emulsions.

H) Any excessive concentrations of nonbiodegradable oil, petroleum oil or refined petroleum products.

I) Any dispersed biodegradable oils and fats, such as lard, tallow or vegetable oil in excessive concentrations that would tend to cause adverse effects on the sewerage system.

J) Any unreasonably large amounts of undissolved or dissolved solids.

K) Any wastes with excessively high BOD, COD or decomposable organic content.

L) Any strongly odorous waste or waste tending to create odors.

M) Any wastes containing over 0.1 milligram/liter of dissolved sulfides.

N) Any wastes with a pH high enough to cause alkaline incrustations on sewer walls.

O) Any substance promoting or causing the promotion of toxic gases.

P) Any waste having a temperature of 120 degrees F. or higher.

Q) Any wastes requiring an excessive quantity of chlorine or other chemical compound used for disinfection purposes.

R) Any excessive amounts of chlorinated hydrocarbon or organic phosphorus type compounds.

S) Any excessive amount of deionized water, steam condensate or distilled water.

T) Any waste containing substances that may precipitate, solidify or become viscous at temperature between 50 degrees F. and 100 degrees F.

U) Any waste producing excessive discoloration of wastewater or treatment plant effluent.

V) Any garbage or waste that is not ground sufficiently to pass through a 3/8-inch screen.

W) Any wastes containing excessive quantities of iron, boron, chromium, phenols, plastic resins, copper, nickel, zinc, lead, mercury, camium, selenium, arsenic or any other objectionable materals toxic to humans, animals, the local environment or to biological or other wastewater treatment processes.

X) Any blow-down or bleed water from cooling towers or other evaporation coolers exceeding one-third of the makeup water.

Y) Any single pass cooling water.

Z) Any quantities of radioactive material wastes.

aa) Recognizable portions of the human anatomy.

No person shall discharge or cause to be discharged to any public sewer any wastes, if in the opinion of the City such wastes may have an adverse or harmful effect on sewers, maintenance personnel, wastewater treatment plant personnel or equipment, treatment plant effluent quality, public or private property, or may otherwise endanger the public, the local environment or create a public nuisance. The City, in determining the acceptability of specific wastes, shall consider the nature of the waste and the adequacy and nature of the collection, treatment and disposal system available to accept the waste.

The City shall from time to time prepare a list of the maximum permissible quantities or concentrations of certain constituents in industrial waste water flows and otherwise issue detailed directions for meeting the requirements of this Section.

SECTION 2.05 Hospital Wastes. Hospitals, clinics, offices of medical doctors, and convalescent homes:

A) May discharge, through a City approved grinder installation with inlet size and design features suitable for its intended use and so constructed that all particles pass through a maximum 3/8-inch opening, wastes of the following categories:

1) Wet organic kitchen wastes from food preparation and disposal but excluding all paper and plastic items.

2) Disposable hypodermic needles, syringes and associated articles following their use.

3) Infectious wastes, defined as:

a) Laboratory and surgical operating room wastes except as excluded in (B) (2) below.

b) Wastes from outpatient areas and emergency rooms similar to those included in (a) above.

c) Solid wastes generated in the rooms of patients who are not isolated because of a suspected or diagnosed communicable disease.

B) Shall not discharge to the sewer by any means:

1) Equipment, instruments, utensils and other materials of a disposable nature that may harbor or transmit pathogenic organisms and that are used in the rooms of patients having a suspected or diagnosed communicable disease which by the nature of the disease is required to be isolated.

2) Recognizable portions of the human anatomy.

3) Wastes excluded by other provisions of these Rules and Regulations except as specifically permitted in (A) above.

4) All solid wastes not included in (A) above.

Nothing in this Section shall be construed to limit the authority of the Health Officer of San Mateo to define wastes as being infectious and, with the concurrence of the City, to require that they not be discharged to the sewer.

SECTION 2.06 Limitations on Wastewater Strength. No person shall discharge wastewater containing in excess of:

0.1 mg/l arsenic
0.2 mg/l cadmium
2.0 mg/l copper
1.0 mg/l cyanide
1.0 mg/l lead
0.01 mg/l mercury
1.0 mg/l nickel
0.2 mg/l silver
0.5 mg/l total chromium
3.0 mg/l zinc

The City shall lower the concentration limitations for the above constituents if it is evident that the wastewater from any one or number of dischargers is causing the effluent from the Water Quality Control Plant to exceed the limits set forth in the City's NPDES permit.

SECTION 2.07 Pretreatment of Industrial Wastewaters. An industrial wastewater pretreatment system or device may be required by the City to treat industrial flows prior to discharge to the sewer when it is necessary to restrict or prevent the discharge to the sewer of certain waste constituents, to distribute more equally over a longer time period any peak discharges of industrial wastewaters or to accomplish any pretreatment result required by the City. All pretreatment systems or devices shall be approved by the City but such approval shall not absolve the industrial discharger of the responsibility of meeting any industrial effluent limitation required by the City. In special cases, the City may require construction of sewer lines by the discharger to convey certain industrial wastes to a specific City trunk sewer. All pretreatment systems judged by the City to require engineering design shall have plans prepared and signed by an engineer of suitable discipline licensed in the State of California.

Approval of plans and specifications of pretreatment facilities pursuant to this section shall not relieve the user from the responsibility of modifying such pretreat facilities as necessary to produce effluent therefrom complying with all pertinent provisions of this chapter, or any permit issued pursuant to this chapter, or any other requirements of law. Any proposed cessation of use, or alteration, modification or other change to approved pretreatment facilities or any portion thereof, or any change in method of operation thereof, shall be reported to the City prior to commencement thereof, and shall be subject to the approval of the City. Such approval may be withheld, granted, or granted subject to such terms, conditions or requirements as the City may reasonably require in order to ensure compliance with the provisions of this chapter, or any permit issued pursuant to the provisions of this chapter.

Normally a gravity separation interceptor, equalizing tank, neutralization chamber and control manhole will be required respectively to remove prohibited settleable and floatable solids, to equalize wastewater streams varying greatly in quantity and/or quality, to neutralize low or high pH flows and to facilitate inspection, flow measurement and sampling. Floor drains from commercial or manufacturing buildings, warehouses, or multi-use structures shall not discharge directly to the sewer, but shall first discharge to a gravity separation interceptor.

SECTION 2.08 Discharges from Portable Sanitation Facility. No person shall discharge or cause to be discharged directly or indirectly to a public sewer any wastes originating from recreational vehicles, boats, campers, mobile homes, trailers, portable toilets, chemical toilets, or any temporary sanitation facility except as designated by the City Engineer.

The City shall designate the location, time, quantity and quality of discharge of wastes originating from portable sanitation facilities.

ARTICLE III

DISCHARGE REPORT, WASTEWATER DISCHARGE PERMITS, AND ADMINISTRATION

SECTION 3.01 Discharge Reports. The City may require that any person discharging or proposing to discharge wastewater into a community sewer file a periodic Discharge Report. The Discharge Report may include, but not be limited to, nature of process, volume, rates of flow, mass emission rate, production quantities, hours of operations, number and classification of employees, or other information which relates to the generation of waste including wastewater discharge. Such reports may also include the chemical constituents and quantity of liquid or gaseous materials stored on site even though they are not normally discharged. In addition to Discharge Reports, the City may require information in the form of Wastewater Discharge Permit applications and self-monitoring reports.

SECTION 3.02 Permit for Industrial Wastewater Discharge. No person shall discharge or cause to be discharged any industrial wastewaters directly or indirectly to sewage facilities owned by the City without first obtaining a City permit for industrial wastewater discharge.

The permit for industrial wastewater discharge may require pretreatment of industrial wastewaters before discharge, restriction of peak flow discharges, discharge of certain wastewaters only to specified sewers, relocation of point of discharge, prohibition of certain wastewater components, restriction of discharge to certain hours of the day, payment of additional charges to defray increased cost to the City created by the wastewater discharge and such other conditions as may be required to effectuate the purpose of these Rules and Regulations.

No person shall discharge industrial wastewaters in excess of the quantity or quality limitations set by the Permit for Industrial Wastewater Discharge. Any person desiring to discharge wastewaters or use facilities which are not in conformance with the Industrial Wastewater Permit should apply to the City for an amended Permit.

State requirements and limitations on discharges shall apply in any case where they are more stringent than federal requirements and limitations or those in this ordinance.

Upon the promulgation of the federal categorical pretreatment standards for a particular industrial subcategory, the federal standards for a particular industrial subcategory, if more stringent than limitations imposed under this ordinance for sources in that subcategory, shall immediately supersede the limitations imposed under this ordinance. The City Engineer shall notify all affected users of the applicable reporting requirements under 40 CFR Section 403.12.

SECTION 3.035 Permit Conditions.

Wastewater Discharge Permits shall be expressly subject to all provisions of this ordinance and all other applicable regulations, user charges and fees established by the City. Permits may contain the following:

a) The unit charge or schedule of user charges and fees for the wastewater to be discharged to a community sewer;

b) Limits on the average and maximum wastewater constituents and characteristics.

c) Limits on average and maximum rate and time of discharge or requirements for

flow regulations and equalization.

d) Requirements for installation and maintenance of inspection and sampling facilities;

e) Specifications for monitoring programs which may include sampling locations, frequency of sampling, number, types and standards for tests and reporting schedule;

f) Compliance schedules.

g) Requirements for submission of technical reports or discharge reports.

h) Requirements for maintaining and retaining plant records relating to wastewater discharge as specified by the City, and affording City access thereto;

i) Requirement for notification of the City for any new introduction of wastewater constituents or any substantial change in the volume or character of the wastewater constituents being introduced into the wastewater treatment system.

j) Requirements for notification of slug discharges.

k) The permits duration shall be for a specified time period. The terms and conditions of the Permit may be subject to modification by the City during the term of the permit as limitations or requirements as identified are modified or other just cause exists. The user shall be informed of any proposed changes in his permit at least 30 days prior to the effective date of change. Any changes or new conditions in the permit shall include a reasonable time schedule for compliance.

SECTION 3.03 Permit Application.

Users seeking an Industrial Wastewater Discharge Permit shall complete and file with the City, an application in the form prescribed by the City, and accompanied by the applicable fees. The applicant may be required to submit, in units and terms appropriate for evaluation, the following information:

a) Name and address of applicant;

b) Volume of wastewater to be discharged;

c) Wastewater constituents and characteristics including but not limited to those mentioned in Article II as determined by a laboratory approved by the City.

d) Time and duration of discharge;

e) Average and 30-minute minute peak wastewater flow rates, including daily, monthly and seasonable variations if any;

f) Site plans, floor plans, mechanical and plubming plans and details to show all sewers and appurtenances by size, location and elevation.

g) Description of activities, facilities and process on the premises including types of materials which are or could be discharged;

h) Each product produced by type, amount, and rate of production;

i) Number and type of employees, and hours of work;

j) Any other information as may be deemed by the City to be necessary to evaluate the permit application.

SECTION 3.04 Transfer of a Permit.

Wastewater Discharge Permits shall be issued to a specific user for a specific operation. A Wastewater Discharge Permit shall not be reassigned or transferred or sold to a new owner, new user, different premises, or a new or changed operation.

SECTION 3.045 Compliance Report

Within 90 days following the date for final compliance with applicable pretreatment standards or, in the case of a new source, following commencement of the introduction of wastewater into the POTW, any user subject to pretreatment standards and requirements shall submit to the City a report indicating the nature and concentration of all pollutants in the discharge from the regulated process which are limited by pretreatment standards and requirements and the average and maximum daily flow for these process units in the user facility which are limited by such pretreatment standards or requirements. The report shall state whether the applicable pretreatment standards or requirements are being met on a consistent basis and, if not, what measures are being taken to bring the user into full compliance with all applicable pretreatment standards or requirements. This statement shall be signed by an authorized representative of the industrial user, and certified to by a qualified professional.

SECTION 3.046 Periodic Compliance Report

1. Any user subject to a pretreatment standard, after the compliance date of such pretreatment standard, or, in the case of a new source, after commencement of the discharge into the POTW, shall submit to the City during the months of June and December, unless required more frequently by the City, a report indicating the nature and concentration, of pollutants in the effluent which are limited by such pretreatment standards. In addition, this report shall include a record of all daily flows which during the reporting period exceeded the average daily flow.

2. The City may impose mass limitations on users which are using dilution to meet applicable pretreatment standards or requirements, or in other cases where the imposition of mass limitations are appropriate. In such cases, the compliance report shall indicate the mass of pollutants regulated by pretreatment standards in the users effluent. These reports shall contain the results of sampling and analysis of the discharge, including the flow and the nature and concentration, or production and mass where requested by the City, of pollutants contained therein which are limited by the applicable pretreatment standards. The frequency of monitoring shall be prescribed in the applicable pretreatment standard. All analysis and sampling shall be performed in accordance with procedures established by the City.

SECTION 3.05 Administration.

Except as otherwise provided herein, the City shall administer, implement, and enforce the provisions of these rules and regulations. Any powers granted to the City may be delegated by the City to persons acting in the beneficial interest of, or employ, of the City.

SECTION 3.06 Monitoring Facilities.

The City shall require to be provided and operated at the user's own expense, monitoring facilities to allow inspection, sampling, and flow measurement of the building sewer and/or internal drainage systems. The monitoring facility should normally be situated on the user's premises, but the City may, when such a location would be impractical or cause undue hardship on the user, allow the facility to be constructed in the public street or sidewalk area and located so that it will not be obstructed by landscaping or parked vehicles.

There shall be ample room in or near such sampling manhole or facility to allow accurate sampling and preparation of samples for analysis. The facility, sampling, and measuring equipment shall be maintained at all times in a safe and proper operating condition at the expense of the user.

Whether constructed on public or private property, the sampling and monitoring facilities shall be provided in accordance with the City's requirements and all applicable local construction standards and specifications. Construction shall be completed within 90 days following written notification by the City.

SECTION 3.07 Inspection and Sampling.

The City shall inspect the facilities of any User to ascertain whether the purpose of this Ordinance is being met and all requirements are being complied with. Persons or occupants of premises where wastewater is created or discharged shall allow the City or their representative ready access at all reasonable times to all parts of the premises for the purposes of inspection, sampling, records examination or in the performance of any of their duties. The City, Approval Authority and (where the NPDES State is the Approval Authority) the EPA shall have the right to set up on the User's property such devices as are necessary to conduct sampling inspection, compliance monitoring and/or metering operations. Where a User has security measures in force which would require proper identification and clearance before entry into their premises, the User shall make necessary arrangements with their security guards so that upon presentation of suitable identification, personnel from the City, Approval Authority and EPA will be permitted to enter, without delay, for the purposes of performing their specific responsibilities.

SECTION 3.08 Pretreatment.

Users shall provide necessary wastewater treatment as required to comply with this Ordinance and shall achieve compliance with all Federal Categorical Pretreatment Standards within the time limitations as specified by the Federal Pretreatment Regulations. Any facilities required to pretreat wastewater to a level acceptable to the City shall be provided, operated, and maintained at the User's expense. Detailed plans showing the pretreatment facilities and operating procedures shall be submitted to the City for review, and shall be acceptable to the City before construction of the facility. The review of such plans and operating procedures will in no way relieve the User from the responsibility of modifying the facility

as necessary to produce an effluent acceptable to the City under the provisions of this Ordinance. Any subsequent changes in the pretreatment facilities or method of operation shall be reported to and be acceptable to the City prior to the User's initiation of the changes.

All records relating to compliance with Pretreatment Standards shall be made available to officials of the EPA or Approval Authority upon request.

SECTION 3.09 Confidential Information.

Information and data on a User obtained from reports, questionnaires, permit applications, permits and monitoring programs and from inspections shall be available to the public or other governmental agency without restriction unless the User specifically requests and is able to demonstrate to the satisfaction of the City that the release of such information would divulge information, processes or methods of production entitled to protection as trade secrets of the User.

When requested by the person furnishing a report, the portions of a report which might disclose trade secrets or secret processes shall not be made available for inspection by the public but shall be made available upon written request to governmental agencies for uses related to this Ordinance, the National Pollutant Discharge Elimination System (NPDES) Permit, State Disposal System Permit and/or the Pretreatment Programs; provided, however, that such portions of a report shall be available for use by the State or any State Agency in judicial review of enforcement proceedings involving the person furnishing the report. Wastewater constituents and characteristics will not be recognized as confidential information.

Information accepted by the City as confidential shall not be transmitted to any governmental agency or to the general public by the City until and unless a ten-day notification is given to the User.

SECTION 3.1 - Fees.

3.15 Purpose.

It is the purpose of this sect-on to provide for the recovery of costs from users of the City's Wastewater Disposal System for the implementation of the Program established herein. The applicable charges or fees shall be set forth in the City's schedule of charges and fees which is adopted by resolution, and is subject to periodic change to reflect changes in cost of operating the program.

3.20 Charges and Fees.

The City may adopt charges and fees which may include:

a) Fees for reimbursement of costs of setting up and operating the City's Pretreatment Program;

b) Fees for monitoring, inspections and surveillance procedures;

c) Fees for reviewing accidental discharge procedures and construction;

d) Fees for permit applications;

e) Fees for filing appeals;

f) Fees for consistent removal (by the City) of pollutants otherwise subject to federal pretreatment standards.

g) Other fees as the City may deem necessary to carry out the requirements contained herein; these fees relate solely to the matters covered by this ordinance and are separate from all other fees chargeable by the City.

ARTICLE IV

ENFORCEMENT

SECTION 4.01 Accidental Discharges.

SECTION 4.01.1 Notification of Discharge. Dischargers shall notify the City immediately upon accidentally discharging wastes in violation of these Rules and Regulations to enable countermeasures to be taken by the City to minimize damage to the community sewer, treatment facility, treatment processes and the receiving waters.

This notification shall be followed within 15 days of the date of occurrence by a detailed written statement describing the causes of the accidental discharge and the measures being taken to prevent future occurrence.

Such notification will not relieve dischargers of liability for any expense, loss or damage to the sewer system, treatment plant, or treatment process, or for any fines imposed on the City on account thereof under Section 13350 of the California Water Code or for violations of Section 5650 of the California Fish and Game Code.

SECTION 4.01.2 Notices to Employees. In order that employees of dischargers be informed of City requirements, dischargers shall make available to their employees copies of these Rules and Regulations together with such other wastewater information and notices which may be furnished by the City, from time to time, directed toward more effective water pollution control. A notice shall be furnished and permanently posted on the discharger's bulletin board advising employees who to call in case of an accidental discharge in violation of Rules and Regulations.

SECTION 4.01.3 Preventive Measures. Any direct or indirect connection or entry point for deleterious wastes to the discharger's plumbing or drainage system should be eliminated. Where such action is impractical or unreasonable, the user should appropriately label such entry points to warn against discharge of such wastes in violation of these Rules and Regulations.

SECTION 4.02 Enforcement. The City may suspend a permit for industrial wastewater discharge when such suspension is necessary in order to stop an actual or threatened discharge which presents or may present an imminent or substantial endangerment to the health or welfare of persons, to the environment, to the City's sewerage system, causes interference to the City's Water Quality Control Plant or causes the City to violate any condition of its NPDES Permit.

Any discharger notified of a suspension of his industrial wastewater permit shall immediately cease and desist the discharge of all industrial wastewater to the sewerage system. In the event of a failure of the discharger to comply voluntarily with the suspension, the City shall take such steps as deemed necessary, including immediate severance of the sewer connection, to prevent or minimize damage to the City's Water Quality Control Plant system or endangerment to any individuals.

The City shall reinstate the permit for industrial wastewater discharge upon proof of the elimination of the non-complying discharger. A detailed written statement

submitted by the User describing the causes of the harmful contribution and the measures taken to prevent any future occurrence shall be submitted to the City within 15 days of the date of the occurrence.

SECTION 4.03 Revocation of Permit. Any User who violates the following conditions of this Ordinance or applicable state and federal regulations is subject to having his permit revoked in accordance with the procedures of Section 4 of this Ordinance:

a) Failure of a User to factually report the wastewater constituents and characteristics of his discharge;

b) Failure of the User to report significant changes in operations or wastewater constituents and characteristics;

c) Refusal of reasonable access to the User's premises for the purpose of inspection or monitoring; or,

d) Violation of conditions of the permit.

SECTION 4.04 Notification of Violation. Whenever the City finds that any User has violated or is violating this Ordinance, wastewater contribution permit, or any prohibition, limitation of requirements contained herein, the City may serve upon such person a written notice stating the nature of the violation. Within 30 days of the date of the notice, a plan for the satisfactory correction thereof shall be submitted to the City by the User.

SECTION 4.05 Show Cause Hearing.

4.05.1 The City may order any User who causes or allows an unauthorized discharge to enter the Water Quality Control Plant to show cause before the City Council why the proposed enforcement action should not be taken. A notice shall be served on the User specifying the time and place of a hearing to be held by the City Council regarding the violation, the reasons why the action is to be taken, the proposed enforcement action, and directing the User to show cause before the City Council why the proposed enforcement action should not be taken. The notice of the hearing shall be served personally or by registered or certified mail (return receipt requested) at least (ten) days before the hearing. Service may be made on any agent or officer of a corporation.

4.05.2 The City Council may itself conduct the hearing and take the evidence, or may designate any of its members or any officer or employee of the (assigned department) to:

a) Issue in the name of the City Council notices of hearings requesting the attendance and testimony of witnesses and the production of evidence relevant to any matter involved in such hearings.

b) Take the evidence;

c) Transmit a report of the evidence and hearing, including transcripts and other evidence, together with recommendations to the City Council for action thereon

405.3 At any hearing held pursuant to this Ordinance, testimony taken must be under oath and recorded stenographically. The transcript, so recorded, will

be made available to any member of the public or any party to the hearing upon payment of the usual charges thereof.

4.05.4 After the City Council has reviewed the evidence, it may issue an order to the User responsible for the discharge directing that, following a specified time period, the sewer service be discontinued unless adequate treatment facilities, devices or other related appurtenances shall have been installed on existing treatment facilities, devices or other related appurtenances are properly operated. Further orders and directives as are necessary and appropriate may be issued.

SECTION 4.06 Legal Action. If any person discharges sewage, industrial wastes or other wastes into the City's wastewater disposal system contrary to the provisions of this Ordinance, Federal or State Pretreatment Requirements, or any order of the City, the City Attorney may commence an action for appropriate legal and/or equitable relief in the appropriate court.

SECTION 4.07 Submission of Time Schedule. When the City finds that a discharge of wastewater has been taking place, in violation of prohibitions or limitations prescribed in these Rules and Regulations, or wastewater source control requirements, effluent limitations or pretreatment standards, or the provisions of a Wastewater Discharge Permit, the City may require the User to submit for approval a detailed time schedule of specific actions which the User shall take in order to prevent or correct a violation of requirements.

SECTION 4.08 Penalty for Violation. Any person violating any provision of these Rules and Regulations, including the failure to pay any fees or charges imposed hereby, or any condition of a permit or plan approval issued pursuant thereto, is guilty of a misdemeanor punishable by a fine of not to exceed $500, and/or imprisonment not to exceed 6 months or both.

SECTION 4.09 Inspectors. Adequate identification will be provided by the City for all inspectors and other authorized personnel, and these persons shall identify themselves when entering any property for inspection purposes or when inspecting the work of any contractor.

Inspection of every facility that is involved directly or indirectly with the discharge of wastewater in the City's sewerage systems may be made by the City as deemed necessary. These facilities shall include but not be limited to sewers; sewage pumping plants; pollution control plants; all industrial processes; industrial wastewater generation conveyance and pretreatment facilities, devices and connection sewers; and all similar sewerage facilities. Inspections may be made to determine that such facilities are maintained and operated properly and are adequate to meet the provisions of these Rules and Regulations.

Access to all of the above facilities or to other facilities directly or indirectly connected to the City's sewerage systems shall be given to authorized personnel of the City at all reasonable times including those occasioned by emergency conditions. Any permanent or temporary obstruction to easy access to the sewerage facility to be inspected shall promptly be removed by the facility user or owner at the written or verbal request of the City and shall not be replaced.

No person shall interfere with, delay, resist or refuse entrance to an authorized city's inspector attempting to inspect any wastewater generation, convenance or treatment facility connected directly or indirectly to the city's sewerage systems.

ARTICLE V

INDUSTRIAL WASTEWATER TREATMENT SURCHARGE

SECTION 5.01 Surcharge Formula. An industrial wasterwater treatment surcharge shall be paid to the City annually, within six months of the end of the fiscal year in which charges accrue, by those industrial wastewater discharges whose contribution of flow, chemical oxygen demand, suspended solids, or peak flow create costs in excess of their annual sewer service charge. The treatment surcharge shall be based on the City's sanitary sewerage system's total maintenance, operation and capital expenditures for providing industrial wastewater collection, treatment and disposal services in the fiscal year for which charges are assessed as described in section 5.02.

The annual industrial wastewater treatment surcharge shall be computed by the following formula:

$$\text{Surcharge} = a\,(V) + b\,(COD) + c(SS) + dM(P) - \text{Sewer Service Charge}$$

Where:

Surcharge = Net annual industrial wastewater treatment surcharge in dollars. No refund will be made if a negative number results.

V = Total annual volume of flow, in millions of gallons.

COD = Total annual discharge of chemical oxygen demand, in thousands of pounds.

SS = Total annual discharge of suspended solids in thousands of pounds.

P = Peak discharge rate over a 30-minute period, occurring between the hours of 8:00 a.m. and 10:00 p.m. and determined by averaging a maximum of 10 substantiated peak flow rate measurements of the accrual year in gallons per minute. Values of "P" less than 10 gallons per minute shall be considered equal to zero.

A = Average discharge rate, determined by dividing "V" by the total annual hours of operation or working time of the industrial discharger, in gallons per minute (see M).

a,b,c,d = Unit charge rates adopted annually by the City of San Mateo based upon the projected annual costs for wastewater collection, treatment, and disposal, in dollars per unit as described in Section 5.02.

M = A multiplying factor accounting for increased city costs due to the ratios of industrial discharger peak - average flow rates (P/A); Factor "M" is obtained from Figure 1. ($M = 2.50 \log P/A$)

Sewer Service Charge = The annual sewer service charge paid to the City during the accrual year.

SECTION 5.02. Establishment of unit charge rates for industrial wastewater treatment surcharge.

The charge rates "a", "b", "c" and "d" in the industrial wastewater treatment surcharge shall be established annually by the procedure described herein.

Appropriate unit charge rate parameters for flow, COD and suspended solids - respectively designated "Q" (in dollars per million gallons), "b" (in dollars per 1000 pounds of COD) and "c" (in dollars per 1000 pounds of suspended solids) - shall be determined by the following method:

(A) The total capital outlay for construction of sewerage facilities including debt principal and interest over the next fiscal year less anticipated grant funds shall be estimated and distributed among the three parameters in accordance with the City's determination of the percentage of the total existing capital facilities of the sewerage system predominantly related to each parameter.

(B) The total operation and maintenance costs of the system shall be estimated for the next fiscal year and distributed among the three parameters in accordance with City's determination as to which charges are predominantly related to each parameter.

(C) The sum of the capital costs and operation and maintenance costs determined for each parameter in (A) and (B) above shall be divided by the projected one year total volume of wastewater and weight of COD and suspended solids to be treated by the sewerage system in order to obtain the unit charge rates "a", "b", "c", for the system.

The unit charge rate related to peak flow rate and designated "d" (in dollars per gallon per minute of peak flow) shall be determined by the following method:

(A) The total non-depreciated value of the historic capital investment in the serving (Collection and Treatment) system shall be divided by the total peak hydraulic capacity of the treatment facilities to determine a unit cost per million gallons per day of peak flow capacity.

(B) The unit cost determined in (A) above shall be amortized over thirty (30) years at seven (7) percent interest and converted to a gallon per minute basis to obain the unit charge rate "d".

071055

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AMENDMENT TO SANITARY SEWAGE AGREEMENT BETWEEN THE TOWN OF HILLSBOROUGH, CITY OF SAN MATEO, CRYSTAL SPRINGS COUNTY SANITATION DISTRICT, AND THE COUNTY OF SAN MATEO

This amendment of the Sanitary Sewage Agreement entered into on July 18, 1989, by and among the TOWN of HILLSBOROUGH, a municipal corporation in the County of San Mateo, State of California, hereinafter called "Town", the CITY OF SAN MATEO, a municipal corporation in the County of San Mateo, State of California, hereinafter called "City"; the CRYSTAL SPRINGS COUNTY SANITATION DISTRICT, a sanitation district in the County of San Mateo, State of California, hereinafter called "District"; and the COUNTY OF SAN MATEO, a political subdivision of the State of California, hereinafter called "County", and is made effective as of September 28, 2010, and is based on the following:

RECITALS:

WHEREAS, the parties have previously entered into agreements dating back to 1955 which set forth their arrangements and relationships regarding the discharge, pumping, transmission, and treatment of sewage; and

WHEREAS, the parties' most recent agreement is the Sanitary Sewage Agreement made and entered into July 18, 1989 (the "1989 Agreement"); and

WHEREAS, the parties are subject to the Cease and Desist Order R2-2009-0020 (the "CDO") issued by the California Regional Water Quality Control Board, which requires that the parties undertake certain actions, studies, and projects to improve the performance and capacity of the sewer facilities that are subject to the 1989 Agreement; and

WHEREAS, the parties now wish to amend the provisions of the 1989 Agreement as they relate to the parties' obligations with respect to the allocation of costs between the parties for the limited purpose of allocating among themselves the costs of the environmental study and design of the Crystal Springs/El Cerrito Trunk Sewer Improvements required by the CDO and to enter into this amendment to establish those obligations; and

WHEREAS, the parties anticipate amending the 1989 Agreement or executing a new, comprehensive agreement prior to beginning construction of the Crystal Springs/El Cerrito Trunk Sewer Improvements; and

WHEREAS, until a new or further amended agreement is adopted, the parties must allocate costs associated with the environmental study and design related to the Crystal Springs/El Cerrito Trunk Sewer Improvements so that these improvements can be completed within the time allotted by the CDO;

NOW, THEREFORE, IT IS HEREBY AGREED as follows:

Section 1. Crystal Springs/El Cerrito Trunk Sewer Improvements

The CDO Provision I.A. requires that by September 11, 2015, the Crystal Springs/El Cerrito Trunk Sewer improvements be completed. The scope of the required work is one continuous segment of sewer trunk, approximately four miles long, at an estimated total project cost of $21,000,000. The upstream limit of work is the intersection of Crystal Springs Road and Crystal Springs Terrace in the Town of Hillsborough, and the down stream terminus is at the intersection of Sunnybrae Boulevard and Birch Avenue in the City of San Mateo.

The Crystal Springs/El Cerrito Trunk Sewer Improvements project consists of two segments:

a. *Crystal Springs/El Cerrito Trunk Sewer Phase II (the "Phase II Project").* The Town of Hillsborough serves as the lead agency for the Phase II Project. This project, which is approximately two miles in length, is currently at 95% design. The Town of Hillsborough has arranged for funding of the project through the State Revolving Fund (SRF) Loan Program. Environmental consultants were engaged on November 9, 2009 to conduct cultural resources investigations and to update the 2002 environmental study previously prepared for the Town for both this segment and an upstream sewer segment (Phase I), which is now complete. The estimated cost of this environmental work and the design work is approximately $400,000.

b. *El Cerrito Relief Line Project (the "Relief Line Project").* The City of San Mateo serves as the lead agency for the Relief Line Project, which is currently in preliminary design. This trunk sewer, also approximately two miles in length, will serve as a bypass to an existing sewer trunk. The project will be submitted for funding by the State Revolving Fund Loan Program by the City of San Mateo. A Request for Proposals (RFP) for an environmental consultant was issued in October 2009. A Request for Proposals (RFP) for design of the Relief Line Project was issued in July 2010. The estimated cost of environmental study and design for the Relief Line Project is approximately $1,000,000.

Section 2. Financial Participation

The City, County, District and Town are each proportionally financially responsible for the installation and replacement of sewer conveyance systems to the extent of the proportional share of the Peak Wet Weather Flow (PWWF) generated from each agency's sewage area.

For the purpose of allocating each party's proportional share of the environmental study and design costs related to the CDO-mandated capital improvements (i.e., the Phase II Project and the Relief Line Project), the PWWF estimated in the May 2010 *Sewer System Flow Monitoring and Hydraulic Modeling* study authored by RMC Water and Environment, will be used. This study was jointly commissioned by the City, County, District and Town. Based on the conclusions in the RMC study, each party's share of the environmental and design consulting costs described in this amendment, based on the PWWF, are as follows:

City:	6%
County:	6%
District:	37%
Town:	51%

Section 3. Financial Commitments

a. The Phase II Project.

Town has advanced, or will advance the costs of the environmental and design work on the Phase II Project and shall invoice each party based on actual project costs for that party's proportional share, as set forth in Section 2 above. All invoices are due and payable within 30 days. Any invoice not paid within 60 days shall bear interest at the rate of 10% per annum.

b. The Relief Line Project

Funding for the environmental study and design work for the Relief Line Project shall be provided as follows:
Prior to the City's execution of any contract with an environmental and/or design consultant, each party shall deposit with the City its respective proportional share of the estimated cost of the phase of the environmental study and/or design work (e.g. 35% design) to be performed by the consultant. Such deposit shall be made within 10 business days of request for funding sent by the City to each party. Such funding requests shall include an itemized description of the project costs for which the request is made, along with the calculation showing each party's proportional share of the project costs for the environmental study and/or design for which the request is made. In calculating each party's share of the consultant's work that must be deposited, the City shall apply the percentages stated in section 2 above. Payments to the consultant shall be made by City out of the funds deposited by the parties. It is anticipated that the City will proceed with the environmental work and design work to accomplish 35% complete design immediately upon execution of this amendment and deposit by the parties of the funds associated with this work. The environmental and 35% complete design work are estimated to cost $90,000 and $457,000, respectively. If, after completion of the work performed by any consultant, there remain funds on deposit for such work, the City shall return the funds to the parties based on their respective proportional shares of funds deposited with the City. If the funds on deposit are exhausted and design and/or

environmental review work for the Relief Line Project remains to be done, the City shall invoice each party according to the proportional share of liability for the project's environmental study and design costs, as set forth in Section 2. Any such invoice not paid within 60 days shall bear interest at the rate of 10% per annum.

Section 4. Limitations

This amendment shall not affect the allocation of costs for treatment, capital improvements, or other services under the 1989 Agreement. The parties shall continue to share costs for those services in accordance with the procedures set forth in the 1989 Agreement until it is amended or replaced.

Except as modified herein, the terms of the 1989 Agreement shall continue in full force and effect.

ATTEST:

Norma Gomez
City Clerk

CITY OF SAN MATEO

John Lee
Mayor

APPROVED AS TO FORM:

Shawn M. Mason
City Attorney

ATTEST:

Clerk of the Board

COUNTY OF SAN MATEO

Richard S. Gordon
President, Board of Supervisors

APPROVED AS TO FORM:

JOHN D. NIBBELIN, DEPUTY
County Counsel FOR MICHAEL P. MURPHY

Certificate of Delivery
(Government Code Section 25103)
I certify that a copy of the original document filed in the Office of the Clerk of the Board of Supervisors of San Mateo County has been delivered to the President of the Board of Supervisors.

Deputy Clerk of the Board of Supervisors

ATTEST:

Clerk of the District

CRYSTAL SPRINGS COUNTY
SANITATION DISTRICT

Richard S. Gordon
President, Board of Supervisors,
Ex-Officio Governing Board of the District

APPROVED AS TO FORM:

JOHN D. NIBBELIN, DEPUTY, for
District Counsel MICHAEL P. MURPHY

Certificate of Delivery
(Government Code Section 25103)
I certify that a copy of the original document filed in
the Office of the Clerk of the Board of Supervisors o
San Mateo County has been delivered to the
President of the Board of Supervisors.

Deputy Clerk of the Board of Supervisors

ATTEST:

City Clerk

TOWN OF HILLSBOROUGH

City Manager

APPROVED AS TO FORM:

Town Attorney

RESOLUTION NO. 071055

BOARD OF SUPERVISORS, COUNTY OF SAN MATEO, STATE OF CALIFORNIA ACTING AS THE COUNTY OF SAN MATEO AND THE GOVERNING BOARD OF THE CRYSTAL SPRINGS COUNTY SANITATION DISTRICT

* * * * * *

RESOLUTION AUTHORIZING THE PRESIDENT OF THE BOARD TO EXECUTE AN AMENDMENT TO THE SANITARY SEWAGE AGREEMENT AMONG THE TOWN OF HILLSBOROUGH, CITY OF SAN MATEO, CRYSTAL SPRINGS COUNTY SANITATION DISTRICT, AND THE COUNTY OF SAN MATEO FOR THE ENVIRONMENTAL STUDY AND DESIGN COSTS ASSOCIATED WITH IMPROVEMENTS TO THE CRYSTAL SPRINGS/EL CERRITO TRUNK SEWER TRANSMISSION LINES.

RESOLVED, by the Board of Supervisors of the County of San Mateo, State of California, acting as the County of San Mateo and the governing board of the Crystal Springs County Sanitation District, that

WHEREAS, the Town of Hillsborough (Hillsborough), City of San Mateo (San Mateo), Crystal Springs County Sanitation District (District), and the County of San Mateo (County) entered into a sanitary sewage agreement dated July 18, 1989 (1989 Agreement), which sets forth the parties' respective rights and obligations with respect to the use of sewage conveyance and treatment facilities jointly used by Hillsborough, San Mateo, District, and County; and

WHEREAS, the 1989 Agreement specifies that expenses related to repairs and upgrades to jointly used facilities will be proportionally shared based on each party's contribution of flow to the jointly used sewage conveyance and treatment facilities; and

WHEREAS, this Board has reviewed and considered said Amendment and the recommendation of the Director of Public Works and concurs with the Director's recommendation.

NOW THEREFORE, IT IS HEREBY DETERMINED AND ORDERED as follows:

The President of this Board of Supervisors be, and is hereby, authorized and directed to execute said Amendment for and on behalf of both the District and the County and signature of the Clerk of this Board shall attest thereto.

* * * * * *

Regularly passed and adopted this 28th day of September, 2010.

AYES and in favor of said resolution:

Supervisors: MARK CHURCH

CAROLE GROOM

RICHARD S. GORDON

ROSE JACOBS GIBSON

ADRIENNE J. TISSIER

NOES and against said resolution:

Supervisors: NONE

Absent Supervisors: NONE

Richard S. Gordon
President, Board of Supervisors
County of San Mateo
State of California

Certificate of Delivery

I certify that a copy of the original resolution filed in the Office of the Clerk of the Board of Supervisors of San Mateo County has been delivered to the President of the Board of Supervisors.

Marie L. Peterson
Marie L. Peterson, Deputy
Clerk of the Board of Supervisors

SECOND AMENDMENT TO SANITARY SEWAGE AGREEMENT BETWEEN THE TOWN OF HILLSBOROUGH, CITY OF SAN MATEO, CRYSTAL SPRINGS COUNTY SANITATION DISTRICT, AND THE COUNTY OF SAN MATEO

This Second Amendment to the Sanitary Sewage Agreement entered into as of July 18, 1989 by and among the TOWN of HILLSBOROUGH, a municipal corporation in the County of San Mateo, State of California, hereinafter called "Town", the CITY OF SAN MATEO, a municipal corporation in the County of San Mateo, State of California, hereinafter called "City"; the CRYSTAL SPRINGS COUNTY SANITATION DISTRICT, a sanitation district in the County of San Mateo, State of California, hereinafter called "District"; and the COUNTY OF SAN MATEO, a political subdivision of the State of California, hereinafter called "County" is made effective as of April 23, 2013, 2013 and is based on the following:

RECITALS:

WHEREAS, the parties have previously entered into agreements dating back to 1955 which set forth their arrangements and relationships regarding the discharge, pumping, transmission, and treatment of sewage; and

WHEREAS, the parties' most recent agreement is the Sanitary Sewage Agreement made and entered into July 18, 1989 (the "1989 Agreement"); and

WHEREAS, the parties are subject to the Cease and Desist Order R2-2009-0020 (the "CDO") issued by the California Regional Water Quality Control Board, which requires that the parties undertake certain actions, studies, and projects to improve the performance and capacity of the sewer facilities that are subject to the 1989 Agreement; and,

ORIGINAL

WHEREAS, the parties previously amended the 1989 Agreement to provide for the allocation of costs for the environmental review and preliminary design work for the Crystal Springs/El Cerrito Trunk Sewer Improvements required by the CDO, as further described below (the "Improvements"), and agreed to allocate these costs on the basis of peak wet weather flows (the "2010 Amendment"); and,

WHEREAS, one or more of the parties intend to fund their share of the cost of constructing the Improvements with loan proceeds from the Clean Water State Revolving Fund Program administered by the State Water Resources Control Board, and, as a result, additional environmental review (referred to below as "CEQA Plus" environmental review) will be required; and,

WHEREAS, the parties desire to further amend the provisions of the 1989 Agreement to provide for the allocation of costs for completing the final design and "CEQA Plus" environmental review of the Improvements and reimbursing staff costs, and to establish the roles and responsibilities of the parties for completion of the final design and environmental review, and to agree to allocate these costs on the basis of peak wet weather flows, and to enter into this amendment to establish those obligations; and,

WHEREAS, certain elements incorporated into the Improvements may provide greater benefit to certain parties of the agreement and each party agrees to pay the full construction costs of elements which are to their sole benefit; and;

WHEREAS, the parties anticipate amending the 1989 Agreement or executing a new, comprehensive agreement prior to beginning construction of the Crystal Springs/El Cerrito Trunk Sewer Improvements; and,

WHEREAS, until a new or further amended agreement is adopted, the parties must allocate costs associated with the final design and "CEQA Plus" environmental review related to Crystal Springs/El Cerrito Trunk Sewer Improvements so that these improvements can be completed within the time allotted by the CDO;

NOW, THEREFORE, IT IS HEREBY AGREED as follows:

Section 1. Definitions

The following definitions apply to terms used in this amendment:

"CEQA Plus"- means the scope and process of environmental review required by the State Water Resources Control Board application process for State Revolving Fund Loans.

"days" – means calendar days unless otherwise stated

"direct project costs" – includes all costs incurred by the lead agency specifically for the design and environmental work necessary to implement the project Improvements, including professional consultant costs, and staff costs of the lead agency. In addition, direct project costs includes any liability the lead agency incurs in prosecuting the project work and any claims adjusting, claims investigation, and costs incurred in defending claims (including reasonable attorney fees) brought by any contractor or third party for damages arising out of the prosecution of the project work.

"lead agency" – the agency responsible for performance of tasks required to implement and complete the design and environmental review of Improvements, or a portion thereof, on behalf of all parties, including tasks such as obtaining and overseeing professional services.

"partner agency" – those agencies not serving as lead agency

"staff costs" – the actual costs incurred by lead agency staff for hours spent in direct participation in activities to implement the planning, design, and environmental review of the Improvements.

Section 2. Crystal Springs/El Cerrito Trunk Sewer Improvements

The CDO Provision I.A. requires that the Crystal Springs/El Cerrito Trunk Sewer Improvements (the "Improvements") be completed by September 11, 2015. The scope of the required work is one continuous segment of sewer trunk, approximately four miles long, with an estimated total project cost of $27,000,000 including design, environmental review, construction and staff costs. The upstream limit of work is the intersection of Crystal Springs Road and Woodridge Road in the Town of Hillsborough, and the downstream terminus is at the intersection of Sunnybrae Boulevard and South Idaho Street in the City of San Mateo.

The Improvements consist of two segments:

a. *Crystal Springs/El Cerrito Trunk Sewer Phase II (the "Phase II Project").* The upstream limit of the Phase II Project is located at the intersection of Crystal Springs Road and Woodridge Road in the Town of Hillsborough, and the downstream limit is the point of connection with the City of San Mateo's El Cerrito Meter at the City of San Mateo city limits near the intersection of El Cerrito Avenue and Gramercy Drive. The Phase II Project is approximately two miles in length, and will increase the capacity of the sewer trunk lines located in Crystal Springs Road and El Cerrito Avenue. The estimated cost of the Phase II project is $12,000,000 including design, environmental review, construction and staff costs.

b. *El Cerrito Relief Line Project (the "Relief Line Project").* The upstream limit of the Relief Line Project is the point of connection of the Phase II project with the City of San Mateo's El Cerrito Meter at the City of San Mateo city limits near the intersection of El Cerrito Avenue and Gramercy Drive, and the downstream limit is located at the intersection of Sunnybrae Boulevard and South Idaho Street in the City of San Mateo. The Relief Line Project is approximately two miles in length and involves altering the current sewer

system to accept additional flows from the Crystal Springs / El Cerrito trunk line during wet weather. The estimated cost of the Relief Line project is $15,000,000 including design, environmental review, construction and staff costs

Section 3. Financial Participation

A. All financial participation requirements established in the 2010 Amendment shall remain in force and are not modified by this Amendment.

B. The City, County, District and Town shall each be responsible for the independent funding of its portion of the direct project costs. In the event of an annexation, merger, or other acquisition, the successor entity shall be responsible for the amounts owed by the entity that is acquired by annexation, merger, or other means and the percentage owed by the acquired entity under Section 3C shall be added to the percentage owed by the acquiring entity following acquisition.

C. The portion of the direct project costs to be paid by each agency to complete final design and environmental review for the Improvements shall be determined by the estimated Peak Wet Weather Flow (PWWF) generated from each agency's sewage area.

The PWWF estimated in the May 2010 *Sewer System Flow Monitoring and Hydraulic Modeling* study authored by RMC Water and Environment, will be used for the purpose of allocating each party's proportional share of the direct project costs related to the CDO-mandated capital improvements (i.e., the Phase II Project and the Relief Line Project). This study was jointly commissioned by the City, County, District and Town. Based on the conclusions in the RMC study, each party's share of the direct project costs, including design, environmental review, and staff costs described in this amendment, based on the PWWF, are as follows:

City:	6%
County:	6%
District:	37%
Town:	51%

Section 4. Lead Agency

a) The Phase II Project.

The Town of Hillsborough will serve as the lead agency for completion of the design and "CEQA Plus" environmental review of the Phase II project.

b) The Relief Line Project

The City of San Mateo will serve as the lead agency for completion of the design and "CEQA Plus" environmental review of the Relief Line project.

Section 5. Financial Commitments

A. Each partner agency shall deposit its share of the future estimated direct project costs with the lead agency prior to the award of professional service agreement(s) or the performance of additional work on existing professional service agreement(s) for the final design and CEQA or "CEQA Plus" environmental review for the Improvements. Such deposit shall be made within 30 days of request for funding sent by the lead agency to each party. Such funding requests shall include an itemized description of the estimated staff and project costs for which the request is made, along with the calculation showing each party's proportional share in accordance with the percentages stated in Section 3 above. Failure of any partner agency to provide funding within 30 days of a request from the lead agency will constitute a breach of this Agreement, and may result in a cessation of work on the project. If a party breaches this agreement by failing to make a required deposit within the time described herein, that party shall bear costs resulting

from the breach, including any damages resulting from the cessation of work on the project.

B. Fund deposits and payments for costs incurred for the Improvements shall be made directly and without offset for any other financial obligations of the parties.

C. Each party shall pay the following amounts calculated in accordance with Section 3 above:

a) The Phase II Project.

Pursuant to the 1989 Master Agreement and 2010 Amendment, the Town expended staff time and engaged engineers to prepare the design and environmental consultants to conduct the cultural resources investigation and to update the 2002 environmental study previously prepared for the Town for the Phase II Project. Town has advanced the amount of approximately $1,892,116 for direct project costs incurred from July 1, 2004 to date on the Phase II Project and shall invoice each partner agency for its respective proportional share of those actual direct project costs within three (3) months of execution of this Second Amendment. All invoices are due and payable within 30 days of date of issuance. Any invoice not paid within 60 days shall bear interest at the rate of 10% per annum. Interest on past due invoices shall begin accruing at 30 days from date of issuance.

Completion of the final design and "CEQA Plus" environmental work for the Phase II Project is estimated to cost an additional $93,000, including staff costs. The parties shall deposit their shares of these direct costs in accordance with Section 5A above.

b) The Relief Line Project

Pursuant to the 2010 Amendment, the City of San Mateo has expended staff time and engaged engineers to design the Relief Line Project and to conduct the

environmental review. City has advanced the amount of approximately $138,183.00 for staff costs to date on the Relief Line Project and shall invoice each Partner Agency for its respective proportional share of those actual direct project costs within three (3) months of execution of this Second Amendment. All invoices are due and payable within 30 days of date of issuance. Any invoice not paid within 60 days shall bear interest at the rate of 10% per annum. Interest on past due invoices shall begin accruing at 30 days from date of issuance.

Prior to authorizing the consultant(s) to complete final design work and "CEQA Plus" environmental work at an estimated cost of $762,000.00 including staff costs, City shall invoice each party for its respective proportional share of the estimated cost in accordance with Section 5A above. Each party shall deposit with the City its respective proportional share of the estimated cost within 30 days of receipt of this invoice. City shall notify each party when 80% of the estimated cost established herein is expended and shall provide a revised estimate of costs to complete the work. Costs are incurred and funds are considered expended at the time the work is performed.

When the design and environmental work is completed City will calculate the actual direct project costs incurred. If the funds collected exceed the actual direct project costs upon completion of design and environmental work, City shall refund the balance to the parties in accordance with the percentages in Section 3 above. If the funds collected are insufficient to cover the actual direct project costs, City shall invoice each party for the additional costs in accordance with the percentages in Section 3 above. Any invoice not paid within 30 days shall bear interest at the rate of 10%.

Section 6. Survival

In the event that the 1989 Agreement is terminated or found to be unenforceable, the provisions of this Second Amendment shall remain in effect as the funding mechanism for the Improvements.

Section 7. Limitations

This Second Amendment shall not affect the allocation of costs for treatment, capital improvements, or other services under the 1989 Agreement. The parties shall continue to share costs for those services in accordance with the procedures set forth in the 1989 Agreement until it is amended or replaced. Except as modified herein, the terms of the 1989 Agreement shall continue in full force and effect.

ATTEST: CITY OF SAN MATEO

Patrice M. Olds
City Clerk

David Lim
Mayor

APPROVED AS TO FORM:

Shawn M. Mason

ATTEST:

Clerk of the Board

COUNTY OF SAN MATEO

President, Board of Supervisors,

APPROVED AS TO FORM:

County Counsel

ATTEST:

Clerk of the District

CRYSTAL SPRINGS COUNTY SANITATION DISTRICT

President, Board of Supervisors,
Ex-Officio Governing Board of the District

APPROVED AS TO FORM:

District Counsel

ATTEST:

City Clerk

TOWN OF HILLSBOROUGH

City Manager

APPROVED AS TO FORM:

Town Attorney

Certificate of Delivery

(Government Code Section 25103)

I certify that a copy of the original document filed in the Office of the Clerk of the Board of Supervisors of San Mateo County has been delivered to the President of the Board of Supervisors.

Clerk of the Board of Supervisors

RESOLUTION #073002

THIRD AMENDMENT TO SANITARY SEWAGE AGREEMENT BETWEEN THE TOWN OF HILLSBOROUGH, CITY OF SAN MATEO, CRYSTAL SPRINGS COUNTY SANITATION DISTRICT, AND THE COUNTY OF SAN MATEO

This Third Amendment to the Sanitary Sewage Agreement entered into as of July 18, 1989 by and among the TOWN of HILLSBOROUGH, a municipal corporation in the County of San Mateo, State of California, hereinafter called "Town", the CITY OF SAN MATEO, a municipal corporation in the County of San Mateo, State of California, hereinafter called "City"; the CRYSTAL SPRINGS COUNTY SANITATION DISTRICT, a sanitation district in the County of San Mateo, State of California, hereinafter called "District"; and the COUNTY OF SAN MATEO, a political subdivision of the State of California, hereinafter called "County" is made effective as of 2/11, 2014 and is based on the following:

RECITALS:

WHEREAS, the parties have previously entered into agreements dating back to 1955 which set forth their arrangements and relationships regarding the discharge, pumping, transmission, and treatment of sewage; and

WHEREAS, the parties' most recent agreement is the Sanitary Sewage Agreement made and entered into July 18, 1989 (the "1989 Agreement"); and

WHEREAS, the parties are subject to the Cease and Desist Order R2-2009-0020 (the "CDO") issued by the California Regional Water Quality Control Board, which requires that the parties undertake certain actions, studies, and projects to improve the performance and capacity of the sewer facilities that are subject to the 1989 Agreement; and,

WHEREAS, the parties have executed two Amendments to the 1989 Agreement to provide for allocation of costs for the environmental clearance and design of the Crystal Springs/El Cerrito Trunk Sewer Improvements required by the CDO, as further described below (the "Improvements"), and agreed to allocate these costs on the basis of peak wet weather flows; and,

WHEREAS, the parties desire to further amend the provisions of the 1989 Agreement to provide for the allocation of costs for construction of the Improvements including staff costs, and to establish the roles and responsibilities of the parties for completion of construction, and agree to allocate these costs on the basis of peak wet weather flows, and to enter into this amendment to establish those obligations; and,

WHEREAS, certain elements incorporated into the Improvements may provide benefit to only certain parties to the agreement and each party agrees to pay the full costs of elements which are to their sole benefit; and,

NOW, THEREFORE, IT IS HEREBY AGREED as follows:

Section 1. Definitions

The following definitions apply to terms used in this amendment:

"days" – means calendar days unless otherwise stated

"direct project costs" – includes all costs incurred by the lead agency specifically to implement and complete construction of project Improvements, including construction contractor costs, professional consultant costs, cost of compliance with mitigation measures, and staff costs of the lead agency. In addition, direct project costs includes any liability the lead agency incurs in prosecuting the project work and any claims adjusting, claims investigation, and costs incurred in defending claims (including reasonable

attorney fees) brought by any contractor or third party for damages arising out of the prosecution of the project work.

"lead agency" – the agency responsible for performance of tasks required to implement and complete construction of Improvements, or a portion thereof, on behalf of all parties, including tasks such as obtaining and overseeing construction contractors and professional services.

"partner agency" – those agencies not serving as lead agency

"staff costs" – the actual costs incurred by lead agency staff for hours spent in direct participation in activities to implement the construction of the Improvements.

Section 2. Crystal Springs/El Cerrito Trunk Sewer Improvements

The CDO Provision I.A. requires that the Crystal Springs/El Cerrito Trunk Sewer Improvements (the "Improvements") be completed by September 11, 2015. The scope of the required work is one continuous segment of sewer trunk, approximately four miles long, with an estimated total project cost of $27,000,000 including design, environmental review, construction and staff costs. The upstream limit of work is the intersection of Crystal Springs Road and Woodridge Road in the Town of Hillsborough, and the down stream terminus is at the intersection of Sunnybrae Boulevard and South Idaho Street in the City of San Mateo.

The Improvements consist of two segments:

a. *Crystal Springs/El Cerrito Trunk Sewer Phase II (the "Phase II Project").* The upstream limit of the Phase II Project is located at the intersection of Crystal Springs Road and Woodridge Road in the Town of Hillsborough, and the downstream limit is the point of connection with the City of San Mateo's El Cerrito Meter at the City of San Mateo city limits near the intersection of

El Cerrito Avenue and Gramercy Drive. The Phase II Project is approximately two miles in length, and will increase the capacity of the sewer trunk lines located in Crystal Springs Road and El Cerrito Avenue. The estimated cost of the Phase II project is $12,000,000 including design, environmental review, construction, and staff costs.

b. *El Cerrito Relief Line Project (the "Relief Line Project").* The upstream limit of the Relief Line Project is the point of connection of the Phase II Project with the City of San Mateo's El Cerrito Meter at the City of San Mateo city limits near the intersection of El Cerrito Avenue and Gramercy Drive, and the downstream limit is located at the intersection of Sunnybrae Boulevard and South Idaho Street in the City of San Mateo. The Relief Line Project is approximately two miles in length and involves altering the current sewer system to accept additional flows from the Crystal Springs / El Cerrito trunk line during wet weather. The estimated cost of the Relief Line project is $15,000,000 including design, environmental review, construction, and staff costs.

Section 3. Financial Participation

A. All financial participation requirements established in the First and Second Amendments shall remain in force and are not modified by this Amendment.

B. The City, County, District and Town shall each be responsible for the independent funding of its portion of the direct project costs. In the event of an annexation, merger, or other acquisition, the successor entity shall be responsible for the amounts owned by the entity that is acquired by annexation, merger, or other means and the percentage owned by the acquired entity under Section 3C shall be added to the percentage owed by the acquiring entity following acquisition.

C. The portion of the direct project costs to be paid by each agency for construction of the Improvements shall be determined by the estimated Peak Wet Weather Flow (PWWF) generated from each agency's sewage area.

The PWWF estimated in the May 2010 *Sewer System Flow Monitoring and Hydraulic Modeling* study authored by RMC Water and Environment, will be used for the purpose of allocating each party's proportional share of the direct project costs related to the CDO-mandated capital improvements (i.e., the Phase II Project and the Relief Line Project). This study was jointly commissioned by the City, County, District and Town. Based on the conclusions in the RMC study, each party's share of the direct project costs, including design, environmental review, construction and staff costs described in this amendment, based on the PWWF, are as follows:

City:	6%
County:	6%
District:	37%
Town:	51%

Section 4. Lead Agency

a) The Phase II Project.

The Town of Hillsborough will serve as the lead agency for the construction of the Phase II Project.

b) The Relief Line Project

The City of San Mateo will serve as the lead agency for construction of the Relief Line Project.

Section 5. Financial Commitments

A. Each partner agency shall deposit its share of the estimated direct project costs with the lead agency in accordance with Section 5.C. Such deposit shall be made within 30 days of request for funding sent by the lead agency to each party. Such funding requests shall include an itemized description of the estimated staff and project costs for which the request is made, along with the calculation showing each party's proportional share in accordance with the percentages stated in Section 3 above. Failure of any partner agency to provide funding within 30 days of a request from the lead agency will constitute a breach of this Agreement, and may result in a cessation of work on the project. If a party breaches this agreement by failing to make a required deposit within the time described herein, that party shall bear costs resulting from the breach, including any damages resulting from the cessation of work on the project.

B. Fund deposits and payments for costs incurred for the Improvements shall be made directly and without offset for any other financial obligations of the parties.

C. Each party shall pay the following amounts calculated in accordance with Section 3 above:

a) The Phase II Project.

Prior to advertisement of a contract(s) for construction of the Phase II Project, each partner agency shall: 1) provide written evidence to the Town confirming, to the satisfaction of the Town, that funding for its share of the estimated total construction phase direct project cost has been secured, and 2) deposit with the Town an initial deposit equal to 25% of its respective proportional share of the estimated total construction phase direct project cost. Such initial deposit shall be calculated based on the Engineer's Estimate of Construction Cost and associated estimated staff and consultant support costs for the construction phase. The Town will issue a funding request for each party's initial deposit amount at least 30 days

prior to the proposed contract advertisement date. Town will not advertise the construction contract(s) until the proportional shares of the initial construction phase deposit amount are received from all parties. Failure of any party to provide the additional funding deposit within 30 days of the request will constitute a breach of this Agreement and may result in the postponement of contract advertisement. Funds deposited pursuant to this Section 5.(C)(a) shall be used by the Town to pay the cost of construction of the Phase II Project, except as provided in Section 5.C.c), below.

Upon receipt from each partner agency of the initial deposit and satisfactory evidence that funding is secured for the construction phase, the Town, as lead agency, will take appropriate actions to advertise, bid, and award the construction contract(s) and issue Notice to Proceed with Construction. Following issuance of contract advertisement, Town shall invoice each Partner Agency monthly for its respective proportional share of actual direct project costs incurred by Town during the calendar month preceding the invoice. Any invoice not paid with 30 days shall bear interest at the rate of 3% and may result in cessation of work on the project in accordance with Section 5.A.

The deposit amount is subject to change by the Town at any time as needed to manage and complete the construction work without Town incurring costs in excess of the unexpended deposit balance on hand at the time the costs are incurred. Costs are incurred and funds are considered expended at the time the work if performed. Town will issue a funding request to each party periodically as needed to increase each party's deposit amount to cover estimated expenditures to complete construction. Failure of any party to provide the additional funding deposit within 30 days of the request will constitute a breach of this Agreement and may result in the cessation of all work on the project, including work by consultants or construction contractor(s). Costs incurred as a result of a stop work notice to the contractor shall be borne by the partner(s) which failed to provide timely payment.

Payments to the consultant(s) and contractor(s) shall be made by Town out of the funds deposited by the parties. If the total funds collected exceed the actual direct project costs upon completion of construction, Town shall refund the balance to the parties in accordance with the percentages in Section 3 above. If the funds collected are insufficient to cover the actual direct project costs, Town shall invoice each party for the additional cost in accordance with the percentages in Section 3 above.

b) The Relief Line Project

Prior to advertisement of a contract(s) for construction of the Relief Line Project, each partner agency shall: 1) provide written evidence to the City confirming, to the satisfaction of the City, that funding for its share of the estimated total construction phase direct project cost has been secured, in the form of a State Revolving Fund loan or otherwise, and 2) deposit with the City an initial deposit equal to 25% of its respective proportional share of the estimated total construction phase direct project cost. Such initial deposit shall be calculated based on the Engineer's Estimate of Construction Cost and associated estimated staff and consultant support costs for the construction phase. The City will issue a funding request for each party's initial deposit amount at least 30 days prior to the proposed contract advertisement date. City will not advertise the construction contract(s) until the proportional shares of the initial construction phase deposit amount are received from all parties. Failure of any party to provide the additional funding deposit within 30 days of the request will constitute a breach of this Agreement and may result in the postponement of contract advertisement.

Upon receipt from each partner agency of the initial deposit and satisfactory evidence that funding is secured for the construction phase, the City, as lead agency, will take appropriate actions to advertise, bid, and award the construction contract(s) and issue Notice to Proceed with Construction. Following issuance of contract advertisement, City shall invoice each Partner Agency monthly for its

respective proportional share of actual direct project costs incurred by City during the calendar month preceding the invoice. Any invoice not paid with 30 days shall bear interest at the rate of 3% and may result in cessation of work on the project in accordance with Section 5.A.

The deposit amount is subject to change by the City at any time as needed to manage and complete the construction work without City incurring costs in excess of the unexpended deposit balance on hand at the time the costs are incurred. Costs are incurred and funds are considered expended at the time the work if performed. City will issue a funding request to each party periodically as needed to increase each party's deposit amount to cover estimated expenditures to complete construction. Failure of any party to provide the additional funding deposit within 30 days of the request will constitute a breach of this Agreement and may result in the cessation of all work on the project, including work by consultants or construction contractor(s). Costs incurred as a result of a stop work notice to the contractor shall be borne by the partner(s) which failed to provide timely payment.

Payments to the consultant(s) and contractor(s) shall be made by City out of the funds deposited by the parties. If the total funds collected exceed the actual direct project costs upon completion of construction, City shall refund the balance to the parties in accordance with the percentages in Section 3 above. If the funds collected are insufficient to cover the actual direct project costs, City shall invoice each party for the additional cost in accordance with the percentages in Section 3 above.

c) Town State Revolving Funding

The parties acknowledge that Town is applying for State Revolving Fund ("SRF") funding in an amount up to 100% of the estimated cost of Phase II. If funding in such amount is granted, Town reserves the right to apply such funds entirely to the construction costs for Phase II, which will result in Town paying more than its 51% share. In such event, the other parties hereto shall reimburse Town in an amount equal to 49% of such construction costs, each in the ratio which its percentage share bears to 49. Reimbursement shall be made from funds deposited by such parties in accordance with section 5.C.a. In the event that SRF funding is received after expenditure of any or all of funds deposited in accordance with Section 5.C.a. shall have been expended for construction costs for Phase II, such SRF funding shall be deemed to have been applied to such costs and the funds deposited in accordance with Section 5.C.a., up to the amount of such SRF funding, shall be deemed to be applied to reimbursement of payments for such costs.

Section 6. Project Coordination

Town shall not be obligated to commence construction on the Phase II project until City has given its contractor a Notice to Proceed on the Relief Line project.

Section 7. Ownership

The portion of the Improvements that are within the boundaries or corporate limits of the Town shall be owned by the Town, and that portion of the Improvements that are within the boundaries or corporate limits of City shall be owned by City.

Section 8. Survival

In the event that the 1989 Agreement is terminated or found to be unenforceable, the provisions of this Third Amendment shall remain in effect as the funding mechanism for the Improvements.

Section 9. Limitations

This Third Amendment shall not affect the allocation of costs for treatment, capital improvements, or other services under the 1989 Agreement. Except as modified herein, the terms of the 1989 Agreement shall continue in full force and effect.

ATTEST:

Patrice M. Olds
City Clerk

CITY OF SAN MATEO

~~David Lim~~ Robert Ross

Mayor

APPROVED AS TO FORM:

Shawn M. Mason

ATTEST:

Deputy Clerk of the Board

COUNTY OF SAN MATEO

John Maltbie, County Manager
Clerk of the Board

APPROVED AS TO FORM:

Brian Wong
County Counsel

ATTEST:

Deputy Clerk of the District

CRYSTAL SPRINGS COUNTY SANITATION DISTRICT

John Maltbie, Clerk of the Board,
Ex-Officio Governing Board of the District

APPROVED AS TO FORM:

District Counsel

ATTEST:

City Clerk

TOWN OF HILLSBOROUGH

Mayor

APPROVED AS TO FORM:

Town Attorney

Certificate of Delivery

(Government Code Section 25103)

I certify that a copy of the original document filed in the Office of the Clerk of the Board of Supervisors of San Mateo County has been delivered to the President of the Board of Supervisors.

Clerk of the Board of Supervisors

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SSMP

ELEMENT 3 – LEGAL

AUTHORITY APPENDIX 3.3

2022 Town of Hillsborough

Capital Cost Agreement

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INTERIM AGREEMENT FOR PAYMENT OF CAPITAL COSTS OF CLEAN WATER PROGRAM PROJECTS

This Interim Agreement for Payment of Capital Costs of Clean Water Program Projects (this "Interim Agreement") is entered into by and between the City of San Mateo (the "City") and the Town of Hillsborough ("Hillsborough") and is based on the following:

A. The City and Hillsborough are parties to a Sanitary Sewage Agreement entered into as of July 18, 1989 (the "1989 Agreement"). The County of San Mateo (the "County") and the Crystal Springs County Sanitation District (the "District") are also parties to the 1989 Agreement. The 1989 Agreement has been the subject of three prior amendments. The 1989 Agreement governs the operation of certain shared facilities for the transportation and treatment of sanitary sewage, allocation of costs for maintenance and improvement of the shared facilities, and allocation of treatment costs.

B. The wastewater generated by the City, Hillsborough, the County, and the District is subject to regulation under a National Pollution Discharge Elimination System permit (the "NPDES permit").

C. The City, Hillsborough, the County, and the District are subject to Cease and Desist Order R2-2009-0020, which required certain improvements to the shared facilities.

D. The City has begun construction on a comprehensive suite of capital improvements referred to as the "Clean Water Program," including capital improvements to the sewage treatment plant owned by the City and Foster City and operated by the City (the "Wastewater Treatment Plant" or "WWTP").

E. The City, Hillsborough, the County, and the District have been negotiating a fourth amendment to the 1989 Agreement to allocate capital costs for the Clean Water Program and provide for the installation of a new meter along Polhemus Road. The fourth amendment has not been finalized. The City, County, and District continue to discuss terms unrelated to Hillsborough which need to be resolved in order to finalize the fourth amendment.

F. Hillsborough acknowledges its responsibility to pay for its share of the capital costs of the Clean Water Program and is willing to make payments toward such capital costs on an interim basis until the fourth amendment is finalized. Hillsborough's Percentage Share consists of Project Costs incurred by City beginning in October 2014 through the completion of construction of Clean Water Program Projects.

G. The City desires to receive the interim payment of capital costs from Hillsborough and cooperate on other procedures between the two agencies until the fourth amendment can be finalized.

Now, therefore, for good and valuable consideration, the City and Hillsborough agree as follows:

//

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AGREEMENT

Section 1. Definitions

The following definitions apply to the terms used in this Amendment.

"Clean Water Program" means the suite of capital improvement projects to the City's sewer collection system and WWTP that are necessary for capacity assurance and reliability, and to meet regulatory compliance requirements contained in the Cease and Desist Order and NPDES permits.

"Clean Water Program Projects" means those projects listed in Exhibit A which provide a benefit to Hillsborough and for which Hillsborough and others will be responsible for a share of capital costs.

"District Meter" means the existing meter located along Polhemus Road owned and maintained by the District which currently measures flows from the Polhemus Trunk Sewer from the City/County/District and into the Crystal Springs/El Cerrito Trunk Sewer.

"Effective Date" means the date on which this Amendment is last signed by the parties.

"El Cerrito Meter" means the flow meter installed at El Cerrito Avenue near Gramercy Drive, which measures sewage flows contributed by the City/Town/District/County.

"Maximum Allowable Flow" means the maximum volume of wastewater, expressed in millions of gallons per day (MGD), that Hillsborough is authorized to convey through the El Cerrito Meter and the Yew/Borel Trunk Sewer. Based on a Technical Memorandum prepared by Jacobs as revised October 12, 2020, the Maximum Allowable Flows for Hillsborough is 7.1 MGD (Including 0.3 MGD for the Yew/Borel Trunk Sewer) for purposes of this Interim Agreement.

"Metered Flows" refers to the calculation of each party's flows through various meters, as set forth in Section 5 (Calculation of Flows) of the 1989 Agreement.

"New Polhemus Meter" means the meter to be installed by Hillsborough at or near Polhemus Road to measure flows coming into the Crystal Springs/El Cerrito Trunk Sewer from the Polhemus Trunk Sewer.

"Percentage Share" means Hillsborough's share of Project Costs and is calculated by dividing Hillsborough's Maximum Allowable Flow by the maximum capacity at which a collection system or treatment facility is designed to operate. The Percentage Share for various Project Costs is set forth in Exhibit A, and is subject to adjustment as set forth in this Interim Agreement. The general methodology for calculating the parties' percentage shares based on Maximum Allowable Flows is illustrated in the excerpts from the Technical Memorandum

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attached to this Amendment as Exhibit A-1; provided, that the provisions in the body of this Amendment shall control over the contents of Exhibit A-1.

"Project Costs" means all costs incurred by City to develop, finance, implement, and complete construction of Clean Water Program Projects, including costs of construction contracts, professional consultant services, material and equipment procurement, compliance with regulatory requirements and mitigation measures, real property acquisitions, legal services, finance and economic consultants, and staff costs. In addition, Project Costs include any liability the City incurs in performing the work associated with Clean Water Program Projects and any claims adjusting, claims investigation, and costs incurred in defending claims (including reasonable attorney fees) brought by any consultant, contractor or third party for damages arising out of the prosecution of the Clean Water Program Projects. "Project Costs" does not include components of the Clean Water Program which do not benefit Hillsborough and the costs for which are not allocated to it under this Interim Agreement.

Section 2. Interim Payment of Capital Costs

All financial participation requirements established in previous amendments to the 1989 Agreement and the 1989 Agreement remain in force and are not modified by this Interim Agreement.

City and Hillsborough acknowledge that City is responsible for acquiring financing for Clean Water Program Costs, and has done so through a line of credit, a series of sewer revenue bonds issued in 2019, and loans through programs administered under the Federal Water Infrastructure Finance and Innovation Act. City anticipates securing additional funding through additional sewer revenue bonds and/or the Clean Water State Revolving Fund program.

For purposes of calculating its payments under this Interim Agreement, Hillsborough's Percentage Share of Project Costs shall be:

WWTP Project Costs	7.6%
Dale Avenue Pump Station Projects	8.2%
Underground Flow equalization System Projects	8.2%
Program Management Office	5.7%

Subject to Section 3 below, Hillsborough agrees to reimburse the City for Project Costs incurred in accordance with these percentage shares as follows:

Hillsborough will make an initial payment of $2,415,000.00, which shall be due and payable within 30 days of the Effective Date. Thereafter, Hillsborough shall make quarterly payments in accordance with Exhibit B (Scenario One – Full Flow) until this Interim Agreement is replaced with the fourth amendment or other permanent arrangement. These interim payments shall be in addition to the periodic charges for wastewater treatment services. Exhibit B amortizes the remaining Project Costs after the initial payment on a 30-year basis. Hillsborough may prepay its share of the remaining Project Costs, in whole or in part and

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from time to time, without penalty. Hillsborough agrees it shall provide the City with at least 30 days advance notice should it intend to prepay any of its share of the remaining Project Costs in any amount exceeding the scheduled payments described in Exhibit B. Hillsborough and the City will thereafter amend Exhibit B accordingly to reflect Hillsborough's said prepayment of its share of Project Costs over the remaining years of the original 30-year amortization period pursuant to Section 9 of this Interim Agreement.

Prior invoices for capital costs issued by the City to Hillsborough and any payments by Hillsborough for such costs have been incorporated into Exhibit B.

Hillsborough acknowledges the Percentage Share was developed using a hydraulic model of Hillsborough's Maximum Allowable Flow and the design capacity of the facilities to be constructed as part of the Clean Water Program and intended to be used for capital planning over the course of the Clean Water Program. Hillsborough's Percentage Share will remain unchanged, even if actual flows do not exceed Maximum Allowable Flow, except as detailed in Section 3.

The City shall provide an annual report to Hillsborough regarding the progress of the Clean Water Program including percentage of completion of components of the Clean Water Program and expected completion dates, Project Costs, interest rates, cost overruns, design changes, and other pertinent financial information. The report shall be provided within 60 days of the end of each fiscal year while the Clean Water Program Improvements are being constructed and at the end of the Clean Water Program.

Section 3. Alternative Allocation of Project Costs

The City agrees to provide for an alternative allocation of Project Costs that will apply under the circumstances described in this section.

If during the five years from the Effective Date the Metered Flows from Hillsborough at the El Cerrito Meter exceed the rolling average rate of 4.5 MGD (excluding the 0.3 MGD from the Yew/Borel Trunk Sewer) for any two-hour period, then Hillsborough's share of Project Costs shall be determined pursuant to the provisions of Section 2. If during the five years from the Effective Date the Metered Flows at the El Cerrito Meter from Hillsborough never exceed the rolling average rate of 4.5 MGD for any two-hour period, then Hillsborough's share of Project Costs shall be:

WWTP Project Costs	5.2%
Dale Avenue Pump Station Projects	5.6%
Underground Flow Equalization System Projects	5.6%
Program Management Office	3.9%

Hillsborough's rolling average over a two-hour period shall be calculated by the City using the one-minute interval flow data of the preceding two hours recorded at the El Cerrito Meter, less the one-minute interval flows recorded at the District Meter (until the New Polhemus Meter has been installed and calibrated, and thereafter by the New Polhemus Meter) for the comparable period that accounts for the lag time between the two meters. The

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calculations for these flows shall be verified by a third-party consultant acceptable to the parties.

Hillsborough agrees to pay the City its share of Project Costs as calculated pursuant to Section 2 beginning at the Effective Date of this Interim Agreement.

If Hillsborough's share of the Project Costs is to be adjusted pursuant to the provisions of this section, Hillsborough shall make payments in the amounts as shown in Scenario II – Reduced at 5 Year of Exhibit B. Hillsborough will receive a credit for the amount by which the payments under Scenario I exceeded the amounts under Scenario II prior to adjustment, and this credit will be applied to payments due under Scenario II until exhausted.

The five-year period established under this Section 3 shall be carried forward in the fourth amendment or other modification of the 1989 Agreement.

Section 4. Metering

The parties acknowledge and agree that accurate measurement of flows is essential to the allocation of both Project Costs and treatment costs.

(a) The City is agreeable to a new permanent flow meter to be installed at a new, more level location near Polhemus Road as selected by Hillsborough, within Hillsborough's municipal boundaries (the "New Polhemus Meter"). The New Polhemus Meter shall be owned by Hillsborough. The selection of the New Polhemus Meter will be recommended by a consultant acceptable to the parties. Hillsborough shall provide the plans and specifications for the New Polhemus Meter to the City for engineering review and approval. Approval shall not be unreasonably withheld by the City. Any comments or objections shall be provided to Hillsborough within 10 working days. If Hillsborough determines that installation of the New Polhemus Meter involves modifications to the District's facilities, Hillsborough shall at its earliest opportunity inform the District and coordinate the modifications, including scheduling and design, with the District. The City shall not be responsible for any design, scheduling, or construction of modifications to the District's facilities, if any are required. Hillsborough acknowledges it is solely responsible for satisfying all conditions for the installation of the New Polhemus Meter. Until the New Polhemus Meter is installed and calibrated, the current District Meter shall continue to be used as the meter of record for measuring Hillsborough's flows and as a basis for billing treatment costs to Hillsborough under the 1989 Agreement. Once it is installed, the New Polhemus Meter will be calibrated to manufacturer's standards and put into service and thereafter shall be the meter of record for Hillsborough's flows and treatment costs for the duration of this Interim Agreement. Hillsborough will pay the cost of installing the New Polhemus Meter and the initial calibration. Thereafter, the City may utilize the District Meter for comparative purposes.

(b) Within 60 days of the Effective Date, the El Cerrito Meter will be calibrated to manufacturer's standards by a consultant acceptable to the parties. Thereafter, the El Cerrito and New Polhemus Meter will be read and maintained by a third-party consultant acceptable to the parties. The City/District/County/Hillsborough shall have on-line access to the meter data from the El Cerrito and New Polhemus Meters on a real-time basis. Meter calibration records shall be

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shared amongst the City/District/County/Hillsborough.

(c) Following the installation and calibration of the New Polhemus Meter and the calibration of the El Cerrito Meter, the meters shall be calibrated not less than annually and shall be replaced when recommended by the third-party consultant.

(d) Except as provided in Section 4(a)-(c) above, the cost of calibrating the El Cerrito and New Polhemus Meters shall be shared equally by the City and Hillsborough for the duration of this Interim Agreement. Maintenance and reading costs of said meters shall continue pursuant to the 1989 Agreement.

Section 5. Payment

Hillsborough agrees to pay its Percentage Share of Project Costs incurred by the City for Clean Water Program Projects. Hillsborough agrees to pay its Percentage Share of Project Costs to City in installments as set forth in Exhibit B for the duration of this Interim Agreement.

Installment payments will commence 30 days after the Effective Date and continue until the full amount of Project Costs and interest has been paid, not exceeding 30 years from the Effective Date, as provided in this Interim Agreement. The amount of the installments will be based on the cost estimates for the Clean Water Program Projects on the effective date of this Interim Agreement, plus interest based on the weighted average of any financing and refinancing obtained for the Clean Water Program Projects. Installment payment amounts will be reduced by the initial payment, as identified in Section 2, and by the amounts paid to the City by Hillsborough for the flow-based percentage of actual costs incurred in connection with Clean Water Program Projects during the period between October 2014 and the Effective Date. The installment schedules in Exhibit B shall be adjusted for differing interest rates when achieved.

Upon completion of construction of the Clean Water Program Projects, the City will recalculate the amount of the installments to reflect the final Project Costs, plus interest as provided in this section, and re-amortize these costs for the balance of time remaining in Exhibit B. Hillsborough acknowledges that the amount of the installments may increase or decrease based on actual Project Costs; however, in no case may the time for payment of the full amount of Project Costs and interest exceed 30 years from the Effective Date unless otherwise agreed for in any subsequent amendment or agreement.

The City and Hillsborough will meet and confer on any new projects in addition to those described in Exhibit A that will have a material effect on the Project Costs payable by them.

Section 6. Late Payment

For any amounts invoiced and not paid to the City within 60 days, Hillsborough agrees to pay to City a late charge equal to 1.5% of the overdue amount. This late charge is a reasonable sum that takes into consideration all the circumstances existing on the date of this Interim

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Agreement and is a fair and reasonable estimate of the costs and expenses that will be incurred by City due to Hillsborough's failure to make timely payments. The parties agree that it would be impracticable or extremely difficult to fix the actual damages resulting to City from Hillsborough's failure to make timely payments.

Section 7. Payment Required During Dispute

The City and Hillsborough agree to comply with their respective obligations under this Interim Agreement, including full payment of Project Costs as invoiced, while resolution of any disputes under this Interim Amendment or the 1989 Agreement are pending.

Section 8. Survival

In the event that the 1989 Agreement is terminated or found to be unenforceable, the provisions of this Interim Agreement shall remain in effect as the funding mechanism for Hillsborough's share of the Clean Water Program Projects as defined herein.

Section 9. Amendments and Amendment to Conform to New Agreement

In the event that the City agrees to financial terms with the District and/or County in a subsequent modification of the 1989 Agreement or another agreement that are more favorable than those set forth in this Interim Agreement, Hillsborough shall be entitled to the benefit of the same terms, which shall be applied retroactively and prospectively.

In the event Hillsborough prepays its share of Project Costs as described in Section 2 of this Interim Agreement, the City Managers of the City and Hillsborough are hereby authorized to amend Hillsborough's payment schedule(s) as reflected in Exhibit B. Any other amendment to this Interim Agreement unrelated to the payment schedule shall continue to require approval from the parties' respective legislative bodies.

Section 10. Limitations

The terms of the 1989 Agreement, as amended, shall continue in full force and effect, including its procedures for quarterly billing and annual reconciliation for operation and maintenance costs, except that the City and Hillsborough agree to modify their rights and obligations with respect to each other as provided in this Interim Agreement and do not intend to affect the rights or obligations of the County or District. This Interim Agreement shall not affect the allocation of costs for non-CWP capital improvement costs, or other services under the 1989 Agreement except as provided in Section 4.

This Amendment affects the cost allocation for the Clean Water Program as designed as of the Effective Date. Any future capital projects, including modifications to the WWTP or sewage transmission lines, shall be the subject of an amendment to the 1989 Agreement.

In the event of a conflict between the terms of this Interim Agreement and the terms of the 1989 Agreement, as amended, the terms in this Interim Agreement shall control.

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ATTEST:

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Patrice Olds
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Patrice M. Olds
City Clerk

City of San Mateo

DocuSigned by:
Drew Corbett
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6/28/2022

Drew Corbett
City Manager

Date

APPROVED AS TO FORM:

DocuSigned by:
Prasanna W. Rasiah
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Prasanna W. Rasiah
City Attorney

ATTEST:

DocuSigned by:
Lisa Natusch
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Lisa Natusch
City Clerk

Town of Hillsborough

DocuSigned by:
Ann Ritzma
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6/29/2022

Ann Ritzma
City Manager

Date

APPROVED AS TO FORM:

DocuSigned by:
Christopher Diaz
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Christopher Diaz
City Attorney

Exhibit A – Full Flow based Town/District/County Clean Water Program Project Costs with Percentage Share

Project Number	Project Name	Project Description	Estimate at Completion*	San Mateo Share (vs Foster City)	Shared SM Costs with Regional Customers	Town		District		County	
						%	EAC	%	EAC	%	EAC
469981	Program Management Clean Water Program (CWP)	Implementation of the CWP including establishment of the Program Management Office (PMO), management of staff and resources, Program Controls, construction management oversight, permitting, environmental documentation, document controls, change and risk management, and development and implementation of design guidelines and standards.	$ 72,672,093	87.94%	$ 63,907,839	5.7%	$ 3,642,746.80	3.9%	$ 2,492,405.70	0.3%	$ 191,723.52
46T002	WWTP Immediate Action projects (IAP) Package 1	Replacement, repair, and modification to provide redundancy of various existing Wastewater Treatment Plant (WWTP) components including rehabilitation and improvements to the secondary clarifiers and solids handling system, replacement of motor control centers (MCC), and SCADA system improvements	$ 18,621,628	75.88%	$ 14,130,091	7.6%	$ 1,073,886.94	5.2%	$ 734,764.75	0.4%	$ 56,520.37
46T003	Nutrient Removal and Wet Weather Flow Management Upgrade and Expansion Project	Construction of a new preliminary and primary treatment facility and the replacement of an existing secondary treatment process at the WWTP to elimin SSOs as directed by a Cease and Desist Order issued by the Regional Water Quality Control Board. State of the art technologies, including membrane bioreactor an biological nutrient removal will be used to operate in peak flows, as well as produce a high-quality effluent, addressing requirements of the NPDES permit. The project includes a new administration building that will house the SCADA system, a new warehouse for equipment and parts storage, and the conversion of the existing aeration basin to an equalization basin.	$ 540,176,708	75.88%	$ 409,886,086	7.6%	$31,151,342.54	5.2%	$21,314,076.47	0.4%	$ 1,639,544.34
46T009	WWTP IAP Package 2	Replacement, repair, and modification to provide redundancy of various existing WWTP components including installation of bar screens and rehabilitation and improvements to the effluent pump station and solids handling system.	$ 13,914,127	75.88%	$ 10,558,040	7.6%	$ 802,411.01	5.2%	$ 549,018.06	0.4%	$ 42,232.16
46T010	WWTP IAP Package 3	Replacement, repair, and modification to provide redundancy of various existing WWTP components at the effluent pump station including replacement of MCC, variable frequency drives (VFD), valves, and HVAC equipment.	$ 14,950,765	75.88%	$ 11,344,640	7.6%	$ 862,192.68	5.2%	$ 589,921.31	0.4%	$ 45,378.56
46T090	Annual Major Components (Recurring Project) – WWTP	An annual recurring budget, during the CWP, used to address priority projects including replacement, repair, and modification to provide redundancy to influent flow meters, the effluent pump station, dichlorination system, solids handling system, HVAC and odor control, site drainage, aeration basin blowers, primary sludge pumps, dewatering equipment, and electrical equipment.	$ 8,826,138	75.88%	$ 6,697,274	7.6%	$ 508,992.79	5.2%	$ 348,258.22	0.4%	$ 26,789.09
469942	DAPS Wet Well Rehabilitation	Repair and rehabilitation to allow for improved operation and reliability of DAPS including repair to concrete, relining of wet wells, replacement of existing gates, conduits, and piping, improvements for maintenance access, and improvements for operational flexibility.	$ 1,744,140	100.00%	$ 1,744,140	8.2%	$ 143,019.48	5.6%	$ 97,671.84	0.4%	$ 6,976.56
46S003	Basin 2 & 3 - DAPS Improvements	Replacement of existing pumps and installation of VFDs to improve DAPS capacity and reliability, replacement of existing control panels and generator, modifications and enhancements to the SCADA system, and modifications and enhancements to wetwell. Rehabilitation of the existing forcemains.	$ 29,629,424	100.00%	$ 29,629,424	8.2%	$ 2,429,612.79	5.6%	$ 1,659,247.76	0.4%	$ 118,517.70
46S003	Basin 2 & 3 – Underground Flow Equalization System	Construction of a 5.3 million gallon below grade tank for in-system equalization storage at the San Mateo County Event Center, associated diversion sewers, force mains, and pump station	$ 84,679,710	100.00%	$ 84,679,710	8.2%	$ 6,943,736.23	5.6%	$ 4,742,063.77	0.4%	$ 338,718.84
		TOTAL	**$ 785,214,733**		**$ 632,577,244**		**$ 47,557,941**		**$ 32,527,428**		**$ 2,466,401**

Notes

*Values are based on the Clean Water Program estimates as of April 2022

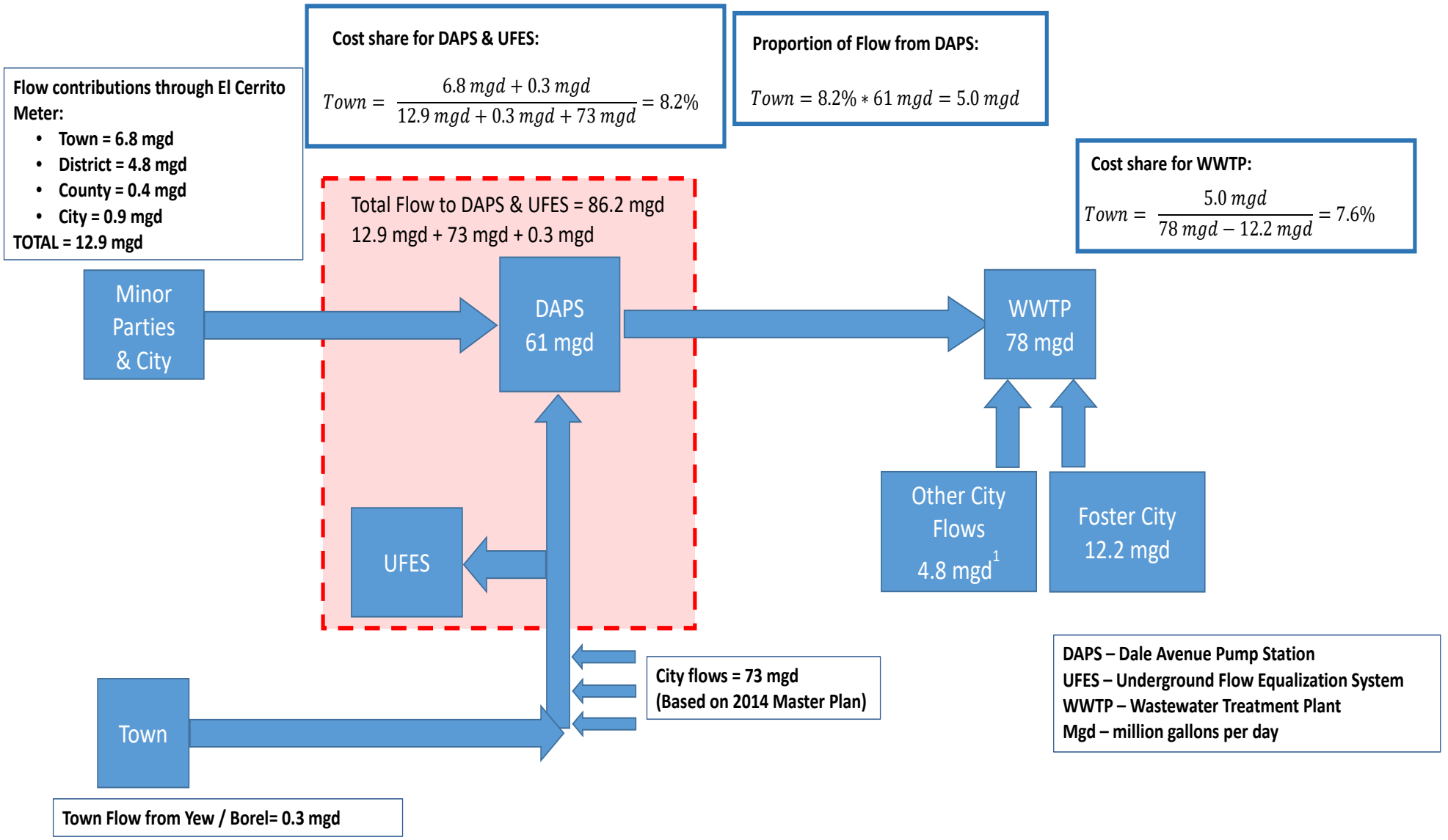
Exhibit A – Reduced Flow based Town/District/County Clean Water Program Project Costs with Percentage Share

Project Number	Project Name	Project Description	Estimate at Completion*	San Mateo Share (vs	Shared SM Costs with Regional	Town		District	
						%	EAC	%	EAC
469981	Program Management Clean Water Program (CWP)	Implementation of the CWP including establishment of the Program Management Office (PMO), management of staff and resources, Program Controls, construction management oversight, permitting, environmental documentation, document control change and risk management, and development and implementation of design guidelines and standards.	$ 72,672,093	87.94%	$ 63,907,839	3.9%	$ 2,492,405.70	2.6%	$ 1,661,603.80
46T002	WWTP Immediate Action projects (IAP) Package 1	Replacement, repair, and modification to provide redundancy of various existing Wastewater Treatment Plant (WWTP) components including rehabilitation and improvements to the secondary clarifiers and solids handling system, replacement of motor control centers (MCC), and SCADA system improvements	$ 18,621,628	75.88%	$ 14,130,091	5.2%	$ 734,764.75	3.4%	$ 480,423.11
46T003	Nutrient Removal and Wet Weather Flow Management Upgrade and Expansion Project	Construction of a new preliminary and primary treatment facility and the replacement of an existing secondary treatment process at the WWTP to eliminate SSOs as directed by a Cease and Desist Order issued by the Regional Water Quality Control Board. State of the art technologies, including membrane bioreactor and biological nutrient removal will be used to operate in peak flows, as well as produce a high-quality effluent, addressing requirements of the NPDES permit. The project includes a new administration building that will house the SCADA system, a new warehouse for equipment and parts storage, the conversion of the existing aeration basin to an equalization basin.	$ 540,176,708	75.88%	$ 409,886,086	5.2%	$21,314,076.47	3.4%	$13,936,126.93
46T009	WWTP IAP Package 2	Replacement, repair, and modification to provide redundancy of various existing WWTP components including installation of bar screens and rehabilitation and improvements to the effluent pump station and solids handling system.	$ 13,914,127	75.88%	$ 10,558,040	5.2%	$ 549,018.06	3.4%	$ 358,973.35
46T010	WWTP IAP Package 3	Replacement, repair, and modification to provide redundancy of various existing WWTP components at the effluent pump station including replacement of MCCs, variable frequency drives (VFD), valves, and HVAC equipment.	$ 14,950,765	75.88%	$ 11,344,640	5.2%	$ 589,921.31	3.4%	$ 385,717.78
46T090	Annual Major Components (Recurring Project) – WWTP	An annual recurring budget, during the CWP, used to address priority projects including replacement, repair, and modification to provide redundancy to influent flow meters, the effluent pump station, dichlorination system, solids handling system, HVAC and odor control, site drainage, aeration basin blowers, primary sludge pumps, dewatering equipment, and electrical equipment.	$ 8,826,138	75.88%	$ 6,697,274	5.2%	$ 348,258.22	3.4%	$ 227,707.30
469942	DAPS Wet Well Rehabilitation	Repair and rehabilitation to allow for improved operation and reliability of DAPS including repair to concrete, relining of wet wells, replacement of existing gates, conduits, and piping, improvements for maintenance access, and improvements for operational flexibility.	$ 1,744,140	100.00%	$ 1,744,140	5.6%	$ 97,671.84	3.7%	$ 64,533.18
46S003	Basin 2 & 3 - DAPS Improvements	Replacement of existing pumps and installation of VFDs to improve DAPS capacity and reliability, replacement of existing control panels and generator, modifications and enhancements to the SCADA system, and modifications and enhancements to wetwell Rehabilitation of the existing forcemains.	$ 29,629,424	100.00%	$ 29,629,424	5.6%	$ 1,659,247.76	3.7%	$ 1,096,288.70
46S003	Basin 2 & 3 – Underground Flow Equalization System	Construction of a 5.3 million gallon below grade tank for in-system equalization storage at the San Mateo County Event Center, associated diversion sewers, force mains, and pu station	$ 84,679,710	100.00%	$ 84,679,710	5.6%	$ 4,742,063.77	3.7%	$ 3,133,149.28
		TOTAL	**$ 785,214,733**		**$ 632,577,244**		**$ 32,527,428**		**$ 21,344,523**

Notes

*Values are based on the Clean Water Program estimates as of April 2022

Exhibit A-1 – Town of Hillsborough



1. Flow includes Bay Meadows PS, Flint PS, and Mariners Island.

Exhibit B
Town of Hillsborough Clean Water Program Costs

	Scenario I - Full Flow	Scenario II - Reduced at 5yr	
		Years 1-5	Years 6-30
Max El Cerrito Flow (mgd)	6.8	4.5	4.5
Clean Water Program Costs[1]	$ 47,557,941	$ 47,557,941	$ 32,527,428
Clean Water Program Payments[2]	$ 3,362,249	$ 3,362,249	$ 10,478,018
Clean Water Program Contribution[3]	$ 44,195,692	$ 44,195,692	$ 22,049,410
Interest Rate[4]	3.50%	3.50%	3.50%
Installment Years	30	5	25
Annual Installment Payment	$ (2,402,979)	$ (2,402,979)	$ (1,337,827)

Payment Year	**Annual Payment Amount**	**Annual Payment Amount**	**Annual Payment Amount**
2022	$ (2,402,979)	$ (2,402,979)	
2023	$ (2,402,979)	$ (2,402,979)	
2024	$ (2,402,979)	$ (2,402,979)	
2025	$ (2,402,979)	$ (2,402,979)	
2026	$ (2,402,979)	$ (2,402,979)	
2027	$ (2,402,979)		$ (1,337,827)
2028	$ (2,402,979)		$ (1,337,827)
2029	$ (2,402,979)		$ (1,337,827)
2030	$ (2,402,979)		$ (1,337,827)
2031	$ (2,402,979)		$ (1,337,827)
2032	$ (2,402,979)		$ (1,337,827)
2033	$ (2,402,979)		$ (1,337,827)
2034	$ (2,402,979)		$ (1,337,827)
2035	$ (2,402,979)		$ (1,337,827)
2036	$ (2,402,979)		$ (1,337,827)
2037	$ (2,402,979)		$ (1,337,827)
2038	$ (2,402,979)		$ (1,337,827)
2039	$ (2,402,979)		$ (1,337,827)
2040	$ (2,402,979)		$ (1,337,827)
2041	$ (2,402,979)		$ (1,337,827)
2042	$ (2,402,979)		$ (1,337,827)
2043	$ (2,402,979)		$ (1,337,827)
2044	$ (2,402,979)		$ (1,337,827)
2045	$ (2,402,979)		$ (1,337,827)
2046	$ (2,402,979)		$ (1,337,827)
2047	$ (2,402,979)		$ (1,337,827)
2048	$ (2,402,979)		$ (1,337,827)
2049	$ (2,402,979)		$ (1,337,827)
2050	$ (2,402,979)		$ (1,337,827)
2051	$ (2,402,979)		$ (1,337,827)
Total	**$ (72,089,359)**	$ (12,014,893)	$ (33,445,667)
		Total	**$ (45,460,560)**

[1]Estimated share of CWP project costs as of 4/2022 estimates; subject to change based on final actual costs.

[2]Payments made toward the CWP project costs as of 2/18/22 + payment of $2,415,000 pending receipt. For the reduced flow scenario, the payments made account for extra principal paid in the first 1-5 years.

[3]Share of CWP project costs less project payments.

[4]The final interest rate will be based on the weighted average of the financings and refinancings obtained for the CWP Projects. Debt service payments will be revised accordingly.

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ELEMENT 3 – LEGAL

AUTHORITY APPENDIX 3.5

City of Belmont Agreement

AMENDMENT TO
AGREEMENT BETWEEN CITY OF SAN MATEO AND CITY OF BELMONT FOR SANITARY SEWER MAIN CONNECTIONS AND CHARGES

THIS AMENDMENT is entered into this 1st day of MARCH, 2004, by and between the CITY OF SAN MATEO, hereinafter called "San Mateo", and the CITY OF BELMONT, hereinafter called "Belmont".

RECITALS

WHEREAS, the parties have previously entered into an Agreement for Sanitary Sewer Main Connections and Charges dated October 20, 1981, and now wish to amend said Agreement;

WHEREAS, Belmont finds it difficult, if not impossible, to provide water consumption data for the months of October through March as required by recital Section 7(b) of the current agreement;

WHEREAS, Belmont is unable to supply the consumption data by April of each year to San Mateo as required by Recital Section 8;

WHEREAS, San Mateo requires additional time at year end to close the fiscal year and provide Belmont with either a refund or request for additional payment beyond the September 1 date as required by Recital Section 9;

NOW, THEREFORE, IT IS HEREBY AGREED BY THE PARTIES HERETO, AS FOLLOWS:

1. Recital. Recital Section 7(b) of the current agreement is revised to change the consumption months used to arrive at the fee for conveyance, treatment and disposal of sewage from October through March to November through April. Recital Section 7(b) now reads:

A fee for conveyance, treatment, and disposal of sewage. The amount of the fee to be arrived at by taking the average of five winter months (November through April) of household potable water metered consumption (extrapolated to 12 months) for sewer users in BELMOMT and SAN MATEO and dividing it into the pro rata cost share of budgets for annual conveyance, treatment, and disposal of sewage to be expended by AN MATEO in behalf of SAN MATEO and BELMONT, thereby to obtain a cost per 100 cubic feet of potable water used to convey, treat, and dispose of sewage emanating from such domestic potable water usage. Based on that amount per 100 cubic feet of water consumption, multiply the metered water usage of BELMONT properties to arrive at a total amount for conveyance, treatment, and disposal due SAN MATEO from BELMONT.

2. Recital Recital Section 8 of the current agreement is revised to change the month that the consumption data will be supplied by Belmont to San Mateo

ORIGINAL

from April to June and to change the consumption months used to arrive at the fee for conveyance from October through March to November through April. Additionally, Belmont is to supply supporting backup (i.e., actual water consumption for each month). Recital Section 8 now reads:

BELMONT will supply SAN MATEO with the five winter months metered water usage (November through April) (averaged and extrapolated to 12 months usage including supporting backup) in June of each year for each BELMONT property or unit served in BELMONT. Winter consumption readings minimize distortion of charges due to irrigation usage in gardens. SAN MATEO will provide budget figures and actual last year's expenditures figures to BELMONT in July of each year.

3. Recital Recital Section 9 of the current agreement is revised to change the September 1 time of additional payment or refund to October 1. Recital Section 9 now reads:

Time of Payments – Payments pursuant to said formula shall be made during the month of July of each fiscal year as compensation in advance for estimated costs for such fiscal year. Subsequent additional payments or refunds are to be determined after the close of the fiscal year not later than October 1, of the succeeding fiscal year to adjust the amount to become equivalent to the cost experienced during the fiscal year if different than the advance payment made at the beginning of the fiscal year.

All other terms shall remain unchanged and in full force and effect.

CITY OF SAN MATEO, a
Municipal Corporation

By: Carole Groom
San Mateo Carole Groom, Mayor

Attest:
City Clerk Norma Gomez

CITY OF BELMONT, a
Municipal Corporation

By: George Metropulos
Belmont George Metropulos, Mayor

Attest:
City Clerk Terri Cook

EXHIBIT B

AGREEMENT
BETWEEN CITY OF SAN MATEO AND CITY OF BELMONT FOR SANITARY SEWER MAIN CONNECTIONS AND CHARGES

THIS AGREEMENT, made and entered into this 20th day of October, by and between the CITY OF SAN MATEO, a Municipal Corporation, hereinafter referred to as "SAN MATEO" and the CITY OF BELMONT, a Municipal Corporation, hereinafter referred to as "BELMONT".

RECITALS:

1) There exists an agreement, dated March 31, 1954, between SAN MATEO and BELMONT authorizing BELMONT to have certain connections of sanitary outfall sewers to SAN MATEO sewers and containing a consideration formula for the privilege of connection and subsequent treatment of sewage by SAN MATEO;

2) The consideration for permission to retain connections and for service set forth in that agreement was based on a formula of; "The total of an amount a) arrived at by applying a rate provided in (b) below, per $100 assessed valuation as shown on the secured rolls of the County of San Mateo for those properties within the CITY OF BELMONT, served by the sanitary outfall sewers of the CITY OF SAN MATEO";

b) "The rates shall be the cost per $100 assessed valuation as shown on the secured rolls of the County of San Mateo for properties situated within the CITY OF SAN MATEO for the operation, maintenance, and depreciation of the sewage treatment plant, force main and pumps, and the principal and interest of any bonded indebtedness incurred therefore;"

3) The time of payment under said formula was to be during the month of January of each calendar year, in advance, for the calendar year;

4) Inasmuch as elective Proposition 13 of the State of California has "frozen" some assessed valuations while other assessed valuations are allowed to be escalated upon the creation or sale of properties causing the base of assessed valuation between properties in BELMONT and SAN MATEO to become aberrated for comparism, it is necessary that the basis of charges to BELMONT properties for services through SAN MATEO trunk lines, pump plants, and treatment facilities be changed to a more equitable and representative formula;

5) SAN MATEO and BELMONT have further agreed, in a second document dated October 6, 1980, that SAN MATEO would authorize additional connections to SAN MATEO sewers in the Lauriedale area east of Old County Road, near U.S. 101, for adjacent BELMONT houses in the Woodbridge Park, Unit D, Subdivision. Terms and conditions of that second agreement included:

a) SAN MATEO and BELMONT agree to extend the terms and conditions of the March 31, 1954, agreement to the sewer service of Woodbridge Park Subdivision Unit D on an interim basis with provision for connection charges for Unit D.

b) The agreement dated March 31, 1954, between CITY OF SAN MATEO and CITY OF BELMONT will continue in effect for all BELMONT properties until April 1, 1982, at which time the payment of Sewer Service Charges will be revised by substitute agreement to conform with the current sewer service charge method in effect within the CITY OF SAN MATEO.

c) THE CITY OF BELMONT will pay to the CITY OF SAN MATEO a connection fee of $250.00 per single family home connected in Woodbridge Park Unit D payable to SAN MATEO at the time the building permits are issued by the CITY OF BELMONT.

d) An inspection-service manhole will be constructed at the CITY boundary in the sewer line serving Woodbridge Park Unit D.

e) BELMONT will operate and maintain all sewer lines in BELMONT. SAN MATEO will operate and maintain all sewer lines, pumps, and treatment facilities in SAN MATEO.

f) SAN MATEO shall have the right to inspect new and existing sewer lines and laterals in BELMONT for soundness, rate of infiltration of storm and ground waters, and illicit connections.

6) All conditions, rights, and charges should be uniform for properties in BELMONT sewered through SAN MATEO.

NOW THEREFORE, it is hereby agreed as follows:

a) The agreement between the CITY OF SAN MATEO and the CITY OF BELMONT for sanitary outfall sewer connection and charts dated March 31, 1954, is superseded by this agreement and of no force or effect.

b) The agreement dated October 6, 1980, regarding sewer connections and charges for BELMONT properties in Woodbridge Park, Unit D, to SAN MATEO is superseded by this agreement and of no force or effect.

c) All present BELMONT connections to the SAN MATEO sewer mains are to remain as presently constituted. It is further agreed that at each intersection point of BELMONT sewer mains with SAN MATEO sewer mains at the City boundary lines, there shall be a manhole located near the boundary line for inspection and testing of entering flows from properties in BELMONT.

d) That before new BELMONT connections are made to sewer mains tributary to SAN MATEO in BELMONT or substantial changes made in present land uses and intensities in BELMONT properties served by existing connections, that SAN MATEO will be consulted and permission obtained to add the sewage flows therefrom to the SAN MATEO system. SAN MATEO will not unreasonably withhold approval therefore.

e) That SAN MATEO has the privilege of inspecting mains, lines, and tributary properties in BELMONT to insure compliance with State Water Quality Control Board, Federal EPA, and SAN MATEO rules, regulations, and ordinances relating to kinds and amounts of sewage that may be introduced to the system for conveyance and treatment.

f) That as consideration for said connections and for the service of conveying and treating the sewage from properties in BELMONT that BELMONT will pay in advance to SAN MATEO each fiscal year, beginning July 1, each year of this agreement amounts based upon the following formula:

7) a) A connection fee for each new commercial, manufacturing or residential unit added to the BELMONT system draining to SAN MATEO at the time it is added. The fee shall be as agreed upon by mutual Council resolutions, including changes from time to time. Initial residential fee shall be $250.00 per single family unit added to the BELMONT system.

b) A fee for conveyance, treatment, and disposal of sewage. The amount of the fee to be arrived at by taking the average of five winter months (October through March) of household potable water metered consumption (extrapolated to 12 months) for sewer users in BELMONT and SAN MATEO and dividing it into the pro rata cost share of budgets for annual conveyance, treatment, and disposal of sewage to be expended by SAN MATEO in behalf of SAN MATEO and BELMONT, thereby to obtain a cost per 100 cubic feet of potable water used to convey, treat, and dispose of sewage emanating from such domestic potable water usage. Based on that amount per 100 cubic feet of water consumption, multiply the metered water usage of BELMONT properties to arrive at a total amount for conveyance, treatment, and disposal due SAN MATEO from BELMONT.

c) An additional credit or charge beginning with the second year of this agreement, to reflect the difference between 1) budgeted amounts and 2) actual amounts of monies expended in behalf of SAN MATEO and BELMONT to convey, treat, and dispose of sewage from BELMONT and SAN MATEO in accordance with paragraph b) above.

d) A proportionate share of annual cash capital expenditures and annual bond debt service for sewer trunk mains, pumping plants, treatment works, and outfall mains, based on pro rata usage of these capital facilities, as measured by respective computed flows there through.

8) BELMONT will supply SAN MATEO with the five winter months metered water usage (October through March) (averaged and extrapolated to 12 months usage) in April of each year for each BELMONT property or unit served in BELMONT. Winter consumption readings minimize distortion of charges due to irrigation usage in gardens. SAN MATEO will provide budget figures and actual last year's expenditure figures to BELMONT in July of each year.

9) Time of Payments – Payments pursuant to said formula shall be made during the month of July of each fiscal year as compensation in advance for estimated costs for such fiscal year. Subsequent additional payments or refunds are to be determined after the close of the fiscal year not later than September 1, of the succeeding fiscal year to adjust the amount to become equivalent to the cost experienced during the fiscal year if different than the advance payment made at the beginning of the fiscal year.

10) Each city will maintain, own, operate, and be responsible for its respective sewer collection, pumping, and treatment facilities.

11) Term of Agreement - This agreement shall continue indefinitely and may be terminated at the option of either party hereto by at least 90 days written notice to the other party. This agreement may be amended from time to time upon mutual agreement of the two parties.

Notices shall be in writing and shall be transmitted by registered United States mail, postage pre-paid.

Notices to SAN MATEO shall be addressed as follows:

City Manager
City Hall
330 West 20th Avenue
San Mateo CA 94403

Notices to BELMONT shall be addressed as follows:

City Manager
City Hall
1365 Fifth Avenue
Belmont, CA 94002

IN WITNESS WHEREOF, the parties hereto have caused their corporate names and seals to be hereunto subscribed the 20th day of October, 1981.

CITY OF SAN MATEO, a Municipal Corporation

By /s/ RICHARD B. DE LONG
CITY MANAGER

ATTEST: (SEAL) /s/ DORIS CHRISTEN
CITY CLERK First Party

CITY OF BELMONT, a Municipal Corporation

By
MAYOR

ATTEST:
CITY CLERK Second Party

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ELEMENT 4 – O&M PROGRAM

APPENDIX 4.1

CCTV Standards

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CITY OF SAN MATEO
Department of Public Works

Closed-Circuit Television Inspection Manual

January 2014

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SECTION 1 – INTRODUCTION

The City of San Mateo Department of Public Works (CITY) owns, operates and maintains the public sanitary sewer collection system and storm drainage facilities within the City of San Mateo. The CITY performs a thorough condition assessment of the public sewer mainlines and manholes on a five year schedule to adequately track the condition of these assets and plan for replacement prior to failure.

The information provided in this manual is intended to supplement any contractual requirements that bind a contractor performing this work for the CITY.

1.1 MANUAL CONTENTS

This manual includes the general procedures required to mobilize for, perform, and document conditions found while inspecting manhole and underground pipe utilities in the City of San Mateo utilizing closed circuit television inspection (CCTV). This manual is intended for use in conjunction with NASSCO Standards for sewer mainline, sewer lateral and sewer manhole condition assessment. Use of NASSCO instructions, methods of data capture and codes is required for CITY projects. Current NASSCO PACP and MACP certification of all CCTV operators is required for all contracted CCTV work. Nothing in this manual alters NASSCO standards or codes. This manual provides data collection and submittal procedural information specific to San Mateo.

1.2 IMPORTANCE OF TELEVISION INSPECTION

CITY has a primary responsibility to protect and maintain its facilities and to prevent sewage spills that could create public health hazards or damage to the environment. CCTV provides information about the condition of the pipes so they can be properly maintained, repaired, and/or replaced. CCTV information is used to schedule routine maintenance, identify critical repair/rehabilitation needs and prioritize these repairs, and establish budgets for rehabilitation, system improvements, spot repairs and large-scale projects. CCTV is also used to verify the quality of preventative maintenance cleanings, new pipe construction and pipeline rehabilitation.

Captured CCTV data will be used primarily for the following purposes:

- Develop a condition rating for each line.
- Provide follow-up maintenance and/or structural recommendations.
- Display results on a map.
- Establish benchmarks to compare with future inspections of the same pipe.

1.3 STANDARDIZED PROCEDURES AND CODES

It is important for all CCTV inspections to be completed to a uniform standard. The use of uniform codes to describe conditions and defects allows the reviewer to gain a good understanding of the condition of a pipe and be able to assess deterioration of a pipe from one inspection to the next. All CCTV performed by CCTV contractors must be performed by NASSCO certified operators using current NASSCO standards and coding system that can be found in current NASSCO documents. Video, still images and data shall be delivered to the City on a portable hard-drive for large scale projects or on digital video discs (DVDs) for small projects. The City shall specify the media storage type at the start of the contract. Database shall be an unmodified NASSCO-PACP Certified Database.

For large sewer basin CCTV contracts, upon completion of the first 1000 LF, contractor shall submit data and video logs for review and acceptance prior to continuing work. For smaller contracts, project manager may request a submittal of a portion of the initial data capture. Requests made by CITY staff to alter the data and video collection process shall be adhered to for the remainder of the contract.

1.4 CCTV REQUIREMENTS SPECIFIC TO SAN MATEO

- All CCTV contractors performing work for the City of San Mateo shall use NASSCO PACP Standards Version 6 or higher.
- In addition to televising pipes, all manholes shall be panned with the video camera and visually inspected.
- All contractors shall first upload the City of San Mateo sewer GIS layer information for use within CCTV software inside the CCTV vehicle prior to commencing work. Utilizing the GIS layer during CCTV operations will minimize data entry errors.
- If contractor confirms that information in the GIS data provided by CITY is inaccurate, such as pipe size, length, material or the flow direction inside the pipe (if PipeID has the upstream manhole and downstream manhole reversed), contractor shall make notations in the Additional Information Header field.
- Contractor shall refer to table 4.2-1 for data matching of GIS fields with CCTV Header fields.
- Contractor shall follow NASSCO Header guidelines. Tables 4.2-1, 4.2-2 and 4.2-3 give additional information specific to the City of San Mateo for completing the header section.
- CITY requires CCTV data submittal on a portable external hard drive for large projects. DVD's can be used for smaller projects as directed by the CITY.
- For CCTV contracts that cover a large sewer basin, pre-cleaning activities shall include use of hydro-cleaning as well as mechanical cleaning equipment where necessary to clear the pipe and allow video capture of the entire length of pipe.
- Contractors providing CCTV following a completed pipe rehabilitation project must submit CCTV information for the entire length of pipe and follow all requirements of this Manual and NASSCO PACP standards.
- Contractor shall follow CITY guidelines for buried manholes described in section 3.7.
- Contractor shall follow CITY guidelines for video Start and End points described in section 4.3.
- If contractor utilizes continuous defect coding, contractor shall ensure that the defect end code is entered at the appropriate footage and not at the end of the video run.

SECTION 2 – PRE-INSPECTION ACTIVITIES

This section includes basic information on pre-inspection activities including all activities required to assess the requirements for working at the job site, mobilize for the field and set up equipment before actually performing the CCTV.

2.1 SITE ASSESSMENT

It is important to be familiar with the CCTV project area; the location of sewer assets, direction of flow and access issues to sewers in public right-of-ways and in utility easements. Further, knowledge of historical sewer problems encountered in different areas of the City will help the contractor prepare for and mobilize appropriate hydraulic and/or mechanical equipment necessary to effectively clean sewer pipes for successful CCTV.

Blockage Removal - CITY contracts for cleaning and CCTV work anticipate shifting the burden of removing blockages within sewer pipes (aside from structural issues) to the CCTV contractor. CITY crews are not to be dispatched except under extenuating circumstances and as directed by the CITY

project manager. CCTV contractor shall utilize their own hydraulic and mechanical cleaning equipment to adequately clear and remove blockages if the traditional four passes with a hydraulic jet nozzle has failed to adequately clear and remove blockages.

Plugging or bypassing - Plugging or bypassing needs shall be determined by CITY project manager during project development unless otherwise specified in the contract Where projects call for flow control, contractor shall provide plans describing methods that will be used for plugging and bypassing. During project work, Contractor shall obtain approval from the CITY project manager prior to initiating plugging or bypassing.

Large diameter pipes: Large diameter pipes often require special procedures for flow control, lighting, and camera travel or use of sonar equipment. Only CCTV crews with the appropriate equipment and training to perform large diameter pipe inspection should do so.

2.2 COUNTER CALIBRATION

The footage counter for the camera must be calibrated at least every two weeks during CCTV operations. The footage counter must be accurate to 0.5 feet per 100 feet. The calibration is performed by checking the cable counter against a measured length of 400 feet. The date of last calibration should be recorded for every CCTV report.

2.3 PUBLIC NOTIFICATION – ACCESS TO PRIVATE PROPERTY

Property owners must be notified if access to property is required. CCTV contractors must follow the CITY prescribed easement access procedures for the project being performed and provide no less than 72 hour notification to residents prior to entering onto private property. Sample notifications will be provided by the CITY project manager. Notifications must include on-site contractor and CITY direct emergency phone numbers should residents experience sewer problems during the project.

2.4 SAFETY

CCTV operators and field crew shall all be thoroughly knowledgeable about the following documents describing procedures for activities related to CCTV:

- Current GREENBOOK STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION sections including but not limited to the following sections:
    - Section 7-10 – Public Convenience and Safety
    - Section 500-1.1.4– Cleaning and Preliminary Inspection
    - Section 500-1.1.5– Television Inspection
- Current CALTRANS STANDARDS for traffic control procedures when required by the City or CALTRANS.
- Equipment owner's manuals (for CCTV vehicle, Cleaning vehicle and cleaning tools and equipment operation, maintenance, and troubleshooting) .
- Software user's manuals (for software operation, maintenance, and troubleshooting).

- For contracted work: Special Procedures (SP-) outlined in contract documents which refer to modifications or additions to sections in the Standard Specifications which have the same first numbers (e.g., 200-2).

Traffic Control and Safety - Traffic control is normally required to perform CCTV. GREENBOOK or CALTRANS STANDARD must be followed at all times. The City will determine whether the traffic control is adequate. Flashing lights must be used for all night work.

Atmospheric Testing - Atmospheric Testing must be performed even if entry into the manhole is not planned. This prevents personnel leaning over the manhole from being overcome by noxious gasses and allows emergency confined space entry if necessary. If the gas detector alarm sounds, contact a supervisor immediately.

NOTE: If the safety of field personnel or the public, or safe use of field equipment, is threatened at any time during the CCTV process, the field activities should be stopped and the site secured. If CITY field personnel are performing the CCTV, the supervisor should be notified immediately. If a CCTV contractor is performing the CCTV, the prime contractor and CITY'S project manager should be notified immediately.

SECTION 3 – DATA COLLECTION/PERFORMANCE STANDARDS

This section describes CCTV performance standards, including general information and definitions, quality standards, record keeping requirements, digital data formatting, appropriate screen text information and narration, and special CCTV procedures.

3.1 CCTV PERFORMANCE

CCTV performance includes the following:

- Consistent use of NASSCO standard forms and codes
- Uniform compliance with setup and inspection procedures
- Quality picture and audible records
- Suitable camera speed, lighting, and panning
- Accuracy when recording file names and electronic data

3.2 CCTV QUALITY STANDARDS

Camera Travel Speed: The speed of travel shall be slow enough to inspect each pipe joint, tee connection, structural deterioration, infiltration and inflow sources, and deposits. Camera speed should not, at any time, travel at a rate of more than 30 feet per minute. The camera speed should be steady or slower when recording features and defects.

Clarity: All video and still picture images must be clear and sharp. The camera operator should adjust focus, zoom, and lighting as needed to obtain a satisfactory image. The recorded image from the CCTV camera must be free of fog or haze in the pipe. If the camera lens becomes obscured with condensation, grease, scum, or debris, the camera should be removed from the pipe and cleaned.

Lighting: Lighting in the pipe should be such that the pipe is illuminated and there is a minimum amount of glare. Lighting should be adjusted as needed according to the size of the pipe to provide a clear picture of the entire periphery of the pipe for all conditions encountered.

Visibility: Where practical, CCTV inspections will be conducted in a manner that provides an unobstructed view of the entire pipe. Identifying structural defects is important as they influence the long-term integrity of the pipe. If debris or obstructions impede visibility, the pipe needs to be cleaned and camera inspection rescheduled. 85% to 100% of the inside of the pipe must be visible at all times for successful condition assessment. In some cases, nighttime work may be required in order to obtain appropriately low flow levels for CCTV. If maximum pipe wall visibility and sufficiently low flow levels cannot be obtained even at night, flow plugging and/or bypass pumping may be required. Plugging should only be performed under the direction and approval of the CITY. For new pipe construction acceptance inspection, nearly 100 percent of the circumference of the pipe wall circumference must be visible. A small amount of water will be introduced for purposes of sag identification.

Verification of Map Length: If a pipe's map length (as indicated by the written distance shown on sewer or storm drain maps, plan sheets, or contained in GIS Field=LENGTH) and the CCTV video counter length differ by more than 5 feet, the field length should be verified by measuring between the centerlines of the manholes using a measuring tape or wheel.

3.3 RECORD KEEPING

Sewer Pipe Segment Reference Number (Pipe ID): The CITY has developed a standardized system for assigning unique identification numbers for each sewer pipe segment. This convention joins the upstream MH# with the downstream MH# separated with an underscore and omitting the dashes used within each manhole ID.

For example, a pipe with an upstream manhole ID of 431-08X and a downstream manhole ID of 410-22X would be:

43108X_41022X.

Should two pipes travel from one manhole to the same downstream manhole, the overflow pipe would be distinguished from the original pipe by replacing both "X" with "O" for overflow.

In NO instance should the PipeID be altered so that downstream manhole ID is listed first and upstream manhole ID listed after the underscore.

Utilization of this pipe identifier is extremely important as it assists staff link external data to GIS sewer mainline layers to analyze and display information.

CCTV Field Log: A field log is to be used by the CCTV crew (and cleaning crew if contracted for both clean and CCTV) to track daily work. This log should be returned with the completed fieldwork at the end of the day (by CITY employees) or when data are delivered (by contractors). Logs shall specify the date, number of persons working, and shall list the specific pipe segments cleaned or CCTV'd (PipeID's), time spent per pipe segment and equipment used.

Portable External Hard Drive or DVD Submittal: Upon submittal, DVD's and external hard drives shall become the property of the CITY.

Portable External Hard Drive or DVD Labels: All DVDs/External Hard Drives must be properly identified with the project number and/or name (provided by project manager). DVD's must be labeled with the Pipe IDs of the inspections on the DVD.

3.4 DIGITAL DATA FORMAT & FILE NAMING

CCTV Software: Inspection software used by the contractor may be Wincam, POSM, or Granite XP. Any other proposed software format must be approved by CITY project manager prior to any work being

performed. CCTV contractors must provide the data in a format (unaltered PACP Version 6 or higher database) that will permit uploading to the CITY's computerized maintenance management system.

CCTV Video: The full CCTV video must be captured in MPEG format. Other formats may be accepted but contractor must obtain approval from CITY project manager prior to any work being performed. In addition to televising pipes, all manholes shall be panned with the video camera and visually inspected.

Video File Naming: Video files should be named in accordance with the following convention:

UpstreamNodeID-DownstreamNodeID-mmddyy-F/R.mpg

For Sanitary Sewer Pipe Segments:

- UpstreamNodeID = Upstream MH# (no dashes)
- DownstreamNodeID = Downstream MH# (no dashes)
- mmddyy is the date of the inspection
- F or R indicates whether the CCTV direction is upstream-to-downstream (F) or downstream-to-upstream (R)

For example, the file name of a sewer pipe inspection conducted on August 13, 2011, starting at upstream manhole 431-08X and extending to downstream manhole 410-22X would be:

43108X-41022X -081311-F.mpg

For Storm Sewer Pipe Segments:

- UpstreamNodeID = Upstream MH# or Catchbasin (CB)# (no dashes)
- DownstreamNodeID = Downstream MH# or CB# (no dashes)
- mmddyy is the date of the inspection
- F or R indicates whether the CCTV direction is upstream-to-downstream (F) or downstream-to-upstream (R)

For example, the file name of a storm pipe inspection conducted on August 13, 2011, starting at upstream storm catchabsin 12M-05 and extending to downstream storm manhole 12L-32 would be:

12M05-12L32-081311-F.mpg

If digital video files and data are to be copied onto a DVD, information shall be grouped in a logical manner (e.g., by area of inspection).

Still Picture Captures: Still images shall be captured similarly for all observed defects with a severe rating and/or as directed by CITY. In addition, additional still images should be captured every 100 feet to illustrate the typical condition of the pipe. Still images should be in jpeg format at least 640 x 480 resolution and should utilize the file naming convention as described below.

Picture File Naming: Still picture files should be named in accordance with the following convention where xxx is the footage location of the defect or observation (to the nearest foot).

UpstreamNodeID-DownstreamMH#-mmddyy-F/R-xxx.jpg

For example, the file name for a still image at footage 123.4 for the example inspection described above would be:

43108X-41022X-081311-F-123.jpg

If two or more images are captured at the same footage, add .a, b, etc. after the footage, e.g.:

43108X-41022X-081311-F-123a.jpg
43108X-41022X-081311-F-123b.jpg

Still image files are to be copied onto the same portable external hard drive or DVD as the corresponding video and data files for the pipe segment.

3.5 SCREEN TEXT

Start-up Screen Text: The following information shall be provided as text on the video recording at the start manhole prior to camera moving up the pipe. This text should be displayed for approximately 10 seconds or for the duration of the Start-up Narration, whichever is longer.

- Upstream and downstream node numbers – or PipeID (GIS Field=FACILITYID)
- Direction of camera travel
- Location (GIS Field=UPMHLOC)
- Date and time of day
- Weather conditions
- Pipe Diameter (GIS Field=DIAMETER)
- Total length of pipe (as stated on plan sheets; or GIS Field=LENGTH)
- Pipe material (at start of pipe)
- Depth of upstream and downstream manholes
- CCTV company (or City of San Mateo if taken by San Mateo crews)
- Operator's name (or CITY staff name if internal)

Running Screen Text: During CCTV, the running screen must include the following information. The display of this information must in no way obscure the central focus of the pipe being inspected.

- Running footage (distance traveled)
- Upstream and downstream node numbers – or PipeID

End Screen Text. The end point of the inspected pipe segment should be indicated with screen text for approximately 10 seconds. The ending screen text should indicate:

- Ending footage – footage from video counter
- Date and time of day
- Upstream and downstream node numbers – or PipeID

3.6 NARRATION

Language and Background Noise: The CCTV video recordings are part of CITY permanent records and should not contain inappropriate language, idle chatter, background noise, and discussions between the operator and other crew members.

Start-up Narration: A voice narration must be included in the video recording. This narration must include the following information at the beginning of each pipe segment:

- Upstream and downstream MH#'s
- Direction of camera travel
- Depth of flow

- Date and time of day
- Weather conditions
- Pipe size
- Pipe material (at start of pipe)

Running Narration: All observations, including lateral taps (service connections) along the length of the pipe shall be narrated. Narration shall include a description of the observation and clock position, if applicable.

End Narration: At the conclusion of the inspection of a pipe segment, the operator should state the final CCTV footage and indicate that the CCTV of the pipe segment is complete. . If the survey is abandoned before completion of the pipe segment, narration shall state the reason the survey was abandoned.

3.7 SPECIAL CCTV PROCEDURES: MANHOLE MARKING/UNCOVERING

Buried Manholes
If the CCTV crew encounters a buried manhole, they should notify CITY project manager immediately. Every effort should be made by contractor to locate and uncover, or locate and mark the location of the buried manhole. If unsuccessful in uncovering the manhole, CCTV may proceed through the buried manhole, however, a new file should be started, treating the CCTV inspection as a separate pipe segment from the initial pipe segment.

If it is not possible to CCTV through the manhole, and CCTV contractor has made every effort to uncover the manhole, contractor shall notify CITY that the manhole needs to be exposed in order to complete the inspection. After contractor has marked the location of the manhole, CITY project manager will identify whether contractor or CITY crews shall uncover the manhole.

SECTION 4 – STANDARDIZED CCTV CODES

This section covers the information and standard formats and codes required for completion of the CCTV. This manual is intended for use as a complement to NASSCO Standards for sewer mainline, sewer lateral and sewer manhole condition assessment. When in doubt, refer to most recent NASSCO PACP binder.

4.1 GENERAL GUIDELINES

The following guidelines must be followed when completing the header section of the CCTV form:

- If the CCTV extends through a manhole and spans more than one pipe segment, a new header form must be completed at the start of each subsequent pipe segment.
- If a reverse set-up is required because the CCTV in the downstream direction could not be completed, a new header form must be completed at the start of the reverse set-up CCTV. (In NO instance should the PipeID be altered so that downstream manhole ID is listed first and upstream manhole ID listed after the underscore).

4.2 REQUIRED HEADER INFORMATION

The header information contains pertinent data about the individual pipe being inspected. The header data entry is completed in the field to provide as much information as possible about the inspection work.

Table 4.2-1 lists required header information for each CCTV inspection and provides an explanation of appropriate responses to each item expected by the CITY.

Much of this information is stored in the CITY's GIS sewer layers. Upload of San Mateo's GIS layers

will pre-populate much of this information. Adjustments to fields may be requested by the CITY at the start of the project once the initial data has been reviewed.

Table 4.2-1

CCTV HEADER INFORMATION		
FIELD #	**TITLE**	**ENTRY/COMMENTS**
1	Surveyor's Name (CCTV Operator's Name)	First and Last Name
1a	Certificate Number	Surveyor's NASSCO Certificate #
2	System Owner	"CITY OF SAN MATEO" GIS Field = OWNER
3	Survey Customer	"Engineering" or "Sewer Maintenance" – based on which Division is requesting the CCTV
4	Drainage Area	The "Cleaning Area" as identified for each pipe Example: "A1a" GIS Field = CLEANA
5	Sheet Number	If using hardcopy sheets for hand-recording – OR – Plan Sheet number on which the pipe is located.
6	P.O. Number	Purchase Order # provided by project manager.
7	Pipe Segment Reference	PipeID Example: 43108X_41022X GIS Field = FACILITYID
8	Date of Survey	YYYYMMDD
9	Military Time – Beginning of Survey	i.e. 13:30
10	Street Name and Number of Upstream Manhole	GIS Field = UPMHLOC
10a	City Name	Most often "SAN MATEO"
11	Further Location Details	Landmarks near MH. Example: near fence
12	Upstream Manhole Number	Example 132-12X GIS Field = UPSMH
13	Upstream Rim to Invert	Measure in field. Feet + tenths of foot.
14	Upstream Grade to Invert	Measure in field. Feet + tenths of foot.
15	Upstream Rim to Grade	Measure in field. Feet + tenths of foot.
16	Downstream Manhole Number	Example 132-13X GIS Field = DWNMH
7	Downstream Rim to Invert	Measure in field. Feet + tenths of foot.
18	Downstream Grade to invert	Measure in field. Feet + tenths of foot.
19	Downstream Rim to Grade	Measure in field. Feet + tenths of foot.
20	Use of Sewer	Sewer=SS Forcemain=FM Storm=SW GIS Field = USE_
21	Direction of Survey	Upstream=U Downstream=D
22	Flow Control	Not Controlled=N Plugged=P Bypassed=B De-watered using Jet=D Lift Station=L

23	Size 1 (Diameter)	Diameter of pipe GIS Field = DIAMETER
24	Size 2 (Width)	Mandatory use if pipe is not circular
25	Shape	Most Often Circular=C GIS Field = SSML_SHAPE
28	Pipe Joint Length	Most common length of pipe segments in run
29	Total Length of Pipe	Length Stated on Plan Sheets or: GIS Field = LENGTH
30	Total Length Surveyed	Actual length of pipe from footage counter
31	Year Constructed	GIS Field = INSTALLDT YYYY
32	Year Renewed	If known
33	Tape/Media Number	If using multiple DVD's
34	Purpose of Survey	For CCTV contracts the cover an entire sewer basin, use "G" Capital Improvement Program Assessment. Otherwise, refer to Table 4.2-2 and ask project manager which code to use.
35	Sewer Category	This will become mandatory after CITY defines the criticality for each pipe and provides this in the GIS.
36	Pre-Cleaning	J=Jetting, H=Heavy/Mechanical Cleaning N=No Pre-cleaning, Z=Unknown For CCTV contracts the cover an entire sewer basin, this shall be J or H.
36a	Date Pre-Cleaned	Mandatory for CCTV Contracts that require pre-cleaning.
37	Weather	Mandatory to enter a PACP weather code for weather at time of inspection
38	Location Code	Please refer to Table 4.2-3 for description of CITY utilization of NASSCO codes.
39	Additional Information	Use as necessary. Mandatory to use if CCTV confirms inaccurate data in CITY GIS.
40	Work Order Number	Provided by project manager if applicable.
41	Project	Name of CCTV project – will be provided by project manager.
42	Pressure Value	Minimum testing pressure specified/used during joint or lateral testing.

Tables 4.2-2 describes the CITY utilization of the NASSCO "Purpose of Survey" code. Contractor shall ensure the proper Purpose of Survey code is utilized. Project manager shall identify this code at pre-construction meetings or prior to start work.

Table 4.2-2

PURPOSE OF SURVEY		
CODE	**DESCRIPTION**	**CITY CODE DESCRIPTION**
A	Maintenance Related	Use "A" when CCTV is performed to identify maintenance needs or evaluate effectiveness of maintenance.
B	Infiltration & Inflow (I&I) Investigation	Use "B" when CCTV is performed specifically to see where and how much I&I may be entering or affecting a pipe.
C	Post-Rehabilitation Survey	Use "C" after a repair has been performed. Most repair contracts require post-repair survey. Follow all requirements for CCTV of entire length of pipe.
D	Pre-Rehabilitation Survey	Use "D" when CCTV is performed prior to repair while confirming repair location and extent.
E	Pre-Acceptance of New Sewers	Use "E" when CCTV is performed on brand new sewers as part of CITY acceptance procedures.
F	Routine Assessment	Use "F" for CCTV is requested by CITY for storm assets or CCTV not involving a large sewer basin or any other more appropriate codes.
G	Capital Improvement Program (CIP) Assessment	Use "G" for large sewer basin CCTV projects. This CCTV is used specifically for developing the next years' sewer CIP rehabilitation project.
H	Resurvey for Any Reason	Use "H" if directed by CITY to re-survey a line. Enter the original project name and reason for re-survey in the Additional Information Header field.
V	Reversal	This code should not be used unless directed to by project manager. Upstream and Downstream directional identifiers suffice.
Z	Not Known	This code should not be used unless directed to by project manager.

Tables 4.2-3 describes the CITY utilization of the NASSCO "Location" code. Contractor shall ensure the proper Location Code is utilized for each pipe.

Table 4.2-3

LOCATION CODE – Of sewer pipe being surveyed. (Not necessarily the same location as the start node)		
CODE	**DESCRIPTION**	**CITY CODE DESCRIPTION**
A	Main Highway - Urban	The main highways in San Mateo are Hwy 101 and Hwy92. If a pipe repair would impact use of either of these highways, then use "A".
B	Main Highway - Suburban	For NASSCO, main suburban highways are those roads that heavy good vehicles. Refer to Table 4.2-3a, San Mateo's Truck Routes. Use "B" for pipes underneath these roadways.
C	Light Highway	For NASSCO, light highway streets are residential streets. Use "C" for pipes underneath any San Mateo roadways outside of those listed above.
D	Easement / Right-of-Way	For CCTV projects, use "D" for pipes that have the majority of their length within a private property easement.
E	Woods	In San Mateo, the only pipes that would be assigned code "E" would be the sewer mainlines running through Laurelwood Park.
F	Sidewalk	Some sewer pipes run along and underneath a sidewalk. "F" can be used in those situations.
G	Parking Lot	If the majority of the sewer pipe resides underneath a parking lot, use "G".
H	Alley	Use "H" for any pipes located in public or private alleyways in San Mateo.
I	Ditch	This code would be used in very rare situations. Confirm with project manager prior to use.
J	Building	Use "J" only in the rare instance that the majority of a pipe runs underneath a building.
K	Creek	If a pipe repair would affect a waterway, use location code "K." for example, the sewer pipes that run alongside the 19th Ave Channel east of Hwy 101 highways would have location code "K".
L	Railway	Use "L" for the handful of sewer pipes in San Mateo that cross underneath the railway. Also use "L" for sewer pipes adjacent to the railway that are also on railway property (parcels between S El Camino and Pacific Blvd just north and south of the 42nd Ave underpass).
M	Airport	There are no airports in San Mateo.
Y	Yard	San Mateo prefers the use of location code "D" for sewers in backyard easements. If no easement exists, "Y" may be used.
Z	Other	If "Z" is used, provide details in the Additional Comments field.

NOTE: For proper use of the Location Code "B", please refer to this list of truck routes (next page) and/or obtain a Truck Routes Map from a project manager. Identifying sewers underneath heavily used roads will assist in determining the criticality for sewer repairs.

Table 4.2-3.a

CITY OF SAN MATEO TRUCK ROUTES
US 101 (Bayshore Freeway)
State Route 82 (El Camino Real)
State Route 92 (J. Arthur Younger Freeway)
2nd Avenue between South Humboldt Street and North Amphlett Boulevard
East 3rd Avenue (J. Hart Clinton) from the easterly city limits to US 101 (between the hours of eight-thirty a.m. to four-thirty p.m. eastbound)
East 3rd Avenue between US 101 and South Claremont Street
East 4th Avenue between US 101 and South Claremont Street
9th Avenue between El Camino Real and South Claremont Street
19th Avenue between South Delaware Street and Fashion Island Boulevard
East 25th Avenue between El Camino Real and South Delaware Street
28th Avenue between Edison Street and El Camino Real
37th Avenue between El Camino Real and Edison Street
Bridgepointe Parkway between Baker Way and Bridgepointe Circle
South Claremont Street between 3rd Avenue and 9th Avenue
Concar Drive between Westbound SR 92 Ramps and Grant Street
South Delaware Street between Garvey Way and 25th Avenue
Edison Street between 28th Avenue and the Hillsdale Shopping Center
Fashion Island Boulevard between 19th Avenue and Baker Way
Franklin Parkway between US 101 and Saratoga Drive
East Hillsdale Boulevard between El Camino Real and US 101
East Hillsdale Boulevard between US 101 and easterly city limit
South Humboldt Street between 2nd Avenue and 4th Avenue
Kehoe Avenue between Northbound US 101 Ramps and South Norfolk Street (between the hours of six a.m. to six p.m. Monday through Friday)
Mariner's Island Boulevard between Eastbound SR 92 Ramps and Fashion Island Boulevard
South Norfolk Street between East 3rd Avenue and Fashion Island Boulevard (between the hours of six a.m. to six p.m. Monday through Friday)
The southerly side of Peninsula Avenue, between Bayshore Freeway and El Camino Real
East Poplar Avenue between Southbound US 101 Ramps and Amphlett Boulevard Street
Saratoga Drive between Franklin Parkway and East Hillsdale Boulevard

4.3 CAMERA START AND END CODES

The location at which the camera footage counter is set to 0.00 should be at the start of the pipe at the manhole or access point wall. Two codes shall always be entered at the start point:

1) the access point code ***along with the M ID# entered into the Remarks field***, and
2) the water level code with the appropriate percentage for height of water in Value 1 field (to nearest 5%).

The point where the camera footage counter is stopped is at the end of the pipe at the (typically downstream) manhole or access point wall. Two codes shall always be entered at the end point:

1) the access point code ***along with the MH ID# entered into the Remarks field,*** and

2) the water level code with the appropriate percentage for height of water in Value 1 field (to nearest 5%).

4.4 CONTINUOUS DEFECTS

Contractor will follow NASSCO guidelines for continuous defects. If the camera goes under water, it cannot be assumed that the defect continues. The defect must be closed out where the camera first goes into the water.

4.5 – CCTV OBSERVATION CODES

The City uses NASSCO Version 6 or higher standard pipe observation codes.

SSMP
ELEMENT 4 – O & M
Program APPENDIX 4.2

Sewer Pipe Cleaning
Standard Operating Procedures
(SOPs)

City of San Mateo
CODE OF SAFE PRACTICES

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A
Air Compressor and Pressure Vessel Safety
Air Gun Nozzle Safety
Air Rake and Vacuum Super Blower
Arrow Board, Trailer Mounted
Automatic External Defibrillators

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Backhoe
Barbeque
Blower, Backpack Operator
Boom Truck

C
Cart and Hand Truck Safety
Chain and Sling Safety
Chip Hammering and Jack Hammering
Compressed Air, Shop Safety
Crack Sealing, Roadways

D
Drill Press
Drill, Cord Drill
Drill, Cordless
Dump Truck

E
Engine Hoist – Lift

F
Facilities and Operations Staff
Fire Extinguishers – Portable
Floor Jack, 3 Ton
Forklift
Front End Loader, Tractor Loader

G
Gas Powered String Trimmer and Brush Cutter Safety
Generator – Portable Electrical (Trailer Mounted)
Generator – Portable Gasoline
Grinders – Bench, Floor, and Hand

H Hedge Clipper (Gasoline Powered)

P Painting and Striping Units
Pavement Grinder
Pipe Threading Machine
Portable Welding, Arc
Pressure Washer Safety
Propane Tank Handling and Use

R Roller Compactor

S Saw – Chain Saw
Saw – Chop Saw Cut-off Safety
Saw – Concrete Saw
Saw – Reciprocating Saw
Spill Response Materials SPCC
Street Sweeper
Stump Grinder

V Vacuum Truck (Vac-Con)
Vibrating Soil Tamper Compactor

W Welding - Portable Oxygen and Acetylene
Welding – Portable Electric
Wheel Barrows
Wood Chippers
Working Near Vehicular Traffic

City of San Mateo
Code of Safe Practice

FOR IMMEDIATE RELEASE
Initial date:
Revised date:

Questions or comments regarding this Code of Safe Practice should be directed to the Safety Director.

Vacuum Truck (Vac-Con)

SAFE PRATICE RULES

1. Pre-operational equipment (including rental equipment). Be familiar with operator's manual.
2. Examine for worn or frayed hoses and lines. Check valves and hose connections for signs of leakage.
3. When swinging boom, change direction slowly.
4. Only one person operates the boom and one-person signals and assists the operator.
5. When positioning truck to work, be extra cautious of personnel and other equipment.
6. Properly secure all equipment and miscellaneous items before leaving yard or job site.
7. Do not load dump body beyond rated capacity.
8. Be aware of possible load surge when turning or braking.
9. Check to see that tailgate is properly secured after dumping.
10. Use safety stand when working under raised dump body.
11. Keep cab clean.
12. Use hearing protection.

PERSONAL PROTECTIVE EQUIPMENT

Protection Area	PPE Required
Eye	Wear safety glasses with side shields or goggles.
Face	
Hand	Work gloves.
Head	Hardhat.
Foot	Safety steel or composite toe safety shoes or boots.
Body	Proper protective clothing.

Respiratory	N95 dust mask when appropriate.
Hearing	Wear earplugs or earmuffs as necessary.

I, _____ (*print name*) have read and understand the safe work practices listed above and will operate the designated machine in accordance with them, the manufacture's operating instructions and the supervisor's instructions.

Signature: _____ Date: _____

DISCLAIMER

This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. Although all of the material contained herein was carefully selected and reviewed, company claims no liability for its accuracy and specifically disclaims any warranty, real or implied, as to its accuracy. The parties using this information do so at their own risk and specifically hold company harmless from anyone claiming damage by using the above referenced material.

City of San Mateo
Code of Safe Practice

FOR IMMEDIATE RELEASE Initial date: Revised date:	Questions or comments regarding this Code of Safe Practice should be directed to the Safety Director.

Working Near Vehicular Traffic

- Workers (on foot) exposed to vehicular traffic must wear orange flagging garments.
- Workers on foot shall not wear any type of headgear that can interfere with hearing back up alarms, warnings, etc.
- When hazards to workers exist because of vehicular traffic, use traffic controls in conformance with the State's Department of Transportation, "Manual of Traffic Control." Additionally, controls such as detours, warning signs, or barricades shall be used when necessary.
- Flagmen shall be required where the above controls are ineffective.
- Wherever mobile equipment operation encroaches upon a public thoroughfare, a system of traffic controls must be used.

PERSONAL PROTECTIVE EQUIPMENT

Protection Area	PPE Required
Eye	Wear safety glasses with side shields or goggles.
Face	
Hand	Work gloves.
Head	Hardhat.
Foot	Safety steel or composite toe safety shoes or boots.
Body	Proper highly reflective garment (vest or jacket).
Respiratory	N95 dust mask when appropriate.
Hearing	Wear earplugs or earmuffs as necessary.

I, _____ (*print name*) have read and understand the safe work practices listed above and will operate the designated machine in accordance with them, the manufacture's operating instructions and the supervisor's instructions.

Signature: _____ Date: _____

DISCLAIMER

This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. Although all of the material contained herein was carefully selected and reviewed, company claims no liability for its accuracy and specifically disclaims any warranty, real or implied, as to its accuracy. The parties using this information do so at their own risk and specifically hold company harmless from anyone claiming damage by using the above referenced material.

City of San Mateo
ENVIRONMENTAL SERVICES DIVISION

STANDARD OPERATING PROCEDURES

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12. EMPLOYEE ORIENTATION PACKET



CITY OF SAN MATEO

ENVIRONMENTAL SERVICES
HYDRO CLEANING SEWERS

FLUSHER CONTROL PANEL AND DESCRIPTION

Engine Controls: Key start,and choke with engine oil and temperature gauges for auxiliary engine machines.

Throttle: Vernier type throttle with emergency shut down button. Rotate counter clockwise to increase power, clockwise to reduce. Use emergency stop button ONLY if rapid shut down is required.

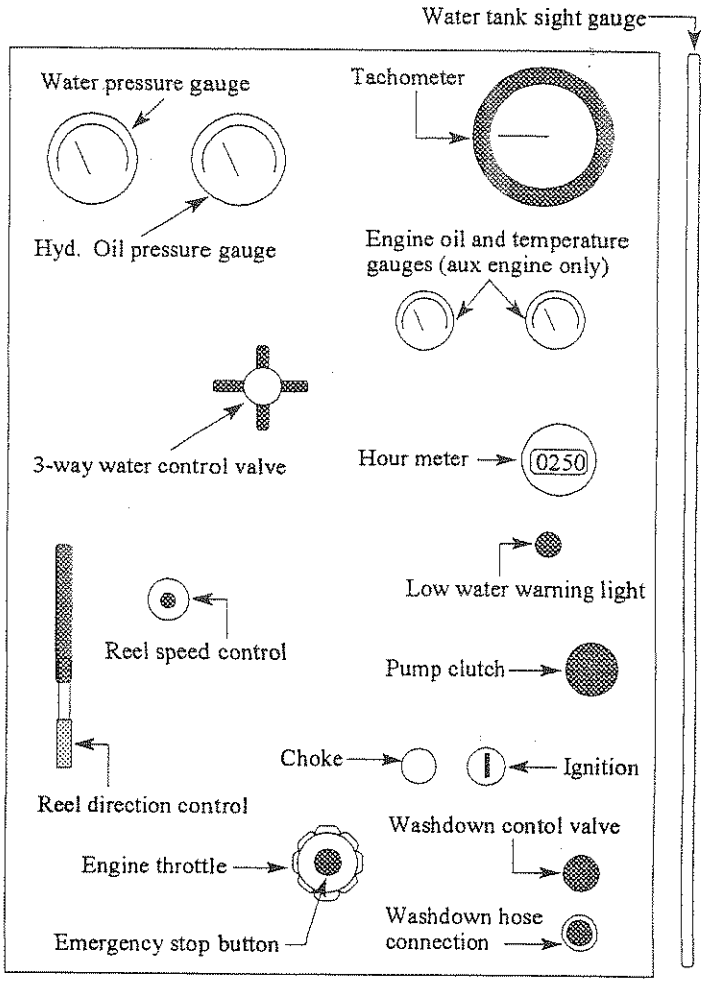
Tachometer: Shows engine rpms during operation.

Hour Meter: Displays number of operating hours on pump or engine. Used for scheduling recommended maintenance and service.

Water Pressure Gauge: Shows water pressure level in system during operation.

Hydraulic Oil Pressure Gauge: Shows amount of hydraulic oil pressure being applied to hose reel during pull back.

3-way Water Control Valve: Directs water to the sewer hose reel or recirculation mode.



Reel Direction Control: Operates the hose reel in forward or reverse modes. Pushing down rotate the reel forward, pushing up rotates the reel in reverse.

Reel Speed Control: Sets reel speed at desired rate of nozzle travel speed.

Pump Clutch: Engages/disengages water pump from power source.

Low Water Warning Light: Displays red when water level is less than 3 minutes of operating time.

Water Tank Sight Gauge: Shows water level of water tank during operation.

Washdown Hose Connection: Quick disconnect fitting for the washdown hose and gun.

Washdown Control Valve: Engages/disengages the washdown gun system.

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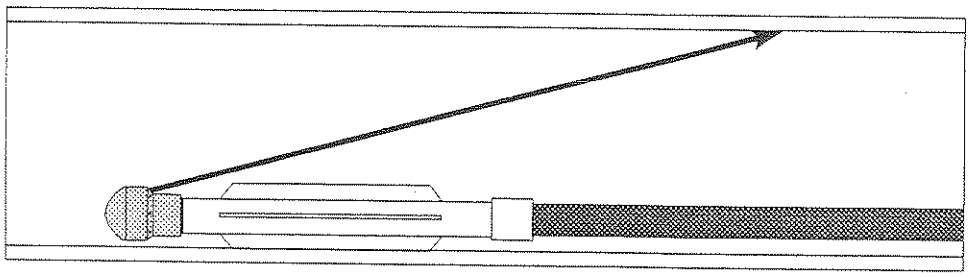
NOZZLE ANGLES AND EFFECTS

Nozzles use water volume and pressure to accomplish two things at once, climb the pipe and clean it. The angles used in the nozzle determine the amount of thrust that is developed and the effect of the cleaning jets on the pipe.

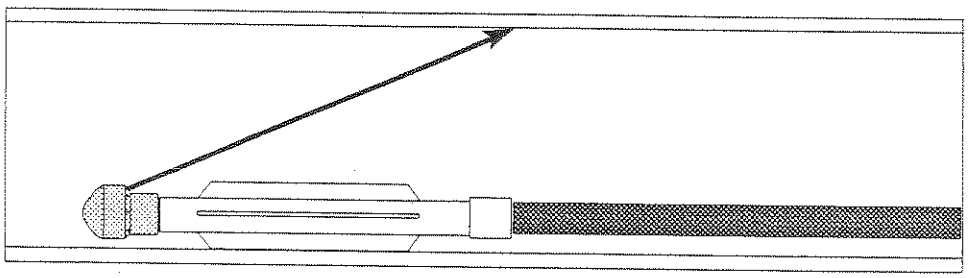
Nozzle cleaning jets provide a strong stream of water to remove or loosen materials. The water jets diffuse rapidly once they clear the nozzle orifice. The greater the distance between the nozzle and the pipe walls, the less effective the cleaning force will be.

Low angled nozzles develop the most thrust and travel quickly up the pipe. The effectiveness of their cleaning jets, however, is limited due to the distance the water jet must travel to reach the pipe walls.

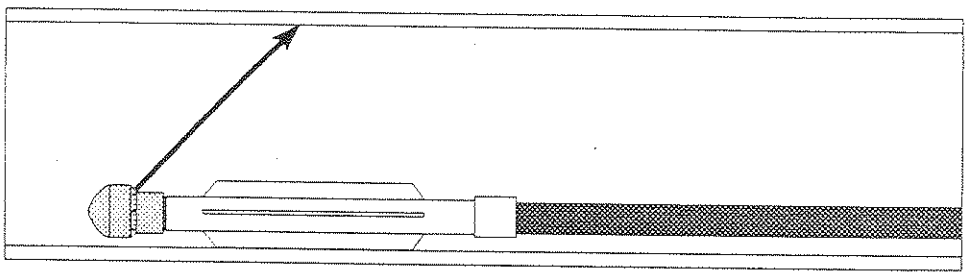
High angled nozzles develop less thrust, traveling up the pipe slower. The effectiveness of their cleaning jets is increased as the distance from the nozzle to the pipe wall is less.



15° angle, note the distance between nozzle and pipe crown for high thrust and low cleaning power. This angle commonly used for stoppages.



35° angle, note shorter distance to pipe crown for better cleaning with a little less thrust. This nozzle angle is most commonly used for P/M work.



45° angle, note short distance to pipe crown for best cleaning but little thrust developed. This angle used for grease and detergent build up.

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CLEANING METHOD FOR GREASE REMOVAL

Grease deposits begin at the crown of the pipe and build down until the flow is restricted to a point that stoppages frequently occur. Understanding grease deposits is important to effective removal. Grease consists of hot waste oils from commercial and residential users. Tallow, or animal fats, can mix with oil deposits, creating a heavy sludge. This sludge is deposited on pipe surfaces as water cools it and moves it down stream from the source. Grease problems are common in service areas supporting commercial or industrial food preparation or processing.

The difficulty with grease removal is determined by the thickness of the deposit, the hardness of the deposit, and the length of the deposit area. It can be one thing to dislodge the grease deposits, it can be another to avoid stopping the flow downstream as the pieces of dislodged grease become stuck.

1. Determine the area affected by the grease deposit. If possible, begin cleaning operations from the first section showing little or no evidence of grease build up. This will help keep down the possibility of dislodged grease from being caught downstream.

2. In known grease areas, a grease nozzle should be used to provide the proper cleaning power. These nozzles are commonly large bore nozzles providing maximum water flow to provide strong removal jets and supply enough water to keep dislodged materials in suspension.

3. Set up the hose toward the upstream manhole. In heavy grease removal operation, a lower manhole roller is recommended over the use of a slipper guide. Slipper guides tend to block the downstream flow, allowing grease deposits to collect in them, stopping the flow. Lower roller assemblies to not block the invert and allow free movement of water and materials. If a slipper guide is used, check the flow rate in the pipe continuously. If a drop in the flow rate is seen, pull the slipper guide up the hose to relieve the grease build up.

4. Move the nozzle slowly up the line, returning it slowly under pressure. Observation of the flow will show the effect the nozzle is having. After a couple of passes, the water should be clear unless harder layers are present.

5. Grease observed in the pipe during cleaning will help determine what the deposit thickness is. Recent layers of grease will turn the downstream flow into a light brown color, much like adding cream to coffee. Layers beginning the hardening process will show as small clumps or bits in the flow. Harder layers typically show as curved sections of grease in the shape of the pipe itself and be accompanied by strong odors. Extremely hard layers will generally appear as 'logs', long and hard to break up as they pass by. These logs usually indicate a serious build up the flusher may or may not be able to effectively remove.

6. As explained in the drawing, grease can harden to a point where flushing machines will have difficulty in removing it. In these instances, a Rodding machine may have to be used to cut the hardened grease from the pipe walls in manageable pieces. Once removed, flushers can be scheduled on a regular frequency to remove recent, soft deposits before they can build into difficult problems.

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CLEANING METHOD FOR SAND REMOVAL

Sand in collection systems can be a variety of different consistencies from loose earth and dirt, to bank run with rocks, to very fine beach sand. With some minor differences, the removal methods remain the same with all types of sand or earth debris.

One of the most common mishaps in sand removal is trying to remove too much at one time and getting the nozzle or the sewer hose stuck in the debris, sometimes referred to as compacting. Compacting occurs when the nozzle is sent too far up the pipe to remove all the material between the nozzle and the manhole. Typically, the nozzle will build material behind it as it is pulled back, in some instances causing a wall of material to build downstream. Usually the nozzle can pull clear of the debris pile, however, if the material can pack tightly around the hose, it will prevent the nozzle from pulling out. To avoid potential compaction, and the resulting stoppages that can be caused by this, some basic steps can be taken to reduce the opportunity for this to occur.

1. Always remove the material from the downstream access. A method for removing the debris, such as a spoon shovel, handi-clam, or air conveyance, should be available to prevent the material from going downstream and creating problems.

2. Use a sand trap in the downstream invert to prevent large amounts of debris from getting past the access. This device will stop most material, causing to fall out of suspension and allow the water to flow by.

3. Using the proper nozzle can usually be determined by the size of the line. In small lines of 6" - 10", a combination sand/grease nozzle may be effective. In medium to large size lines of 12" - 24", either a sled or football type sand nozzle should be used. In larger lines these same nozzles should also be used, however, as the line size increases, the effectiveness of hydraulic cleaners is diminished and bucket machines may have to be used.

4. Once set up in the pipe with the proper nozzle and hose protection, use the rule of 10's. Travel approximately 10' up the pipe and return to the manhole. Examine the amount of material that is pulled out to determine how far the nozzle can safely travel. If a large amount returns, clean the same 10' section a few times to clear it, then push another 10' beyond to remove the next leg. Though this may take some additional time, the chance of compaction is reduced and the debris will be more easily controlled.

5. Once enough material has gathered in the manhole, stop operation of the nozzle until the materials can be removed. Under no circumstances should an operator be in the manhole when the flusher nozzle is working, even if it is quite a distance from the manhole. An unexpected release of water in the pipe can quickly fill the manhole, or airborne rocks, razors, and other objects can cause injuries.

6. Using this method, continue the operation until the pipe is cleared. It is not uncommon to need several tanks of water in a given line section. If a useable hydrant is nearby, a long length of hose may be used to trickle feed the tank, keeping the water at the same level while working. If using a slipper guide, be sure materials are shaken out regularly to avoid compaction in the guide itself.

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CLEANING METHOD FOR STOPPAGE REMOVAL

Stoppages can be caused by a wide variety of circumstances from hydraulic bottle necks in the system to physical objects such as cans or tires. The flushing machine can be used to relieve most stoppages resulting from grease, debris deposits, or soft solids like rags and papers. In some instances, a rodding machine may be needed to remove roots or foreign objects from the pipe that flushing machines cannot easily remove.

As a caution when using flushing machines to relieve stoppages, always operate the flusher from the downstream, dry manhole. Never attempt to operate from a surcharged manhole. In trying to place the nozzle in the invert of a surcharged manhole, it is difficult to determine if the nozzle is in the pipe. When the nozzle is put under pressure it can exit the manhole without warning surprisingly fast, striking and/or penetrating anything in it's path, including the operator, and can cause serious injury.

If forced to operate from a surcharged manhole, use long poled tools to insure the nozzle is in the pipe. Apply minimum pressure of approximately 500 psi, use the long tool to feel if the nozzle is running up the pipe or up the side of the manhole. This tool may also keep the hose on the pipe floor, preventing the nozzle from escaping. Again, this is a dangerous practice, and is not recommended. Most serious injuries associated with flushing machines are related to surcharged manhole operation.

1. Determine the nearest dry manhole from the stoppage. Set up for stoppage removal should be done from this manhole.

2. A penetrator nozzle should be used to clear the line. This nozzle has a small head designed to penetrate the material and create an ever widening hole though it.

3. Set up the sewer hose in the pipe, using the proper hose protection and/or easement rollers. Send the nozzle up the line until the upstream travel stops, indicating the blockage has been reached.

4. Use the reel controls to back the nozzle up and return to the mass repeatedly. If this fails to relieve the blockage, a common practice is to physically hold the hose, using gloves for protection, pull the nozzle back and abruptly let go, ramming the debris.

5. If the stoppage should clear before water runs out in the water tank. If the blockage remains, refill and return, or a Rodding machine may want to be considered. The nozzle may be trying to move a large rock or other physical object from an invert opening, and lacks the strength necessary to move it against the head pressure of the water backed up in the pipe system. The Rodding machine is best designed to provide the strength needed to resolve these blockages.

6. After the stoppage is relieved, the pipe should be cleaned using the proper nozzle to remove any additional materials that caused the problem. Once cleaned, the line should be proofed with a proofing tool to be sure the nozzle is not passing under or around another potential stoppage. Document this proofing test to limit future liability claims.

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HYDRAULIC ROOT CUTTER OPERATION

Flushing machines can utilize hydraulically powered root cutters to remove hardened grease and roots from sewer lines. Hydraulic root cutters are designed to propel a skid mounted motor up the pipe while turning a tool at the front end. This tool can be an effective method for material removal, however, some caution is advised in operation.

Avoid using standard skid mounted cutters in pipes with alignment problems such as dropped pipe joints. The tool can become lodged in the dropped section and force excavation to be removed. Some skid assemblies can accommodate dropped joints up to approximately 3", and should be used in known problem lines, or when faced with an unknown line condition. Be sure the machine footage meter is operating properly and is reset during use to locate the tool if it becomes stuck.

Use the proper sized skid for the tool being used. Undersized skids will cause opposite end of the cutter to bounce around in the pipe, potentially causing damage to the pipe and/or cutter.

Use the proper saw blade when cutting roots. Use balanced blades to prevent front bearing wear. Though interchangeable with Rodding machine saw blades, not every blade will withstand the tremendous forces generated by the cutter. Use saw blades specifically designed for use on hydraulic root cutters. Never attempt to handle the operating tool once the cutter is connected to the hose.

1. When removing roots, it is often best to use a size smaller root saw than the diameter of the pipe to do the initial cutting pass. The cutter can be gaffed up at the far manhole, or returned to the cleaner to attach a pipe size root saw and skids for the final pass.

2. Operate the tool slowly up the line. Due to the rotational speed of the blade, roots can be thrown against the sides of the pipe, avoiding the cutting teeth. Slow operation allows the tool to work much more effectively. Operating speed should be a minimum of half that used with nozzles.

3. When engaging root masses, ease the cutter in and out of the mass using the hose reel controls. Carefully watch the sewer hose during use. If the hose begins to twist, it indicates the saw is stuck in the materials, forcing the motor to turn. Withdraw the hose to avoid hose damage at in the pipe, and free the blade.

4. Use finishing tools, like three blade cutters, to scour the pipe walls after root cutting. Root saw blades will leave a small portion of roots in the pipe. The three blade cutter scours the pipe walls to cut the remaining roots or root ends. This tool requires a very slow travel speed to get these remaining roots, at approximately 2/3 of the speed the cutter was operated at.

5. For grease removal, use the three blade cutter. Root saw blades become ineffective when clogged with grease. The three blade cutter provides a long, single edged cutting tool that with shave off layers of grease. Use a small tool on the initial pass, either gaffing up the tool at the far manhole or returning it to the cleaner to put a pipe sized tool and skids on. Use a very slow travel speed to be sure the deposit is broken up enough to pass downstream.

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PURGED PLUMBING

Purged plumbing, commonly referred to as "blown toilets", is an increasing problem for may agencies. Recent studies of this nuisance problem show there can be several contributing factors. Increased water pressures used in flushing equipment in recent years, more frequent line cleaning required by preventive maintenance programs, line obstructions, and structure plumbing can all contribute to the phenomenon.

Purged plumbing is the result of air volume moving in the pipe during cleaning operations. Most often this can be felt as a blast of air from the manhole when the cleaning nozzle is working. As the nozzle moves up the line, nozzle jets create high pressure air behind the nozzle. This is referred to as positive air pressure. Air in front of the nozzle is pulled downstream. This is referred to as negative air pressure.

The negative air pressure moving down the pipe will try to pull air from the source of least resistance. Normally this air is pulled from the line itself, manhole chambers, and/or vents in the manhole lids. If the pipe is obstructed with water flow, root or grease build up, or has a dip sealed with water, the cubic foot space available for air movement is reduced or eliminated. The negative air is then pulled from service connections.

When air is pulled from service connections the house vent will usually allow air to move freely. Depending on the size of this vent, obstructions that may be present, and the complexity of the structure plumbing, the air may pull freely or may try to pull water from the traps. Which traps are affected depends on which trap offers the path of least resistance to the negative pressure.

In toilets, water is drawn from the trap as negative air forms a vacuum. Water is drawn down from the bowl until it reaches a level that air can move through the trap, venting air to relieve the negative pressure. Once the nozzle is past the service connection, the water settles and remains at low level in the bowl and trap, barely sealing the trap.

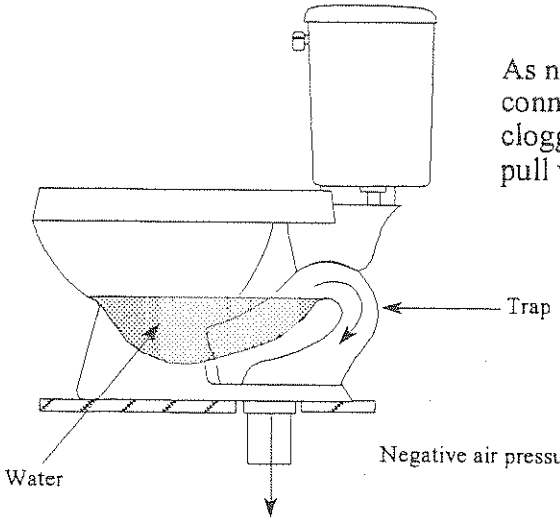
When the nozzle is pulled back, positive air is now pushed downstream. The same conditions that caused negative air pressure to pull water from traps will cause positive air to be pushed up the service connection. The positive air pressure builds behind the small amount of water in the trap. This pressure builds to a point it can move the water, and will either push back the water seal and vent, or can eject water from the trap as the air escapes. In some cases this can be dramatic, causing water to reach the ceiling.

Research has shown that to help avoid purged plumbing, the best solution is a multiple one. First, in areas that there are known occurrences of this, remove the upstream manhole to help allow more air flow in the line. This alone will not solve the problem, however, it will help to reduce the volume of air that is drawn from service connections. You should be sure there are no crown obstructions that inhibit this air flow, and if so, they should be removed with equipment designed to cut roots and hardened grease. Use high angled nozzles, or vortex nozzles that break the pressure cone of air in the pipe. If by taking these preventive steps the problem persists, video inspection of the main line and/or service vent may be needed to find physical flaws.

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PURGED PLUMBING RESULTS

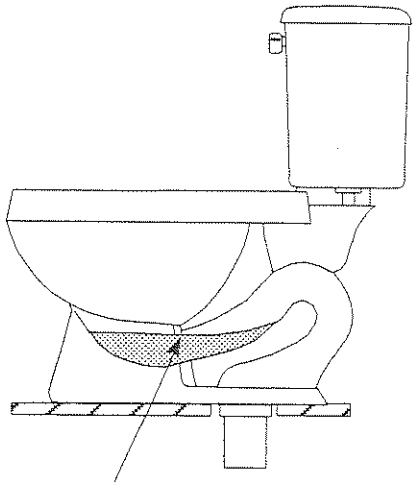
Typically, purged plumbing does not attect toilets as often as other "P" traps in a building. Basement or first floor traps in sinks and showers will often provide air relief for the rest of the building. Low flush toilets, and other modern designs may have a low enough trap to be the first to evacuate water. The results of this range from minor surging to impressive spray that can reach the ceiling.



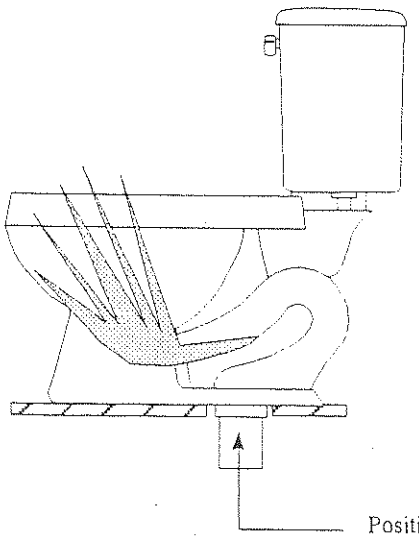
Negative air pressure pulls water down in the trap

As negative pressure from the nozzle pulls air from service connections, the vent system may be too small in diameter, clogged, or not properly installed, causing a vacuum that can pull water down in the toilet.

Water will pull down until the surface level breaks contact with the top of the trap. At this point the vacuum is relieved, and some water returns to the bowl, barely covering the top of the trap.



Negative air pressure relieved when water yeilds to allow air to vent



Positive air builds pressure bhind water in trap, eventually causing the water to move

On the return pass, positive pressure from the nozzle forces air back into the service connection. If the vent work cannot accept the volume of air, it seeks the path of least resistance. Air builds pressure until the water in the toilet can be forced from the trap.

Depending on the amount of water in the trap, and the amount of air pressure, the air can either vent easily, or will explode the water from the trap.

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TOP TEN LIST OF FLUSHER DO'S AND DON'TS

1. Always be aware of traffic and safety concerns. When setting up on the street use cones to define the work area. Set the cones out at least 20' out from the machine to allow the sewer hose to be laid out to change nozzles, skids, or other tools. Always wear gloves when handling the hose, especially when the hose is under load to protect hands from acids and other agents that may be present.

2. Inspect the sewer hose regularly. Do not allow use of a hose that has deep cuts in the jacket, or sections of hose jacket that are peeling off. Watch all coupling and splice fittings for bubbles in the jacket indicating water is getting between the inner core and outer jacket. Avoid using hose with many in-line splice connections for extended periods before replacing.

3. Do not use the sewer hose without a slipper guide or lower manhole roller to avoid damage. Always use the proper easement roller, both at the remote manhole, and on the machine to ease the stress placed on the hose.

4. When performing routine cleaning, use little pressure to jet up the line, when returning turn the pressure up a little to help the scouring action. Most 8 - 12" pipes can be easily cleaned at approximately 1200 - 1500 PSI. For tough problems such as hardened grease or large amounts of debris, a full 2000 PSI may be needed.

5. Do not attempt to clear a blockage from the upstream, full manhole. Serious injury can result if the nozzle is not in the pipe and exits the manhole unexpectedly under pressure.

6. When moving large amounts of static debris, use short distances forward and bring the nozzle back to the manhole. Trying to pull too much material can bury the hose and nozzle, making it difficult, if not impossible, to remove, and can cause a blockage.

7. Under no circumstances should anyone be in the manhole when the flusher is in operation. Serious injury can result if a blockage is relieved upstream and floods the manhole, or from airborne debris such as small rocks and razor blades thrown up by the force of the nozzle.

8. Use the proper tool for the job. Understand how each nozzle in the inventory works, and when it should be used. Some nozzles may appear to work well when used outside of their design, when in fact they not be working as well as a nozzle designed for the application.

9. When operating hydraulic root cutter, use a much slower forward and reverse speed than when using a nozzle to allow the cutter to work. Always use the same size skids as the blades being used to avoid damage to the blade, cutter, or pipes.

10. Maintain the machine and accessories regularly. Do not leave nozzle attached to the sewer hose overnight, or long periods, as they will corrode and fuse themselves to the coupling. Grease all reel bearings, and rollers regularly, and check system fluid levels in the pump, engine, and hydraulic system. Inspect nozzles for wear, replacing them if the orifices become wallowed out, or they show signs of heavy abrasion wear.

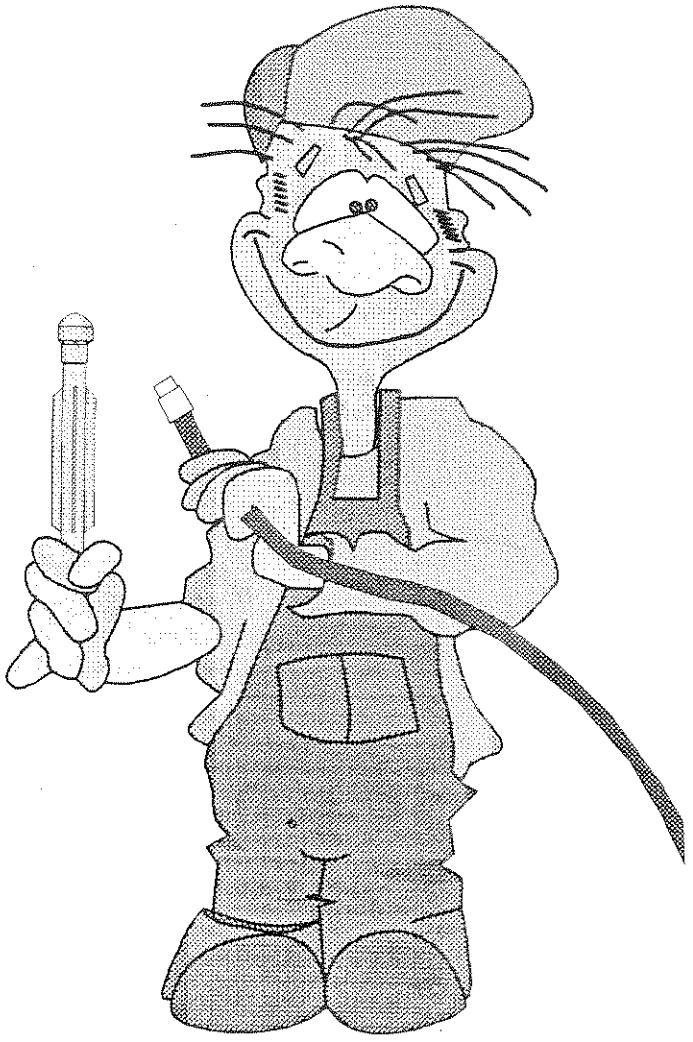
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CITY OF SAN MATEO

ENVIRONMENTAL SERVICES
MECHANICAL RODDING

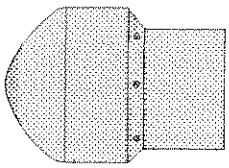
FLUSHER TOOLS SECTION



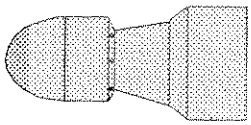
NOZZLE TYPES AND USE

Determining the proper nozzle for the job can be confusing. The operator cannot see what is happening in the pipe and how the nozzle is working. Like all tools, nozzles have different designs for various cleaning applications. These applications fall into five basic catagories; Preventive maintenance, Stoppage Removal, Crown Obstruction Removal, Invert Obstruction Removal, and Specialty nozzles.

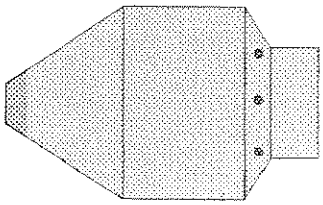
There are, to be sure, many different types of nozzles that are offered for use with flushing machines. The best way to determine how a specific nozzle will work for you is to determine which catagory group the nozzle fits into. If a nozzle does not appear to fit any one group, or has a narrow specialty use, you may want to consider the use you will get from it versus the cost.



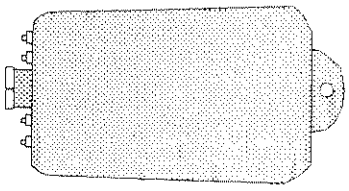
Preventive maintenance nozzles include radial nozzles, typically drilled at 35°. These nozzles provide a design suitable for use in routine cleaning and pin pointing of problems in pipes.



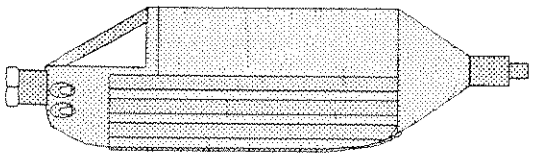
Stoppage nozzles include penetrator nozzles, typically drilled at 15°. These nozzles are designed to penetrate materials and create an ever widening hole. Stoppage nozzles commonly have heads smaller than the nozzle shank.



Crown obstruction nozzles include large bore nozzles, typically drilled at 35° to 45° with some having combinations of both. These nozzles are designed to produce high volume and direct jets at crown obstructions to remove them.



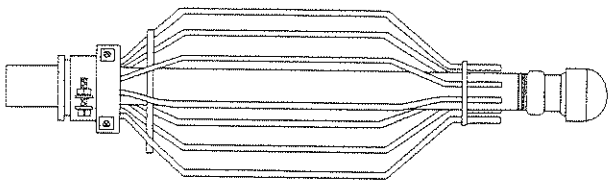
Invert obstruction nozzles include either flat sled type, or football type nozzles. These nozzles have replaceable orifices at various angles from 1° to 15°. These nozzles are designed to provide high water volume and direct jets to the bottom of the pipe.



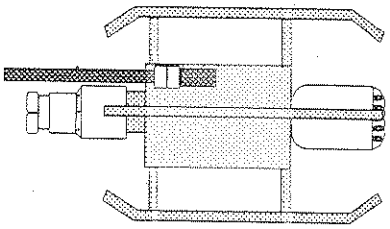
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LOCATING AND INSPECTION TOOLS

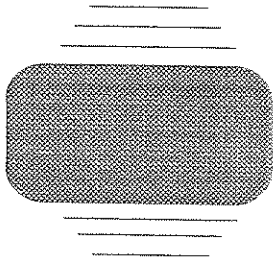
In the same catagory as specialty nozzles, there are many useful specialty accessories used to facilitate video inspection, problem identification, and underground locating of pipes. While not used on a daily basis by most regular cleaning crews, these accessories can be tremendous time savers when working to accurately pin point, or observe underground problems.



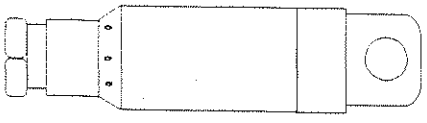
Proofing Tool: A proofing tool is used during regular maintenance to confirm the pipe is clear within 1" of the diameter. Used to enhance records, this tool is very effective in finding areas a mechanical cleaner needs to be used. Also used for non-TV inspection of new sewer lines before acceptance to be sure they are not crushed or have protruding connections.



Self Propelled Camera: The advent of small, inexpensive TV systems has allowed development of easy to use skids with a camera installed. These systems use a special nozzle attached to the skid to do fast inspection of areas that have suspected problems. Not to take the place of a mainline camera system, these small systems can provide a real time look at most problems in lines up to 12".



Sonde: Location equipment using battery operated sondes can be used with flushers. These sondes emit a signal that is traced on the surface with a special receiver. When strapped to the sewer hose, or skid, the progress of the nozzle can be monitored, or locate a specific dig site.



Cable Towing Nozzle: This nozzle is used to pull video or bucket machine cable when stringing a line. The nozzle has a built in swivel to allow the cable to twist without effecting the sewer hose, and should be used whenever pulling tag lines or cables.

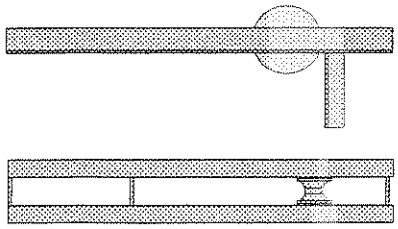
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REMOTE AND EASEMENT ACCESS

As operators well know, not all manholes are in the street. Construction needs of the time, development in former open land, and varying construction codes, will ofen result in manholes set to the side of the road, in back yards, alleys, and easements or right of ways.

Reaching these manholes with the sewer hose can be difficult, especially if the cleaner cannot be taken off road to reach them. Remote manholes are typically set to the side of the street , within a few dozen feet. Isolated manholes are commonly found in easement right of ways behind buildings, or through an undeveloped area.

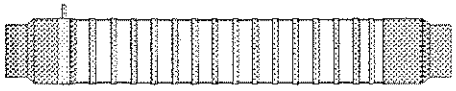
Easement and lateral rollers to protect the hose and the operator should be used when working in remote or isolated manholes.



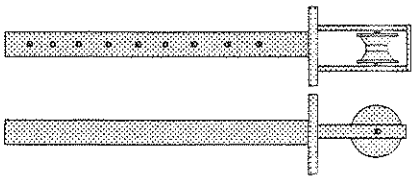
Top manhole rollers should be used at the distant manhole to allow the hose to pass by the sharp edges of the rim under load. Accidents involving hose breaks are most commonly caused by sharp edges cutting into the hose and holding it while it is being pulled, eventually cuttin the hose.



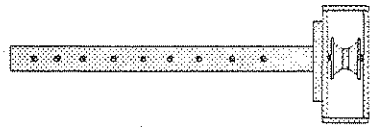
Field stake rollers are used to protect the hose from structure corners, stone or masonary walls, and other opbjects that would catch the hose and damage it.



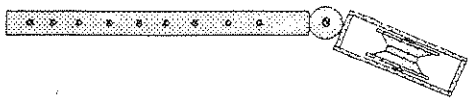
Use slipper guides to pass the hose over rough stone, fences, or binding angles.



Machine mounted easement rollers should be used to take the lateral stress away from the level wind and footage meter. These insert to a tube mounted under the hose reel, and allow the hose to be deployed in line with the cleaner. Roller sides are quick connect, allowing set up of the hose before they are attached.



For use on 90° access, use the 90° machine mounted easement roller. Roller sides are quick connect, allowing set up of the hose before they are attached.



Articulating, or pivoting machine mounted rollers provide an unlimited number of working angles, and are extremely useful in street operation if the cleaner is not aligned with the manhole. Working up to 180°, the roller sides are quick connect, allowing the hose to be set up before they are attached.

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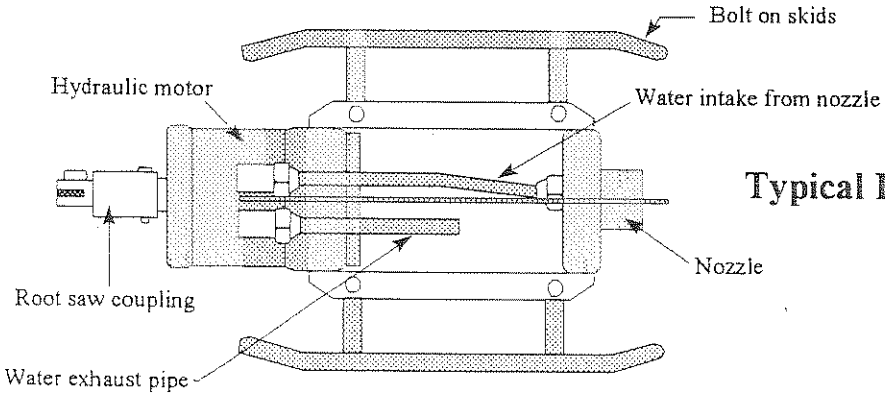
HYDRAULIC ROOT CUTTERS

Hydraulic root cutters come in a variety of power configurations and sizes. Much like power saws used in construction, there are ranges of performance power from low rpm/low torque to high rpm/high torque. As the rpm and torque rating increase, the cutter provides higher cutting power with less chance the saw blade will bind in root masses.

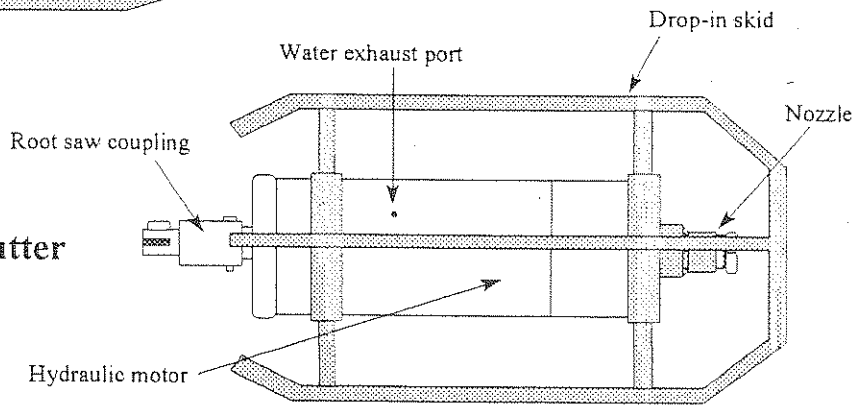
For routine maintenance in pipes where roots have been previously removed , a low rpm/low torque cutter can be used . These cutters typically turn at approximately 400 rpm, generating 300 pounds of torque. Bolt on skids with open ends are most often used, requiring approximately 20 minutes to change skid sizes . Due to the open skid design, caution should be observed when using in pipes that may have dropped sections, as the cutter could become stuck. These cutters are less expensive than high performance cutters, but suitable to perform light maintenance work.

For cutting heavy root masses or extensive use, a high rpm/high torque cutter is used. These cutters typically turn at approximately 850 rpm or higher, generating over 1000 pounds of torque. A drop in type, 'closed' skid design are commonly used, requiring approximately 2 minutes to change skids sizes during use. Due to the closed skid design, these cutters can be used in lines with known, or suspected, dropped joints, allowing retrieval up to a 3" drop. These cutters are usually more expensive than low performance cutters, but they will provide a far stronger cutting force and potentially longer field life.

Maintenance of these cutters is crucial to long field life. All root cutters need to have the water removed after use, and oil run through the system to prevent rust build up. As a recommended practice, after each line section has been completed, the tool should be removed from the hose, and oil poured into the nozzle. Turn the blade to draw the oil into the cutter and drain water from the vent. When the water turns to oil from the vent, the tool is lubricated. Be sure not to store the cutter with water in it for longer than a few minutes to prevent rust from forming internally.



Typical Low Torque/rpm Cutter



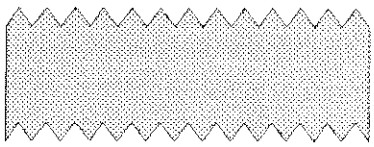
Typical High Torque/rpm Cutter

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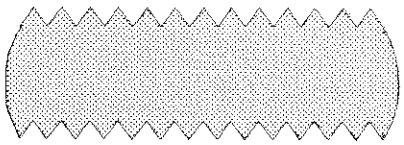
ROOT SAW TYPES AND USE

Just as carpenters have different saws for different cuts, root saws are varied for different types of work. Some root saws used with rodding machines can be used on hydraulic root cutters, depending on the task. While these saws can be interchangable, root saws specifically designed for use with hydraulic root cutters should be used.

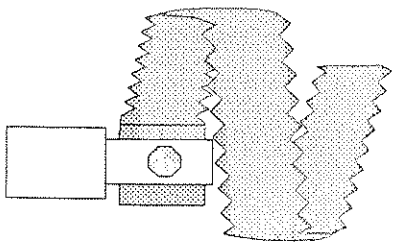
Rodder root saws are not designed to be used with hydraulic root cutters, and may not hold up well being turned at high rpm's at high torque, especially in lines where heavy roots exist. Blade balance is also important, especially with root cutters, as an unbalanced blade can affect bearings in the front of the tool. Cutting tools and blades designed for use with hydraulic root saws are typically heavier than most standard rodder tools, designed not to deform while being turned at high rates of speed and lessen wear.



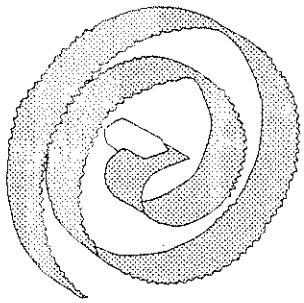
Standard root saw blade. Typically used as an all purpose P\M saw in lines that have known or suspected roots. Flat blade allows teeth to cut closer to the pipe surface.



Concave root saw. Commonly used as an all purpose P/M saw in pipes with known or suspected roots. Rounded edges keep teeth away from pipe surfaces and joints in lines that have pipe deflection problems. Rounded shape adds higher strength to the blade over standard blades for heavy work.



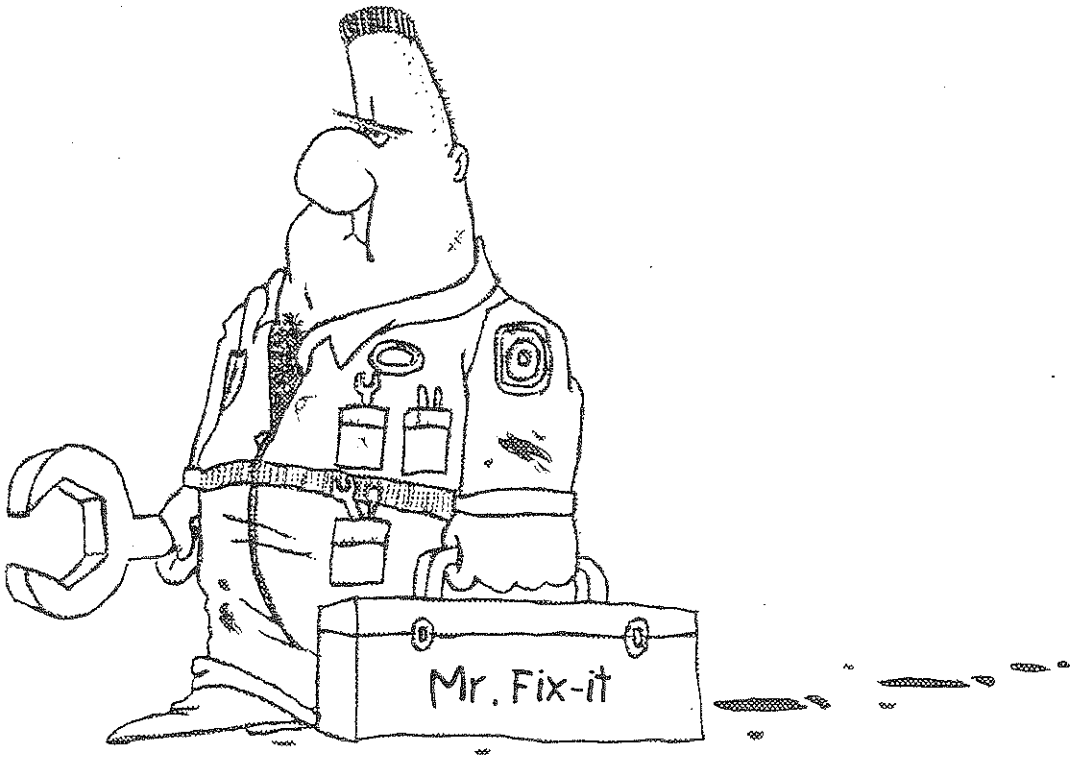
Spiral root saw blade. Most often used in lines having known, heavy root intrusion. Tapered end engages roots, creating a leading cut in heavy masses. Light roots are drawn into the saw and cut. This blade is most effective when used in graduating sizes when working in heavy root masses.



Extra curl root saw. Typically used to grind and cut roots that have filled the pipe. The spiral pattern creates a multiple cutting surface that works at the entire face of the root mass. This tool can be very effective in lines when root s have trapped dirt and other debris in the mass., using the flusher to remove the grindings periodically.

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FLUSHING MACHINE REPAIR SECTION



TROUBLE SHOOTING LACK OF PRESSURE

The drop of operating pressure can be a tough problem to solve. It is usually a simple problem, however. The following check list should help you to identify what has happened to cause lack of top operating pressure.

1. Check the nozzle for wear. Most cases this is the culprit. If the nozzle has a forward orifice, place the stem end of a pop rivet, from the inside, through the opening. Attach the nozzle to the hose and run the pressure up. If the cleaner gets to full pressure quickly, you need to replace the nozzle. If not, continue with the next steps.

2. Check the strainer. When strainer is replaced, check the assembly for suction leaks. A suction leak can affect the pressure. If the strainer is clogged, clean the strainer and replace. Try the machine, if it is still not up to pressure, continue with the list.

3. Check the pump for any leaks. There may be some worn packings, or worn seals allowing water and pressure to escape. Unless an active water leak is seen, it may not be necessary to go inside the pump. Before working on the pump, follow the next steps.

4. Check the belts that drive the pump for wear, or tightness. Many times it is the power belts slipping. If the belts are glazed, torn, or checked, replace the belt and try the machine. If the belts are in good shape, continue with the list.

5. Next check the water control valves to see if there is any blow-by. Disconnect the return line hose from the water control or ball valve. Pull the lever to divert the water to the sewer hose. Run the machine, if any water comes through the control valve and out the open end of the return line, you will need to replace or repair the valve. If no water appears from the return line, proceed to step 6.

6. If the pressure relief valve does not dump to ground and is piped back into the tank or system, disconnect the return or dump line. Run the machine, if water comes out the dump line below maximum pressure the valve may be stuck open, or need adjustment.

7. If all of these steps do not tell you where the problem is, it may be in the pump, or motor. You may need to contact SRECO-FLEXIBLE for further help. Consult the pump manual for suggested procedures.

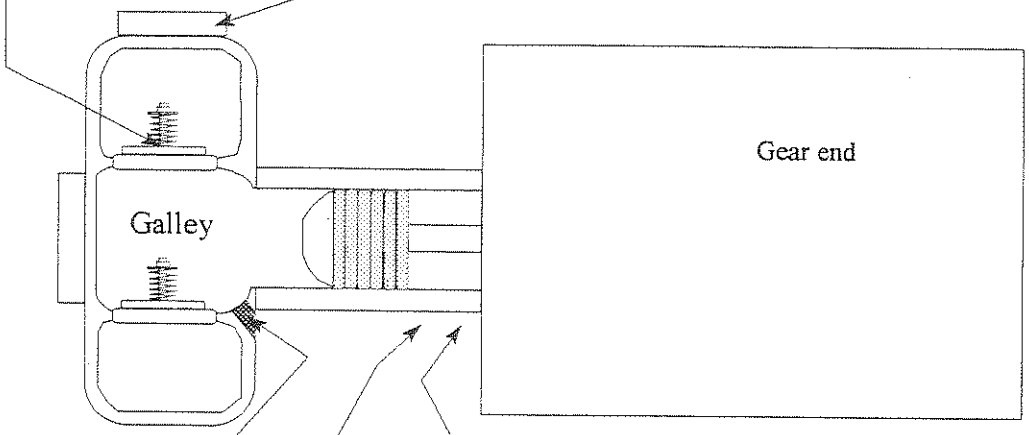
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PUMP TROUBLESHOOTING - FLUID END

Common causes relating to loss of pressure are usually not in the water pump itself. Clogged strainers, worn water control valves, worn or 'stuck' pressure relief valves, or worn nozzles are the usual culprits that steal pressure. Refer to the trouble shooting guide before looking to the pump. Basic troubleshooting of the pump can be done during operation, and should be a regular field mainternance check. Most common things to look for in the fluid end are;

Valves - Valve damage or wear can affect pressure and flow, and can be difficult to determine which valve may be causing the problem. Valve damage can sometimes be heard during operation standing near the pump, or using a mechanic's stethoscope or small pipe to listen to each valve. Each valve consists of a seat, moving disc, spring, and retainer, which are subject to wear. Valve discs can jam open if something large has tried to pass through it.

Valve Covers - The most common source of water leaks on a pump are the valve access covers, which may need tightening or new 'O' ring seals.



Cylinders - If the cylinders are worn or scratched, water may be evident under the pump between the fluid and gear ends.

Packing - When packings wear, water may be seen leaking from the bottom of the pump, usually between the fluid and gear end.

Icing - Cylinders, packing, and valve assemblies can be damaged with a single freeze. To avoid catastrophic failure, be sure to use the recommended dewatering process for the system, and remove the small drain plugs (open petcocks if installed) that drain the galleys. If ice is suspected in the system, place the machine in a heated area to thaw. If ice is suspected in the sewer hose, run the system without nozzles to flush out the ice.

Air in the Pump - A pump will pull air into the fluid end if it runs out of water, or there is an air leak in the suction line. A large air 'bubble' occurs that will prevent water movement and is evidenced by a severe pulsation of the sewer hose. Remove the nozzle and run the system up for a full minute to allow the air mass to move out of the pump.

Water Purity - Solids suspended in water can erode fluid end components. Most suspended particles are introduced throught the water tank. Be sure to flush the hydrant before each fill, check the strainer daily, and clean the sump of the water tank periodically . If plant effluent or drafting water source is used, secondary straining such as a fine mesh nylon strainer at the tank fill, may be needed.

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SEWER HOSE ANATOMY

Most sewer hose used today is constructed specifically for conveyance of pressurized water. Generally speaking, there are three grades of sewer hose used. Common , high, and specialized grades. Each grade of hose offers different properties from low cost considerations, to high end applications.

Common grade hose is typically the least expensive, using layered construction and a polyethylene inner core. High grade is usually a little more expensive, as layered construction is fuse bonded to each layer, and a hytrel inner core is used. Specialized grades of hose are far more expensive, and include extremely high pressure applications, or single material composition.

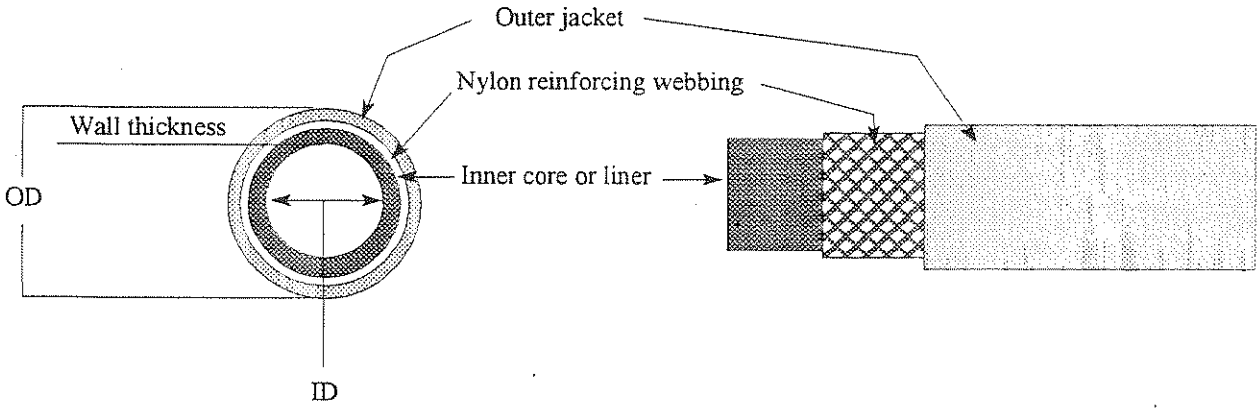
Longevity of sewer hose is difficult to predict due to the various conditions found in collection systems. There are, however, some basic guidelines that can be used to make a fair assessment of how a particular hose will perform.

Side Wall Thickness: As a general rule, the thicker the walls of a hose, the higher resistance to cuts and abrasive wear will be seen. Thicker walled hose will tend to resist kinks, especially where attached to fittings over thinner walled hose.

Construction: Bonded, or fused construction permanently bonds the outer jacket, nylon reinforcing, and inner core, into one piece. Layered construction can allow the outer jacket to separate from the nylon jacket and inner core. This difference can be seen when cuts occur in the outer jacket. If the jacket can be peeled off in larger pieces similar to a banana, it is probably not bonded. If the jacket cannot be peeled and only small pieces can be pulled off, it is most likely bonded.

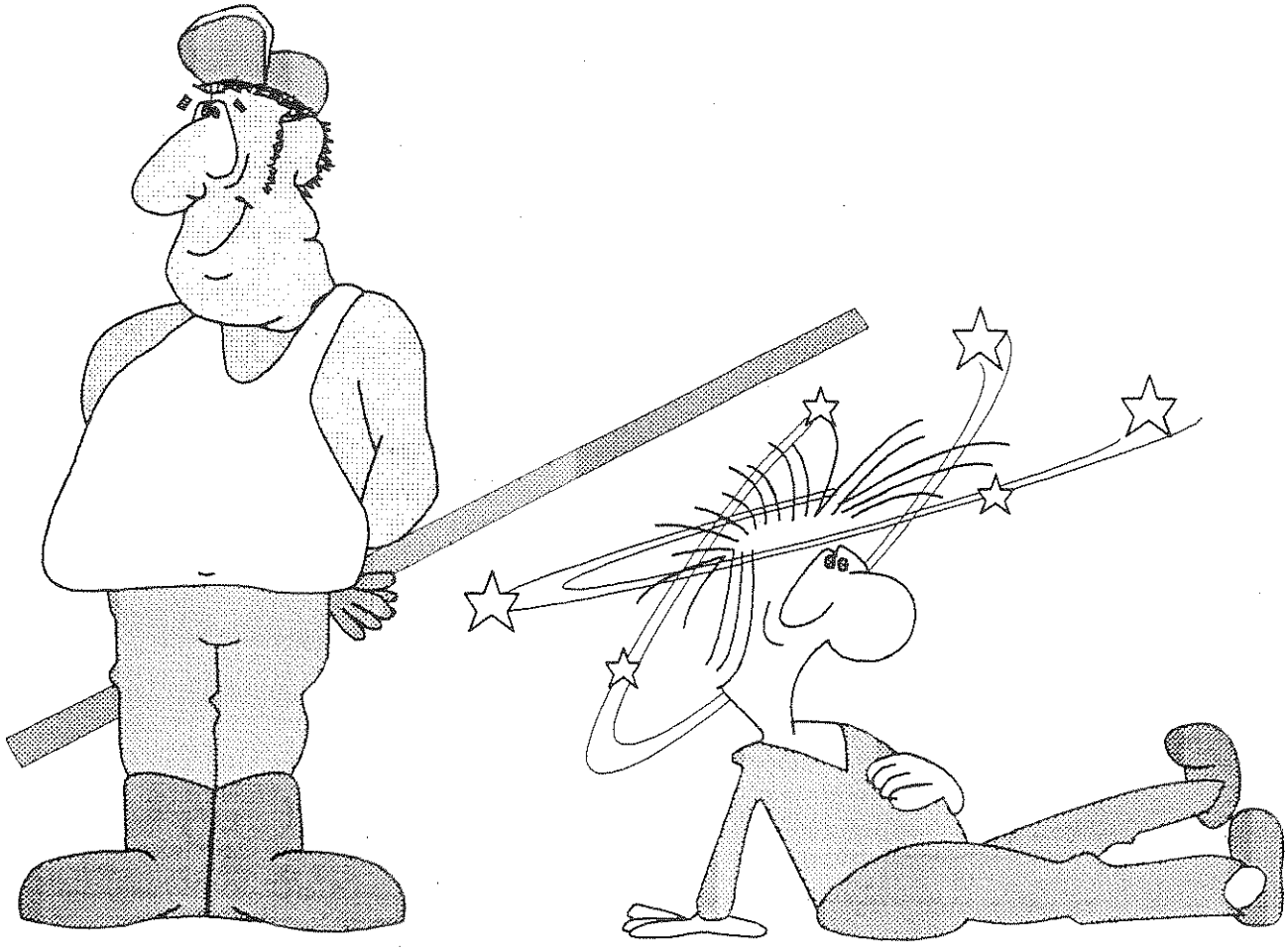
Inner Core: The thickness and density of the inner core determines the elasticity and strength of the hose. As and example, hytrel tends not to stretch as much as polyethylene. If the hose is pulled when a nozzle becomes stuck, the potential for hidden damage increases with elasticity. The thickness of the inner core can affect water volume capacity, and should measure a true 1" or .75" ID for trailer or truck mounted systems to operate at full capacity.

Bend Radius: The bend radius of a hose determines how tight a bend can be made before a kink, or permanent bend in the hose occurs. As a rule, the lower the bend radius, the higher the resistance to kinking, especially at coupling connections.



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COLLECTION SYSTEM AND MACHINE SAFETY



HOSE COUPLINGS AND REPAIR

When sewer hose is damaged, couplings are usually needed to perform repairs. While this is not a difficult process, there are some considerations to be made for successful coupling installation.

When installing new end or splice fittings, be sure to use the proper size fitting to accommodate the wall thickness of the hose on the machine. Often is best to purchase fittings made by the hose manufacturer than take a chance on having one fail.

Good hose fittings have internal ribs designed to bite into the hose and prevent it from pulling out. Hydraulic assisted presses are usually needed for installation, however, field repair kits using draw down bolts can provide a safe installation if properly used.

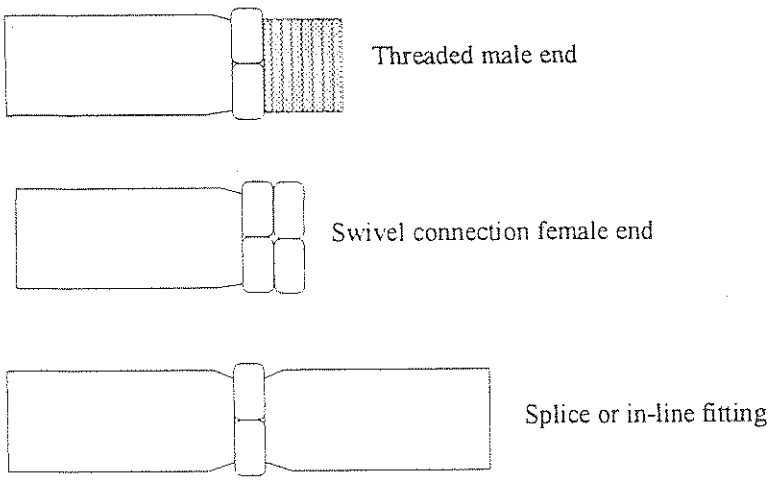
Cut the sewer hose a few feet from any damaged areas to insure hose integrity for the coupling to mount on. Be sure the cut is as square as possible, as uneven cuts may prevent a solid seal to the coupling. Be sure the sewer hose is free of oil or grease on the outer jacket where the coupling will mount.

Place the new coupling on the end of the hose, and draw a line on the hose at the end of the coupling. If the coupling is properly pressed on, the line will be very close to, if not right on the edge of the coupling.

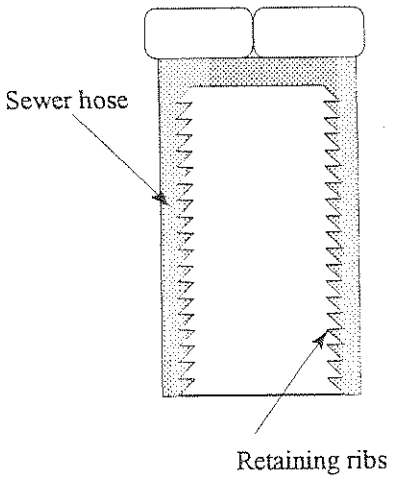
Avoid using temporary in-line splice couplings unless under emergency conditions. Temporary fittings are typically larger in diameter than the sewer hose, and are threaded on by hand. Over time, these fittings can loosen or hang up in the pipe during use, and are not designed to be used on a permanent basis.

Despite the best efforts to protect the hose, all hose will eventually need replacing. While there are different parameters used in determining when to acquire new hose between different agencies, there are a few common considerations; 1. Age of the current hose, 2. Many in-line splicer couplings (more than 5 in 500'), 3. Overall length and is it enough to reach between the farthest manholes, and 4. Overall condition of the hose and number of cuts, peeling sections, etc.

Coupling Types

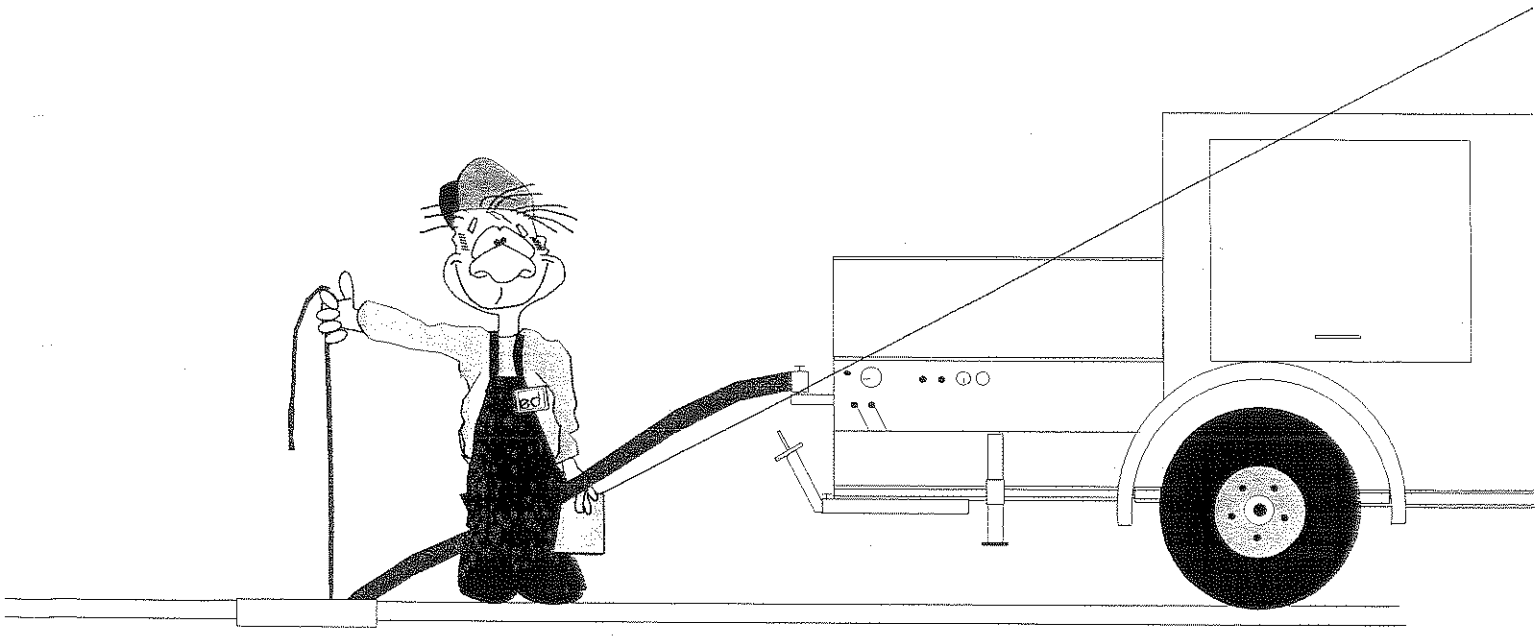


Cut away of coupling



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RODDING MACHINES



USING THE PROPER TOOL FOR THE JOB

We have all heard that using the right tool for the job can make all the difference. Some of us learn this lesson when we try to loosen a stubborn nut on a toilet tank with a few taps of a hammer and discover porcelain has little to no elastic properties. We usually learn this lesson repeatedly in adult life due to convenience. It can be inconvenient to stop what you are doing to go get the proper tool, however, as many of us can attest, the results of not doing this can be far more than inconvenient. The lessons of using the proper tool for the job is especially true with Rodding Machines. Using the wrong tool for a given cleaning application can cause extensive rod or tool damage, can damage pipes, can damage the machine, or hurt the operator. Part of the art of operating Rodders safely and effectively is understanding the many different tools that can be used and what each is for.

There are four basic categories of tool groups used with Rodding Machines; Boring Tools, Cutting Tools, Finishing Tools, and Specialty Tools. Each tool group with its own specific design function and each tool in the group having it's own specific application.

Boring Tools:
Boring tools perform as their name suggests, they bore into materials, their corkscrew shaped design separating them from other tool groups . These tools are used to remove stoppages, as piloting tools to allow larger tools to be used, and to retrieve objects in pipes. Having unique working abilities in their ability to be turned clockwise and counterclockwise, boring tools are critical to the removal of roots and grease. These tools operate at low RPMs, typically between 20 and 30 RPM for best effectiveness.

Cutting Tools:
Cutting tools are primarily root saws, shaped or constructed for different uses. Much as there are different types of saws used to cut lumber, there are different types of saws used to cut roots. Depending on the type of roots, density, and intrusion level, there is a saw to meet it. Root saws can only be used clockwise in the pipe, and are most effective when turned at approximately 45 - 55 RPM, moved slowly in the pipe. Root saws should be preceded by a piloting auger and used in pull back mode to do their heavy cutting work. This puts less strain on the rods than pushing the tool, and allows the saw to deliver all of its cutting power to the root mass.

Finishing Tools:
Finishing tools are the last tools used in cleaning operations. They are designed to remove residue of materials boring or cutting tools may leave in the pipe. These tools are not sized smaller than the pipe, as are other tools, they fit snugly to scour the pipe walls free of grease and/or root materials. For best efficiency, a rotation speed of approximately 60 - 70 RPM should be used, with very slow movement in the pipe to allow several revolutions per foot. These tools are essential to use in heavy grease and root control, effectively lengthening the frequency between cleaning.

Specialty Tools:
Specialty tools have special designs which are used in unique cleaning or pipe work situations. From cleaning tools that penetrate hardened slurry composites, to tools used to pull back cables for cameras and bucket machines, to finding buried manholes, these tools fill a variety of needs. Typically not usable outside of their design function, they are highly effective when used as designed.

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ROD COUPLING TOOLS

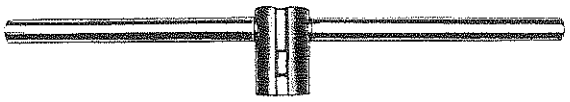
Used for a variety of purposes, these tools are not used to clean pipe, but to work with rods themselves. To properly attach tools, work with rod couplings, feed through guide hoses, or retrieve if broken, these tools should be kept with the machine at all times.



The assembly wrench is used to loosen or tighten coupling nuts. The jog in the handle is to allow knuckles to pass each other without hitting when using both the assembly wrench and the assembly turning handle. The tapered end of the tool is for use in anchoring the coupling tools are being attached to, or when the turning handle is not handy.

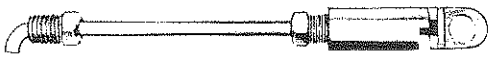


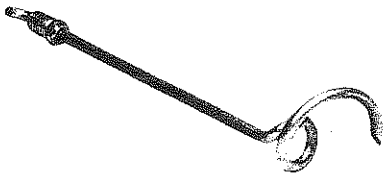
The assembly turning handle is designed to anchor the rod coupling through the center hole for leverage to loosen or tighten nuts on the rod coupling while removing/connecting rods, or working with tools. The locking pin moves in and out to lock onto the coupling and hold it firmly. This tool is much safer and easier to use than broken rods or other ill fitting tools to hold the rod coupling against stubborn nuts.



The pull out tool design is to allow rod to turn while a coupling is pushed during hand rod operations. Today it is used primarily to set the rod pressure and robotic system during the machine set up. Far safer than using a broken rod through the coupling in this process if the reel is turned, the tool allows the rod to turn.







The pilot bullet tool is used primarily to guide the rod through the guide. This tool is be hand tightened on and retracted into the machine so on the next use it will pilot its way down the guide hose and protect the rod coupling threads and the inside of the guide hose. The tool can also can be used to push up the pipe to tow back cable or ropes. When pulling cable, the swivel bullet tool is recommended to allow the cable to turn without kinking.

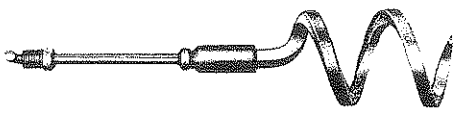
The pick up tool is used when a string of rod breaks in the pipe. Designed to rotate onto a rod and catch a coupling on the pull back, this is a critical tool to have on the machine.

Photos courtesy of SRECO-Flexible

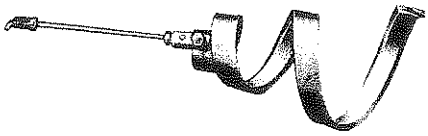
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BORING TOOLS

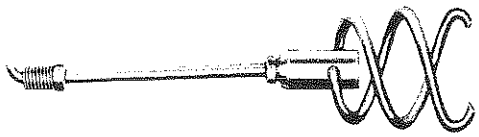
The use of boring tools with rodders is essential for most all cleaning work. Boring tools pilot small holes through roots and grease which allow larger tools to be used until full pipe sized tools can be pulled through. Boring tools have specific design functions, from stoppage removal to mineral deposit removal, to piloting for larger tool use. Boring tools should be turned relatively slowly, around 25 to 35 RPMs, and moved slowly in the pipe. These tools provide the perfect means to carry the rod to the far manhole where tool changes to other pull tools can be easily made. Designed to operate clockwise in the pipe, these tools can be turned counter clockwise to free them from materials if they get snared, or to work their way over misaligned pipe connections that clockwise rotation will not let them pass.



The squarebar corkscrew is designed to be used on stoppages. It rips and pulls its way through material that makes up static blockages, with an open winding of the blade that allows debris to flush through the tool as it relieves the blockage.



The auger is used for piloting a hole to the distant manhole in roots and grease. From this hole, larger tools can be pulled through the line to clear any organic material deposits or growth. Extremely effective in grease when used in graduating sizes to pipe size, it can remove this material in small chunks. Augers are also used as an all purpose tool when it is not known what is in the line.



The double point corkscrew is used to bite into fabrics in the pipe and remove them by slowly twisting and pulling them out. Water will gradually lubricate the pipe around the material, allowing it to be pulled out. Other uses include removing frisbees, cans, and plastic bottles, jugs, and buckets.



The round wire corkscrew is designed to remove mineral deposits in small pipes of 3" to 8" diameter. The resiliency of this tool allows it to penetrate and pick apart lime and other deposits. It can also be used as a simple traversing tool from one manhole to the next.



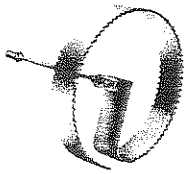
The sand corkscrew is used to traverse pipe which has filled with sand or to open pipes after floods. The tool allows water to follow using the rear threads and allow water flow or a cable to be attached for bucket machine use.

Photos courtesy of SRECO-Flexible

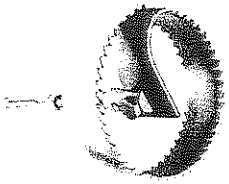
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ROOT SAWS

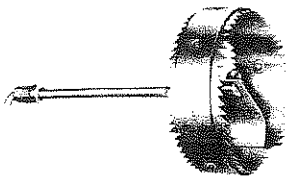
For most any kind of root cutting work necessary in pipes, there is a corresponding root saw. Root saws range from heavy cutting with heavy blades to light curtain root cutting with very thin blades. Each root saw is designed for a specific task, much as wood working saws are designed for specific work. Root saws generally need to be turned relatively quickly to operate as designed, about 50 - 60 RPMs. They should also be pulled as opposed to pushed in the pipe to reduce torque damage to rods and to cut more effectively in the same plane.



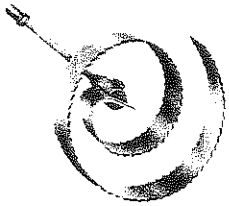
The standard root saw, or flat blade as they are sometimes called, are used for heavy cutting work. The flat edge of the blade allows the teeth of the saw to travel closer to the pipe to cut roots that are pushed to the side by the force of the cutting action.



The concave root saw uses a shaped, or curved, blade for strength and to keep the teeth of the saw away from pipe edges. This is the most commonly used root saw for heavy cutting work due to their strength and ability to work in sensitive pipes without scarring the inside with the cutting teeth.



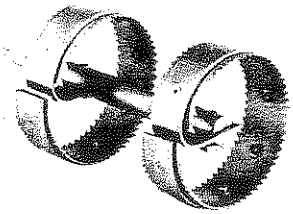
The Fine blade root saw uses a very thin steel blade with a reinforced back to keep its shape. The thin blade cuts fine roots such as curtain roots and new growth, and does not push them off to the sides like heavier steel tooth root saws.



The spiral root saw uses a blade which has an auger shape to it to create a taper that engages very thick root structures and draws the rest of the blade into the cut. The tool is effective in light roots as the roots can be drawn into the saw and cut in several places, unlike standard root saws which cut in a single plane.



The extra curl root saw uses an extra wrap of the blade to provide a full face cutting surface for working on willow and other full pipe mass root structures. Very effective as a push cutting saw, though caution of over torque has to be observed during use.



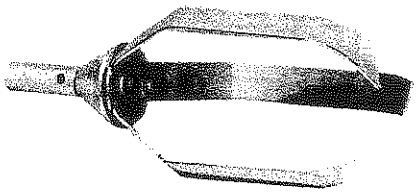
The tandem root saw is used when pull cutting cannot be easily done, such as in a long run without enough rod, or blocked upstream access. The second blade prevents the front root saw from trying to turn and climb to the top of the pipe. The second blade can be a fine blade saw to provide a surgical cut after the heavier cutting blade has passed.

Photos courtesy of SRECO-Flexible

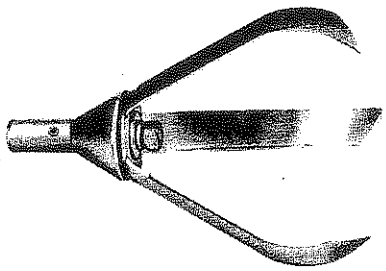
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SCOURING TOOLS

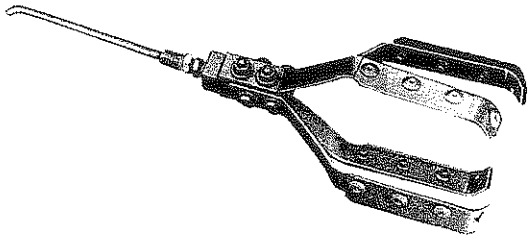
Scouring tools, sometimes referred to as finishing tools, are designed to scour pipe walls after cleaning operations to remove hair roots, grease and other debris root saws and boring tools can miss. Made at or slightly larger than the pipe size, these tools compress slighly as they are pulled into the pipe. They should be rotated quickly, about 60 to 70 RPMs and pulled back slowly for full effect. Especially useful in completely removing hardened grease and avoiding large chunk removal when used in graduating sizes up to pipe size. This controls the way grease is cut out and can avoid stoppages. As a regrowth preventer, finishing tools scour roots from the sidewalls of the pipe, cutting exploratory roots away which lengthens the time between return maintenance calls.



The three blade cutter is used in grease and root applications. The tool is designed to be pushed if necessary and is a choice tool in lines that serpentine and do not allow conventional tools to be used due to misaligned pipes.



The curved blade cutter is used primarily in grease applications, the tool is tapered to allow increasingly larger bites to be taken when being pulled back slowly. The short cutting edge can get under hardened deposits of grease and pry them free. Not necessarily recommended for root removal work due to the limited cutting surface, it can be used if no other scouring tool is available.



The four blade cutter is used primarily on root masses, especially those of very fine root matter such as willow or chinese elm trees. The thin roots of these trees can be difficult to cut, however, the very thin cutting blades of these tools can be very effective in cutting away this light root matter.

Photos courtesy of SRECO-Flexible

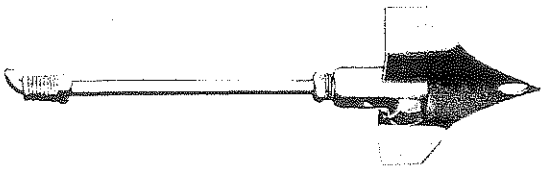
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SPECIALTY TOOLS

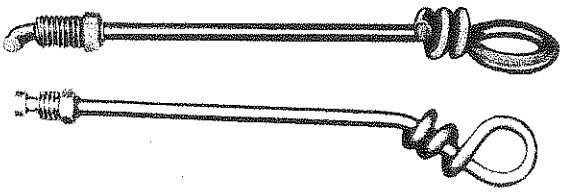
There are a variety of specialty tools used with rodding machines which are designed for unique tasks or problems. Typically these tools are not used outside of these functions, but when used for the specific application they were designed for, these tools can provide very good results.



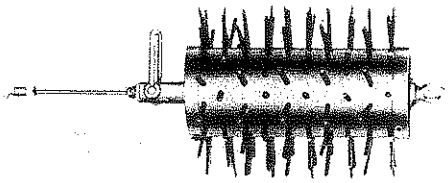
The spear point is used for a variety of things. It is designed to dislodge materials in pipes like eggshells, fine broken glass, and other materials that tend to lay flat and are not easily moved with flushing machines unless disturbed. It can be used as a stoppage tool, but is not as effective as a square bar corkscrew in that job.



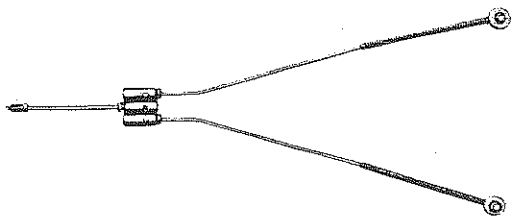
The sand leader is made to move on top of sand in a pipe to dig at it and allow flushing equipment to remove it. The curved sides tend to let the tool remain on top of the material and is frequently used to thread camera or bucket machine cable between manholes.



The loop tool is a simple tool designed to pull cable or rope between manholes. Its cousin the swivel loop is primarily for cable to allow the cable to twist when being pulled so rod is not twisted in the process.



The turn type porcupine is used when scale deposits such as concrete or paving have adhered to the pipe walls. Pulled back and forth in the pipe and turned, the heavy bristles can pry off stubborn scale. Caution should be used in being sure the pipe is the same size the entire section.



The lateral locator is used to help find buried manholes. Placed in the pipe at the 6/12 position and not rotated, the tool will expand when it enters a manhole, giving exact footage to the structure. This tool is frequently used in pipes running at full flow which cameras cannot see manhole structures as they pass through them.

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Photos courtesy of SRECO-Flexible

HYDROGEN SULFIDE (H2S) IN MANHOLES

Hydrogen sulfide is a naturally occurring gas from the biological breakdown of organic materials. When bacteria and organisms breakdown organic material, waste by products are produced in the form of hydrogen sulfide. H_2S has a distinctive odor of rotten eggs, and is heavier than air so it is found low in the manhole if present. Above 200 parts per million, hydrogen sulfide will deaden the sense of smell, so detectors are the only safe means of testing for this gas. The following chart shows health effects at various levels of H_2S.

5 ppm:	Moderate odor, easily detectable by smell
10 ppm:	Eye irritation can begin, bloodshot eyes may indicate presence of gas
30 ppm:	Very strong odor of rotten eggs
100 ppm:	Loss of smell in 2 - 15 minutes, breathing irritation resulting in coughing
300 ppm:	Rapid loss of smell, difficulty breathing without coughing
500 - 700 ppm:	Unconsciousness within a short time, possible death in 30 minutes
700 - 1000 ppm:	Rapid unconsciousness. Breathing stops
1000 - 2000 ppm:	Instant unconsciousness, involuntary muscles cease, death in a few minutes
43000 ppm:	Lower explosive limit

If hydrogen sulfide is present, it is most likely to be found;

Down low in the manhole
Where there is poor ventilation like pump stations, wet pits, or deep manhole structures
Where flow is stopped, either a stoppage, or area that organics settle out and decay
In large lines that are flowing slow and nearly full
At discharge points of long force mains due to organics clinging to pipe walls

Hydrogen sulfide is strong enough to cause death by itself, or by causing unconsciousness leading to death by falling or drowning. Remember, sense of smell will be lost when H_2S is present in amounts that can cause death or unconsciousness, you will not be able to smell it.

Respect hydrogen sulfide gas, and take the proper steps to detect and disperse it;

Use knowledge and experience to suspect it in the system
Use gas detecting equipment to test manholes and other confined spaces before entry
Use a blower to vent all confined spaces entered, H_2S may become present after entry
Use a safety harness when working in manholes

Do not attempt a rescue attempt if proper self contained breathing apparatus and entry equipment are not available. One half of confined space fatalities are would be rescuers who thought they would not be overcome by the same gasses someone else was. Call in the emergency and wait for trained personnel to arrive. Open manhole covers nearest the accident manhole, and start blowing air into the effected manhole to disperse the gas.

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HAZARDOUS ATMOSPHERE REVIEW

Among hazardous atmospheres, there are three primary groups;

Lack of oxygen	- carbon dioxide, carbon monoxide
Hazardous atmospheres	- hydrogen sulfide, industrial wastes
Explosive atmospheres	- methane, petro-chemicals

Test and ventilate underground or confined space structures before entry to avoid accidents. Follow these basic rules;

Common Places Found

Lack of Oxygen	Hazardous Atmosphere	Explosive atmosphere
Down low near the bottom	Down low near the bottom	Methane - top of structure
Sealed structures	Large pipes running full	Fuel fumes - down low
Meter vaults	Wet pits, and pump stations	Near swamps or old dumps
Non-vented manholes	Long force main ends	Near industrial areas

Symptoms of Exposure

Lack of Oxygen	Hazardous Atmosphere	Explosive atmosphere
Difficulty breathing	Smells of rotten eggs	Smells like fuel
Ringing in ears	Difficulty breathing	Difficulty breathing
Dizziness or nausea	Dizziness or nausea	Dizziness or nausea
Coughing	Coughing	Coughing
Drowsiness	Unable to think clearly	

IF ANY OF THESE SYMPTOMS OCCUR - GET OUT!!

Do not attempt a rescue of a victim if:

You are alone, call for help immediately - seconds count
You do not have proper emergency air equipment or do not know how to use it
You do not have a safety harness or other confined space entry equipment

REMEMBER!

½ of all fatalities in confined space accidents are would be rescuers believing they would not be affected by the same conditions as the victim, or not knowing what the conditions were.

Don't be a dead hero <u>and</u> an ineffective rescuer

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14. Insure operators remain clear of the manhole during operation. Never allow operators in the manhole while the machine is in operation.

15. Insure operators use long handled gaffing tools or hooked rope to remove or lower nozzles or tools from the far manhole to avoid entry. Read, understand, and follow all applicable confined space entry procedures if manhole entry is required.

16. Insure operation of the cleaner during stoppages is done from the downstream, dry manhole. Never attempt to place the nozzle in a full manhole. Injury can be caused if the nozzle is not in the pipe and exits the manhole under pressure.

17. Do not operate the hose reel in payout mode faster than the nozzle can pull the hose, creating a hose backlash.

18. Do not use the sewer hose as pulling tool.

19. Do not rewind sewer hose on reel tightly without water pressure to avoid reel damage.

20. Adhere to all safety labels on the machine.

21. Do not operate the machine when excessive noise appears that are uncommon to normal operation.

22. When performing service work on the machine, shut the machine down. Never place hands near moving components. Do not wear loose clothing near moving parts or components.

23. Always use a secondary prop for cowling doors when service work is performed.

24. Use only manufacturer recommended parts and tools.

25. Follow all manufacturer's recommended routine maintenance procedures for the machine and components. Insure the system has been dewatered properly if storing outside during cold weather.

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13. Insure reel cowling door is secured with the primary prop when opened for field inspection.

14. Adhere to all safety and caution labels on the machine during operation.

15. Insure all operating components are maintained in accordance with the manufacturer's recommended service procedures and frequency.

16. Do not operate the machine when excessive noise appears that are uncommon to normal operation..

17. When performing service work on the machine, shut the machine down. Never place hands near moving components. Do not wear loose clothing near moving parts or components.

18. Insure proper lock out/tag out procedures are followed when servicing the machine. Be sure the rod storage reel is blocked or secured when performing service work to prevent free wheeling.

19. Always use a secondary prop for cowling doors when service work is performed.

20. Use only manufacturer recommended parts and tools.

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CITY OF SAN MATEO

ENVIRONMENTAL SERVICES
CONFINED SPACES

City of San Mateo
Environmental Services
Standard Operating Procedure (SOP)

SOP NO.: 1

DIVISION: Utilities

PROCEDURE TITLE: Confined Spaces

INTRODUCTION

This SOP is a guide to use when it is needed to work in a confined space. A confined space is defined by Cal-OSHA as the concurrent existence of the following conditions: (1) existing ventilation is insufficient to remove dangerous air contamination and/or oxygen deficiency which may exist or develop; and (2) ready access or egress for the removal of a suddenly disabled employee is difficult due to the location and/or size of the opening(s). Dangerous air contamination is defined as an atmosphere presenting a threat of causing death, injury, acute illness or disablement due to the presence of flammable, explosive, toxic or otherwise injurious or incapacitating substances. Included in this definition are:

1. Sanitary sewer lift stations.
2. Sanitary sewer and storm manholes.
3. Water, electrical and pump station vaults.
4. Tanks, stationary or portable.
5. Pits, which either have covers or have insufficient natural ventilation to allow for a safe atmosphere.
6. Excavation or construction trenches.

OPERATING PROCEDURE

Preentry

1. Entry is not allowed until the atmosphere within a confined space is found to be safe. All air tests should be conducted by qualified persons who have received specific training on the use of air monitoring equipment.

2. In every confined space area, air testing should include, but not be limited to, oxygen deficiency, toxic gases and the presence of flammable or combustible gases.

3. If monitoring for carbon monoxide, levels must remain below 35 ppm. When not using SCBA equipment, the oxygen level must be above 19.5 percent and not exceed 23 percent. Lower explosive limit (LEL) must be maintained below 10 percent. Hydrogen sulfide level must be maintained below 10 ppm.

4. When using SCBA equipment, the oxygen level should not be below 16 percent and not exceed 23 percent. Hydrogen sulfide level should not exceed the Cal-OSHA requirement of 50 ppm. LEL should be below 10 percent. When using SCBA equipment at the sewer lift station, spike readings lasting more than 10 seconds must be acted upon and evacuation of the confined space must begin. If the monitor clears to below allowed levels within 10 seconds, work may proceed.

5. No smoking will be permitted within 25' of the confined space.

Procedures

1. The confined space shall be checked with an approved air monitoring device by inserting a probe in the confined space prior to entry. If an alarm sounds during the monitoring process or the employee feels there could be an unsafe condition, do not enter until it is made safe. If toxic gas levels are below 50 ppm and LEL is below 10 percent, the space may be open for ventilation, but not entered. Once this process has been completed and preentry conditions are met, entry can be made. A gas monitoring device probe shall be lowered into the confined space and kept inside during the entire maintenance process when entry is required. If an alarm should sound and acceptable levels are exceeded, secure the area and notify the supervisor immediately. The following areas shall be referred to as confined spaces and be assigned by type as follows:

    a. Sanitary sewer and storm manholes—Permitted Confined Space.

    b. Sewer lift stations—Permitted Confined Space.

    c. Water tanks—Permitted Confined Space.

    d. Water valve pits—Nonpermitted Confined Space.

    e. Water meter vaults or pits—Nonpermitted Confined Space.

    f. Trenches—Nonpermitted Confined Space.

If any employee encounters a situation which does not fit this list precisely, or if there is a question concerning whether or not it is a confined space, assume it to be a Permitted Confined Space. Under no circumstances is a manhole or any cover of an enclosed area to be opened without first testing the space for toxic gases, combustibles, or the lack of oxygen.

Classification Permitted Confined Space

The procedures specified in Title 8, Article 108, Section 5159, will be followed, including setup and use of all required equipment. The exception to Section 5159 will be that the person or persons in the confined space need not wear approved respiratory protective equipment (SCBA) if the space is constantly ventilated and the air quality continually tests at a safe level. Entry into the confined space is by permit only. The confined space entry permit or work permit is a written authorization that certifies that all existing hazards have been evaluated and necessary precautions have been taken to ensure the safety of each worker. Permits must be dated, signed and posted. Supervisors are responsible for the evaluation and the posting of the permit.

1. An approved safety harness and safety line are required for entry into a Permitted Confined Space. The line shall be attached to either the hoist on the tripod or some other fixed object. At the sewer lift station screen room, the rescue plan shall consist of the two standby employees equipped with SCBA equipment and a stretcher to remove an employee not wearing a safety harness.

2. At least two employees, currently certified for CPR/first aid, shall stand by on the outside of the confined space ready to give assistance in case of emergency. One employee shall be continually monitoring the atmosphere in the confined space. At least one additional employee, who may have other duties, shall be within sight or maintain radio communication with the standby employee. An effective means of communication between workers in the confined space and the standby worker must be maintained.

3. The standby employee shall have an SCBA available for immediate use.

4. Work involving the use of flame, arc, spark or other source of ignition is prohibited within a confined space which contains dangerous air contamination due to flammable and/or explosive substances.

5. If the air quality becomes unsafe as measured by an approved air monitoring device, the space will be immediately evacuated. Ventilate the area for five minutes and wait for air quality to improve. If air quality does not improve, SCBA equipment will be needed.

6. If the employee in the confined space becomes incapacitated due to the unsafe atmospheric conditions, a standby employee shall immediately notify the person within sight. This second person shall call Communications either through the nonemergency radio or by dialing 9-1-1.

7. The standby employee shall immediately begin lifting the fallen employee out of the confined space. The second standby employee will assist in removing the victim from the confined space and begin to administer CPR and/or first aid.

Classification Nonpermitted Confined Space

1. The entire lid or cover shall be removed, and the space shall be ventilated.

2. If the atmosphere tests acceptable, the employee need not wear the harness nor be attached to the hoisting device.

3. Employee may now enter the space to perform work. Entry into this space is acceptable by ladder or hoist or by any other appropriate device or piece of equipment. The atmosphere shall be continually monitored while the employee remains in the confined space.

4. If the air quality becomes unsafe, as measured by the approved air monitoring device, the employee shall immediately evacuate the confined space.

5. If the employee in the confined space becomes incapacitated due to accident or injury and the atmosphere still tests acceptable, rescue will only be performed by Fire Department personnel or under the direction of a medical technician.

6. If the employee in the confined space becomes incapacitated due to the unsafe atmospheric conditions, the standby employee shall immediately notify the person within sight. This second person shall call Communications either through the nonemergency radio or by dialing 9-1-1.

7. Any rescue can only be attempted after atmospheric conditions have been made safe or with the use of SCBA equipment, if available at the site. The standby employee shall immediately begin lifting the fallen employee out of the confined space. The second standby employee will assist in removing the victim from the confined space and begin to administer CPR and/or first aid.

Definitions

1. Qualified Person: The Qualified Person is the person designed to serve as the on-site monitor during confined space operations. This individual must understand the use of safety equipment and assure compliance with the safety procedures developed for the confined space operation. This person shall be

capable of specifying necessary control and/or protective action necessary for workers' safety. Additionally, the Qualified Person must be trained in the use of combustible gas/oxygen deficiency and toxic gas meters and in CPR/first aid. All City of San Mateo Utilities Department employees engaged in confined space entry, either in the active or standby roles, are required to fulfill the training requirements of the Qualified Person.

2. Standby Person: As with all other personnel involved in confined space entry operations, the Standby Person is thoroughly trained in the confined space entry procedures and the use of safety and monitoring equipment. Standby Person should be stationed at the access opening of any confined space while such space is occupied for any reason. At all times, the Standby Person must maintain visual contact with every occupant in the confined space, where the construction of the space permits, or should have continuous knowledge of the activities and well-being of every occupant of the confined space.

MAINTENANCE (Equipment, Tools)

1 Barriers and warning signs must be placed at or near the entrance to the confined space.

2. Any electrical service or equipment connected to a confined space should be locked in the "off" position and tagged if such service presents a hazard to personnel entering the confined space. Follow SOP that pertains to lock-out, tag-out procedures.

3. When unsafe conditions are detected by air monitoring equipment or by other means, the work area should be ventilated and made safe before entry, as determined by follow-up monitoring. Low-pressure type air movers (blowers) or fans should be used to purge the confined space prior to personnel entry. Refer to the SOP for the air monitoring equipment of gases and vapors.

SAFETY PRECAUTIONS

In general, personnel authorized to enter a confined space should be provided with and use the following equipment:

1. Safety harness—Full harness to be worn whenever feasible.

2. Lifeline—2,000 lbs. test strength.

3. Portable ladder or other approved means of entry and exit provided such means would not obstruct the access opening.

4. Several means of illumination equipment which are explosion-proof.

5. Nonsparking striking, chipping, hammering, or cutting tools and equipment in a confined space where an explosive or flammable air conditions exist.

6. Other personal protective equipment (i.e., eye protection, chemical-resistant gloves) should be taken into consideration by the work environment, the work being performed and skin absorption potential of the chemicals involved.

7. Air-driven power tools (where flammable liquid is present) whenever feasible should be used.

8. Cylinders of compressed gas should never be taken into a confined space.

City of San Mateo
Environmental Services
Standard Operating Procedure (SOP)

REVISION DATE DECEMBER 2005

Appendix D to §1910.146—Sample Permits

Appendix D - 1A

Sewer Entry Permit

Confined Space Pre-Entry Check List

See Safety Procedure.
A confined space either is entered through an opening other than a door (such as manhole or side port) or requires the use of a ladder or rungs to reach the working level and test results are satisfactory. This check list must be filled out whenever the job site meets this criteria.

		Yes	No
1.	Did your survey of the surrounding area show it to be free of hazards such as drifting vapors from tanks, piping or sewers?	( )	( )
2.	Does your knowledge of industrial or other discharges indicate this area is likely to remain free of dangerous air contaminants while occupied?	( )	( )
3.	Are you certified in operation of the gas monitor to be used?	( )	( )
4.	Has a gas monitor functional test (Bump Test) been performed this shift on the gas monitor to be used?	( )	( )
5.	Did you test the atmosphere of the confined space prior to entry?	( )	( )
6.	Did the atmosphere check as acceptable (no alarms given)?	( )	( )
7.	Will the atmosphere be continuously monitored while the space is occupied?	( )	( )

Contact County Centrex for personnel rescue by local fire department in the event of an emergency. If on-site at the Regional Treatment Plant, contact the Plant Control Center (PCC).

Notice: If any of the above questions are answered "no" do not enter. Contact your immediate supervisor.

Job Location_____

LEAD MAN signature_____Date_____

PERMIT REQUIRED CONFINED SPACE ENTRY PROGRAM

T8 CCR 5156

Establish and implement a written Permit Required Confined Space Entry Program that includes, but not limited to, the following elements:

A. Implementations of the measure to prevent unauthorized entry.

B. Identify and evaluate hazards prior to entry.

C. Development and implement means, procedures and practices for safe entry operations.
   1. Specify acceptable entry conditions.
   2. Isolate permit space.
   3. Purge, inert, flush, or ventilate space.
   4. Protect entrants from external hazards.
   5. Verify acceptable conditions throughout duration of entry.

D. Provide appropriate equipment for:
   1. testing and monitoring,
   2. ventilation,
   3. communication,
   4. personal protection,
   5. lighting,
   6. barriers and shields,
   7. ingress and egress,
   8. rescuing,
   9. other.

E. Evaluate conditions during entry operations.
   1. Test conditions prior to entry.
   2. Test conditions during operations, as necessary.
   3. Test in this order; Oxygen content, Combustibility, Toxicity.

F. Provide attendant, at least one.

G. Designate the persons who have active roles, identify duties of:
   1. Authorized entrants,
   2. Attendants,
   3. Entry supervisors,
   4. Persons who test and monitor.

H. Procedures for summoning rescue and emergency services.

I. System for preparation, issuance, and cancellation of permits.

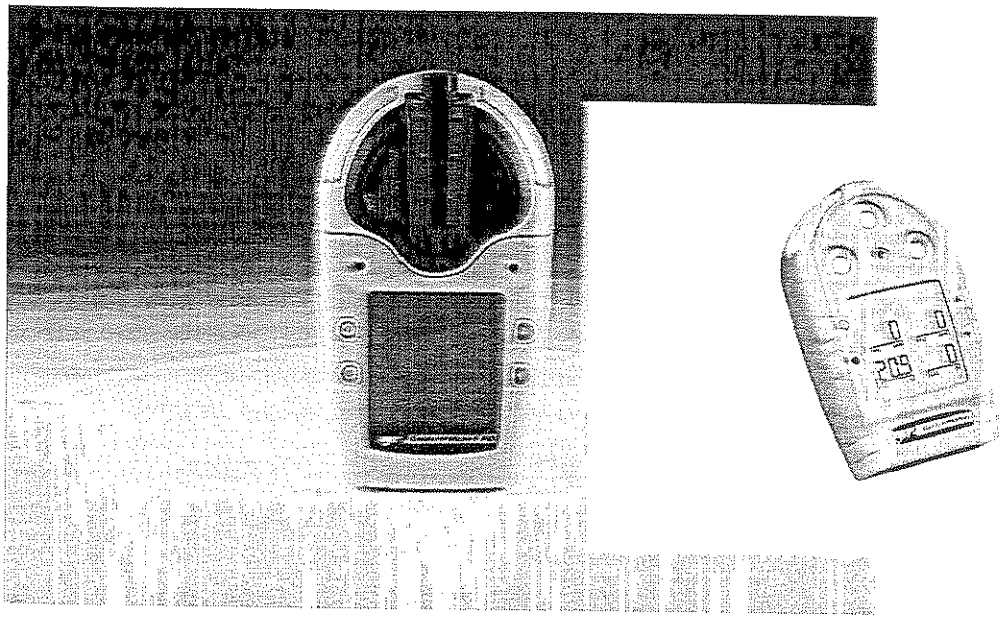
J. Coordinate operations when employees of more than one employer are authorized entrants simultaneously.

K. Procedure for closing off space and cancelling permit.

L. Review entry operations when there is doubt of safety.

M. Review program at least annually.

GAS ALERT MICRO 5 PID



Follow safety rules at all times. Your life and the lives of your fellow workers depend on it.

1) Always "quick check" your gas detector or continuously monitor immediately before use <u>each time</u> at the work site. Even if your company practice requires you to test your equipment at the beginning of each shift, or at the work center, anything can happen to your equipment en route from job to job.

2) Test the atmosphere in a manhole before removing the cover whenever possible, i.e.: through the cover puller access holes.

3) Never enter a manhole without first testing for combustible gases and purging the atmosphere within the manhole with a power ventilator. Then ensure continuous power ventilation after you enter, and all the while you are working in a manhole.

If gas is detected and/or your unit alarms while you are working in manhole, leave the manhole immediately. Do no re-enter until the cause is determined and corrected.

Remember, it only takes a second for an accident to happen.

After every attempt has not succeeded to restore the space to normal limits for gas concentrations, the supervisor will work with local authorities to evacuate or correct or remedy the problem, as necessary.

Note: If there is no hole in the manhole lid, create a work order to change out the lid, after the scenario has ended. Give the work order to a lead worker.

Employee Responsibility

Employees must follow all City procedures to ensure personal safety and the safety of others when responding to high/low gas alarms. Failure to do so may result in serious injury or fatal consequences. Employees not sure of work environment shall contact a lead worker before proceeding. It is each employee's responsibility to operate the gas detection testing equipment safely. Employees will properly maintain, inspect, test, and ensure the gas detection testing equipment is within the calibration standards at the time of use.

Management Responsibility

Management is responsible for providing the proper equipment and training for employees and for ensuring that employees follow the established procedures and guidelines. Management will coordinate emergency activities with local authorities.

CITY OF SAN MATEO
SANITARY SEWER MANHOLE MONITORING PROCEDURES

Policy

Safe manhole monitoring procedures are required for all employees and contractors who open manholes within the San Mateo service area.

Purpose

To ensure employee safety, establish procedures and responsibility for opening sanitary system manholes.

Equipment

Gad detector
Manhole hook
Pry bar
Spark Resistant Sledge Hammer (when lid is stuck and no LEL is present)

Procedure

Testing

- Setup traffic control and secure the area.

- Using a multi-gas detector, place the tip of the hose into a vent hole of the space to be tested (just the tip of the probe – do not push probe into dustpan). If there is no vent hole, crack the lid slightly using a pry bar and then prop the lid open just enough to insert the gas detector hose into the space. Observing the meter on the detector, note the reading for a minimum of 30 seconds. If no alarm sounds, the employee may remove the manhole cover using a manhole hook. If the lid is stuck, a sledge hammer should be used to break the seal before straining with a hook. If an alarm sounds, **do not remove the lid**.

- Assess upstream and downstream structures (2 structures in each direction) using testing protocol. If the readings are satisfactory at either of these locations, follow ventilation procedures. Used forced air purge. DO NOT use a blower in the exhaust mode to purge an LEL condition.

- If high readings continue, **do not** open the manhole. Contact your lead worker or supervisor.

- Remain at site until a lead worker or the supervisor arrives.

- When there is a question of an environmental impact, the employee will notify Source Control. The designated Source Control Inspector will contact the customer, when appropriate.

Carbon Monoxide (CO)

Below 25% - No alarm
Remove cover and proceed with work.

25% and above – Alarm
Do not remove manhole lid; retest.

1) If an alarm condition exists, notify a lead worker.

2) Assess upstream and downstream structures (2 structures in each direction) using same testing protocol. If the readings are satisfactory at either of these locations, follow ventilation procedures.

3) If readings continue to be unsatisfactory, select a structure with lowest reading levels; position yourself up-wind and remove lid allowing for natural ventilation.

4) If natural ventilation does not clear space, install a blower to power ventilate.

Hydrogen Sulfide Gas (H_2S)

0-9 ppm – No alarm
Remove cover and proceed.

10-49 ppm – Alarm
Do not remove manhole lid; retest.

1) Assess upstream and downstream structures (2 structures in each direction) using same protocol. If the readings are satisfactory at either of these locations, follow ventilation procedures.

2) Select structure with lowest level; position yourself up-wind and remove lid allowing for natural ventilation.

3) If natural ventilation does not clear space, install a blower to power ventilate.

Procedures for high LEL $\geq$ 10%, Oxygen $\geq$ 23.5% & $H_2S \geq$ 50 PPM

1) Call (650) 522-7350 (lead worker) and ask for the CO_2 fire extinguisher to be delivered.

2) Meet with the reporting employee to verify the readings and continue to monitor the space.

3) Wash down lid and the surrounding area with water to dampen the spark potential.

4) While continuing to monitor the space, use a 20-lb CO_2 extinguisher, place the nozzle in the lid vent hole or under the raised edge of the lid, and discharge the extinguisher gas to insert the space.

5) Leave a gas detection device in place to monitor the space continuously, ensuring that the CO_2 gas saturates the space, lowering the explosive potential (LEL).

6) When the manhole atmosphere becomes stabilized, stand up-wind of the structure and immediately pull the lid to begin natural ventilation.

7) Remaining up-wind, retest the space. If the space cannot be naturally ventilated within normal limits, install a blower to force ventilate the space. **DO NOT USE EXHAUST MODE TO REMOVE LEL.**

8) Commence work after the space reaches normal limits.

If an employee cannot clear the condition by venting the up- or downstream-structure, he or she will immediately contact a lead worker. All employees who open manhole lids shall follow these procedures and guidelines.

- When there is a question of an environmental impact, industrial release or spill, the employee will notify the Source Control Inspector. The designated Source Control Inspector will contact the industrial customer, when appropriate.

Sampling of Manhole

Oxygen
19.5% - 23.5 % - No alarm
Remove cover and proceed with work.

Oxygen-Deficiency
Below 19.5% - Alarm and no other Alarms on the meter
Remove manhole lid; retest.

Oxygen-Enriched Atmosphere
Above 23.5% - Alarm
Do not remove manhole lid; retest.

1) If an alarm condition exists, notify a lead worker or supervisor.

High oxygen levels accelerate combustion, which could also result in an explosive condition even with low LEL readings. Use caution to avoid sparks and other ignition sources, move vehicles and do not allow smoking in the area.

2) Assess up- and down-stream structures (2 structures in each direction) using testing protocol. If the readings are satisfactory at either of these locations, follow ventilation procedures.

3) If high readings continue, do not open the manhole. Contact your supervisor.

4) Remain at the site until a supervisor arrives.

5) When there is a question of an environmental impact, the employee will notify the Source Control Inspector. The designated Source Control Inspector will contact the customer, when appropriate.

Lower Explosive Limit
(LEL) Below 10% - No Alarm
Remove cover and proceed with work.

(LEL) 10% and above – Alarm
Do not remove manhole lid; retest.

1) If an alarm condition exists, notify a lead worker or supervisor.

SSMP
ELEMENT 4 – O & M Program
APPENDIX 4.3

Pumpstations
Maintenance & Equipment

Last Update: 11/2020

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	PSNAME	TYPE	ID#	LOCATION	REDUND	ALARMS*	B_UPOWER	HOLDGHRS	INLETDIA	DISCDIA	NUMPUM	CAPAC_1PUMP	DAILYFLOWGPD*	TDYNHEAD
	SANITARY SEWER PUMPSTATIONS													
1	2ND/QUEBEC	SANITARY	09J-SSPS1	203 S QUEBEC	Y	Y	PORTABLE	3	6	6	2	144000	10,800	13
2	38TH	SANITARY	25M-SSPS1	3796 EL CAMINO REAL	Y	Y	PORTABLE	3	15	8	2	1152000	240,000	26
3	41ST AVE	SANITARY	25N-SSPS1	3971 PACIFIC BLVD	Y	Y	PORTABLE	3	6, 8, 18	12	2	1296000	216,000	54
4	42ND AVE	SANITARY	26N-SSPS1	1 W 42ND AVE	Y	Y	PORTABLE	3	6	8	2	576000	83,600	30
5	ARROYO	SANITARY	14G-SSPS1	20 ARROYO CT	Y	Y	PORTABLE	3	8	8	2	576000	80,400	30
6	CHATHAM EAST	SANITARY	08I-SSPS1	205 N QUEBEC	Y	Y	PORTABLE	3	8	8	2	43200	8,400	12
7	DALE AVENUE	SANITARY	13K-SSPS1	DALE AVE	Y	Y	ON-SITE				5			
8	FLINT & NORFOLK	SANITARY	19N-SSPS1	2413 S NORFOLK	Y	Y	PORTABLE	3	10, 10	10	2	1008000	281,000	15
9	KEHOE/KELLY	SANITARY	13M-SSPS1	2223 KEHOE AVE	Y	Y	PORTABLE	3	8	6	2	288000	98,000	10
10	KEHOE/SCOTT	SANITARY	13N-SSPS1	2444 KEHOE AVE	Y	Y	PORTABLE	3	8	6	2	288000	24,000	10
11	LAURIE MEADOWS	SANITARY	25O-SSPS1	95 LAURIE MEADOWS	Y	Y	PORTABLE	3	12	10	2	648000	74,250	16
12	LOS PRADOS #1	SANITARY	21O-SSPS1	3000 LOS PRADOS	Y	Y	PORTABLE	3	12	8	2	1094400	307,800	21
13	LOS PRADOS #2	SANITARY	21P-SSPS1	3160 LOS PRADOS	Y	Y	PORTABLE	3	8	8	2	525600	105,120	8
14	LOS PRADOS #3	SANITARY	22P-SSPS1	3301 LOS PRADOS	Y	Y	PORTABLE	3	8	8	2	360000	63,000	10.5
15	MARINERS ISLAND #1	SANITARY	11N-SSPS1	408 ANCHOR RD	Y	Y	PORTABLE	3	8, 8	8	2	172800	16,560	48
16	MARINERS ISLAND #2	SANITARY	14O-SSPS1	635 MARINERS ISLAND BLVD	Y	Y	ON-SITE	3	24	14	3	2016000	1,044,000	75
17	MARINERS ISLAND #3	SANITARY	14N-SSPS1	894 NEPTUNE CT	Y	Y	PORTABLE	3	8, 8	8	2	648000	64,800	32
18	MARINERS ISLAND #4	SANITARY	16N-SSPS1	MARINERS ISLAND/W CAPE	Y	Y	PORTABLE	3	8, 8	10	2	1440000	114,000	5
19	MARINERS ISLAND #5	SANITARY	17O-SSPS1	1659 VISTA DEL MAR	Y	Y	PORTABLE	3	6, 8	8	2	432000	109,800	15
20	MARINERS ISLAND #6	SANITARY	16O-SSPS1	2021 WINWARD WAY	Y	Y	PORTABLE	3	8, 8	8	2	424800	54,870	11.5
21	MONGINI	SANITARY	19J-SSPS1	2005 PACIFIC BLVD	Y	Y	PORTABLE	3	15, 24	10	3	1296000	669,600	15
22	PARKWOOD	SANITARY	30F-SSPS2	1932 PARKWOOD	Y	Y	PORTABLE	3	8, 8	4	2	72000	10,350	90
23	SANTA CLARA	SANITARY	22N-SSPS1	404 SANTA CLARA	Y	Y	PORTABLE	3	10, 12	14	3	1440000	720,000	45
24	TOYON	SANITARY	30F-SSPS1	1629 TOYON	Y	Y	PORTABLE	3	8, 8	4	2	72000	5,400	80
25	WOODBRIDGE	SANITARY	25O-SSPS2	201 LAURIE MEADOWS	Y	Y	PORTABLE	3	8	8	2	144000	26,100	12
	STORM DRAINAGE PUMPSTATIONS													
1	3RD/DETROIT	STORM	11M-SDPS1	2002 DETROIT DR							2			
2	42ND AVE STORM	STORM	26N-SDPS1	4000 PACIFIC BLVD							3			
3	CASANOVA	STORM	25O-SDPS1	4012 CASANOVA							4			
4	COYOTE POINT	STORM	05F-SDPS1	20 S AIRPORT BLVD							4			
	FATHOM	STORM	12N-SDPS1	400 FATHOM DR							2			
	HILLSDALE	STORM	23L-SDPS1	3397 PACIFIC BLVD							2			
	MARINA LAGOON	STORM	12M-SDPD1	2100 DETROIT DR							5			
	NEW POPLAR	STORM	07I-SDPS1	BAYFRONT LEV/MONTE DIABLO							3			

PSNAME	P1INFO	P1INSTDATE	P1REBUILD	P1MODEL	P1SERIAL	P2INFO	P2INSTDATE	P2REBUILD	P2MODEL	P2SERIAL
SANITARY SEWER PUMP STATIONS										
2ND/QUEBEC	GORMAN RUPP 1.5 HP 230V 3 PHASE	1981	2004	T4-A3-B		GORMAN RUPP 1.5 HP 230V 3 PHA	1981	2004	T4-A3-B	
38TH	GORMAN RUPP 10 HP 230V 3 PHASE	1930	2008	T6A3-B	725342	GORMAN RUPP 10 HP 230V 3 PHAS	1930	2009	T6A3-B	683998
41ST AVE	CORNELL 25 HP 230V 3 PHASE	1962	1998			CORNELL 25 HP 230V 3 PHASE	1962	2003		
42ND AVE	PACO 5 HP 230V 3 PHASE	1988	2006			PACO 5 HP 230V 3 PHASE	1988	2008		
ARROYO	GORMAN RUPP 10 HP 230V 3 PHASE	1963	2008	T4A3-B	744414	GORMAN RUPP 10 HP 230V 3 PHAS	1963	2005	T4A3-B	741115
CHATHAM EAST	GORMAN RUPP 1.5 HP 230V 3 PHASE	1977	1995	T4A3-B	645907N	GORMAN RUPP 1.5 HP 230V 3 PHA	1977	1995	T4A3-B	645908N
DALE AVENUE	Large Pumps 1 thru 5 = Fairbanks Morse	1991		2414		Smaller 2 Pumps = Gorman Rupp			T10A-B	
FLINT & NORFOLK	FAIRBANKS 15 HP 230V 3 PHASE	1965	1983	5443B	K3J1013936	FAIRBANKS 15 HP 230V 3 PHASE	1965	2002	5443B	K3J1013936_1
KEHOE/KELLY	GORMAN RUPP 1.5 HP 230V 3 PHASE	1958	2007	T4A3-B		GORMAN RUPP 1.5 HP 230V 3 PHA	1958	2004	TAA3-B	
KEHOE/SCOTT	FAIRBANKS 1.5 HP 230V 3 PHASE	1958	1998		K99931	FAIRBANKS 1.5 HP 230V 3 PHASE	1958	2006		K99931
LAURIE MEADOWS	CORNELL 10 HP 230V 3 PHASE	1971	2004			CORNELL 10 HP 230V 3 PHASE	1971	2002		
LOS PRADOS #1	FAIRBANKS 7.5 HP 230V 3 PHASE	1965	1998		K2B8036	FAIRBANKS 7.5 HP 230V 3 PHASE	1965	1998		K2B8035
LOS PRADOS #2	FAIRBANKS 1.5 HP 230 V 3 PHASE	1959	1997	5432AK	KZ89127	FAIRBANKS 1.5 HP 230 V 3 PHASE	1959	1989	5432AK	KZ89128
LOS PRADOS #3	FAIRBANKS 5 HP 230 V 3 PHASE	1959	2002	4B5442K		FAIRBANKS 5 HP 230 V 3 PHASE	1959	2003	4B5442K	
MARINERS ISLAND #1	CHICAGO 7.5 HP 230V 3 PHASE	1966	1999		61-23170	CHICAGO 7.5 HP 230V 3 PHASE	1966	2001		61-23478
MARINERS ISLAND #2	FLYGT 30HP 480V 3 PHASE	2009		3171	820040	FLYGT 30HP 480V 3 PHASE	2009		3171	820041
MARINERS ISLAND #3	FAIRBANKS 7.5 HP 230V 3 PHASE	1968	2009	5412B28	K2M1043718K	FAIRBANKS 7.5 HP 230V 3 PHASE	1968	1981	5412B28	K2M1043718K
MARINERS ISLAND #4	FAIRBANKS 25 HP 230V 3 PHASE	1967	1997	5414C	K2M1043717	FAIRBANKS 25 HP 230V 3 PHASE	1967	2003	5414C	K2M1043717
MARINERS ISLAND #5	SMITH & LOVELESS 5HP 208V 3 PHASE	1983	1998		831257	SMITH & LOVELESS 5HP 208V 3 PH	1983	1989		831257
MARINERS ISLAND #6	SMITH & LOVELESS 1.5 HP 208V 3 PHAS	1983	1995		831297	SMITH & LOVELESS 1.5 HP 208V 3 P	1983	1999		
MONGINI	FAIRBANKS	1996	2008			FAIRBANKS	1996	2009		
PARKWOOD	PEABODY/BARNES 15HP 230V 3 PHASE	1981	2000			PEABODY/BARNES 15HP 230V 3 PH	1981	1999		
SANTA CLARA	FLYGT 20HP 230V 3 PHASE [VFD]	1989	2007	3152		FLYGT 20HP 230V 3 PHASE	1989	2006	3152	
TOYON	PEABODY/BARNES 10HP 230V 3 PHASE	1981	1981	SSC27	68895-1081	PEABODY/BARNES 10HP 230V 3 PH	1981	1989	SSC28	66108-180
WOODBRIDGE	GORMAN RUPP 2 HP 230V 3 PHASE	1973	2008	T4A3-B	675716N	GORMAN RUPP 2 HP 230V 3 PHASE	1973	2004	T4A3-B	675717N
STORM DRAINAGE PUM										
3RD/DETROIT	125 HP 460V 3 PHASE	1983	1983			WAUKESHA DIESEL ENGINE		1983		
42ND AVE STORM		1988	1988					1988		
CASANOVA	JOHNSTON 25 HP 240V 3 PHASE	1968	1968		GA3658			1968		GA3657
COYOTE POINT	FAIRBANKS 125 HP 480V 3 PHASE	1973	1973		GD1709	JOHNSTON 40 HP 480V 3 PHASE		1973		GD1710
FATHOM	FAIRBANKS 5 HP 230V 3 PHASE	1966	1985	6360	2J2022362.2			1988	6360	2J2022362.3
HILLSDALE	30 HP	1964	1964					1964		
MARINA LAGOON										
NEW POPLAR	CASCADE 100 HP 460V 3 PHASE	1973	1973	P-36	9137	AC 250 HP 460V 3 PHASE		1998	P-36	9138

PSNAME	P3INFO	P3INSTDATE	P3REBUILD	P3MODEL	P3SERIAL	P4INFO	P4INSTDATE	P4REBUILD	P4MODEL	P4SERIAL
SANITARY SEWER PUM										
2ND/QUEBEC										
38TH										
41ST AVE										
42ND AVE										
ARROYO										
CHATHAM EAST										
DALE AVENUE										
FLINT & NORFOLK										
KEHOE/KELLY										
KEHOE/SCOTT										
LAURIE MEADOWS										
LOS PRADOS #1										
LOS PRADOS #2										
LOS PRADOS #3										
MARINERS ISLAND #1										
MARINERS ISLAND #2	FLYGT 30HP 480V 3 PHASE	2009		3171	820042					
MARINERS ISLAND #3										
MARINERS ISLAND #4										
MARINERS ISLAND #5										
MARINERS ISLAND #6										
MONGINI			2006							
PARKWOOD										
SANTA CLARA	FLYGT 20HP 230V 3 PHASE		2009	3152						
TOYON										
WOODBRIDGE										
STORM DRAINAGE PUM										
3RD/DETROIT										
42ND AVE STORM			1988							
CASANOVA										
COYOTE POINT			1973	TL320-1	P2C3004			1973		P2F2559
FATHOM										
HILLSDALE										
MARINA LAGOON										
NEW POPLAR			1982	15000	5308					

City of San Mateo Department of Public Works
PUMPSTATION PREVENTATIVE MAINTENANCE SCHEDULE

PUMP STATION	TYPE	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
MONGINI	SANITARY				X				X				X
ARROYO	SANITARY	X				X		X			X		
PARKWOOD	SANITARY	X				X		X			X		
TOYON	SANITARY	X				X		X			X		
38TH	SANITARY	X				X		X			X		
41ST	SANITARY	X				X		X			X		
42ND	SANITARY				X				X				X
WOODBRIDGE	SANITARY	X				X		X			X		
SANTA CLARA	SANITARY				X				X				X
LOS PRADOS #1	SANITARY	X				X		X			X		
LOS PRADOS #2	SANITARY	X				X		X			X		
LOS PRADOS #3	SANITARY	X				X		X			X		
FLINT & NORFOLK	SANITARY	X				X		X			X		
PARKSIDE AQ	SANITARY	X				X		X			X		
KEHOE & KELLY	SANITARY	X				X		X			X		
KEHOE &SCOTT	SANITARY	X				X		X			X		
2ND & QUEBEC	SANITARY	X				X		X			X		
CHATEM EAST	SANITARY	X				X		X			X		
MARINERS #1	SANITARY	X				X		X			X		
MARINERS #2	SANITARY	X				X		X			X		
MARINERS #3	SANITARY	X				X		X			X		
MARINERS #4	SANITARY	X				X		X			X		
MARINERS #5	SANITARY	X				X		X			X		
MARINERS #6	SANITARY	X				X		X			X		

SSMP

ELEMENT 4 – O&M PROGRAM

APPENDIX 4.4

Sewer Maintenance Crew Training

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City of San Mateo Environmental Services Division
Collections 2020 Safety Training Log

Staff	Provider	Training Topic	Date Completed
Aviles William	Du-All	Blood borne Pathogens	9/2/2020
Aviles William	Du-All	Concrete/Silica Dust	2/18/2020
Aviles William	Du-All	Confined Space	3/10/2020
Aviles William	Du-All	Defensive Driver Safety	5/5/2020
Aviles William	Du-All	Fire Extinguisher (Portable)	1/14/2020
Aviles William	Du-All	Forklift & Powered Industrial Trucks	5/19/2020
Aviles William	Du-All	Hazard Communication Globally Harmonized System	7/15/2020
Aviles William	Du-All	Hazardous Waste Management	12/1/2020
Aviles William	Du-All	HazWOPER (First Responder)	8/6/2020
Aviles William	Du-All	Hearing Conservation	7/15/2020
Aviles William	Du-All	Heat Illness Prevention & Summer Safety, Poison Oak & Bug Bites	6/2/2020
Aviles William	Du-All	Summer Safety, Poison Oak & Bug Bites	6/2/2020
Aviles William	Du-All	Heavy Equipment (Earth Moving Equipment)	10/27/2020
Aviles William	Du-All	Hot Work	11/3/2020
Aviles William	Du-All	Personal Protective Equipment	1/14/2020
Aviles William	Du-All	Respiratory Protection	2/18/2020
Aviles William	Du-All	Spill Prev. Control and Countermeasure	9/29/2020
Camilleri, Steve	Du-All	Defensive Driver Safety	5/5/2020
Camilleri, Steve	Du-All	Hazard Communication Globally Harmonized System	7/15/2020
Camilleri, Steve	Du-All	Hearing Conservation	7/15/2020
Camilleri, Steve	Du-All	Heat Illness Prevention & Summer Safety, Poison Oak & Bug Bites	6/2/2020
Chetcuti, John	Du-All	Asbestos and Lead Awareness	9/2/2020
Chettcuti, John	Du-All	Back Safety	2/11/2020
Chettcuti, John	Du-All	Blood borne Pathogens	9/2/2020
Chettcuti, John	Du-All	Concrete/Silica Dust	2/11/2020
Chettcuti, John	Du-All	Confined Space	3/10/2020
Chettcuti, John	Du-All	Defensive Driver Safety	5/5/2020
Chettcuti, John	Du-All	Fire Extinguisher (Portable)	1/14/2020
Chettcuti, John	Du-All	Forklift & Powered Industrial Trucks	5/19/2020
Chettcuti, John	Du-All	Hazard Communication Globally Harmonized System	7/15/2020
Chettcuti, John	Du-All	Hazardous Waste Management	12/1/2020
Chettcuti, John	Du-All	HazWOPER (First Responder)	8/6/2020
Chettcuti, John	Du-All	Hearing Conservation	7/15/2020
Chettcuti, John	Du-All	Heat Illness Prevention & Summer Safety, Poison Oak & Bug Bites	6/2/2020
Chettcuti, John	Du-All	Heavy Equipment (Earth Moving Equipment)	10/27/2020
Chettcuti, John	Du-All	Respiratory Protection	2/11/2020
Chettcuti, John	CA DFEH	Sexual Harassment Prevention Non -Management	12/15/2020
Chettcuti, John	Du-All	Spill Prev. Control and Countermeasure	9/22/2020
Cisneroz, Richard	Du-All	Back Safety	3/3/2020
Cisneroz, Richard	Du-All	Concrete/Silica Dust	2/18/2020
Cisneroz, Richard	Du-All	Defensive Driver Safety	5/5/2020
Cisneroz, Richard	Du-All	Fire Extinguisher (Portable)	1/14/2020
Cisneroz, Richard	Du-All	Hazard Communication Globally Harmonized System	7/22/2020
Cisneroz, Richard	Du-All	Hazardous Waste Management	12/1/2020
Cisneroz, Richard	Du-All	HazWOPER (First Responder)	8/13/2020
Cisneroz, Richard	Du-All	Heat Illness Prevention & Summer Safety, Poison Oak & Bug Bites	6/2/2020
Cisneroz, Richard	Du-All	Heavy Equipment (Earth Moving Equipment)	10/27/2020
Cisneroz, Richard	Du-All	Hot Work	11/3/2020
Cisneroz, Richard	Du-All	Personal Protective Equipment	1/14/2020
Cisneroz, Richard	Du-All	Respiratory Protection	2/18/2020
Cisneroz, Richard	Du-All	Spill Prev. Control and Countermeasure	9/22/2020
Cisneroz, Richard	Du-All	Slip, Trip & Fall Prevention	3/3/2020
Di Matteo, John	Du-All	Back Safety	2/11/2020
Di Matteo, John	Du-All	Blood borne Pathogens	9/2/2020
Di Matteo, John	Du-All	Confined Space	3/10/2020
Di Matteo, John	Du-All	Defensive Driver Safety	5/5/2020
Di Matteo, John	Du-All	Fire Extinguisher (Portable)	1/21/2020
Di Matteo, John	Du-All	Hazard Communication Globally Harmonized System	7/22/2020
Di Matteo, John	Du-All	Hazardous Waste Management	12/1/2020
Di Matteo, John	Du-All	HazWOPER (First Responder)	8/6/2020
Di Matteo, John	Du-All	Hearing Conservation	7/22/2020
Di Matteo, John	Du-All	Heat Illness Prevention & Summer Safety, Poison Oak & Bug Bites	6/9/2020
Di Matteo, John	Du-All	Heavy Equipment (Earth Moving Equipment)	10/27/2020

City of San Mateo Environmental Services Division
Collections 2020 Safety Training Log

Staff	Provider	Training Topic	Date Completed
Di Matteo, John	Du-All	Hot Work	11/3/2020
Di Matteo, John	Du-All	Personal Protective Equipment	1/21/2020
Di Matteo, John	Du-All	Respiratory Protection	2/11/2020
Di Matteo, John	CA DFEH	Sexual Harassment Prevention Non -Management	12/15/2020
Di Matteo, John	Du-All	Spill Prev. Control and Countermeasure	9/22/2020
Elo, Luis	Du-All	Asbestos & Lead Awareness	9/2/2020
Elo, Luis	Du-All	Back Safety	3/3/2020
Elo, Luis	Du-All	Blood borne Pathogens	9/2/2020
Elo, Luis	Du-All	Concrete/Silica Dust	2/11/2020
Elo, Luis	Du-All	Confined Space	3/10/2020
Elo, Luis	Du-All	CPR/First Aid/AED	1/21/2020
Elo, Luis	Du-All	Defensive Driver Safety	5/5/2020
Elo, Luis	Du-All	Forklift & Powered Industrial Trucks	6/8/2020
Elo, Luis	Du-All	Hazard Communication Globally Harmonized System	7/15/2020
Elo, Luis	Du-All	Hazardous Waste Management	12/1/2020
Elo, Luis	Du-All	HazWOPER (First Responder)	8/6/2020
Elo, Luis	Du-All	Hearing Conservation	7/15/2020
Elo, Luis	Du-All	Heat Illness Prevention & Summer Safety, Poison Oak & Bug Bites	6/2/2020
Elo, Luis	Du-All	Heavy Equipment (Earth Moving Equipment)	10/27/2020
Elo, Luis	Du-All	Hot Work	11/3/2020
Elo, Luis	Du-All	Respiratory Protection	2/11/2020
Elo, Luis	Du-All	Spill Prev. Control and Countermeasure	9/22/2020
Elo, Luis	FEMA	Nims; ICS-100/ICE-200/IS-700/SEMS Introduction	3/13/2020
Elo, Luis	Du-All	Slip, Trip & Fall Prevention	3/3/2020
Fuentes, Manuel	Du-All	Asbestos & Lead Awareness	9/2/2020
Fuentes, Manuel	Du-All	Back Safety	3/3/2020
Fuentes, Manuel	Du-All	Blood borne Pathogens	9/2/2020
Fuentes, Manuel	Du-All	Confined Space	3/10/2020
Fuentes, Manuel	Du-All	Defensive Driver Safety	5/5/2020
Fuentes, Manuel	Du-All	Fire Extinguisher (Portable)	1/14/2020
Fuentes, Manuel	Du-All	Forklift & Powered Industrial Trucks	6/8/2020
Fuentes, Manuel	Du-All	Hazard Communication Globally Harmonized System	7/15/2020
Fuentes, Manuel	Du-All	Hazardous Waste Management	12/1/2020
Fuentes, Manuel	Du-All	HazWOPER (First Responder)	8/6/2020
Fuentes, Manuel	Du-All	Hearing Conservation	7/15/2020
Fuentes, Manuel	Du-All	Heat Illness Prevention & Summer Safety, Poison Oak & Bug Bites	6/2/2020
Fuentes, Manuel	Du-All	Heavy Equipment (Earth Moving Equipment)	10/27/2020
Fuentes, Manuel	Du-All	Hot Work	11/3/2020
Fuentes, Manuel	Du-All	Spill Prev. Control and Countermeasure	9/22/2020
Fuentes, Manuel	Du-All	Slip, Trip & Fall Prevention	3/3/2020
Godinez, Jose	Du-All	Hazardous Waste Management	12/1/2020
Godinez, Jose	Du-All	Heavy Equipment (Earth Moving Equipment)	10/27/2020
Godinez, Jose	Du-All	Hot Work	11/3/2020
Godinez, Jose	Du-All	Spill Prev. Control and Countermeasure	9/22/2020
Godinez, Jose	FEMA	Nims; ICS-100/ICE-200/IS-700/SEMS Introduction	10/23/2020
Gudino, Carlos	Du-All	Back Safety	3/3/2020
Gudino, Carlos	Du-All	Blood borne Pathogens	9/2/2020
Gudino, Carlos	Du-All	Defensive Driver Safety	5/5/2020
Gudino, Carlos	Du-All	Fire Extinguisher (Portable)	1/14/2020
Gudino, Carlos	Du-All	Forklift & Powered Industrial Trucks	5/19/2020
Gudino, Carlos	Du-All	HazWOPER (First Responder)	8/6/2020
Gudino, Carlos	Du-All	Hearing Conservation	7/15/2020
Gudino, Carlos	Du-All	Heat Illness Prevention & Summer Safety, Poison Oak & Bug Bites	6/2/2020
Gudino, Carlos	Du-All	Heavy Equipment (Earth Moving Equipment)	10/27/2020
Gudino, Carlos	Du-All	Respiratory Protection	2/11/2020
Gudino, Carlos	CA DFEH	Sexual Harassment Prevention Non -Management	12/15/2020
Gudino, Carlos	Du-All	Spill Prev. Control and Countermeasure	9/22/2020
Gudino, Carlos	Du-All	Slip, Trip & Fall Prevention	3/3/2020
Mack Steven	Du-All	Asbestos & Lead Awareness	9/2/2020
Mack Steven	Du-All	Back Safety	2/11/2020
Mack Steven	Du-All	Blood borne Pathogens	9/2/2020
Mack Steven	Du-All	Concrete/Silica Dust	2/11/2020
Mack Steven	Du-All	Defensive Driver Safety	5/5/2020

City of San Mateo Environmental Services Division
Collections 2020 Safety Training Log

Staff	Provider	Training Topic	Date Completed
Mack Steven	Du-All	Electrical Safety - Low Voltage	3/24/2020
Mack Steven	Du-All	Fire Extinguisher (Portable)	1/14/2020
Mack Steven	Du-All	Hazard Communication Globally Harmonized System	7/15/2020
Mack Steven	Du-All	Hazardous Waste Management	12/1/2020
Mack Steven	Du-All	HazWOPER (First Responder)	8/6/2020
Mack Steven	Du-All	Hearing Conservation	7/15/2020
Mack Steven	Du-All	Heat Illness Prevention & Summer Safety, Poison Oak & Bug Bites	6/2/2020
Mack Steven	Du-All	Heavy Equipment (Earth Moving Equipment)	10/27/2020
Mack Steven	Du-All	Hot Work	11/3/2020
Mack Steven	Du-All	Personal Protective Equipment	1/14/2020
Mack Steven	Du-All	Respiratory Protection	2/11/2020
Mack Steven	CA DFEH	Sexual Harassment Prevention Non -Management	12/16/2020
Mack Steven	Du-All	Spill Prev. Control and Countermeasure	9/22/2020
Morkve, Eric	Du-All	Back Safety	3/3/2020
Morkve, Eric	Du-All	Blood borne Pathogens	2/11/2020
Morkve, Eric	Du-All	Concrete/Silica Dust	2/11/2020
Morkve, Eric	Du-All	Confined Space	3/10/2020
Morkve, Eric	Du-All	Defensive Driver Safety	5/5/2020
Morkve, Eric	Du-All	Fire Extinguisher (Portable)	1/14/2020
Morkve, Eric	Du-All	Hazard Communication Globally Harmonized System	7/15/2020
Morkve, Eric	Du-All	HazWOPER (First Responder)	8/11/2020
Morkve, Eric	Du-All	Hearing Conservation	7/15/2020
Morkve, Eric	Du-All	Heat Illness Prevention & Summer Safety, Poison Oak & Bug Bites	6/2/2020
Morkve, Eric	Du-All	Heavy Equipment (Earth Moving Equipment)	10/27/2020
Morkve, Eric	Du-All	Hot Work	11/3/2020
Morkve, Eric	Du-All	Personal Protective Equipment	1/14/2020
Morkve, Eric	Du-All	Respiratory Protection	2/11/2020
Morkve, Eric	CA DFEH	Sexual Harassment Prevention Non -Management	12/16/2020
Morkve, Eric	Du-All	Spill Prev. Control and Countermeasure	9/22/2020
Morkve, Eric	Du-All	Slip, Trip & Fall Prevention	3/3/2020
Padilla, Noel	Du-All	Asbestos & Lead Awareness	9/2/2020
Padilla, Noel	Du-All	Back Safety	2/11/2020
Padilla, Noel	Du-All	Blood borne Pathogens	9/2/2020
Padilla, Noel	Du-All	Concrete/Silica Dust	2/11/2020
Padilla, Noel	Du-All	Defensive Driver Safety	5/5/2020
Padilla, Noel	Du-All	Electrical Safety - Low Voltage	3/24/2020
Padilla, Noel	Du-All	Fire Extinguisher (Portable)	1/14/2020
Padilla, Noel	Du-All	Forklift & Powered Industrial Trucks	6/8/2020
Padilla, Noel	Du-All	Hazard Communication Globally Harmonized System	7/15/2020
Padilla, Noel	Du-All	Hazardous Waste Management	12/1/2020
Padilla, Noel	Du-All	HazWOPER (First Responder)	8/13/2020
Padilla, Noel	Du-All	Hearing Conservation	7/15/2020
Padilla, Noel	Du-All	Heat Illness Prevention & Summer Safety, Poison Oak & Bug Bites	6/2/2020
Padilla, Noel	Du-All	Heavy Equipment (Earth Moving Equipment)	10/27/2020
Padilla, Noel	Du-All	Hot Work	11/3/2020
Padilla, Noel	Du-All	Personal Protective Equipment	1/14/2020
Padilla, Noel	Du-All	Slip, Trip & Fall Prevention	3/3/2020
Rodriguez, Mario	Du-All	Asbestos & Lead Awareness	9/2/2020
Rodriguez, Mario	Du-All	Back Safety	2/11/2020
Rodriguez, Mario	Du-All	Blood borne Pathogens	9/2/2020
Rodriguez, Mario	Du-All	Defensive Driver Safety	5/5/2020
Rodriguez, Mario	Du-All	Electrical Safety - Low Voltage	3/24/2020
Rodriguez, Mario	Du-All	Fire Extinguisher (Portable)	1/14/2020
Rodriguez, Mario	Du-All	Hazard Communication Globally Harmonized System	7/15/2020
Rodriguez, Mario	Du-All	HazWOPER (First Responder)	8/6/2020
Rodriguez, Mario	Du-All	Hearing Conservation	7/15/2020
Rodriguez, Mario	Du-All	Heat Illness Prevention & Summer Safety, Poison Oak & Bug Bites	6/2/2020
Rodriguez, Mario	Du-All	Personal Protective Equipment	1/14/2020
Rodriguez, Mario	Du-All	Respiratory Protection	2/11/2020
Rodriguez, Mario	CA DFEH	Sexual Harassment Prevention Non -Management	12/16/2020
Rodriguez, Mario	Du-All	Spill Prev. Control and Countermeasure	9/22/2020
Rodriguez, Mario	FEMA	Nims; ICS-100/ICE-200/IS-700/SEMS Introduction	3/1/2020
Rodriguez, Mario	Du-All	Slip, Trip & Fall Prevention	3/3/2020
Sandoval, Marcos	Du-All	Asbestos & Lead Awareness	9/2/2020

City of San Mateo Environmental Services Division
Collections 2020 Safety Training Log

Staff	Provider	Training Topic	Date Completed
Sandoval, Marcos	Du-All	Back Safety	3/3/2020
Sandoval, Marcos	Du-All	Blood borne Pathogens	9/2/2020
Sandoval, Marcos	Du-All	Concrete/Silica Dust	2/11/2020
Sandoval, Marcos	Du-All	Confined Space	3/10/2020
Sandoval, Marcos	Du-All	Defensive Driver Safety	5/5/2020
Sandoval, Marcos	Du-All	Fire Extinguisher (Portable)	1/14/2020
Sandoval, Marcos	Du-All	Forklift & Powered Industrial Trucks	5/19/2020
Sandoval, Marcos	Du-All	Hazard Communication Globally Harmonized System	7/15/2020
Sandoval, Marcos	Du-All	Hazardous Waste Management	12/1/2020
Sandoval, Marcos	Du-All	HazWOPER (First Responder)	8/6/2020
Sandoval, Marcos	Du-All	Hearing Conservation	7/15/2020
Sandoval, Marcos	Du-All	Heat Illness Prevention & Summer Safety, Poison Oak & Bug Bites	6/2/2020
Sandoval, Marcos	Du-All	Heavy Equipment (Earth Moving Equipment)	10/27/2020
Sandoval, Marcos	Du-All	Hot Work	11/3/2020
Sandoval, Marcos	Du-All	Personal Protective Equipment	1/14/2020
Sandoval, Marcos	Du-All	Respiratory Protection	2/11/2020
Sandoval, Marcos	CA DFEH	Sexual Harassment Prevention Non -Management	12/15/2020
Sandoval, Marcos	Du-All	Spill Prev. Control and Countermeasure	9/22/2020
Sandoval, Marcos	Du-All	Slip, Trip & Fall Prevention	3/3/2020
Valdivia, Eduardo	Du-All	Asbestos & Lead Awareness	9/2/2020
Valdivia, Eduardo	Du-All	Back Safety	3/3/2020
Valdivia, Eduardo	Du-All	Blood borne Pathogens	9/2/2020
Valdivia, Eduardo	Du-All	Concrete/Silica Dust	2/11/2020
Valdivia, Eduardo	Du-All	Confined Space	3/10/2020
Valdivia, Eduardo	Du-All	Defensive Driver Safety	5/5/2020
Valdivia, Eduardo	Du-All	Fire Extinguisher (Portable)	1/21/2020
Valdivia, Eduardo	Du-All	Forklift & Powered Industrial Trucks	6/8/2020
Valdivia, Eduardo	Du-All	Hazard Communication Globally Harmonized System	7/15/2020
Valdivia, Eduardo	Du-All	Hazardous Waste Management	12/1/2020
Valdivia, Eduardo	Du-All	HazWOPER (First Responder)	8/13/2020
Valdivia, Eduardo	Du-All	Hearing Conservation	7/15/2020
Valdivia, Eduardo	Du-All	Heat Illness Prevention & Summer Safety, Poison Oak & Bug Bites	6/9/2020
Valdivia, Eduardo	Du-All	Heavy Equipment (Earth Moving Equipment)	10/27/2020
Valdivia, Eduardo	Du-All	Personal Protective Equipment	1/21/2020
Valdivia, Eduardo	Du-All	Respiratory Protection	2/11/2020
Valdivia, Eduardo	Du-All	Spill Prev. Control and Countermeasure	9/22/2020
Valdivia, Eduardo	Du-All	Slip, Trip & Fall Prevention	3/3/2020
Valdivia, Eduardo	FEMA	Nims; ICS-100/ICE-200/IS-700/SEMS Introduction	2/10/2020
Veamatahau, Sosefo	Du-All	Asbestos & Lead Awareness	9/2/2020
Veamatahau, Sosefo	Du-All	Back Safety	2/11/2020
Veamatahau, Sosefo	Du-All	Blood borne Pathogens	9/2/2020
Veamatahau, Sosefo	Du-All	Concrete/Silica Dust	2/11/2020
Veamatahau, Sosefo	Du-All	Confined Space	3/10/2020
Veamatahau, Sosefo	Du-All	Defensive Driver Safety	5/5/2020

SSMP

ELEMENT 4 – O&M PROGRAM

APPENDIX 4.5

Manhole Inspection Program

2011 - 2020 MANHOLE ASSESSMENT CONDITION PROGRAM (MACP)
ANNUAL INSPECTION SCHEDULE

Year	# Manholes	Cleaning Areas
2011	585	C1a - C1i, C2a - C2g
2012	549	C3a - C3e, C4a - C4j, D1a - D1f
2013	507	D2a - D2l, D3a - D3f, D4a, D4b, D4c
2014	583	D4d - D4l, E1a, E1b, E2a - E2d, E2k
2015	499	E2e - E2j, E3a - E3m
2016	546	E4a - E4e, E4g - E4r
2017	594	E4f, E4s, E4t, E4u, A1a - A1i, A2a - A2h
2018	545	A2i, A2j, A3a - A3i, A4a - A4d
2019	552	A4e, A4f, B1a, B1b, B2a - B2f, B3a - B3g
2020	465	B4a - B4p

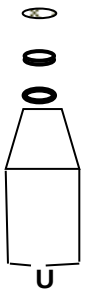
City of San Mateo

MANHOLE INSPECTION FORM

		8. Date:	
		9. Time:	
12. MH#/Struct ID:		***37. Weather Code:***	
41. Project:		4. Drainage Area:	Known
34. Sheet #: N/A	6. PO#: N/A	33. Tape/Media #	N/A
34. Purpose of Survey: G	2. System Owner: San Mateo CS	51. Video Name:	N/A
36. Pre-Cleaning: N	37. Date Cleaned: 00000000	3. Survey Customer:	San Mateo CS
1. Surveyor's Name:		31. Year Installed:	Known
1a Certification #: N/A		32. Year Rehabilitated:	Z
10. MH Street Name & #:		10a. City:	San Mateo
11. Further Location Details:			
20. Use: SS	35. Criticality Rating: TBD	43. Northing (Y):	Verified
40. MH Surface Type:	***38. MH Location Code:***	44. Easting (X):	Verified
41. I&I Potential:	***42. Access Point Type:***	45. Elevation (Z):	Not Verified
48. Inspection Status:	***Subject to Dirt or Debris?*** ***Y N***	46. Coordinate System:	NAD83CAIII
Steps Present? ***Y N***	***49. Evidence of Surcharge?*** ***Y N***	47. Accuracy of GPS Code:	N/A

13. Outgoing Rim to Invert:	ft	***39. Additional Information:***					
14. Outgoing Grade to Invert:	ft	(Or Sketch if different than map)					
15. Rim to Grade:	ft						
Cover Type / Lid Diameter:	in.						
# of Holes in Lid/Hole Dia. Code:							
Cover/Frame Fit:							
Barrel Diameter:	in.						
Rodents:							
Initial Gas Detector Levels	***O2:***		***H2S:***		***LEL:***	***CO:***	

PHYSICAL DATA



	Material	***Condition***	**Comments:**
Lid			
Frame			
Grade Rings			☐ solic ☐ adjustable
Cone			☐ Flat-top ☐ Concentric ☐ Eccentric Lined? Y N
Barrel/Wall			Lined? Y N
Bench/Shelf			Lined? Y N
Channel/Trough			☐ Pipe ☐ Formed ☐ Precast ☐ Insert

OVERALL RATING

☐	Good/Satisf (Inspect Annually)
☐	Debris/Solids Buildup in MH
☐	Other Maint (describe in comments)
☐	Needs Repair (describe in comments)

*Sample Comments: Poor structural condition,
Serviceable, Broken, Unsafe, Damaged, Corroded, Missing Grout
Needs Raising, Needs Lowering, Misaligned, Leaking
Ill-fitting, Dirty, Bad joint, Roots, Grease, Infiltration, Cracks

OVERALL COMMENTS:

CITY OF SAN MATEO - MANHOLE INSPECTION CODES

34. PURPOSE OF SURVEY

Code	Description
A	Maintenance Related
B	I&I Investigation
C	Post Rehabilitation Survey
D	Pre Rehabilitation Survey
E	Pre-Acceptance (New MH)
F	Routine Assessment
G	CIP Assessment
H	Resurvey for any reason
V	Reversal
Z	Not Known

37. WEATHER

Code	Description
1	Dry
2	Heavy Rain
3	Light Rain
5	Saturated
6	Damp
7	Very Dry

38. MH LOCATION

Code	Description
A	Main Urban Hwy (92, 101)
B	Suburban Hwy (El Camino)
D	ROW – all other streets
E	Woods
F	Sidewalk
G	Parking Lot
H	Alley
I	Ditch
J	Building
K	Creek
Y	Yard
Z	Other (note in box 39)

40. MH SURFACE TYPE

Code	Description
AS	Asphalt Street
CO	Concrete Pavement
CC	Concrete Collar
GD	Grass or Dirt
GR	Gravel
ZZ	Other

41. POTENTIAL FOR RUNOFF DURING STORM

Code	Description
N	None (MH will only receive direct rainfall)
S	Sheeting (Rain falling may drain over the MH)
P	Ponding (MH is at a low point where water may collect during heavy rains)
I	Inundated (Covered by water 1 foot or more during storms)

47. ACCURACY OF GPS

Code	Description
M	Sub-meter: w/in one meter (3 feet)
N	Nearest Meter: > or = 1 meter
L	Survey Level: ~5cm overall accuracy

42. ACCESS POINT TYPE

Code	Description
AMH	Manhole
AWA	Wastewater Access
AOC	Other Special Chamber
AM	Flow Meter Structure (not a MH with a flow meter attached)
AWW	Wet Well
AJB	Junction Box
ACOP	Property Cleanout
ACOM	Cleanout on a Mainline
ACOH	House Cleanout
ACB	Catch Basin

48. INSPECTION STATUS

Code	Description
SI	Surface Inspection
DI	Descent Inspection (entered MH)
RI	Remote inspection (use camera)
NF	Structure Not Found
NO	Not Opened – Cover could not be removed
SD	Surcharged or Debris – Structure not completed inspected b/c of debris or high water
NI	Could not inspect b/c of traffic
NA	Could not inspect b/c unable to gain access
BM	Structure located but not excavated or raised yet - marked but no inspection.

STRUCTURE MATERIALS

Code	Description
AC	Asbestos Concrete
BR	Brick
CAS	Cast iron
CMP	Corrugated Metal Pipe
CP	Concrete (non-reinforced)
CSB	Concrete Segments (bolted)
CSU	Concrete Segments (unbolted)
CT	Clay Tile
DIP	Ductile Iron Pipe
FRP	Fiberglass Reinforced
GRC	Glass Reinforced Cement
OB	Pitch Fiber (Orangeburg)
PE	Polyethylene
PP	Polypropylene
PSC	Plastic/Steel Composite
PVC	PolyVinyl Chloride
RCP	Reinforced Concrete
RPM	Reinforced Plastic (Truss Pipe)
SP	Steel
TTE	Transite
VCP	Vitrified Clay
WD	Wood
XXX	Not Known
ZZZ	Other (state in comments)

VERMIN

Description
Rats
Roaches
Insects
Racoons
None

CITY OF SAN MATEO - MANHOLE INSPECTION CODES

MH COVER TYPE – Use more than one code as nec.

Code	Description
1	Solid (concealed pick holes)
2	Vented (pick holes & vent holes allow rain in)
3	Gasketed (gasket present to prevent rain inflow)
4	Bolted
5	Inner Cover (a secondary lid is installed under top cover)
6	Locking (requires special tool to unlock and remove lid)

MH COVER HOLE DIAMETER

Code	Description
A	Less than or equal to ½ inch
B	Greater than ½ inch but less than or equal to 1 inch
C	Greater than 1 inch but less than or equal to 1.5 inches
D	Greater than 1.5 inches but less than or equal to 2 inches
E	Greater than 2 inches

MH COVER/FRAME FIT

Code	Description
O	Oversized (cover does not fit completely onto frame)
G	Good (Gap b/w cover and frame less than or equal to ¼ inch)
U	Undersized (Gap b/w cover and frame is more than ¼ inch)
R	Rocks/Wobbles (Cover unstable when standing on it. Clatters when traffic drive over)

MH COVER, FRAME & RING CONDITION CODES– Use more than one code as nec.

Code	Description
A	Sound – no visible structural defects
B	Cracked – cover cracked but still in one piece
C	Broken – cover broken and in loose pieces
D	Missing – or in the bottom of the manhole
E	Corroded/Pitted – So corroded it does not sit properly on frame
F	Bolts Missing – some or all bolts not in place
G	Coated (coated or has a liner)
H	Loose/Not Attached
I	Offset

13. OUTGOING RIM TO INVERT:

Enter in feet (to the nearest tenth of a foot) the distance between the rim level of the manhole (top of manhole lid) and the invert (bottom of channel).

14. OUTGOING GRADE TO INVERT:

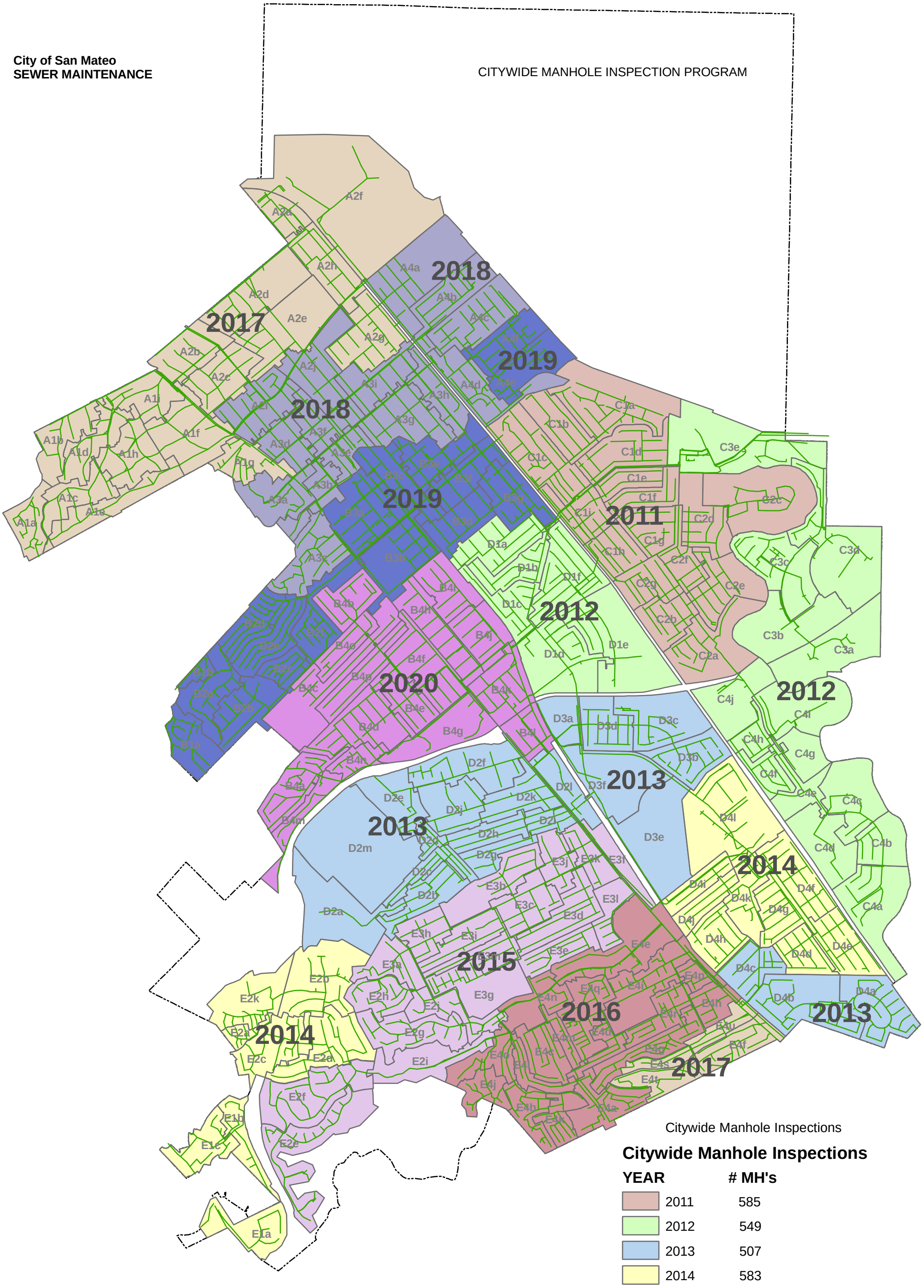
Enter in feet (to the nearest tenth of a foot) the depth between the grade (ground) and the invert (bottom of channel).

CONE, WALL, BENCH, CHANNEL CONDITION CODES: Use more than one code as nec.

Code	Description
A	Sound – no visible structural defects
B	Cracked
CM	Cracks Multiple
C	Broken
D	Missing
DB	Displaced Brick
DA	Deposits Attached
DS	Deposits Settled
E	Corroded/Pitted
F	Needs Immediate Repair
FC	Fracture Circumferential
FL	Fracture Longitudinal
FM	Fracture Multiple
G	Coated (coated or has a liner)
H	Loose/Not Attached
I	Offset
IS	Infiltration Stain
IW	Infiltration Weeper
IR	Infiltration Runner
IG	Infiltration Gusher
LF	Lining Failure
RF	Roots Fine
RM	Roots Medium
RB	Root Ball
WF	Weld Failure

City of San Mateo
SEWER MAINTENANCE

CITYWIDE MANHOLE INSPECTION PROGRAM



Citywide Manhole Inspections

Citywide Manhole Inspections

YEAR	# MH's
2011	585
2012	549
2013	507
2014	583
2015	499
2016	546
2017	594
2018	545
2019	552
2020	465

Q/PW/corpyard/Sewers/MH Inspections/MH Inspect Program 2011-2020
June 6, 2011

SSMP

ELEMENT 4 – O&M PROGRAM

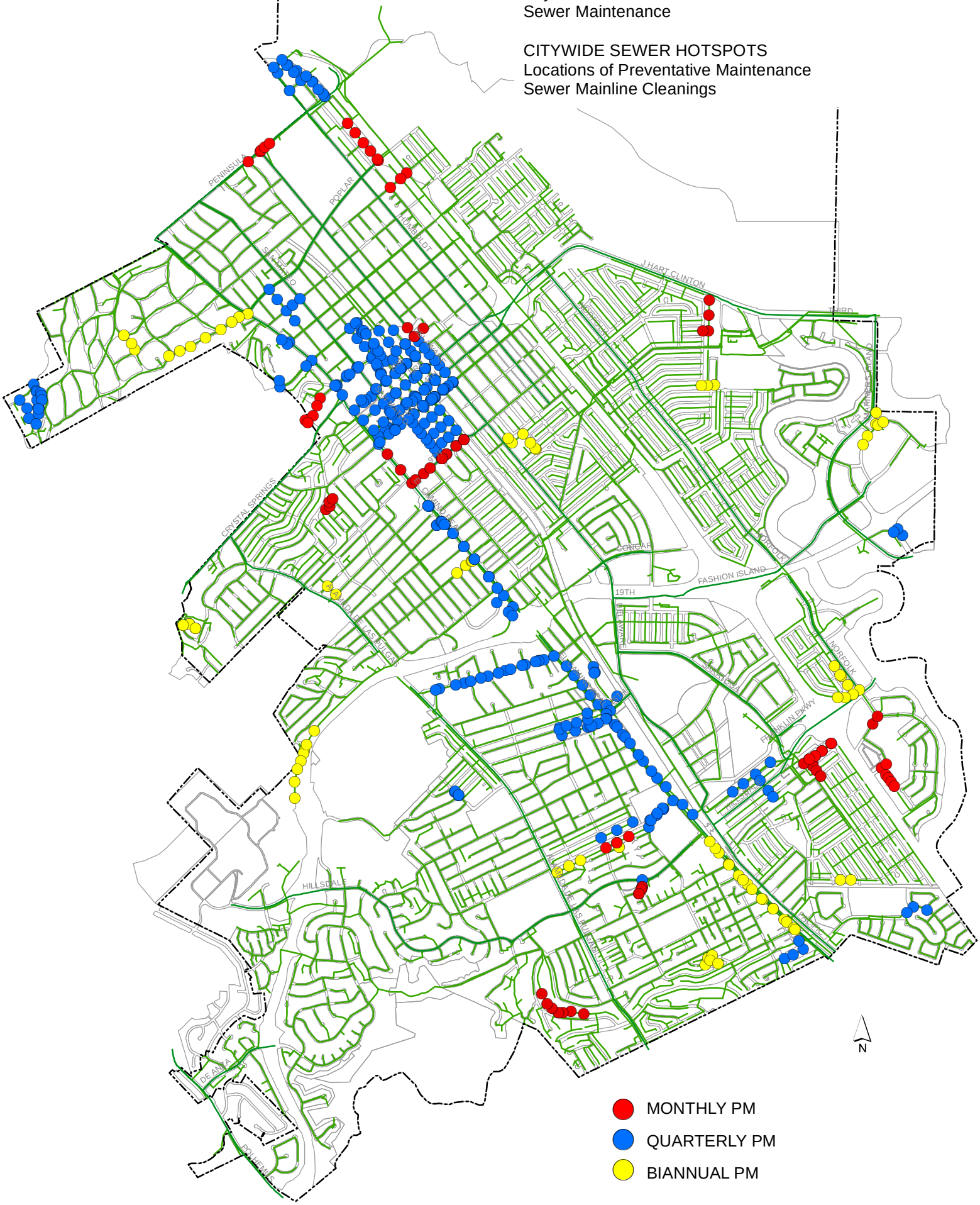
APPENDIX 4.6

“Hot-Spots” & Leak Detection Program

Last Updated: April 2014

City of San Mateo
Sewer Maintenance

CITYWIDE SEWER HOTSPOTS
Locations of Preventative Maintenance
Sewer Mainline Cleanings



- MONTHLY PM
- QUARTERLY PM
- BIANNUAL PM

Q:\PW\corpyard\Sewers\SewerHotSpots\SewerHotSpotLocations2014

SEWER PREVENTATIVE MAINTENANCE "HOT SPOTS" LIST
Last updated – August 15, 2014

MONTHLY SEWER PM'S						
	Location	**Linear Feet**	**Avg Hrs**	**Avg Cost**	**Common Cond.**	**Reason for PM**
1	**31st & Hacienda**	603	.75	$160	Roots	Smartcover on MH492-13. Clean until repairs can be made by engineering.
2	**El Camino Real @ Baywood**	263			Solids	Refered to engineering for re-engineering of pipe where dips under utility junction box creating a siphon, & to replace broken ECR pipe. Baywood section removed 6-25-2012.
3	**3170 Casa de Campo**	661	1.3	$125	FOG	Needs FOG education.
4	**East Hillsdale Monthly** (entire length each month as of 3/11)	1,288	3	$310	FOG	Needs FOG education & grease interceptor.
5	**Idaho (1113 College)**	1132	2	$190	FOG & Bad Grade	Pipe taps in below water level of trunk line.
6	**Indian**	519	2	$185	FOG	Continue PM's until Pipe upgraded under 101.
7	**Peninsula Monthly Jet** NOTE: Flail in Jan & July	2,581	2.5	$300	FOG	Keep on a monthly – but twice a year flail line instead of jet. Refer to Source Control for FOG control & checks of grease trap.
8	**Norfolk & La Selva**	308	1.4	$125	FOG	Added to PM's May, 2008. Jet main and 100' of Lateral into Marina Market.
9	**1st & Delaware**	522	.75	$85	PAPER	Lines consistently plugged with paper.
10	**9th Ave – RR to Palm Ave**	1,016	2	$190	Grade Issues	Continue monthly cleaning until re-engineered. Extended to ECR & Central Park bathrooms flowing to ECR on 9-9-2011.
11	**315 Virginia – Monthly Flail**	338	1	$130	Roots	Roots – Added to PM's March 2010
12	**Winway Powerrod**	173	1	$75	Solids	A siphon MH
13	**Shoreview**	853	1	$155	Breaks/Roots	2049 Shoreview – drop pipe (needs to be fixed in order to reach/cut protruding tap at 2045). Also nozzle

						gets stuck at 2001 – 2005.
14	**Kingridge**	1210			FOG, Solids	Added 4-9-13.
15	**Indian Additional Lines**	650			FOG, Solids	Additional lines requested by Rick Pina 3-18-14.
	TOTAL LF:	**12,117**				

QUARTERLY SEWER PM'S

	Location	Linear Feet	Avg Hrs	Avg Cost	Common Cond.	Reason for PM
1	~~**20TH Avenue**~~					Moved to Bi-Annual per Steve Camilleri 8-12-14
2	**25th Avenue & Lula Belle Alley**	2,150	4	$380	FOG	Restaurants. Needs FOG control.
~~3~~	~~**26th & Dolores**~~					~~Added to PM's March 2010.~~ Engineering fixed pipe 7-11-2012. Removed from PMs.
4	**Bayswater & Idaho Qrtly**	3,214			Heavy FOG	Added to PM's Feb 2011. Flat line – holds solids.
5	**Bromfield / Fulton Qrtly Flail**	1733	4	$335	Solids & Roots	Initially, change from Qrtly jet to Qrtly Flail. Refer to Engineering for pipe replacement & size upgrade.
6	**Downtown Region 1**	1,623	3.5	$330	FOG / Solids	Restaurants & Apts
7	**Downtown Region 2A**	1,406	2.7	$235	FOG / Solids	Restaurants & Apts
8	**Downtown Region 2B**	6,600	10.5	$940	FOG / Solids	Restaurants & Apts
9	**Downtown Region 3A**	3,165	6.6	$600	FOG / Solids	Restaurants & Apts
10	**Downtown Region 3B**	2,738	6.2	$540	FOG / Solids	Restaurants & Apts
11	**Downtown Region 4A**	5,183	5.2	$470	FOG / Solids	Restaurants & Apts
12	**Downtown Region 4B**	4,791	7.75	$680	FOG / Solids	Restaurants & Apts
13	**Downtown Region 5 (Starting July 2010)**	5,949	6	$1550	FOG / Solids	Restaurants & Apts
14	**Ellsworth / Baldwin (DT 6)**	2,830	6	$590	FOG/Solids	Restaurants & Apts
15	**El Camino Real – Seville to 16th**	2,718	5.2	$500	FOG	Referred to Engineering for repair of sag.
16	**El Camino Real 21st to 25th**	2,097	2.4	$235	FOG	Restaurants & Apts.

17	**El Camino Real 25th to 31st**	3,080	5.8	$350	FOG	Restaurants & Apts.
18	**31st Ave – El Camino to Edison**	870	2.25	$200	FOG	Mall foodcourt grease. FOG Control.
19	**42nd Ave & Dumont**	709	1.3	$105	FOG	Continue PM's & identify root control tactics.
20	**Winway Jet & Vacuum MH**	163	2.5	$230	Solids	A siphon MH
21	**1750 El Camino Real**	1,085	2.15	$205	FOG	Added back in to PM's 1/2009 after backups.
22	**El Camino & El Cerrito**	194				Added in 2011. Flat line – holds FOG.
23	**Woodbridge**	535	2.25	$210	FOG	FOG consistently crusted on top inside manholes
24	**Palm Ave siphons**	166				Added 1-6-12. Siphon manholes – fill up with rags, etc.
25	~~**Elm Street**~~					Moved to Bi-Annual per Steve Camilleri 8-12-14
26	**Mariners Island 6**	316			SOLIDS	Added 3-14-12. Ongoing solids issues in area per pump and sewer crews.
27	**111 E Santa Inez**	228			SOLIDS	Added 2-25-13. Solids issues in area per Steve Camilleri, SUPV
28	**McLellan & Curtiss**	1803			SOLIDS	Added 2-25-13. Solids issues in area per Steve Camilleri, SUPV
29	**177 N El Camino Real**	229			SOLIDS	Added 4-30-13. Solids issues in area per Steve Camilleri, SUPV
30	**145 Sylvan**	835			FOG	Added 8-1-13. Heavy FOG per Steve Camilleri, SUPV
31	**Crystal Springs Road**	1145			SOLIDS	Added 1-30-14. Solids issues in area per Steve Camilleri, SUPV
32	**37th and ECR**	472			SOLIDS	Added 1-30-14. Solids issues in area per Steve Camilleri, SUPV
33	**6 Fairoaks**	162			SOLIDS	Added 1-30-14. Solids issues in area per Steve Camilleri, SUPV
	TOTAL LF:	**58,189**				

BI-ANNUAL SEWER PM'S

	Location	Linear Feet	Avg Hrs	Avg Cost	Common Cond.	Reason for PM
1	**Alder Easement** MARCH/SEPT	617	2.3	$150		Added to PM's May 2008. A Sept & March Bi-Annual.
2	**Barneson & El Camino Real** JAN/JULY	439	1.5	$130	Roots	Changed back to Jet from PR per Steve Camilleri.
3	**509 Castilian Powerrod** JAN/JULY	285	1.4	$80	Roots	Refer to engineering to repair break and offset joint.
4	~~**515 Dorchester Powerrod**~~ ~~JAN/JULY~~					PM removed per Steve Camilleri. 8-12-14.
5	**El Camino Real – Hillsdale to 38th** JAN/JULY	3131			FOG	Used to be ECR 36th to 41st. Split into 2 PM's & Added 15" lines.
6	**El Camino Real – 38th to 41st** JAN/JULY	1347	6	$585	FOG	Used to be ECR 36th to 41st. Split into 2 PM's & Added 15" lines.
7	**Edison & Bayview** JAN/JULY	568	.75	$200	Roots	
8	**Holland / Norfolk / Hosmer Hydrosaw** JAN/JULY	1,327	3.5	$285	FOG	Hydrosaw to clear line.
9	**Holland / Norfolk / Hosmer Jet** APRIL/OCTOBER	1,327	2.6	$245	FOG	
10	**1865 Kehoe** JAN/JULY	309	1	$105	FOG & Solids	
11	**MI II PS to Bridgepointe Circle** JAN/JULY – *Pumpstation Rehab Complete*	1,210	1	$80	Sag	Pumpstation rehabilitation project complete – repair of pipe sag unknown.
12	**Murphy Easement**	1,752				Roots/breaks. Added in 2011
13	**Poplar – Crescent to El Camino** JAN/JULY	2,103	4	$425	Roots	Refer to Engineering for pipe replacement & upsize – replace possibly past Crescent to where upper Poplar pipe was replaced w/in last few years.
14	**Sunnybrae School** Clean during Summer and Easter Break (July & March/April)	938			Debris	Added to PM's March 2010. Updated 12-29-11. Added line.

15	**19 Wildwood** JAN/JULY	342	2	$150	Roots	Continue PM's.
16	**258 East 40th Ave** JAN/JULY	248	1	$80	Sags	House 258 Backs Up if line not cleared regularly b/c of sags.
17	**139 Arbor** **JAN/JULY**	117			SOLIDS	Added 3-14-12. Solids issues in area per sewer crew feedback.
18	**Gramercy at El Cerrito (formerly 80 El Cerrito Quarterly)** APRIL/OCT	157				Added 12-29-2011. Sag in pipe. Clean until can be repaired. Moved to bi-annual April 2012.
19	**Elm Street**	941	1	$125	FOG	Added 3-14-12. Area notorious for FOG. Changed from Quarterly to Bi-Annual per Steve Camilleri 8-12-14.
20	**20TH Avenue**	2,950	5.5	$535	Det & Roots	Det (from apts) & Roots (by Elks) below City Hall back up line – can overflow in City Hall. Changed from Quarterly to Bi-Annual per Steve Camilleri 8-12-14.
	TOTAL LF:	**20.108**				

TOTAL LINEAR FEET IN HOT-SPOT PROGRAM = 90,414 (as of 8-15-14)

NOTE: Additional Quarterly = Clean pipe and grate at Shellmound Gurgle (added 3-14-12)

City of San Mateo
Public Works Department
Sewer Maintenance

Work Order # _____

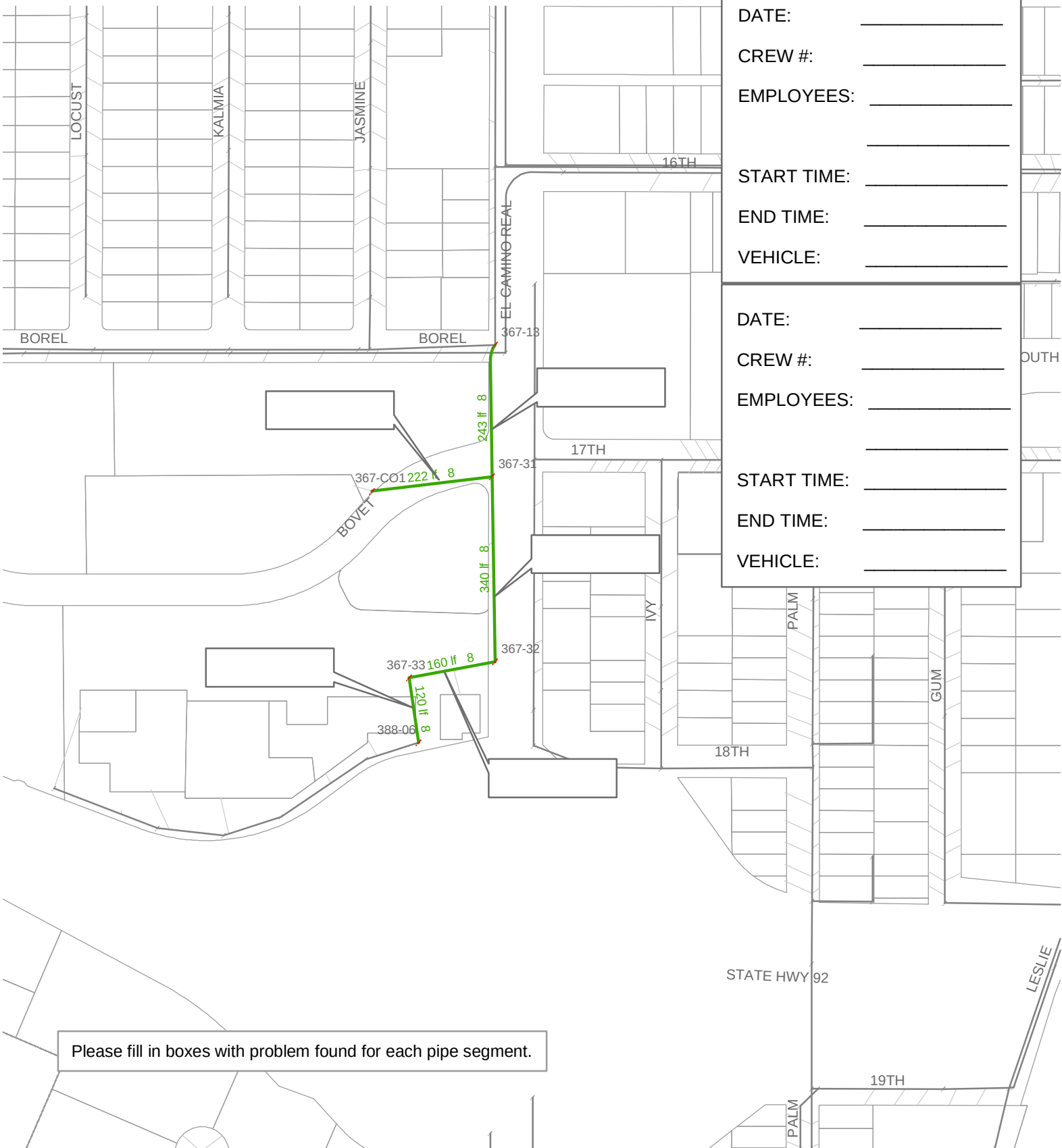
_____, '09 '10 '11

Quarterly PM Map
1750 El Camino Real

 # Blocked mains with MH holding water: _____

DATE: _____
CREW #: _____
EMPLOYEES: _____
_____
START TIME: _____
END TIME: _____
VEHICLE: _____

DATE: _____
CREW #: _____
EMPLOYEES: _____
_____
START TIME: _____
END TIME: _____
VEHICLE: _____



Please fill in boxes with problem found for each pipe segment.

Quarterly Inspections of Sewer Pipes Spanning Waterways

Program Start: March 2012

WOID	Description	Qrtly Schedule	Dispatch To	Address	Requested By	Comments
96628	Inspect Mainline	March, June, Sept., Dec.	UTILITY05,	ARROYO COURT 24121X_26205X 8" MAIN	PREVNT MAINT,	12/01/2020 Monthly check for pipe leaks in pipes over creeks. No leaks, pipe sound.
96626	Inspect Mainline	March, June, Sept., Dec.	UTILITY05,	413 W HILLSDALE BLVD 51222X_51218X 6" MAIN	PREVNT MAINT,	12/01/2020Monthly check for pipe leaks in pipes over creeks. No leaks, pipe sound.
96625	Inspect Mainline	March, June, Sept., Dec.	UTILITY05,	CLEARVIEW OFFICE PARK - HILLSDALE/92 40401X_40409X	PREVNT MAINT,	12/01/2020 Monthly check for pipe leaks in pipes over creeks. No leaks, pipe sound.
96612	Inspect Mainline	March, June, Sept., Dec.	UTILITY05,	523 LA CASA - BELMONT BORDER	PREVNT MAINT,	12/01/2020 Monthly check for pipe leaks in pipes over creeks. No leaks, pipe sound.
96629	Inspect Mainline	March, June, Sept., Dec.	UTILITY05,	809 BROMFIELD 154CO3_15401X 6" MAIN	PREVNT MAINT,	12/02/2020 PM check for leaks/sewage entering waterway. No leaks. Pipe sound
96627	Inspect Mainline	March, June, Sept., Dec.	UTILITY05,	2629 MONTEREY CT 44811X_44810X 6" MAIN	PREVNT MAINT,	12/02/2020 Monthly check for pipe leaks in pipes over creeks. No leaks, pipe sound.
96631	Inspect Lateral	March, June, Sept., Dec.	UTILITY05,	400 HILLSBOROUGH LATERAL	PREVNT MAINT,	12/02/2020 Monthly check for leaks/sewage entering waterway. No leaks. Pipe sound
96630	Inspect Lateral	March, June, Sept., Dec.	UTILITY05,	725 & 751 EDGEWOOD LATERALS	PREVNT MAINT,	12/02/2020 Monthly check for leaks/sewage entering waterway. No leaks. Pipe sound

SEWER MAINTENANCE: **SEWER PIPES OVER CREEKS**
PM Request **Quarterly Check for Leaks**

SUPERVISOR INSTRUCTIONS

Supervisor:	Bob and Ed
Date of Request	June 1, 2012
Submitted To (crew):	June 1, 2012
Expected Completion Date:	June 15, 2012
LOCATION/ADDRESS:	**413 W Hillsdale Blvd Mainline 51222X_51218X**



RECENT CONDITION/ PROBLEM FOUND	Sewer Main spans creek
REASON FOR DISPATCH **(PRIOR HISTORY)**	PM – check for leaks/sewage entering waterway
Instructions:	Please check for leaks/Report on condition of pipe

CREW ACTIONS

START DATE: _____

CLOSE DATE: _____

ARRIVAL TIME: _____

TIME COMPLETE: _____

EMPLOYEES: _____

_____

VEHICLES: _____

_____

MATERIALS: _____

_____

PIPE LEAKING? Y N

CONDITION OF PIPE:

- ☐ Sound
- ☐ Repair in future
- ☐ Repair soon
- ☐ Broken/leaking

Other Crew Comments if Necessary:

SSMP

ELEMENT 4 – O&M PROGRAM

APPENDIX 4.7

Sewer Maintenance Dedicated Equipment and Personnel

APPENDIX 4.7

Equipment dedicated to maintenance of the sewer collection system

Quantity	EQUIPMENT	PURPOSE
7	Generator	Backup power for pump stations G9,G10,G11,G12,G13,G14,G15
1	Pickup F350	Emergency Response L50
1	Pickup F350	Sewer Leadworker Truck L12
1	F150 Electric	Supervisor/Leadworker Truck L79
1	Truck F250	Pump station Maintenance Tools, Parts & Equipment L63
1	Truck F550 with Boom	Pump station Maintenance L86
1	Gorman-Rupp 6" portable pump	Spill Response S80
1	Backhoe	Repair excavation S51
1	Mini excavator	Repair excavation S85
1	Dump truck	Repair hauling M40
3	Vac-Con combo truck	Preventative Maintenance T58 T59 T63
1	Ford Transit electric van	Cctv crawler system, portable cctv for easements L39
1	Trailer – Emergency SSO Response	Emergency SSO Response T61
1	Power rodder	Mechanical cleaning T57
3	Portable cctv	Quick inspection, emergency location
1	Crawler cctv	Inspection, sanitary cleaning inspections(see above L39)

Back up Equipment

QUANTITY	EQUIPMENT	PURPOSE
1	XL12	Medium duty truck
1	Vac-con combo truck	Maintenance XT63

Personnel dedicated to maintenance of the sewer collection system

Quantity	EQUIPMENT	PURPOSE
1	Sewer Supervisor	Oversee Sewer Operations and Maintenance Programs – Pump Crew, Maintenance Crew, Emergency Response, CCTV
1	Pump Mechanic 1/2	Pump station Maintenance
1	Pump Mechanic 2	Pump station Repair & Maintenance
1	Pump Mechanic 3	Oversee Pump Crew
1	Sewer Leadworker	Oversee/Assist Preventative Maintenance sewer storm
0	Sewer Leadworker	Oversee/Assist emergency response, pump crew
5	Maintenance Worker 2	Preventative Maintenance sanitary/storm, emergency response/repair, cctv,
8	Maintenance Worker 1	Preventative Maintenance sanitary/storm, emergency response/repair, cctv,

SSMP

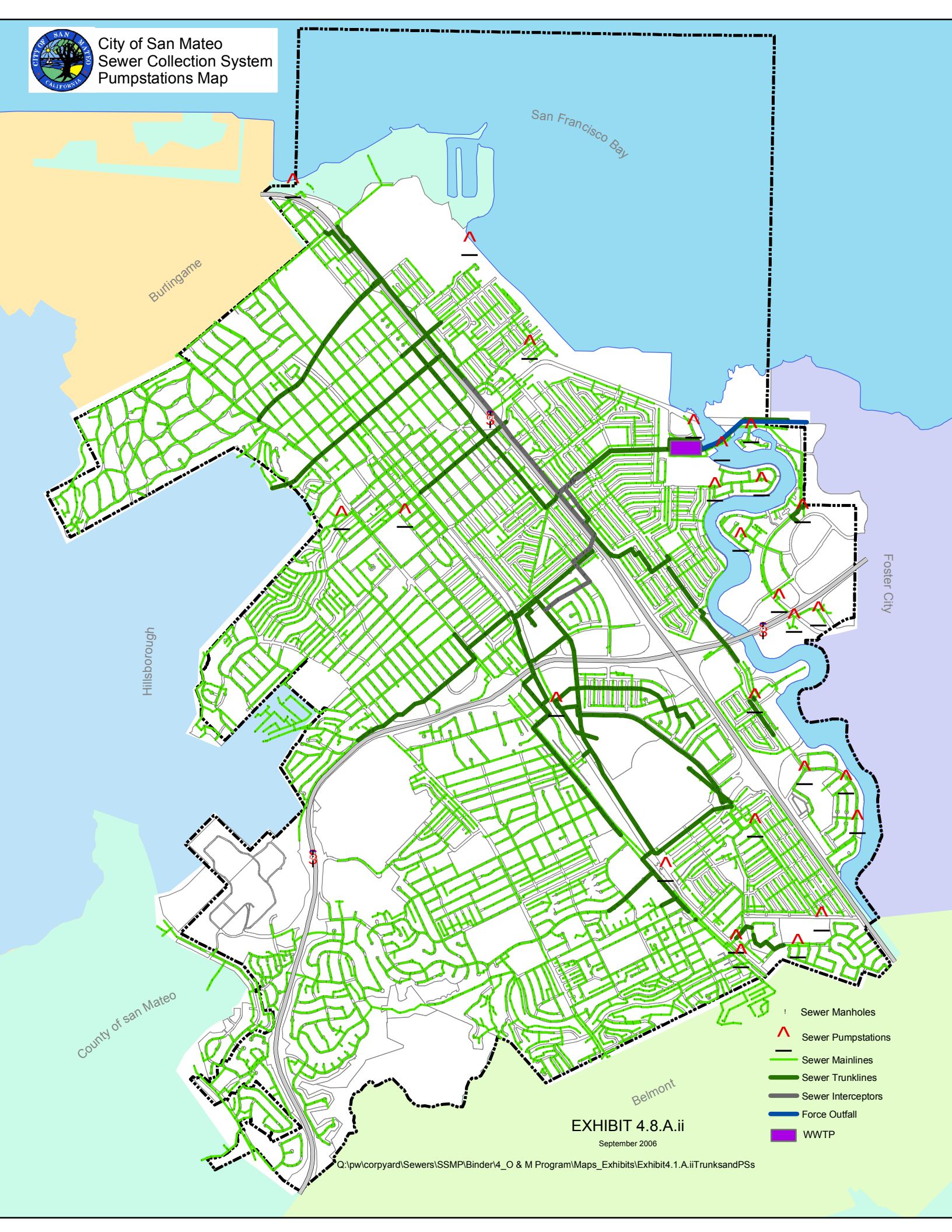
ELEMENT 4 – O&M PROGRAM

APPENDIX 4.8

Collection System Maps and Information

Table of Contents

- 4.8.A.i - Underground Utilities Map Page
- 4.8.A.ii - Sewer Pumpstations and Trunklines Map
- 4.8.A.iii - Sewer Collection System Pipe Sizes
- 4.8.A.iv - Sewer Collection System Terrain Map
- 4.8.A.v - Sewer Collection System Basin Map
- 4.8.A.vi - Sewer Collection System Subbasin Map
- 4.8.A.vii - Sewer Collection System Cleaning Areas Map (Current Snapshot)
- 4.8.A.viii - Sewer District Cleaning Schedule Maps (Current Snapshot)
- 4.8.A.ix – Sewer Root Foaming Schedule Map (Current Snapshot)


City of San Mateo
Sewer Collection System
Pumpstations Map
San Francisco Bay
Burlingame
Hillsborough
Foster City
County of san Mateo
Belmont
Sewer Manholes
Sewer Pumpstations
Sewer Mainlines
Sewer Trunklines
Sewer Interceptors
Force Outfall
WWTP
EXHIBIT 4.8.A.ii
September 2006
Q:\pw\corpyard\Sewers\SSMP\Binder\4_O & M Program\Maps_Exhibits\Exhibit4.1.A.iiTrunksandPSs

City of San Mateo
Sewer Collection System
Summary of Piipe Sizes

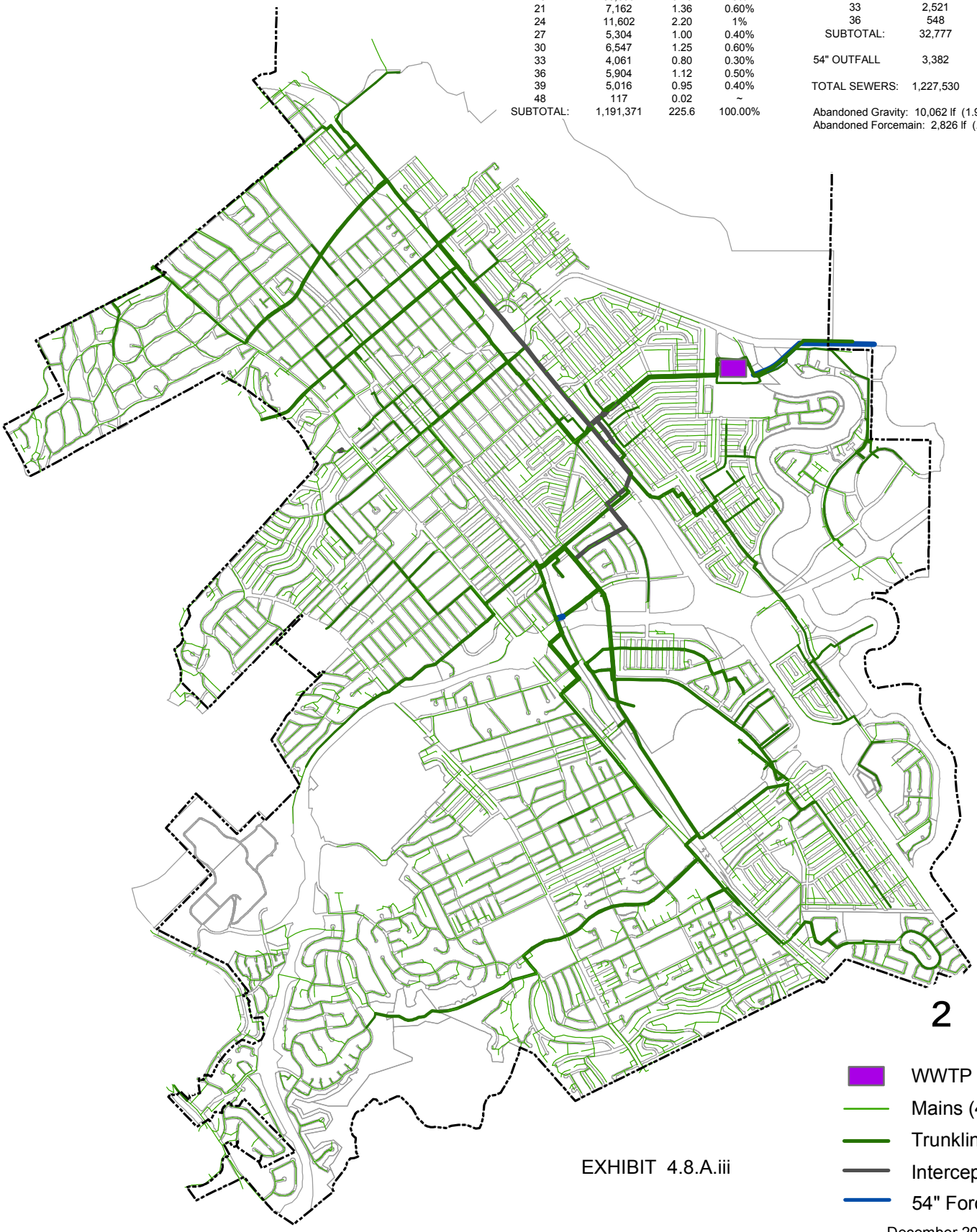
GRAVITY SEWERS

Pipe Dia. (inch.)	Length (ft)	Length (mi)	% of Active Gravity System (by length)
4	2,609	0.50	0.20%
6	712,325	135.00	60%
8	264,841	50.00	22.10%
10	61,919	11.70	5.20%
12	35,985	6.83	3%
14	372	0.07	~
15	31,908	6.04	2.70%
18	35,699	6.76	3%
21	7,162	1.36	0.60%
24	11,602	2.20	1%
27	5,304	1.00	0.40%
30	6,547	1.25	0.60%
33	4,061	0.80	0.30%
36	5,904	1.12	0.50%
39	5,016	0.95	0.40%
48	117	0.02	~
SUBTOTAL:	1,191,371	225.6	100.00%

FORCEMAIN

Pipe Dia. (inch.)	Length (ft)	Length (mi)	% of Active Force System (by length)
4	1,691	0.32	5%
6	795	0.15	2.40%
8	2,962	0.6	9.70%
10	5,572	1	16%
12	2,283	0.43	7%
14	7,490	1.4	22.60%
21	4,118	0.8	12.90%
30	4,797	0.9	14.50%
33	2,521	0.5	8%
36	548	0.1	1.60%
SUBTOTAL:	32,777	6.2	100%
54" OUTFALL	3,382	0.6	
TOTAL SEWERS:	1,227,530	232.4	

Abandoned Gravity: 10,062 lf (1.9mi)
Abandoned Forcemain: 2,826 lf (.5mi)



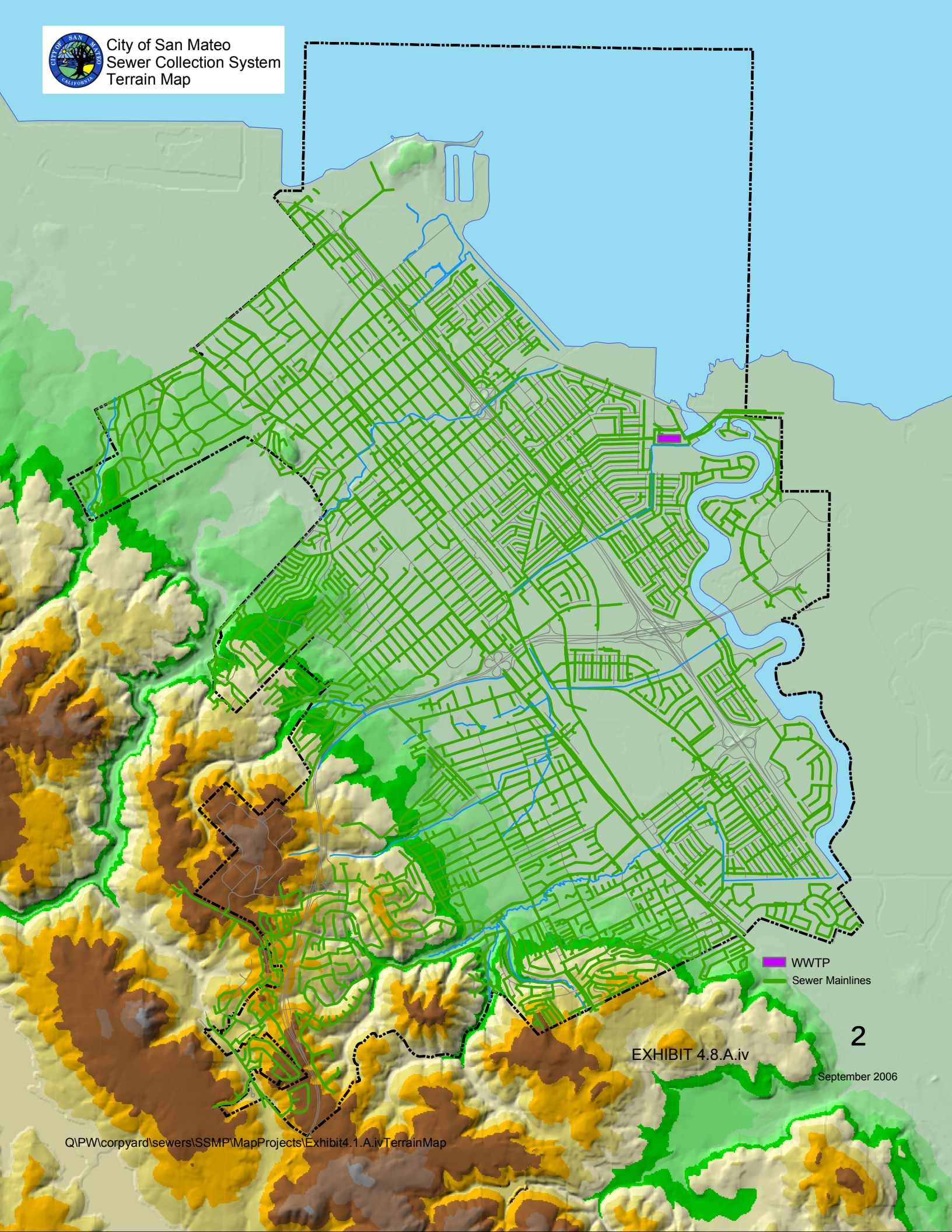
2

WWTP
Mains (4" - 8")
Trunklines (10" - 33")
Interceptors (36" +)
54" Force Outfall

EXHIBIT 4.8.A.iii

December 2008

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City of San Mateo
Sewer Collection System
Terrain Map
WWTP
Sewer Mainlines
2
EXHIBIT 4.8.A.iv
September 2006
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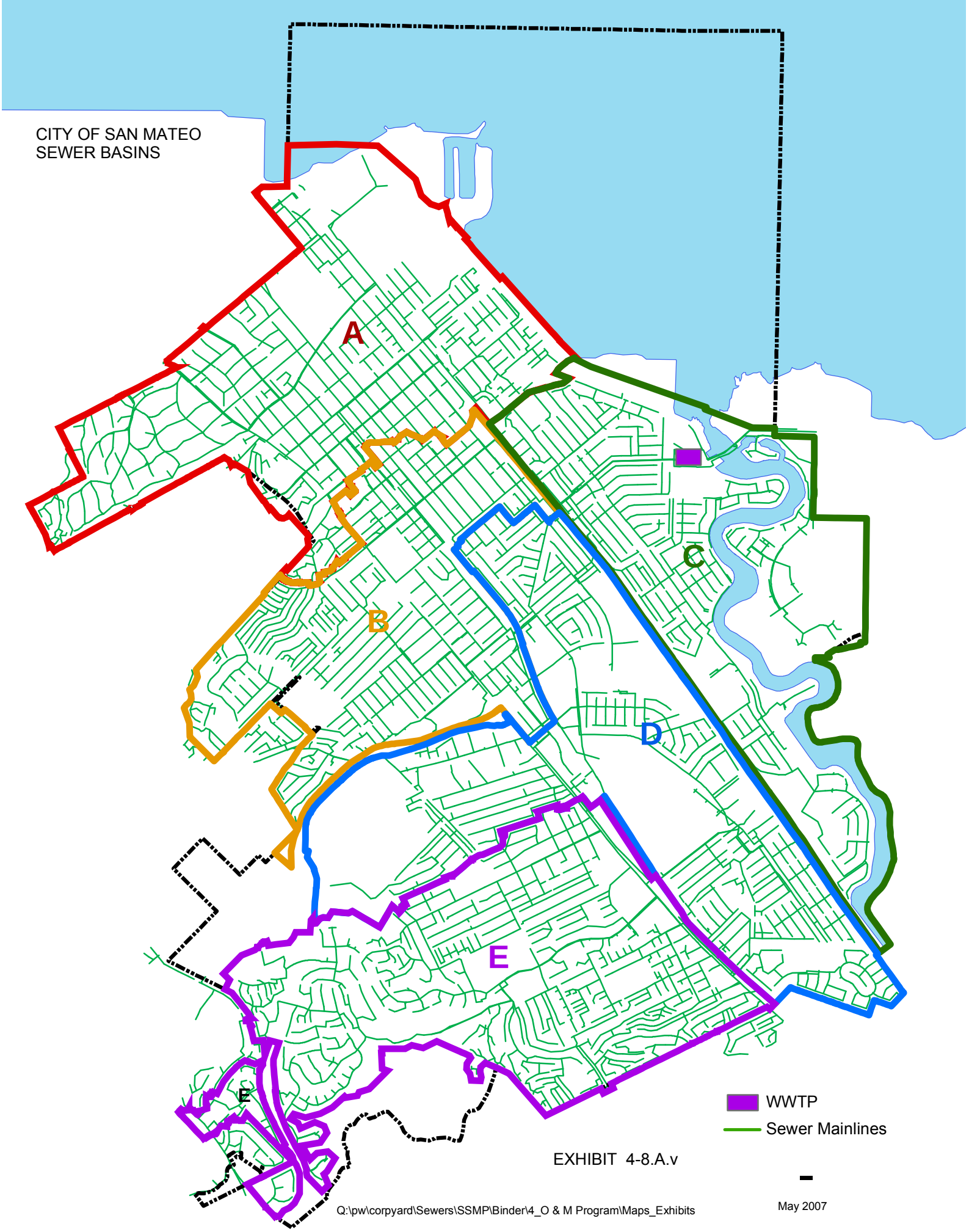


EXHIBIT 4-8.A.v

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May 2007

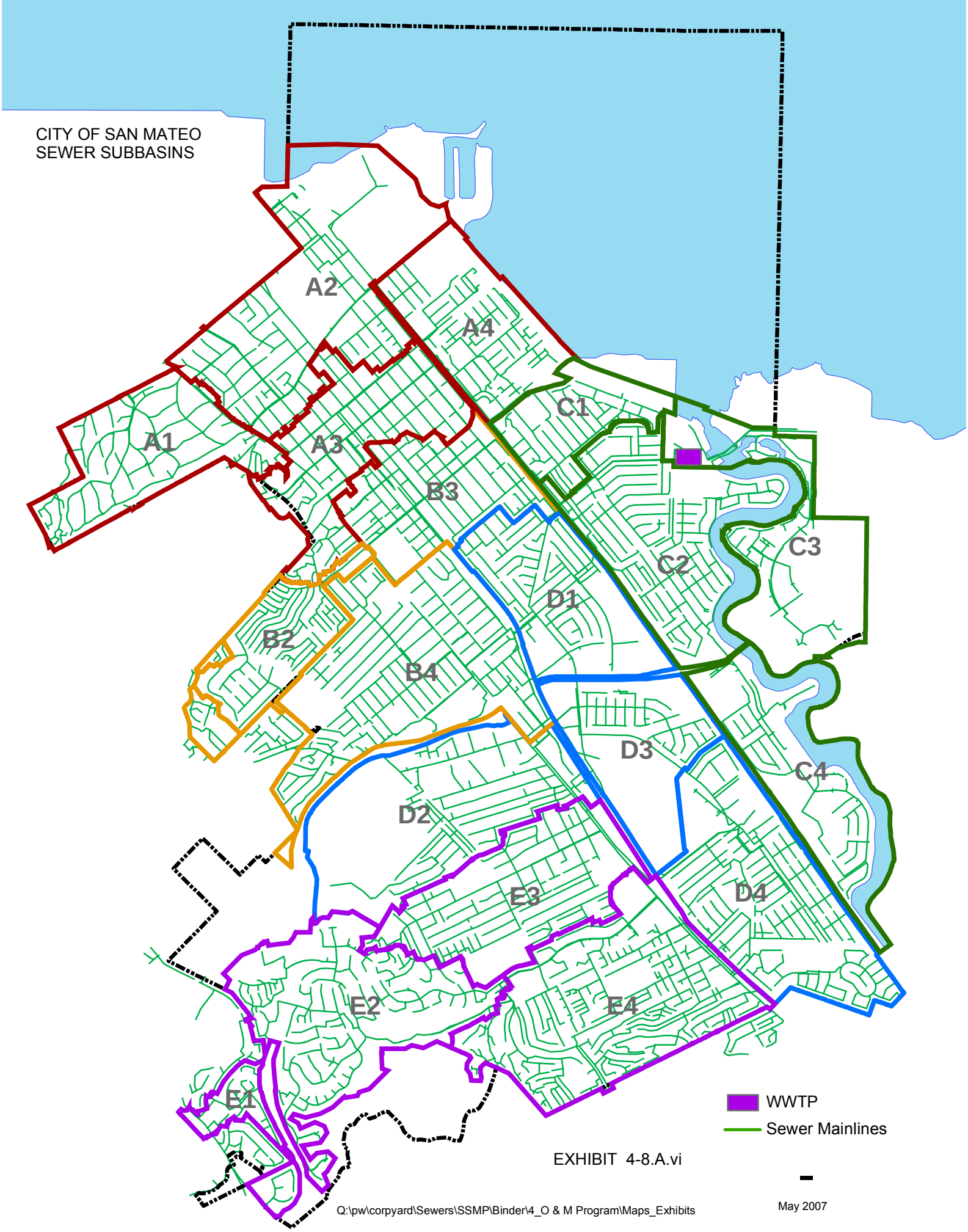


EXHIBIT 4-8.A.vi

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May 2007

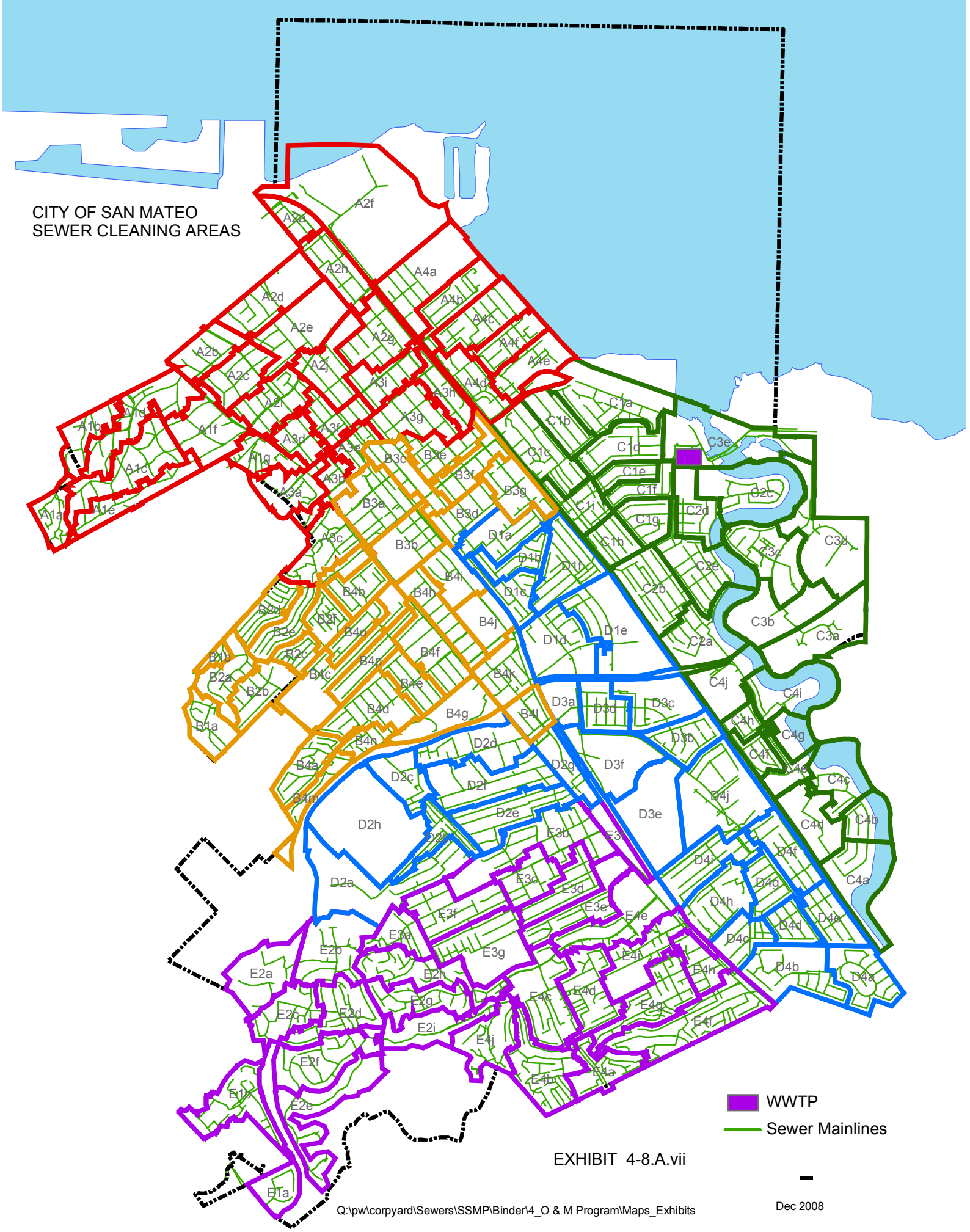
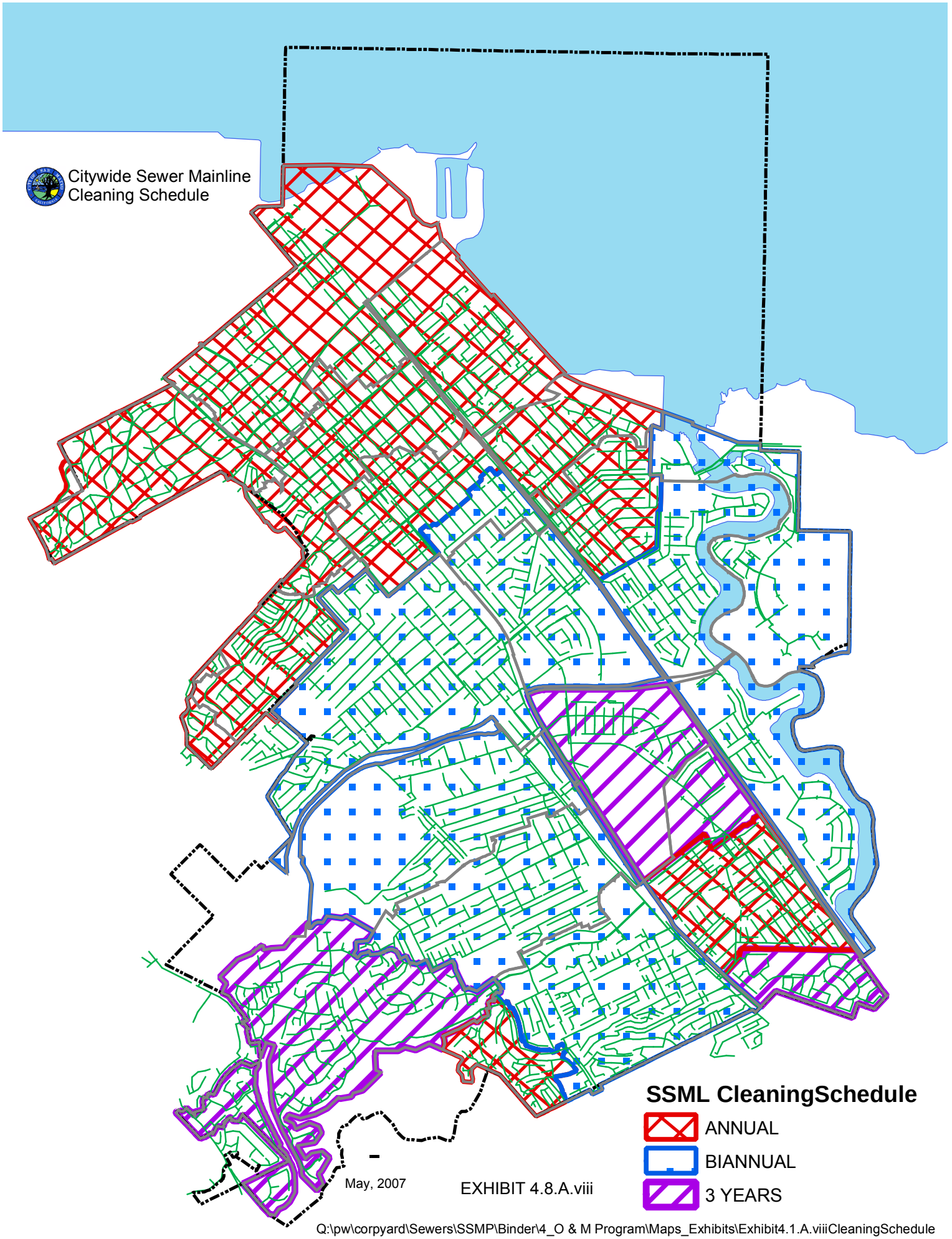


EXHIBIT 4-8.A.vii

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Dec 2008


Citywide Sewer Mainline
Cleaning Schedule
SSML CleaningSchedule
ANNUAL
BIANNUAL
3 YEARS
May, 2007
EXHIBIT 4.8.A.viii
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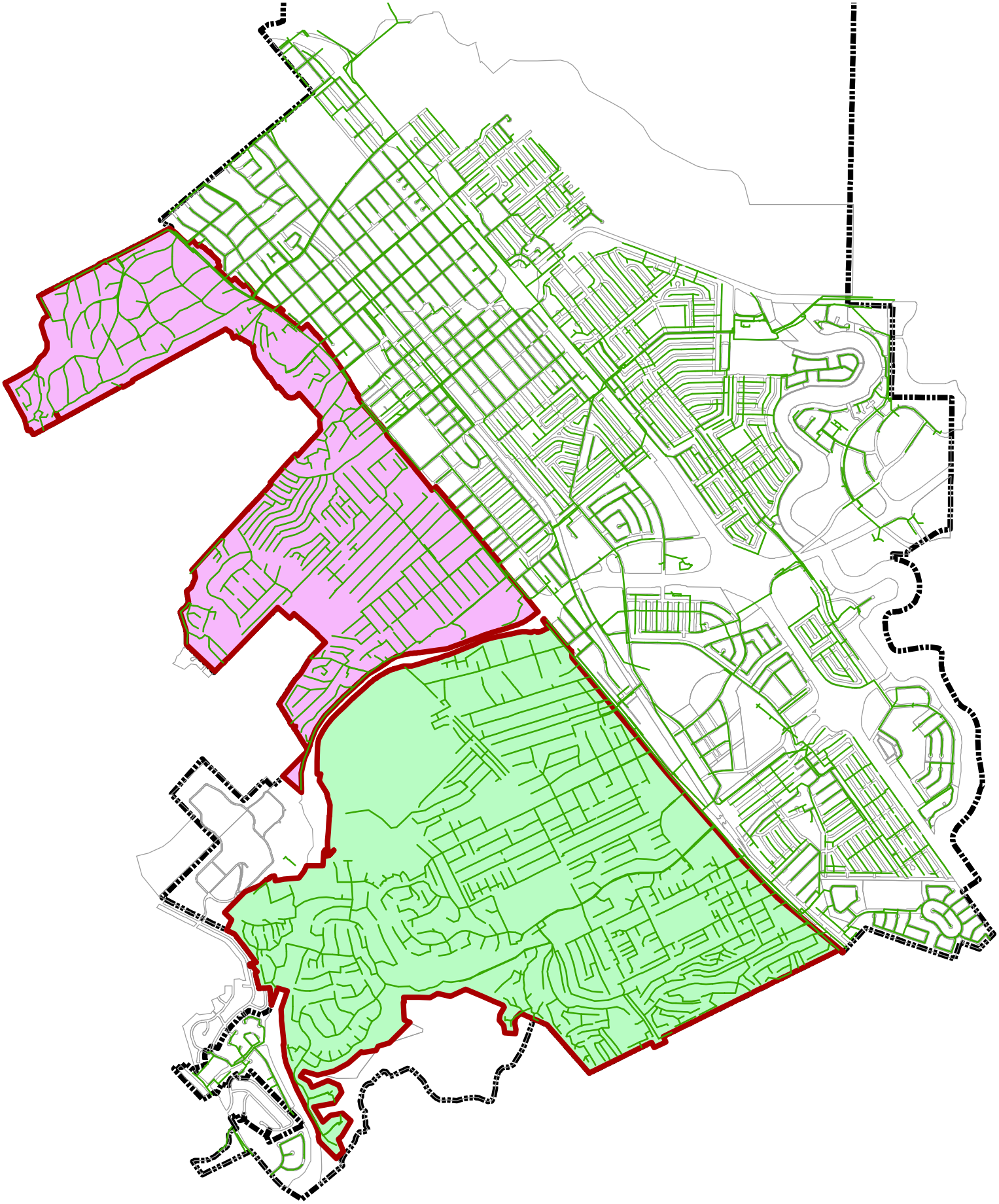


EXHIBIT 4.8.a. ix

2013, 2014, 2015 SEWER MAINLINE ROOT FOAM SCHEDULE

July 14, 2015

Root Foam Boundaries

- 2013/2015
- 2014

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SSMP
ELEMENT 6 – SPILL EMERGENCY RESPONSE PLAN

Appendix 6.1 – Contingency Equipment

Appendix 6.2 – SPILL Field Procedures

Appendix 6.3 – Investigation and Documentation Forms

Appendix 6.4 – Spill Calculation and Estimation

Appendix 6.5 – Signage and Posting Procedures

Appendix 6.6 – Water Quality Monitoring Program

Appendix 6.7 – Spill Technical Report

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SSMP

ELEMENT 6 – OERP

APPENDIX 6.1

Contingency Equipment

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LIST OF PARTS & CONTIGENCY EQUIPMENT FOR SANITARY SEWER SPILL EMERGENCY RESPONSE:

RESPONSE VEHICLE	QTY	SPILL RESPONSE EQUIPMENT IN VEHICLE
Truck L50 F350 Pickup	1	6” to 10” air plug
	1	10” to 24” air plug
	1	Air tank and air compressor
	1	Spill Kit (pads, gloves, etc.)
	2	6 foot booms
	1	5 foot retrieval pole
	1	Sampling Kit with Instructions
	1	Extra Sample bottles
Truck with shell L79 Ranger	1	6” to 8” inflatable air plug
	1	8” to 12” inflatable air plug
	1	12” to 18” inflatable air plug
	1	2” flt pump
	1	Electric air compressor
	1	Cigarette air compressor
	1	5 gallon air tank
	1	Water sampling kit
	1	Bag of extra sample bottles
	1	Water sampling pole
	4	Raw sewage signs for cones
	2	Sidewalk closed signs for cones
	4	No parking signs
	2	Flooding signs for barricades
	3	Safety cones
	3	Safety traffic poles (spill area)
	2	Spill kits
	1	Drain pig insert
	2	Flashlights (1 mag, 1 large)
	1	Camera
	multiple	Spill Reporting field forms
Portable		Gorman-Rupp 6” portable pump
Emergency Spill Response Trailer - T61		PLUGS/HOSES
	1	4” plug
	1	6” plug
	1	12” plug
	1	4” – 6” inflatable air sewer plug
	2	8” – 12” inflatable air sewer plug
	1	10” – 16” inflatable air sewer plug
	2	12” – 18” inflatable air sewer plug
	1	15” – 21” Plug

Emergency Spill Response Trailer - T61 cont.	1	18” – 24” Plug
	1	6” flow thru plug
	1	8” flow thru plug
	1	3.5 suction pump 150 discharge
	1	12ft suction hose
		SIGNS/BARRICADES
	3	Caution tape rolls
	10	Cone arrow signs
	14	Hazard – raw sewage sign
	6	Men working signs
	2	Lane closed cone sign
	2	Sidewalk closed cone sign
	20	Green flag markers
	25	No parking signs
	5	Raw sewage barricades
	10	Barricades
	6	High level signs
	3	Danger – avoid water contact signs
	2	Warning – keep out signs
	1	50ft temporary fencing
	10	delineators
		LIGHTING
	1	Flashlight
	2	Dual 500W flood lights with stands
	1	G.F.I.
	1	2100 GENERATOR/LIGHT
	1	20W Halogen replacement
		SAMPLING
	multiple	Sampling Kits
	multiple	Extra sample bottles and labels
		CLOTHING
	multiple	Medium, Large & X-Large Leather Gloves
	multiple	Medium, Large & X-Large Rubber Gloves
	multiple	Small, Medium & Large Nitrile Rubber Gloves
	multiple	Small, Medium & Large Blue Dipped Cotton Gloves
	multiple	Ear Plugs
	multiple	Clear & Dark pyramex sunglasses
	multiple	Hardhats
	multiple	Rainsuits
	multiple	Large, X-Large & XX-Large Safety Vests

		AIR COMPRESSOR
Emergency Spill Response Trailer - T61 cont.	1	11 gallon air tank
	1	5 gallon air tank
	1	Small air compressor
	1	25ft air hose
	2	Air gauges
	1	Blow tool
	1	2 gallon fuel container
		DIVERSION/CONTAINMENT
	multiple	absorbent
	2	Cases ultra-spill berm
	2	Emergency Spill Kit
	5	Bags white oil spill booms
		OTHER
	1	3” to 1” fire adapter
	1	3” to 2” fire adapter
	1	25ft measuring tape
	1	Green spray paint
	1	White spray paint
	1	Stapler gun
	1	Spanner wrench
	2	Duct tape rolls
	1	manhook
	1	First Aid Kit
	1	camera
	1	Fire Extinguisher
	2	Fill buckets
	1	Clip board
	Multiple	Cone reflectors
	1	25ft extension cord
	1	100ft extension cord
	4	42x40 plastic wrap cases
	1	20x100 6m roll vis.
	multiple	disinfectant
	multiple	Hand sanitizers
	multiple	Soap bottles
	15	towels
	2	Glow stick cases
	3	Power flairs
	multiple	Tie straps
	1	Water cooler
	1	Broom
	1	EZ up tent

Vactors **T59 & T58**	1	First Aid kit
	1	Spot Light
	1	Flashlight
	1	Fire extinguisher
	1	Spill Kit
	1	Camera
	12	Safety cones
	1	Sampling Kit

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ELEMENT 6 – SERP

APPENDIX 6.2

Spill Field Procedures

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Exhibit A

SPILL FIELD PROCEDURES FLOW CHART

ARRIVAL OF CREW
PHOTOGRAPH SOURCE OF SPILL & AFFECTED AREA

ASSESSMENT

CHECK UNDERGROUND MAP BOOK
Has spill reached receiving waters either directly or through a catchbasin that runs directly to waters?

YES → Refer to Sewage Watershed Map. Identify affected watershed. Page 17

NO

Has spill reached Storm Drains?

NO

YES

Can the spill be contained in the storm drain (entered a bubble-up – or storm drain can be plugged)?

NO

YES

Insert plug downstream if not a bubble-up.

If more than 10,000 gallons reached a waterway, direct staff to:

- Implement Sampling. (Requirements on **PAGE 37)** PHOTO SAMPLE LOCATIONS
- Implement Beach /Park Contaminated Water Postings. (Procedures on **PAGE 15)** PHOTO POSTED LOCATIONS

BARRICADE & POST

Barricade spill area and **post**
Warning: Raw Sewage signs to ensure no public contact with spill.
PHOTOGRAPH BARRICADED AREA

Deliver samples to labs. Return to provide assistance at spill site.

Return to provide assistance at spill site.

DIVERSION & CONTAINMENT

Use berms, mats, soil or other methods to

Divert flow *away* from: ***&*** **Channel flow *towards***:

- Storm drains not acting as spill containment,
- Waterways
- Other sensitive areas (schools, intersections, playgrounds, etc.)
- A low area of ground where spill can be collected, &/or
- A downstream manhole, &/or
- A bubble-up or plugged storm drain

PHOTOGRAPH DIVERSION & CONTAINMENT

CLEAR BLOCKAGE

Use cleaning equipment appropriate to **Clear blockage**. (Powerrod, Hydrosaw, HydroJet, etc.) Follow equipment usage SOPs and safety requirements!
[Set up vactor downstream or a trap in manhole to catch debris released during blockage removal.]

Did spill reach storm drains?

YES →

Storm Drain Cleaning

- Vacuum visible signs of sewage spill (record volume of initial spill vacuumed).
- Flush storm drain with water (3x the amount of the recorded spill volume).
- Ensure signs of spill are removed.
- Return flush water to sanitary sewer.

NO

AREA CLEAN UP

- Vacuum/remove visible signs of sewage spill (solids, grease, TP, etc).
- Set up means to return water to sanitary sewers (berms, etc.)
- Spray disinfectant (wait 10 minutes) & broom area.
- Flush area affected by spill with water (use at least 3x the amount of the recorded spill volume) ensuring water is returned to sanitary sewer.
- PHOTOGRAPH AREA AFTER CLEAN-UP

DOCUMENTATION & REPORTING

- Estimate total gallons of spill and gallons recovered. Estimate spill start and end times and duration of spill. FILL OUT SPILL FIELD FORM completely. Return all forms and pictures to office.
- PERFORM CCTV as soon as possible or within 24 hours of spill - submit burned DVD.
- Information reviewed between Crew, Leadworkers, Supervisors and Sr. Project Manager.

Exhibit B

DANGER

RAW SEWAGE

Keep Children and pets out of this area.



AVISO

AGUAS RESIDUALES CRUDAS

For more information – Para mas informacion

Contact: City of San Mateo
Department of Public Works

(650) 522-7300

Exhibit C

Sewer Maintenance SOP
EASEMENT ACCESS PROCEDURES

AFTER RECEIVING A SEWER COMPLAINT FROM CITY HALL OR DISPATCH…

- Maintenance crew arrives at address and knocks on door.

IF RESIDENT IS HOME:

- Inform resident that there is a need to inspect the sewer system located in the sewer easement on their property.
- Proceed to yard and perform required maintenance activities as neatly as possible. Try not to disturb landscaping.
- Replace manhole cover and remove all signs of activities, equipment, debris, etc.
- Ensure gate(s) are shut on the way out.
- Inform resident(s) of the condition encountered, work completed and if there is any necessary follow-up. If so, provide an anticipated date and time when crews need to return.
- If necessary, identify the location of the upstream and/or downstream manhole(s) in the underground map book. Proceed to that residence and start process again.

If resident refuses entry:

- Hand the resident the "Access Required" door hanger and allow them a moment to read and understand the City ordinance that residents must provide unobstructed access to public mainlines and manholes located on private property. If necessary, hand resident manager's business card and wait for resident to call.

If resident STILL refuses entry:

- Return to yard and ask supervisor to mail an "Access Ordinance" letter to the resident. The letter should provide a date and time upon which crews will return and require access.

Daytime: IF NO ONE IS HOME AND YARD IS ACCESSIBLE:

- Fill out the "Access Required" door hanger explaining that there was a need for sewer crews to access the public sewer mainline/manhole on the property. Leave on the door knob(s) of doors expected to be used by returning residents.
- Go to gate and call out (make noise) in case there is a dog in the yard.
- Enter yard and proceed with maintenance activities as neatly as possible. Try not to disturb landscaping.
- After activities are completed, replace manhole cover and remove all signs of activities, equipment, debris, etc.
- Ensure gate(s) are shut on the way out.
- If no one has returned, complete information on the door hanger providing the resident with information on the condition encountered, work completed and if there is any necessary follow-up and when crews are anticipated to return.

Daytime: NON-EMERGENCY- - IF NO ONE IS HOME AND YARD IS <u>NOT</u> ACCESSIBLE:

- Fill out the "Access Required" door hanger explaining that there is need for sewer crews to access the public sewer mainline/manhole on the property. Provide a date and time upon which crews will return and expect access (gate unlocked, dogs kept inside, etc.) in order to service the mainline of manhole.
- Return at specified date and time.

If yard is still not accessible:

- Return to yard and ask supervisor to mail an "Access Ordinance" letter to the resident. The letter should provide a date and time upon which crews will return and require access.

If yard is YET AGAIN not accessible:

- Call communications and/or a code enforcement officer and request an escort onto the property.

Daytime: EMERGENCY - - IF NO ONE IS HOME OR UNABLE TO GET A RESPONSE & YARD IS NOT ACCESSIBLE:

- Call communications and inform them that there is a sewer emergency and crews are going into the yard of a residence. This is important in case resident calls police about an intruder.
- Fill out the "Access Required" door hanger explaining that there was a need for sewer crews to access the public sewer mainline/manhole on the property. Leave on the door knob(s) of doors expected to be used by returning residents.
- PROCEED TO ATTEND TO THE EMERGENCY. (Crews may need to jump the locked fence).
- After activities are completed, replace manhole cover and remove all signs of activities, equipment, debris, etc.
- Ensure gate(s) are shut on the way out.
- If the resident has not returned, complete information on the door hanger providing the resident with information on the condition encountered, work completed and if there is any necessary follow-up and when crews are anticipated to return.
- Call communications again to inform them you are leaving the site.

Nighttime: EMERGENCY - - IF NO ONE IS HOME OR UNABLE TO GET A RESPONSE & YARD IS NOT ACCESSIBLE:

- Call communications and inform them that there is a sewer emergency and crews REQUEST THE PRESENCE OF AN OFFICER (ASAP).
- Fill out the "Access Required" door hanger explaining that there was a need for sewer crews to access the public sewer mainline/manhole on the property. Leave on the door knob(s) of doors expected to be used by returning residents.
- **AFTER ARRIVAL OF AN OFFICER, PROCEED TO ATTEND TO THE EMERGENCY. Do not attempt to gain access prior to the arrival of an officer.**
- After activities are completed, replace manhole cover and remove all signs of activities, equipment, debris, etc.
- Ensure gate(s) are shut on the way out.
- If the resident has not returned, complete information on the door hanger providing the resident with information on the condition encountered, work completed and if there is any necessary follow-up and when crews are anticipated to return.

Dispatch/Communications # = 650–522–7700

SSMP

ELEMENT 6 – OERP

APPENDIX 6.3

Investigation and Documentation Forms

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SPILL INVESTIGATION FORM

Caller Summary

SPILL ADDRESS: _____

Cross Street: _____

CALLER NAME: _____

CALLER CONTACT #: _____

DATE OF INITIAL CALL: _____

TIME OF INITIAL CALL: _____am pm

EST. TIME SPILL STARTED: _____ am pm

Work Summary

REC'VD BY CREW (DATE/ TIME): _____am pm

ARRIVAL TIME: : _____ am pm

_____Called PW Sup. _____□ Spoke □ Left message
(Initial) (Sup Initials) □ Called PW Mgr

TIME SPILL ENDED: _____ am pm

TIME CLEAN-UP FINISHED: _____ am pm

EMPLOYEES: _____

VEHICLES: _____

MATERIALS: _____

Condition Encountered (Describe…):

Customer Cleanout was (circle): Full Empty Non-existent

● **ACTIONS TAKEN (circle): JET VAC CCTV**
HANDROD SNAKE OTHER: _____

Order of Steps Taken:

1. 3.
2. 4.

Contained Spill (circle): ALL PORTION NONE

●Restored Flow?: Y N

●SITE CLEANED-UP?: Y N

●SITE DISINFECTED?: Y N

●HEALTH WARNINGS POSTED AT SITE?: Y N

●BEACHES POSTED?: Y N

●BARRICADES PLACED? Y N

●PHOTOS TAKEN? Y N

Spill Details

●SPILL DURATION (hrs/min): _____

●EST. SPILL RATE (gal/min): _____

●EST. SPILL VOLUME (gal): _____

●EST. VOL RECOVERED(gal): _____

●EST. VOL NOT RECOVERED(gal): _____

●FEET CLEANED: _____ main _____ lateral

●RAIN: Y N If Yes Size of Rain Event: _____

●PROPERTY TYPE?: Public Private

●PROPERTY DAMAGE?: Yes No

●SPILL APPEARANCE POINT:

□ Inside Bldg/Struc (location) _____

□ Cleanout on lateral

Lat type: □ Proper c-o □ Imp c-o □ No c-o

Lat loc: □ Front □ Back □ Side

□ Manhole MH# _____

□ Lampost Cleanout LP# _____

□ Other _____

PROBLEM FOUND IN: □ Lateral □ Mainline

UPSMH# _____ DWNMH# _____

PIPE DIA.: _____″ MATERIAL: _____ AGE ____

●PROBLEM (circle):

Blockage (If blockage) → ●BLOCKAGE FROM:
Broken
Capacity Deficiency
I & I
Unknown

Animal Carcass
Construction Debris
Debris/Grit
Detergent
Grease/FOG
Roots
Solids
Other ____

Further Details:

●FINAL DESTINATION: Bubble-Up Storm Drain
Storm Drain System*
Inside Bldg/Structure
Unpaved Surface
Street/Curb/Gutter
Surface Water Impact
Other _____

*If Storm Drain System – Was stormpipe plugged downstream and vacuumed? Y N N/A

●REACH STATE WATERS?: Y N UNK

●EST VOL REACHED STATE WATER: _____gal

●SAMPLES COLLECTED: Y N N/A

SPILL SERVICE CALL FORM

When a call is received by a representative of the City of San Mateo regarding a spill complaint, or when a City representative witnesses a sewage discharge, the following information should be recorded:

Date:_____ Time Call Received:_____ Received By:_____

Caller's Name:_____ Phone #:_____

Caller Address:_____

Location of Spill: Estimated_____ X-St. _____

Time spill began: _____

NOTE: A City Representative could be any City employee, a police officer or dispatcher, fire fighter, or administrative staff. The Sewer Division is to ensure that all representatives of the City understand the urgency in contacting the Sewer Division directly after receiving a spill complaint and the importance of collecting contact information and the estimated start of spill time.

SPILL - REQUIRED NOTIFICATIONS

If more than 1,000 gallons reached surface waters or are likely to reach waterways

Call CAL OES within 2 hours*: 800-852-7550

***** notify CAL OES as soon as notification can be provided without substantially impeding cleanup or other emergency measures, but no later than 2 hours after becoming aware of spill

Write down CAL OES #: _____

Call CAL OES back if the information you initially provide them (spill volume, waterway being impacted, etc) significantly changes from the time of the initial phone call.

Initial phone call:

PERSON CALLING:_____

DATE & TIME: _____

SPOKE TO: _____

Updates to CAL OES, if needed:

PERSON CALLING:_____

DATE & TIME: _____

SAMPLING AND PUBLIC POSTINGS – Only for spills where more than 10,000 gallons enter waterways

Receiving Waters were: ☐ Noticeably Impacted ☐ NOT Noticeably Impacted

Name of waterway where sewage entered water: _____

Waterway was a: ☐ Creek ☐ Channel ☐ Other

Waterway was : ☐ Dry ☐ Ponded ☐ Trickling ☐ Flowing ☐ Gushing

Locations where signs were posted: _____ (take pictures) 

Samples taken by:_____ Date & Time: _____

Samples taken: _____ ft upstream & _____ ft downstream of where sewage entered water

Conditions that may have influenced sample results:_____

RE-SAMPLING

Sample dates: _____

Date of "clear" sample and signs removed: _____

Additional notes:_____

_____

_____

ADDRESS HISTORY/ SPILL FOLLOW-UP

Date of last Maintenance:_____ Frequency of Maintenance: _____

Dates/ WO#s of Previous Backup Calls:

Final Determinations of Cause: Spill Corrective

Action Taken:

☐ Adjust Maintenance Schedule / Method of Cleaning – Describe:_____

_____

☐ Line TV'd Date: _____ ☐ Replaced Line Date: _____

☐ Repair Scheduled for Date: _____ ☐ Other (Describe) _____

SPILL START TIME INVESTIGATION

Caller: _____

Where did you see sewage spill from? Manhole ☐ Inside Building ☐ Clean Out ☐ Wet well/Lift station ☐

Other_____

Date/time caller noticed spill: Date: ____/____/_Time: _____:_____ ☐ AM ☐ PM

Comments from caller: _____

_____

Last time Caller observed NO spill occurring: _____:_____ ☐ AM ☐ PM Date: _____/_____/_____

Comments:_____
_

_____

First Responder: _____

Arrival Date/Time: Date: ___/___/___ Time:_____:_____ ☐ AM ☐ PM

**** Attempts should be made to interview at least two (2) others in addition to the Caller.**
If nobody is available, document attempts (by address or passer-by) **

On Site Interview 1: Name/Address: _____

Observation Description: _____

_____ Time Observed Spill: _____:_____ ☐ AM ☐ PM ☐ N/A

On Site Interview 2: Name/Address:
_____

Observation Description:
_____

_____ Time Observed Spill: _____:_____ ☐ AM ☐ PM ☐ N/A

Other comments regarding spill start time (more attempted interviews, or reason for no interviews, etc.): _____

_____

_____

_____

_____

_____

_____

SPILL VOLUME CALCULATION

The purpose of this worksheet is to capture the data and method(s) used in estimating the volume of a spill. Since there are many variables and often unknown values involved, this calculation is just an estimate. Additionally, it is useful to use more than one method, if possible, to validate your estimate.



Check all methods and tools that you used:

Remember to take photos!

- ☐ Visual estimate
- ☐ Measured surface area and volume
- ☐ Duration and flow rate
- ☐ Estimated daily use per capita upstream
- ☐ Meter @ Pump Station
- ☐ Other (use notes to explain)

Visual Estimate Method- Imagine a bucket(s) or barrel(s) of water tipped over.

Size of bucket(s) or barrel(s)	How many of this Size?	Multiplier	Total Volume Estimated
1 gal. water jug		X 1	
5 gal. bucket		X 5	
32 gal. trash can		X 32	
55 gal drum		X 55	
Total Volume Estimated Using Visual Method			

Measured Volume Method (this may take several calculations as may have to break down the odd shaped spill to rectangles, circles, and polygons)

If the entire spill is settled in one area, calculate the volume of spill in feet (L' X W' X D') and convert to gallons (X7.48 for gallons in a square area, and X.785 for gallons in a circular area). It is important when guessing depth to measure, if possible in several locations and use an average depth.

1. Draw a sketch of the spill in the space provided on next page
2. Draw shapes and dimensions used for calculations
3. Use correct formula for various shapes (see table below)

Spill Shape	Volume Calculation Formula	Volume Result
Rectangle	L x W x Dx7.48	
Circle	3.14 x R^2 x Dx0.785	
Polygons	Show formula used	

USE THIS SPACE TO DRAW A SKETCH OF THE SPILL SHAPE AND DIMENSIONS

Duration and Flow Rate Method

Start date and time:	
End date and time:	
Total spill duration: Subtract line 1 from line 2. Show time in minutes	
Average flow rate in GPM: **Use photo chart to estimate flow rate** (account for diurnal patterns if long duration)	
Total volume estimate: minutes x gpm	

Upstream Connections Method

If you are dealing with a spill that has been running into a storm drain, you must estimate the gallons by: the amount of the spill times the number of upstream connections on the receiving line (200 gal. per household per 24 hr) and estimate the time that the flow has been occurring. Each residence contributes about 240 gallons per day or about 10 gallons per hour. Multiply the number of residences by 10 and by the number of hours. This gives you the number of gallons.

EXAMPLE A: If you have a line with 6 houses on it and it has been spilling for 24 hours :
6 houses x 200 gallons per house per 24 hours = 1,200 gal.

EXAMPLE B: If you have 60 houses on a line that has been overflowing for 4 hours :
60 houses x 10 gallons per house per hour x 4 hours= 2,400 gal.

Pump Station Method
If the flow is coming from a pump station, use the previous day's (same weather) flow and pump capacity to estimate the flow.

Additional Notes (attach extra pages if needed): _____

SAMPLING

Remember to take photos!



Required for spills where more than 10,000 gallons reach surface waters

Name of waterway/channel where sewage entered water:_____

Waterway was: □ Dry □ Ponded □ Trickling □ Flowing □ Gushing

Waterway was: □ Noticeably Impacted □ NOT Noticeably Impacted

Samples taken by:_____ Date & Time: _____

Samples taken: _____ ft upstream & _____ ft downstream of where sewage entered water

Conditions that may have influenced sample results:_____

_____

Additional sample location(s), if requested by Sr Project Manager or San Mateo County Health:_____

RE-SAMPLING

Sample Dates/Times: _____

Additional Sampling Notes: _____

_____

_____

_____

_____

USE THIS SPACE TO DRAW A SKETCH OF SAMPLING LOCATIONS IN RELATION TO THE SPILL LOCATION

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SSMP

ELEMENT 6 – OERP

APPENDIX 6.4

Spill Calculation and Estimation

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Sewer Maintenance Spill
Calculation and Estimation Methods

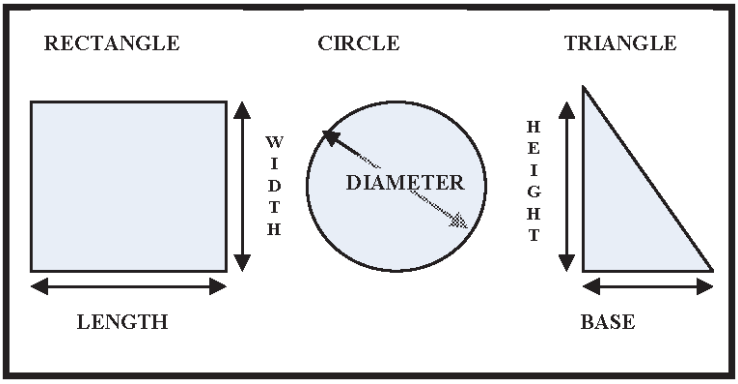
Outlined in this document are three methods that are most often employed for estimating the volume of sanitary sewer spill. The City staff preparing the estimate should utilize the most appropriate method for the sewer spill in question and use the best information available.

Method 1: Eyeball method
The volume of small spills can be estimated using an "eyeball estimate". To use this method imagine the amount of water that would spill from a container listed on the table below. A jug contains 1 gallon, a bucket contains 5 gallons, and a drum contains 55 gallons. If the spill is larger than 55 gallons, try to break the standing water into 55 gal drums and then multiply by 55 gallons. This method is useful for contained spills up to approximately 220 gallons.

Size of container	How many of this size?	Size Multiplier (gal)	Total Volume Estimated (gal)
Water jug		X 1	
Bucket		X 5	
55 gal drum		X 55	
Total volume estimated			

Method 2: Measured Volume
The volume of most small spills that have been contained can be estimated using this method. The shape, dimensions, and the depth of the contained wastewater are needed. The shape and dimensions are used to calculate the area of the spills and the depth is used to calculate the volume.

Common Shapes and Dimensions



Steps for Volume Calculation

Step 1 Sketch the shape of the contained sewage (see figure above).

Step 2 Measure or pace off the dimensions.

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

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

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

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

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

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

Method 3: Duration and Flowrate
Calculating the volume of larger spills, where it is difficult or impossible to measure the area and depth, requires a different approach. In this method, separate estimates are made of the duration of the spill and the flowrate. The methods of estimating duration and flowrate are:

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

Start Time: The start time is sometimes difficult to establish. Here are some approaches:

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

2. Changes in flow on a downstream flowmeter can be used to establish the start time. Typically the daily flow peaks are “cut off” or flattened by the loss of flow. This can be identified by comparing hourly flow data during the spill event with flow data from prior days. This method will likely only be effective with consistent weather.

3. Conditions at the spill site change over time and can be used to establish the start 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 other information. Taking photographs to document the observations can be helpful if questions arise later in the process. This method is valid for spills that have been occurring for a long time and may be used in conjunction with either of the above methods.
4. It is important to remember that spills may not be continuous. Blockages are not usually complete (some flow continues). In this case the spill would occur during the peak flow periods (typically 10:00 to 12:00 and 13:00 to 16:00 each day). Spills that occur due to peak flows in excess of capacity will occur only during, and for a short period after, heavy rainfall.

End Time: The end time is usually much easier to establish. Field crews on-site observe the “blow down” that occurs when the blockage has been removed. The “blow down” can also be observed in downstream flowmeters.

Flow Rate
The flowrate is the average flow that left the sewer system during the time of the spill.
There are three common ways to estimate the flowrate:

1. **The San Diego Manhole Flowrate Chart**: This chart, included as at the end of this appendix, shows sewage flowing from manhole covers at a variety of flowrates. The observations of the field crew can be used to select the appropriate flowrate from the chart. If possible, photographs are useful in documenting basis for the flowrate estimate.

2. **Flowmeter:** Changes in flows in downstream flowmeters can be used to estimate the flowrate during the spill.

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

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

Spill Volume

Once duration and flowrate have been estimated, the volume of the spill is the product of duration (hours or days) and the flowrate (gallons per hour or gallons per day).

For example: Spill start time = 11:00
Spill end time = 14:00
Spill duration = 3 hours
3.3 gallons per minute x 3 hours x 60 minutes per hour
= 594 gallons

Estimating Gallons per Minute from Sewer Manhole Overflows



5 gpm



25 gpm



50 gpm



100 gpm



150 gpm



200 gpm



225 gpm



250 gpm



275 gpm

Photos provided by City of San Diego Water Department during a demonstration using water from a hydrant.

SSMP

ELEMENT 6 – OERP

APPENDIX 6.5

Signage and Posting Procedures

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POSTING OF CONTAMINATED WATERS IN CONNECTION WITH SPILL

This requirement applies to sanitary sewer overflows where 10,000 gallons or more reached a waterway or are expected to reach public creeks, drainage channels, and/or waters that run adjacent to or through City Parks and are accessible to the public, and/or the Marina Lagoon.

1. Follow spill emergency response procedures for spill assessment, and containment.

2. If sewage entered surface waters and was not fully recovered, refer to Sewage Watershed Map (page 22) and determine area of impact. Note name of watershed, names of waterways and beaches (if applicable) on spill field form.

3. Spill Response Crew shall assign a crew to post contaminated water advisory signs at all pre-determined locations downstream of spill location in the identified watershed(s). Crew shall follow the Preferred Specific Locations identified on pages 23 through 25. Signs shall be posted in conspicuous locations to avert potential human water contact. Park locations where waters are completely fenced and inaccessible to the public will not receive signage.

4. If impacted watershed drains in to the Marina Lagoon, the large beach closure signs shall be utilized at Aquatic Park (1097 Seal Court) and Lakeshore Park (1500 Marina Court).

5. Leadworker, PW Supervisor or Sr. Project Manager shall inform Director of Parks and Recreation (522-7404) and Parks Manager (522-7423) of spill address/location, date, time and volume of spill, and the name of the impacted Sewage Spill Watershed.

6. Warning signs should remain posted until the risk of contamination has subsided to acceptable background levels. For beaches, this will be determined by the San Mateo County Department of Environmental Health. For all other waterways, re-sampling must be performed by crews.

For Questions or further assistance,
Contact County Recreation Water Quality Program
Phone 363-4798

DANGER

RAW SEWAGE

WATER CONTACT MAY CAUSE ILLNESS



AVISO

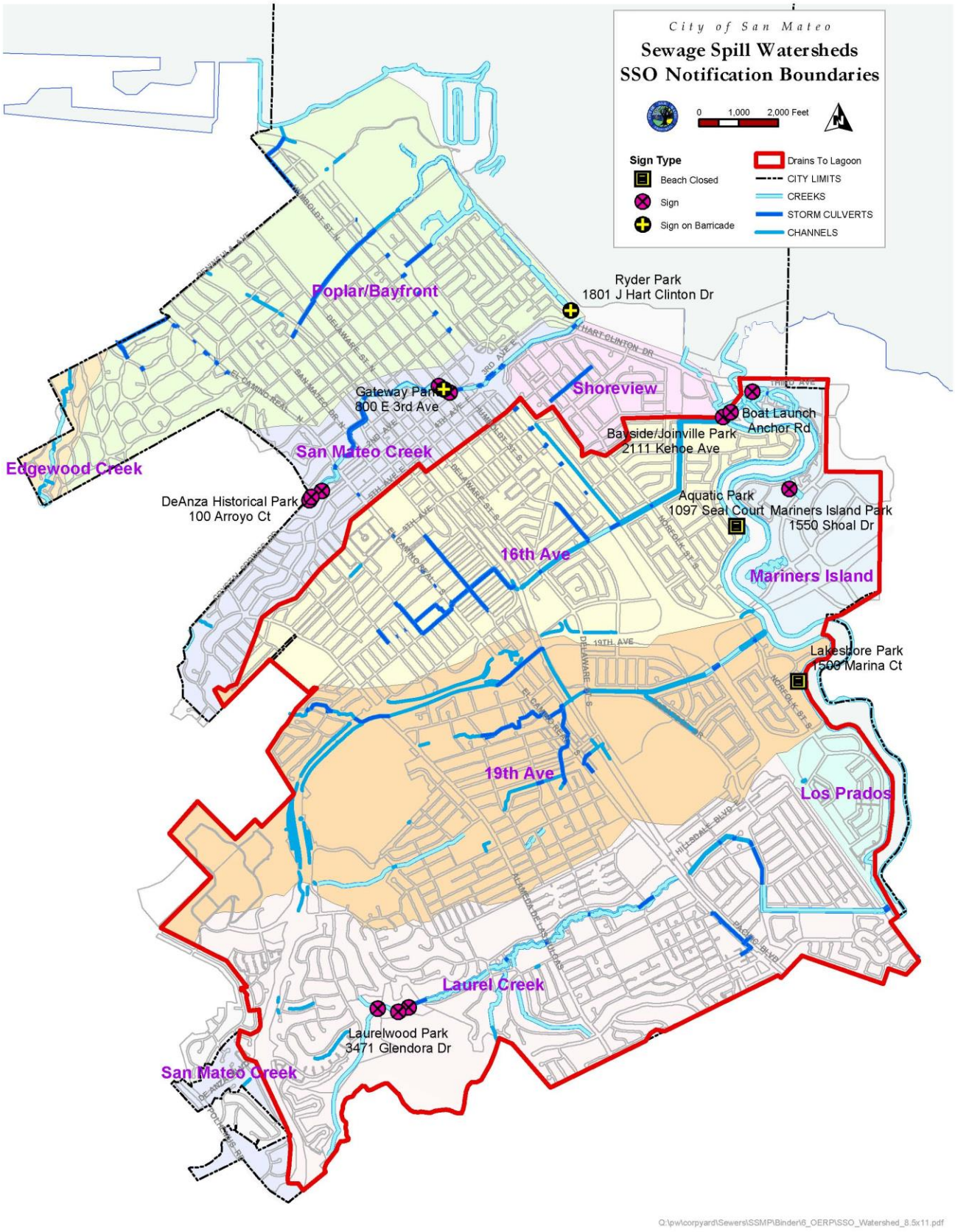
AGUAS RESIDUALES CRUDAS

EL CONTACTO CON AGUA PUEDE CAUSAR ENFERMEDADES

For more information – Para mas informacion

Contact: City of San Mateo
Department of Public Works

(650) 522-7300


City of San Mateo
Sewage Spill Watersheds
SSO Notification Boundaries
0 1,000 2,000 Feet
Sign Type
Beach Closed
Sign
Sign on Barricade
Drains To Lagoon
CITY LIMITS
CREEKS
STORM CULVERTS
CHANNELS
Poplar/Bayfront
Ryder Park
1801 J Hart Clinton Dr
Gateway Park
800 E 3rd Ave
Shoreview
Boat Launch
Anchor Rd
Bayside/Joinville Park
2111 Kehoe Ave
San Mateo Creek
Edgewood Creek
DeAnza Historical Park
100 Arroyo Ct
Aquatic Park
1097 Seal Court
Mariners Island Park
1550 Shoal Dr
16th Ave
Mariners Island
Lakeshore Park
1500 Marina Ct
19th Ave
Los Prados
Laurel Creek
Laurelwood Park
3471 Glendora Dr
San Mateo Creek
Q:\pw\corpyard\Sewers\SSMP\Binder\6_OERP\SSO_Watershed_8.5x11.pdf

PARK SIGNAGE POSTING LOCATIONS

Follow these noticing procedures for SSOs where more than 10,000 gallons reached (or are likely to reach) waterways that run adjacent to or through City Parks and are accessible to the public.

1. Identify the location of the spill on the Sewage Spill Watersheds, Spill Notifications Boundaries Map. Note the Name of the watershed. ALSO - Note whether the Watershed is part of a drainage system that reaches the Marina Lagoon (these watersheds are encircled in red on the map).

2. Find the name of the Watershed below and proceed to post "Danger, Raw Sewage" signage at the locations specified.

3. Remember to also post Beach Closure signs at Lakeshore Park, Aquatic Park, Bayside/Joinville and Tidelands Park.

Edgewood Creek Spill Watershed

There is no public access to any waterways in this watershed. PW Supervisor to contact and coordinate actions with the City of Burlingame.

Poplar/Bayfront Spill Watershed

Ryder Park

Post one sign downstream of water feature, adjacent to the wood deck.



San Mateo Creek Spill Watershed

Gateway Park

Post signs at the waters edge at the 3rd Avenue and 4th Avenue entrances to the Park. Attach a third sign to an A-Frame and place it at the top of the stairs in the middle of the park which lead down to the creek. Proceed to posting Arroyo Park (page 19).







San Mateo Creek Spill Watershed continued…

Arroyo Park/DeAnza Historical Park (Arroyo Court)

Post signs in three locations on the pathways leading from Arroyo drive to the Creek.





NOTE: If spill occurred in upper San Mateo Creek around Polhemus, contact the Town of Hillsborough and the County Sanitary Sewer District.

Shoreview Spill Watershed

There is no public access to any waterways in this watershed. No posting is required.

16TH Ave. Channel Spill Watershed

There is no public access to any waterways in this watershed. Proceed to post at the Marina Lagoon locations from Aquatic Park north to the Marina Lagoon Pump Station (page 25).

19TH Ave. Channel Spill Watershed

There is no public access to any waterways in this watershed. Proceed to post at the Marina Lagoon locations (page 25).

Los Prados Spill Watershed

There is no public access to any waterways in this watershed. Proceed to post at the Marina Lagoon locations (page 25).

Laurel Creek Spill Watershed

Laurelwood Park (3471 Glendora Dr.)

Proceed into park, pass the playground and take the path to the left. There are creeks on either side (creek on the right drains from Belmont). Post one sign near the culvert on the left side. Continue down the path and post another sign on the left side at the path leading down to the creek. Further down there is a fork in the path; stay to the left and post again at the creek access. Then, proceed to Post at Marina Lagoon locations (page 20).





MARINA LAGOON PARK AND BEACH POSTINGS

Follow these noticing procedures for SSOs where more than 10,000 gallons reached (or are likely to reach) the Marina Lagoon.

The following locations are preferred specific locations for postings at locations along the Marina Lagoon where waters of the Lagoon are accessible.

Mariners Island Park (1550 Shoal Dr. – part of **Mariners Island Spill Watershed**)

Post one sign along the waters edge in the ice plant



Bayside / Joinville Park (2111 Kehoe Ave)

Cross over the bridge from Joinville Park heading towards the Marina Lagoon Pump Station. Follow walking path along the lagoon. Post signs in the ice plant near the waters edge, conspicuously, in at least two locations along the walking path.





North End Marina Lagoon Boat Launch (Anchor Road. Near the Marina Lagoon Pumpstation)

Post a sign at the boat launch.



SSMP

ELEMENT 6 – OERP

APPENDIX 6.6

Water Quality Monitoring Program

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WATER QUALITY MONITORING PROGRAM

INTRODUCTION

This Water Quality Monitoring Program supplements the description of City response activities and standard operating procedures to be utilized in the SERP, in the event a sanitary sewer spill exceeds 50,000 gallons and enters surface waters. This program is reviewed periodically and may be updated as necessary.

SAFETY

Be aware of safety issues and do not subject personnel to unsafe conditions in order to comply with this Water Quality Monitoring Plan. Sampling will not be conducted if there are any concerns regarding field crew safety. These concerns may include heavy rain events, which compromise access points through flooding and swift currents. Thunderstorms will also be avoided when lightning is occurring. Employ the buddy system as required to maximize employee safety when sample collection is required.

ESTIMATION OF SPILL TRAVEL TIME

The following methods are recommended to estimate spill travel time and direction:

- Method 1: Use a velocity probe (such as a Global Water FP111-S Flow Probe). To determine the rate of flow in the surface water or

- Method 2: Visual ft/sec measurement. This may be done by observing or dropping floatable debris in the surface water and timing how long it takes to travel over a measured distance (e.g., 100 feet). Include sections in the surface water where there are bends, bottlenecks, or other characteristics that may slow down the flow. If the first measurement is uncertain, this estimate may be performed three to five times, and the values averaged to determine an estimated travel time.

Either method will provide a means to estimate the distance traveled and identify where the spill may be headed within the waterway.

WATER QUALITY SAMPLING PROCEDURES

- In the event a spill reaches a surface water or (flowing) drainage channel tributary and the volume is estimated as greater than 50,000 gallons, samples are required within 48 hours of first knowing of the release. The purpose of water quality sampling is to determine the nature and extent of the impact of the spill. Note: Water quality sampling should not be given precedence over stopping the spill or protection of public health.
- When sampling a spill, collect a minimum of three samples as conditions allow. One sample shall be located 100 feet upstream of the point where sewage entered the waterway. The second sample shall be taken at the discharge location. A third sample shall be taken 100 feet downstream of the point where sewage entered the waterway. When possible, collect samples from the middle of the waterway where the water is actively flowing.
- Sample for Total Coliform, E. coli, enterococcus, and Ammonia as a minimum. Conduct additional sampling for pH if practical.
- Additional follow-up samples may be required by the County Health Department to confirm the surface water quality has returned to baseline conditions. The timing and location of samples shall be determined through discussions with the County Health Department. Follow-up samples may be used to determine if posting of warning signs should be discontinued (if signs were posted).
- Collaboration with the County Health Department should continue until closure is obtained.

WATER QUALITY SAMPLING EQUIPMENT

The following list describes equipment that should be stocked and readily available for each water quality sampling event.

- Personnel protective equipment including latex/nitrile gloves and eye protection
- 3 – 120 mL sterile plastic containers for Bacteria sample collection.
- 3 – 250 mL plastic containers preserved with H_2SO_4 for Ammonia analysis.
- 3 – 250 mL plastic containers (for collecting the sample and transferring to the preserved container for ammonia. Also can be used for checking pH, if desired)
- 1 – Sample Collection Tool (extension pole with attachment to hold sample bottle)
- Cooler with ice packs
- Chain of Custody forms for WWTP Lab, Caltest Labs, and County Health Lab,

Ensure that there are adequate quantities of sample containers-kits if there are more than three sample locations.

SAMPLE COLLECTION PROCEDURE

Note: Collect the UPSTREAM sample first.

I. Bacteria Sample Collection – Dip sample bottle into water, preferably mid-stream

☐ 1. Using the 120-mL sterile plastic sample bottles, one sample must be filled at a point approximately 100 feet upstream of where the spill entered the receiving water, a second bottle filled at a point 100 feet downstream of where the spill entered the receiving water, and the third sample collected at the point where the spill entered the receiving water. Total coliform, *E. coli* and enterococcus can be analyzed at the lab from each sample container.

☐ 2. Immediately before sampling, don latex/nitrile gloves. Using a pen (that doesn't smear in water) record on the bottle label (1) the sample ID*, (2) date, (3) time of sample collection, and (4) the sampler's initials.

*Sample ID = Manhole#–UP (upstream) or Manhole#-DWN(downstream)
Example for upstream Sample ID: 431:06-UP
Example for downstream Sample ID: 431:06-DWN
Example of discharge point Sample ID: 431:06-PT

☐ 3. Carefully open the sample bottle without touching the inside of the lid or bottle.

☐ 4. Face upstream (or upgradient) using the extension pole or by hand, **submerge** the sample container and fill it under water, if possible, without collecting surface or bottom debris. Pour off excess sample volume so that the container is filled to the 100-mL fill line. Secure the lid and dry the outside of bottle with a paper towel.

☐ 5. Immediately place the filled & labeled sample container inside the cooler with ice or cold packs.

☐ 6. Repeat Steps 1 through 5 for each bacteria sample location. Proceed to Section III (after collecting ammonia samples if necessary).

II. Ammonia Sample Collection – Do NOT Dip Sample Bottle into Water

Use Secondary Container

☐ 1. One 250-mLplastic ammonia sample bottle (containing sulfuric acid as preservative) must be filled at a point 100 feet upstream of where the spill entered the receiving water, one sample collected at a point 100 feet downstream of where the spill entered the receiving water, and a sample where the spill entered the receiving water. **USE THE UNPRESERVED SAMPLE CONTAINER** (does not contain sulfuric acid) **TO COLLECT THE SAMPLE AND TRANSFER THE CONTENTS TO THE PRESERVED SAMPLE CONTAINER. Sampling personnel must wear gloves and safety glasses while collecting samples for ammonia because of potential contact with sulfuric acid, which is highly corrosive.**

☐ 2. Use a pen that does not smear when wet to record on the bottle label (1) the sample ID*, (2) date and (3) time of sample collection, and (4) the sampler's initials.

*Sample ID = Manhole#–UP (upstream) or Manhole#-DWN(downstream)
Example for upstream Sample ID: 431:06-UP
Example for downstream Sample ID: 431:06-DWN
Example of discharge point Sample ID: 431:06-PT

☐ 3. Remove the lid from the clean / empty / unused 250-mL plastic secondary container (does not contain sulfuric acid).

☐ 4. Face upstream (or upgradient) using the extension pole or by hand, **submerge** the secondary container and fill it under water, if possible, without collecting surface or bottom debris.

☐ 5. Carefully open the ammonia sample bottle containing sulfuric acid.

☐ 6. Slowly transfer sample from the secondary container into the 250-mL ammonia sample bottle preserved with sulfuric acid. Secure the lid so that acidified sample does not leak out of the bottle and dry the outside of bottle with a paper towel.

☐ 7. Immediately place the filled & labeled sample container inside the cooler with ice or cold packs.

☐ 8. Repeat Steps 1 through 7 for each ammonia sample location.

III. Chain-of-Custody & Sample Delivery

☐ 1. Depending on which lab the bacteria samples will be delivered to, complete the appropriate Chain-of-Custody (COC) form for the bacteria samples (either the WWTP Lab or County Health Lab); include the Sample IDs, Date & Time of Sample Collection and Sampler's Name & Signature. Note the approximate upstream and downstream distance in the "Notes" field on the COC if the samples were collected from a distance other than 100 feet.
The COC is a legal document and must be complete.

☐ 2. Specify on the COC the analyses requested for each sample. Each sample should be analyzed for: Total coliform, E. coli, and Enterococcus. Each COC is pre-filled for three samples; add additional lines if more samples were collected.

☐ 3. Complete the Caltest Lab COC form for all samples that will be analyzed for ammonia. Include the Sample IDs, Date & Time of Sample Collection and Sampler's Name & Signature. Note the approximate upstream and downstream distance in the "Notes" field on the COC if the samples were collected from a distance other than 100 feet.
The COC is a legal document and must be complete.

☐ 4. Deliver bacteria samples to the WWTP Laboratory during normal business hours (Mon – Sun 6:30 a.m. to 3 p.m.). If after business hours, deliver to the County Health Lab.

☐ 5. Ammonia samples will be picked up by Caltest from the WWTP Lab. A sample refrigerator labelled "Caltest Pickup" is in the sample receiving room of the WWTP Lab. Place the labelled ammonia samples in the refrigerator. MAKE SURE THE

SAMPLE LABELS AND COC ARE COMPLETE. Place the CalTest COC in the clip on the refrigerator door. Call Caltest for a pickup (707-258-4000). The courier will sign the COC when they pick up the samples and leave a copy of the signed COC in the clip.

☐ 6. If unable to deliver the bacteria samples to the WWTP Lab, they can be delivered to the San Mateo County Public Health Laboratory at:
225 W. 37th Ave, Room 113. Hours of operation are Mon – Fri 8am to 5pm.* *Have the Lab Analyst sign the COC form & make a copy.*

☐ 7. Place the signed COC forms (or photocopies) in the spill file.

SAMPLING COLLECTION BEST PRACTICE

- Collect all grab samples approximately 3' - 6" below the surface (or if shallower, as close as possible to this depth) to avoid sampling debris or scum from the surface.
- Collect the sample in a safe manner in the middle of the flow, against the direction of water flow.
- Photo-document the spill locations.
- Leave approximately one inch of head space in individual sample bottles. Do not overfill.
- Once the lid is opened for the individual sample bottle, do not touch the inside surface of the bottle or lid.
- For the sample bottles that contain a preservative, take care to keep the preservation material in the container.
- Immediately place all sample bottles on ice.

SAMPLING TIME CONSTRAINTS

Bacteria samples have a 6-hour (chilled) regulatory holding time. **Samples will not be analyzed if the holding time has been exceeded.** The WWTP Lab and County Lab need about 30 minutes to set up the tests.

Ammonia samples have a 28-day regulatory holding time. Samples must be maintained at $\leq 6^{o}C$ (on ice or refrigerated) from the time of collection until receipt by the analytical laboratory.

***If the WWTP Lab and County Public Health lab is Closed…**

If the WWTP Lab or County Health Lab will be opening within *5 hours* from the time the samples were collected, keep samples in a refrigerator or in the cooler containing the cold packs/ice and immediately deliver samples as soon as either Lab is open for business.

Otherwise, call the County Health Lab's After Hours Contact List (starting with #1 – Office/Pager/Cell) and arrange to meet a lab analyst. They have agreed to meet us at the lab to receive samples during off-hours.

Spill Sampling Laboratory Contact Information is on the following page.

CITY OF SAN MATEO - SEWER MAINTENANCE

LAB USE ONLY

DATE AND TIME RECEIVED INITIALS

County of San Mateo
Department of Health
Public Health Laboratory
225 West 37th Avenue, Room #113
San Mateo, CA 94403
(650) 573-2500
Bruce K. Fujikawa, Dr. P.H., Laboratory Director

ENVIRONMENTAL TEST REQUEST FORM

COLLECTED BY:_____ **DATE COLLECTED:**_____

SAMPLE ID : _____ **TIME COLLECTED:**_____

TEST REQUEST ORDER CHOICE:

CITY OF SAN MATEO - SEWER MAINTENANCE

☐ MULTIPLE TUBE FERMENTATION TEST
☒ COLILERT-18 TEST (DILUTE 1:10)
☒ ENTEROLERT TEST (DILUTE 1:10)
☐ OTHER _____

_____

SAMPLE TYPE:

RECREATIONAL WATER

☐ BEACH ON MARINA LAGOON (Name of Beach: _____)

☐ SOIL

☐ MARINA LAGOON

☐ BAYSIDE

☐ CREEK (Name of Creek: _____)

☐ CHANNEL (Name of Channel: _____)

☐ MOUTH OF CHANNEL AT LAGOON (Name of Channel: _____)

☐ OTHER _____

SYSTEM NAME: **San Mateo CS** **SYSTEM ID #** : 2SSO10183

SAMPLE SITE/ADDRESS: 1949 Pacific Blvd
San Mateo, CA 94403

SEND REPORT TO (FULL ADDRESS):	**BILL TO (NAME OF ORGANIZATION)**
LOCATION: City of San Mateo CS	City of San Mateo CS
1949 Pacific Blvd	330 W. 20th Ave
San Mateo, CA 94403	San Mateo, CA 94403

ATTENTION: Tony Baltadano fax: 650-522-7351

Caltest ANALYTICAL LABORATORY

1885 N. KELLY ROAD NAPA, CA 94558 (707) 258-4000 FAX (707) 226-1001 www.caltestlab.com

PAGE 1 OF 1

SAMPLE CHAIN OF CUSTODY

PROJECT NAME / PROJECT NUMBER: SSO Monitoring	P.O. NUMBER	LAB ORDER #
CLIENT: City of San Mateo Public Works	REPORT TO: Tony Baltodano (tbaltodano@cityofsanmateo.org)	
MAILING ADDRESS: 1949 Pacific Blvd. San Mateo, CA 94403	STATE: CA	ZIP: 94403
BILLING ADDRESS: Please email invoice to tbaltodano@cityofsanmateo.org	ATTN: Tony Baltodano	
PHONE NUMBER: 650-522-7359	FAX PHONE NUMBER: 650-522-7351	SAMPLER (PRINT & SIGN NAME):

TURN-AROUND TIME: [X] STANDARD [ ] RUSH

DUE DATE:

ANALYSED REQUESTED

CALTEST LAB #	DATE SAMPLED	TIME SAMPLED	SAMPLE MATRIX*	CONTAINER TYPE/ AMOUNT**	PRESERVATIVE	SAMPLE IDENTIFICATION / SITE	CLIENT LAB #	COMP. or GRAB	Ammonia								REMARKS
			AQ	PT/250ml	H_2SO_4			Grab	X								
			AQ	PT/250ml	H_2SO_4			Grab	X								
			AQ	PT/250ml	H_2SO_4			Grab	X								

WHITE - LABORATORY YELLOW - CLIENT COPY TO ACCOMPANY FINAL REPORT PINK - CLIENT COPY AS RECEIPT

RELINQUISHED BY	DATE/TIME	RECEIVED BY	RELINQUISHED BY	DATE/TIME	RECEIVED BY
	/			/	
	/			/	

FOR LAB USE ONLY

Samples: WC ____ MICRO ____ BIO ____ AA ____ SV ____ VOA ____ pH? Y/N TEMP: SEALED: Y/N INTACT: Y/N

BD: BIO ____ WC ____ AA ____

CC: AA ____ SV ____ VOA ____

SIL: HP ____ PT ____ QT ____ VOA ____

W/HNO_3 ____ H_2SO_4 ____ NaOH ____

PIL: HNO_3 ____ H_2SO_4 ____ NaOH ____ HCL ____

COMMENTS:

R ____ PR ____ M ____ F ____

*MATRIX: AQ = Aqueous Nondrinking Water, Digested Metals; FE = Low R.L.s, Aqueous Nondrinking Water, Digested Metals; DW = Drinking Water; SL = Soil Sludge, Solid ; FP = Free Product

**CONTAINER TYPES: AL = Amber Liter; AHL = 500 ml Amber; PT = Pint (Plastic); QT = Quart (Plastic); HG = Half Gallon (Plastic); SJ = Soil Jar; B4 = 4oz. BACT; BT = Brass Tube; VOA = 40mL VOA; OTC - Other Type Container

11/24/20

CITY OF SAN MATEO WWTP LABORATORY

CHAIN-OF-CUSTODY RECORD

2050 Detroit Drive
San Mateo, CA 94404
Phone: [650] 522-7388 Fax: [650] 522-7381

Lab ID:

DESTINATION LAB CONTACT INFORMATION	**CITY OF SAN MATEO** **WWTP LABORATORY** 2050 Detroit Drive San Mateo, CA 94404 [650] 522-7388 (Xiongbing Liang)
SAMPLER NAME:	
SAMPLER SIGNATURE	
CITY S.M. CONTACT:	Xiongbing Liang [650] 522-7388 xliang@cityofsanmateo.org
PROJECT / P.O. #	

Sample ID	Date Sampled	Time Sampled	Sample Matrix	Container #	Container Type	Container Pres.	REQUESTED ANALYSIS: Colilert-18 Total Coliform, E. Coli) 1:10 dilution	Enterolert (Enterococci) 1:10 dilution					Notes
			aqueous	1	100-mL HDPE	none	X	X					
			aqueous	1	100-mL HDPE	none	X	X					
			aqueous	1	100-mL HDPE	none	X	X					

SENDER COMMENTS:

Billed to:

Report to:
Xiongbing Liang xliang@cityofsanmateo.org
Tony Baltodano tbaltodano@cityofsanmateo.org

LABORATORY COMMENTS:

RELINQUISHED BY (1)	RECEIVED BY (1)
Signature:	Signature:
Print Name:	Print Name:
Company: City of San Mateo - PW Environmental Svcs	Company: City of San Mateo, Wastewater Treatment Plant Laboratory
Date: Time:	Date:
RELINQUISHED BY (2)	**RECEIVED BY (2)**
Signature:	Signature:
Print Name:	Print Name:
Company:	Company:
Date: Time:	Date:
RELINQUISHED BY (3)	**RECEIVED BY (3)**
Signature:	Signature:
Print Name:	Print Name:
Company:	Company:
Date: Time:	Date:

SSMP

ELEMENT 6 – OERP

APPENDIX 6.7

Spill Technical Report

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ON LETTERHEAD

Date

State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Subject: Technical Report for Sanitary Sewer Spill of 50,000 Gallons or More
Event ID: XXXXXX

This submittal comprises the Sanitary Sewer Spill Technical Report ("Report") that is required by State Water Resources Control Board ("SWRCB") Order No.WQ 2022-0103-DWQ ("Order"). The Order requires each enrollee to submit a Spill Technical Report in the California Integrated Water Quality System ("CIWQS") online Sanitary Sewer System Database within 45 calendar days of the spill end date for any spill in which 50,000 gallons or greater is discharged to surface waters.

This Report comprises the following sections:

1. Causes and Circumstances of the Spill
2. District's Response to Spill
3. Water Quality Monitoring
4. Spill Impact Evaluation

1.0 CAUSES AND CIRCUMSTANCES OF THE SPILL

A. Complete and detailed explanation of how and when the spill was discovered:

B. Photographs illustrating the spill origin, the extent and reach of the spill, drainage conveyance system entrance and exit, receiving water, and post-cleanup site conditions:

C. Diagram showing the spill failure point, appearance point(s), the spill flow path, and ultimate destinations:

D. Detailed description of the methodology employed and available data used to calculate the discharge volume and, if applicable, the recovered spill volume:

E. Detailed description of the spill cause(s):

F. Description of the pipe material and estimated age of the pipe material at the failure location:

G. Description of the impact of the spill:

H. Copy of original field crew records used to document the spill are included at the end of this report.

I. The Order requests historical maintenance records for the failure location. The associated pipe segment cleaning and CCTV history is provided in Table 1.

Table 1. Maintenance Results for Pipe Segment XXXXX-XXXX

Date	Action: Clean or CCTV	Summary of Findings

2.0 RESPONSE TO SPILL

A. Chronological narrative description of all actions taken by the District to terminate the spill:

B. Explanation of how the Sewer System Management Plan SERP was implemented to respond to and mitigate the spill:

C. Final corrective action(s) completed and a schedule for planned corrective actions, including:
   a. Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable:

   b. Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences:

   c. Necessary modifications to the SERP to incorporate lessons learned in responding to and mitigating the spill.

3.0 WATER QUALITY MONITORING

A. Description of all water quality sampling activities conducted:

B. List of pollutant and parameters monitored, sampled, and analyzed:

C. Laboratory results, including laboratory reports:

D. Detailed location map illustrating all water quality sampling points:

E. Other regulatory agencies receiving sample results (if applicable):

4.0 SPILL IMPACT EVALUATION

A. Evaluation of spill impact(s), including a description of short-term and long-term impact(s) to beneficial uses of the surface water.

SSMP
ELEMENT 7 – FATS, OILS, AND GREASE (FOG) CONTROL PLAN

Appendix 7.1.A – Outreach Materials

Appendix 7.1.B – Waste Discharge Permit (WDP)

Appendix 7.1.C – WDP Standard Terms, Conditions, and Requirements

Appendix 7.1.D – BMPs for FSEs

Appendix 7.1.E – Pretreatment System Maintenance Log

Appendix 7.1.F – WDP Q&As

Appendix 7.1.G – Inspection Form – FSE

Appendix 7.1.H – FOG Hot Spots (Schedule & Map)

Appendix 7.1.I – List of FSEs and Grease Removal Device Cleaning Frequency

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SSMP

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

APPENDIX 7.1

FOG Supporting Materials

Table of Contents

- Exhibit 7.1A – Outreach Materials (Commercial & Residential)
- Exhibit 7.1B – Waste Discharge Permit (WDP)
- Exhibit 7.1C – WDP Standard Terms, Conditions & Requirements
- Exhibit 7.1D – Best Management Practices for Food Service Facilities
- Exhibit 7.1E – Pretreatment System Maintenance Log
- Exhibit 7.1F – Waste Discharge Permits Q&A
- Exhibit 7.1G – Inspection Form (Food Service Facility)
- Exhibit 7.1H – Preventative Maintenance: Priority Areas (Schedule and Map)
- Exhibit 7.1I – Food Service Facilities, Inspection Frequency and Other Information

EXHIBIT 7.10A
City of San Mateo, Regulatory Compliance Required Best Management Practices for Food Service Facilities

Grease Removal Devices and Maintenance / Records

- If you generate grease, you will need a grease removal device (GRD).
  - A GRD is either a grease trap or a grease interceptor.
- To stop pipes from plugging, keep your GRD in continuous operation and clean.
  - At a minimum, clean the device every six months; or when the combined thickness of the floating fats, oil and grease, and solids layers exceeds 25% of the total depth of the device.
- Keep a record of GRD cleanings in a logbook or binder for the Environmental Compliance Inspector to review:
  - Document the date
  - Who performed the cleaning
  - How much waste was removed
  - Where the waste was deposited
- If you hire a contractor to clean the GRD:
  - Confirm the work was performed as agreed
  - Keep the receipts in a folder as proof of service

Restaurant Operating Practices

- Greasy, dirty, water from cleaning the exhaust FILTERS should be drained into the sink connected to the grease trap or interceptor - or disposed of offsite by your contractor.
  - Water from cleaning the exhaust HOODS is too dirty and should be disposed of offsite by your contractor.
- Waste oil should be collected in a tallow bin and disposed of by a grease-waste hauling company.
- To save money on GRD cleaning costs, use dry clean-up methods such as dry wiping with rubber scrapers and paper towels. These practices reduce the solids and grease load to the GRD:

  Scrape off excess food from plates and cookware into the trash.

  Wipe the excess grease with paper towels and dispose of the towels in the trash.

  Wash plates, pots, pans and utensils.
- Keep the ingredients in the bowl, not on the floor! To prevent spills:
  - Cover large containers when transporting
  - Securely store liquid materials away from floor drains
- To prevent solids from clogging pipes, keep strainers or screens over floor drains.

Storm Drain Protection

- It's against the law to drain any water into a storm drain from washing floor mats or other equipment. Storm drains lead directly to local creeks and the bay, and are for rain water only. Instead, pour dirty water in the mop sink or an area connected to a sanitary drain.
- Don't throw mop water out the back door! It is illegal to dump mop water to a storm drain.

  Put it into a sink or sanitary drain instead.
- Keep it clean! Cover your dumpsters and clean your trash enclosure, tallow bins, or barrels to prevent trash and grease waste from getting washed into the storm drain.
- Don't rinse spills into the storm drain. Use dry clean-up methods (absorbents/kitty litter for oil spills) or a wet-dry vacuum to clean outdoor spills.

City of San Mateo, Regulatory Compliance
Municipal Code Applicable to
Food Service Establishments

Chapter 7.38 Sanitary Sewer Use

7.38.160. Requirements for Food Service Facilities

(a) The owner of every commercial, industrial, or institutional food service facility, shall install or cause to be installed a pretreatment system for grease removal which meets or exceeds minimum sizing requirements of the Uniform Plumbing Code, by no later than January 1, 2001. The Director shall approve final sizing.

7.38.100 Pretreatment of Industrial Waste

(c) Food service facilities shall have a pretreatment system for grease removal designed to serve all drains that may discharge grease into the sewer, including floor drains.

7.38.120 Specific Discharge Prohibitions

(h) Oil and grease shall not be discharged into the sewer system if average concentration of floatable oil and grease exceeds 20 mg/L, defined as that which is subject to gravity separation at a temperature of 20 degrees Celsius and at pH 4.5; nor shall the total oil and grease concentration exceed 200 mg/L.

7.38.170 Operation and Maintenance of Pretreatment Systems

(a) Pretreatment systems shall be inspected and maintained by the user as needed to ensure continuous efficient operation.

(c) A record of all inspection and maintenance activity shall be kept by the user at the facility showing the date of inspection or maintenance, the activity completed, and the disposition of the removed contents, filters cartridges, or other components.

(d) Failure to operate or maintain the pretreatment system in a way so as to ensure optimum efficiency, or failure to keep records of pretreatment system maintenance shall constitute a violation of this chapter.

7.38.210 Waste Discharge Permit

(a) The Director shall require each significant industrial user to obtain a waste discharge permit.

(b) The Director may require other users to obtain waste discharge permits as necessary to carry out the purposes of this chapter.

7.38.390 Best Management Practices

(a) Where best management practices (BMP's) have been established or adopted by the Director for an activity, operation, or facility which may cause a prohibited discharge to the sanitary sewer or storm drain systems, persons undertaking such activity or operation, or owning or operating such facility shall comply with such requirements as may be specified by the Director in waste discharge permits, compliance directives, printed material, or verbal notice. (Ord. 2006-1 § 1; Ord. 2003-7 § 1)

Chapter 7.39 Stormwater Management and Discharge Control

7.39.090 Discharge of Pollutants

(a) Non-stormwater discharges to the City storm drain system are prohibited.

7.39.110 Illicit Discharge

(a) It is prohibited to establish, use, maintain, or continue illicit drainage connections to the City storm drain system, and to commence or continue any illicit discharges to the City storm drain system. This prohibition applies to connections made in the past, regardless of whether made under a permit or whether permissible under the law or practices applicable or prevailing at the time of the connection.

7.39.120 Reduction of Pollutants in Stormwater

Any person engaged in activities, which will or may result in pollutants entering the City storm drain system shall undertake all practicable measures to *reduce such pollutants.*

flowstobay.org
SAN MATEO COUNTYWIDE
WATER POLLUTION PREVENTION PROGRAM
Clean Water. Healthy Community.

BEST MANAGEMENT PRACTICES FOR

FOOD SERVICE FACILITIES

Information for Restaurants | Cafeterias | Grocery Stores | Food Handling Facilities

Storm drains flow directly into creeks, San Francisco Bay and the Pacific Ocean without any treatment. Non-stormwater and other wastes that flow into a storm drain cause pollution. Food handling facilities can cease stormwater pollution through proper cleanup practices that ensure food particles, oil and grease, litter, wash water and cleaning products flow to interior sewer connections, which ensures the water is treated prior to being released.

NEVER RINSE OUTDOOR AREA WITH HOSE

Only rain water is allowed down the storm drains, because storm drains connect directly to local creeks.

It is the responsibility of your business to use appropriate Best Management Practices (BMPs) to keep wind or rain from carrying pollution into the street.



Roofed trash enclosure with doors closed. Bilingual sign reminds staff to keep area tidy.



Dumpster lid is closed, and there is no loose trash on ground.

GENERAL BEST MANAGEMENT PRACTICES

Keep Dumpster Area Clean

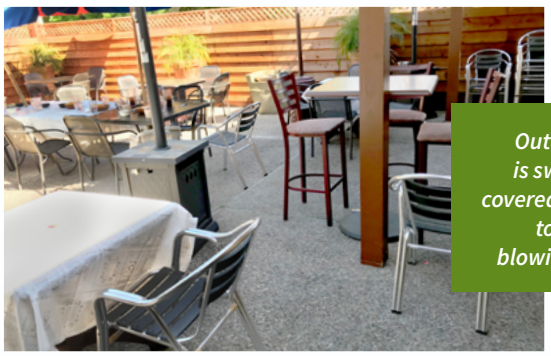
- ☐ Close dumpster lids.
- ☐ Routinely inspect dumpster area for cleanliness.
  - If dumpsters overfill, consider having more dumpsters, or increasing trash pick-up service.
  - Replace leaking or cracked dumpsters.
  - If loose waste is on the ground, then sweep up.
- ☐ Educate all staff on keeping dumpster areas tidy. With high rates of employee turnover, or when sharing a dumpster area, post signs or have routine meetings on proper BMPs.

Cooking Oil & Grease

- ☐ Store oil and grease properly in permitted tallow bins; never pour oil or grease in the trash, storm drain, street, sinks or floor drains.
- ☐ Keep tallow bins clean & lids sealed.
- ☐ Have tallow bin collection scheduled to maintain adequate storage capacity.
- ☐ Check rooftop exhaust fans at least monthly. Place tray under exhaust fan shrouds to collect oil; empty weekly at a minimum.
- ☐ Clean up spills right away (See back of this sheet).

Manage Outdoor Areas (Parking Lots, Outdoor Seating, Staff Break Areas, Outdoor Storage)

- ☐ Empty trash bins into dumpster regularly.
- ☐ Sweep frequently in trash-prone places.
- ☐ If frequent litter issues, consider adding trash cans.
- ☐ Place ash trays in cigarette-prone areas.



Outdoor seating area is swept frequently, is covered, and has fencing to keep debris from blowing into the street.

flowstobay.org
SAN MATEO COUNTYWIDE
WATER POLLUTION PREVENTION PROGRAM
Clean Water. Healthy Community.

BEST MANAGEMENT PRACTICES FOR

FOOD SERVICE FACILITIES

Information for Restaurants | Cafeterias | Grocery Stores | Food Handling Facilities

Properly cleaning and disposing of wash waters helps prevent pollution.

CLEANING BEST MANAGEMENT PRACTICES

Use Dry Cleaning Methods

- ☐ Sweep up dust, debris, and trash.
- ☐ Vacuum floor mats. If water is needed, rinse mats in dishwasher or mop utility sink. Never wash floor mats outdoors or allow wash water to flow to outdoor areas.
- ☐ Do not clean equipment outdoors.
- ☐ When hiring cleaning companies (e.g. for cleaning hood/roof equipment), make sure the company uses dry cleaning methods. If wet methods are used, block off gutters & use a pump/wet-vac, so no water spills off roof.



Sweeping is an example of a dry cleaning method.

Contain and Manage Spills Promptly

- ☐ Keep a spill kit near high risk areas (e.g. near oil tallow bins, loading dock). Kit may include: Barrier/Sock, Storm Drain Inlet Protection; Absorbent granules or kitty litter, Towels, Pads; Dustpan, Broom, Gloves, Trash Bags.
- ☐ Contain the spill and protect nearby storm drains immediately.
- ☐ Use absorbents/towels to manage spill. Sweep up and dispose of properly.
- ☐ Make sure staff know spill plan and spill kit location.



Never rinse water down storm drains.

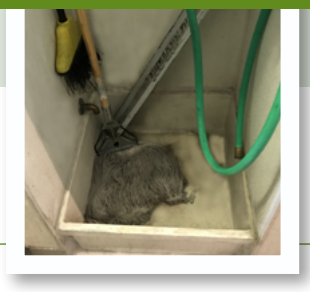
STORM DRAINS VS. SANITARY SEWERS:

Do your employees know the difference?

All **outdoor drains** are storm drains. Pollution that enters storm drains flows directly to creeks and San Francisco Bay or the Ocean, not treated or properly cleaned.

Indoor drains (such as sink, toilet, mop sink, kitchen floor drain) lead to the sanitary sewer system, which is connected to a wastewater treatment plant.

Mop sinks go to the sanitary sewer and wastewater treatment plant.



LOCAL STORMWATER AGENCIES:

Atherton ..... (650) 752-0555	Foster City..... (650) 286-3270	Redwood City ..... (650) 780-7464
Belmont..... (650) 637-2972	Half Moon Bay ..... (650) 726-7177	San Bruno ..... (650) 616-7020
Brisbane ..... (415) 508-2130	Hillsborough ..... (650) 375-7444	San Carlos ..... (650) 802-4212
Burlingame.... (650) 342-3727	Menlo Park ..... (650) 330-6750	San Mateo ..... (650) 522-7300
Colma ..... (650) 757-8888	Millbrae ..... (650) 259-2392	San Mateo County .... (888) 442-2666
Daly City ..... (650) 991-8208	Pacifica ..... (650) 738-3767	South San Francisco .. (650) 877-8555
East Palo Alto .. (650) 372-3189	Portola Valley ..... (650) 851-1700	Woodside..... (650) 851-6790

NO GREASE DOWN THE DRAIN!

KEEP DRAINS FLOWING

WIPE FOOD AND GREASE OUT OF POTS BEFORE WASHING AND DISCARD WASTE INTO THE TRASH





COLLECT AND RECYCLE USED COOKING OIL

HAVE GREASE INTERCEPTORS AND TRAPS CLEANED ON A ROUTINE SCHEDULE



USE ABSORBENTS TO CLEAN UP GREASY SPILLS BEFORE MOPPING



WHEN KITCHEN DRAINS ARE FLOWING, BUSINESS KEEPS FLOWING TOO.

EBMUD • Bay Area Pollution Prevention Group (BAPPG) • The California Fats, Oils, and Grease Work Group (Cal FOG) • The California Restaurant Association (CRA)

주방 싱크대에는 기름을 버리지 마십시오!

싱크대 구멍이 막히지 않도록 하십시오

냄비나 후라이 팬 등에 묻어 있는 음식물 찌꺼기와 기름기는 설거지 하기 전에 종이 타월 등으로 씻어내어 쓰레기 통에 버리십시오





식용유는 사용하신 후에 다시 모아두었다가 재사용하십시오

싱크대 아래 폐유 수집해주는 장치는 정기적으로 청소해주십시오



대걸레로 바닥 청소를 하실 때에는 바닥에 떨어진 기름기를 흡수용지로 먼저 닦아낸 다음에 하십시오



주방 싱크대 배수구멍이 시원하게 잘 흘러내려가면, 비즈니스도 시원하게 잘 돌아가기 마련입니다.

EBMUD • Bay Area Pollution Prevention Group (BAPPG) • The California Fats, Oils, and Grease Work Group (Cal FOG) • The California Restaurant Association (CRA)

¡NO TIRE GRASA AL DESAGÜE!

MANTENGA LIBRE EL FLUJO A LA TUBERÍA DEL DESAGÜE

QUITE LOS RESTOS DE COMIDA Y GRASA Y TÍRELAS A LA BASURA ANTES DE LAVAR LAS OLLAS





JUNTE Y RECICLE EL ACEITE DE COCINA

LIMPIE LAS COLADERAS E INTERCEPTORES DE GRASA CON REGULARIDAD



USE MATERIALES ABSORBENTES PARA RECOGER LA GRASA QUE SE HAYA CAIDO ANTES DE TRAPEAR EL PISO



SU EMPRESA SE MANTIENE A FLOTE CUANDO EL AGUA FLUYE EN EL DESAGÜE DE LA COCINA.

EBMUD • Bay Area Pollution Prevention Group (BAPPG) • The California Fats, Oils, and Grease Work Group (Cal FOG) • The California Restaurant Association (CRA)

ĐỪNG ĐỔ DẦU MỠ XUỐNG CỐNG RÃNH!

GIỮ CHO HỆ THỐNG CỐNG RÃNH THÔNG THOÁNG

LAU VÀ ĐỔ VÀO THÙNG RÁC ĐỒ THỪA HAY DẦU MỠ TRONG NỒI TRƯỚC KHI RỬA NỒI





THU VÀ TÁI CHẾ DẦU ĂN ĐÃ SỬ DỤNG

LAU CHÙI BỘ PHẬN CHẶN VÀ LƯỚI CHẮN DẦU MỠ ĐỀU ĐẶN



DÙNG ĐỒ CHẤM ĐỂ THẤM DẦU MỠ ĐỔ RA NGOÀI TRƯỚC KHI LAU



KHI HỆ THỐNG CỐNG RÃNH TRONG NHÀ BẾP THÔNG THOÁI, CÔNG VIỆC KINH DOANH CŨNG TIẾN TRIỂN THUẬN LỢI.

EBMUD • Bay Area Pollution Prevention Group (BAPPG) • The California Fats, Oils, and Grease Work Group (Cal FOG) • The California Restaurant Association (CRA)

Prevent Costly Sewer Back-Ups

Information for Apartment Managers



Pouring grease down drains is an important cause of sanitary sewer backups and overflows in San Mateo neighborhoods. The City of San Mateo Public Works Department is working hard to maintain the public sewer through intense cleaning efforts, rehabilitation of old sewer lines and education. We need you to protect and maintain your sewer lateral to help prevent the health threat and environmental damage that overflows can cause.

Follow these tips to keep your lines clear of clogs year-round

Clean. Clean sewer lines regularly to prevent problems, or step up the number of cleanings if you're still experiencing backups. The City strongly recommends cleaning at least annually.

Catch and remove. Train maintenance staff to catch and remove the debris that is dislodged during a cleaning. Be sure any plumbers you contact do the same to assure that you are getting what you pay for. If materials are not removed or simply pushed down the pipe, you are not solving the problem—you are simply paying for it to recur later.

Educate. Remind tenants of the importance of properly disposing kitchen wastes and other materials. Enclosed are some informational pieces that can be distributed to tenants and posted on bulletin boards or trash collection areas. The City can also provide newsletter articles and on-site training upon request. Call us at 650-522-7300 for more information.

Help residents understand how it helps them

It keeps rent low. With too many costly backups, you may have to raise rent. The State of California is also stepping up enforcement of sanitary sewer overflows from the multi-family sector, so preparation is the key.

It protects their property. A sewer backup in a dwelling unit causes significant damage to floors and personal property.

It protects human health and the environment. Overflows contaminate yards, creeks and city streets and expose community residents to health and environmental hazards.

What should residents do?

- Pour grease and oil into a lidded container, and place it in the trash. To help solidify the grease, freeze it or add coffee grounds, kitty litter or other absorbent material.
- Use paper towels to wipe excess grease from pans and utensils before washing them.
- Never put grease, medications, diapers, paper or other objects down drains or toilets.

For more information, please contact Public Works at 650-522-7300

Please

Help Prevent Sewer Backups and Overflows



Disposal of grease and solid objects down drains and toilets is a leading cause of sanitary sewer backups. Sewer backups may result in raised rents due to increased maintenance costs, as well as possible penalties for property, health, and environmental damages! Help prevent sewer blockages by taking these steps:

DO NOT PUT GREASE, PAPER TOWELS, DIAPERS, MEDICATIONS, DISPOSABLE MOPS, OR OTHER SOLID OBJECTS DOWN SINKS OR TOILETS.

	Pour grease into a lidded container and place it in the trash. To help solidify the grease, mix the grease with coffee grounds, kitty litter, paper towels, or other absorbent materials.
	Use paper towels to wipe excess grease from pans and utensils before washing them, and dispose the wipes in the trash.
	Dispose of diapers, plastics, disposable mops and wipes, facial tissue and other solid objects in the trash. Do not flush any of these down a drain!
	Please do not throw away old medications down the drain or in the trash. Instead, drop them off at a collection container located at the San Mateo Police Department, 200 Franklin Parkway.

EXHIBIT 7.10B

CITY OF SAN MATEO/ ESTERO MUNICIPAL IMPROVEMENT DISTRICT
REGULATORY COMPLIANCE DIVISION
1949 PACIFIC BLVD., SAN MATEO, CA 94403
TELEPHONE 650-522-7300

WASTE DISCHARGE PERMIT

1. Facility Name/Location:	2. User (Permit Holder):	3. Permit ID/Term/Transferability: ID: (Facility Name) Effective: Expires: **NOT TRANSFERABLE**	
4. Facility Description: **FOOD PREP SERVICES**	5. Industrial Activity: **FULL SRV COMM KITCHEN**		6. User Classification: **II**
7. Waste Stream **POT SINK**	8. Waste Pretreatment System(s): **GREASE TRAP**	9. Minimum Maint. Frequency: **1x EVERY MOHTH** **N/A**	
10. Other Pretreatment Requirements:			
11. Waste Discharge Sampling Frequency: ……..… 12. Reporting Frequency:……..			

PERMIT REQUIREMENTS

A. User (Permit Holder) shall discharge industrial waste streams listed in Item 7 above to the sanitary sewer through the waste pretreatment system(s) specified in Item 8. Bypass or removal of listed waste pretreatment systems is prohibited except as provided in Attachment B Section 8, "Pretreatment System Bypasses".

B. Do not modify a waste pretreatment system that in any way impairs unit efficiency.

C. Maintain waste pretreatment systems at a frequency not less than manufacturer instructions or at the frequency indicated in Item 9 above, whichever is more frequent. "Maintain" means the change out of filters/cartridges/screening devices if unit contains such devices, and/or removal of contained accumulated wastes, as applicable. This is a preventive schedule and does not preclude User from conducting more frequent maintenance or other preventive measures to prevent discharge of untreated or inadequately treated wastes to sanitary sewer system.

D. Keep records of waste pretreatment systems maintenance, including change-out dates of treatment filters/cartridges/screening devices, as applicable; pumping and/or clean out of accumulated wastes, etc. Records must be kept on site and available for review by City inspectors at all times. "Records" means waste pretreatment system service receipts and waste hauling records. When waste treatment system service is performed by User, record maintenance activity for each system on Attachment D or equivalent.

E. Conform to other pretreatment requirements specified in Item 10. If "N/A", no other requirements apply at time of permit issuance.

F. Conform to monitoring and reporting requirements specified in Items 11 and 12 above. If "N/A" is indicated, User is not subject to waste sampling and/or reporting requirements at time of permit issuance.

G. Do not discharge to the sewer any hazardous waste, as defined in Section 25117 of the Health and Safety Code, nor any materials that alone or in combination with other wastes may cause an obstruction in the sewer system, inhibit wastewater treatment processes, create corrosive or hazardous conditions in the sewer system, or cause a public nuisance.

H. Notify the City/District at (650) 522-7300 within 24 hours of becoming aware of any of the following: 1) discharge of a hazardous waste; 2) discharge of any abnormally high volume or concentration of waste; 3) pretreatment system bypass; or 4) pretreatment system upset. In addition, notify City/District 30 days in advance of any proposed change in facility operations that may affect the quantity or quality of waste discharged to the sanitary sewer system.

I. Maintain a written procedure for industrial process equipment and work area cleaning that minimizes potential for discharge of toxic process wastes (e.g., solvents, trace metals, etc.) to the sewer system through drains that do not drain through pretreatment systems, and train employees on these procedures annually.

J. Comply with STANDARD TERMS, CONDITIONS, AND REQUIREMENTS (Attachment B).

AUTHORIZATION TO DISCHARGE:

The above named User (Permit Holder) is hereby authorized to discharge wastewater to the public sewer, subject to User's compliance with City of San Mateo/EMID Sanitary Sewer Use Ordinances and this permit, and payment of applicable fees.	
	City of San Mateo, Regulatory Compliance Manager

EXHIBIT 7.10C

CITY OF SAN MATEO / ESTERO MUNICIPAL IMPROVEMENT DISTRICT
DEPARTMENT OF PUBLIC WORKS, REGULATORY COMPLIANCE DIVISION
1949 PACIFIC BLVD, SAN MATEO, CA 94403
TELEPHONE: (650) 522-7300

WASTE DISCHARGE PERMIT – ATTACHMENT B

STANDARD TERMS, CONDITIONS, AND REQUIREMENTS

1. Construction and Application of Permit. This waste discharge permit is issued pursuant to the sewer use ordinances of the City of San Mateo and Estero Municipal Improvement District (City/District). In the event of any apparent conflict between the requirements established in a waste discharge permit and the Federal Pretreatment Regulations, the more restrictive requirements shall apply.

2. General Prohibited Discharges. User (Permit Holder) shall not discharge or cause to be discharged, directly or indirectly, to a public sewer or storm drain, any waste in such quantity, that alone, or in combination with other waste substances, may a) endanger the health and safety of the public or City/District staff; b) cause damage to the sewer or storm drain systems; c) cause a public nuisance; d) result in inflating the cost of preventive maintenance, collection, treatment, or disposal; e) cause interference with wastewater collection, treatment, or disposal; f) result in or may contribute to a violation of the City's NPDES permit or other regulatory requirement; or g) prevent, hinder, delay, or impede compliance with effluent discharge requirements established by the regulatory agencies.

3. Dilution Prohibited. Do not increase the use of potable or process water or, in any way attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this permit.

4. Pretreatment System Operation and Maintenance Requirements. Pretreatment system(s) shall be inspected and maintained per the schedule specified in a waste discharge permit or as otherwise approved in writing by the City/District. Records shall be kept of all such inspections, maintenance, and repairs.

5. Hazardous Waste Notification. User shall notify City/District, the U.S. EPA, and the Regional Water Quality Control Board, of any substance discharged, which, if otherwise disposed of, would be a hazardous waste under 40 CFR Part 261, within 24 hours from the time User becomes aware of the discharge, followed by a written report to City/District within 5 days.

6. Changed Discharge Notification. User shall notify City/District at least thirty (30) days before commencement of discharge to (1) report any significant changes to the quantity or quality of waste discharged to the sanitary sewer system; and/or (2) report any discharge of wastes or use of facilities which are not in conformance with the User's waste discharge permit. User shall report potential for a slug discharge immediately.

7. Notification of Spills. User shall immediately notify the City/District of any discharge, reasonably judged to constitute a hazard to the public health, environment, city personnel, or wastewater treatment facilities including, but not limited to, accidental discharges, discharges of a non-routine episodic nature, a non-customary batch discharge, or a slug discharge. A follow-up written report must be submitted within five (5) days of the incident. If deemed necessary, City/District may require User to develop and implement spill prevention and slug discharge control plans.

8. Pretreatment System Bypasses. A bypass of a waste pretreatment system is prohibited unless (1) the bypass is unavoidable to prevent loss of life, personal injury, or severe property damage; (2) there is no feasible alternative to the bypass; (3) the City/District is promptly notified of the bypass, (4) if the bypass does not cause a violation of pretreatment standards or requirements; and (5) if it is for essential maintenance to ensure efficient operation of the treatment system. If User knows in advance of the need for a bypass, User shall submit notice to City/District at least 10 days prior to the date of the planned bypass. If an unanticipated bypass occurs, User must notify City/District within 24 hours from the time User becomes aware of the bypass and shall submit a written report within 5 days.

9. Pretreatment System Upset. User shall control production of all discharges to the extent necessary to maintain compliance with categorical pretreatment standards upon reduction, loss, or failure of its treatment facilities until the facility is restored or an alternative method of treatment is provided. If an upset occurs, User shall notify City/District within 24 hours from the time User becomes aware of the upset and shall submit a written report within 5 days.

10. Inspections and Monitoring. User shall allow a City/District inspector presenting credentials and identification to enter the premises upon request and without unreasonable delay for the purpose of inspection and sampling. Reasonable times for inspection may include times that are unannounced, and may include any time during which User activities may result in a process waste discharge to the sewer system.

11. Records Retention. Records shall be retained by the User for least three (3) years from the date of the report to which the records are applicable, or three (3) years from the date any investigation or enforcement action undertaken by the City, State, or USEPA has concluded, or such other time as may be directed by the City/District.

12. Best Management Practices. In addition to any pretreatment system requirements, User shall implement work practices that help reduce and prevent a prohibited discharge to the sanitary sewer system or waste discharge to the storm drainage system. Appropriate best management practices (BMPs) may be specified in a waste discharge permit, compliance directive, printed material, or verbal notice.

13. Employee Training. User shall take necessary steps to inform appropriate personnel employed by the User of waste discharge permit requirements. Such personnel shall include workers and supervisors whose duties pertain in any manner to waste discharges specified in the permit. Steps to inform such personnel may include orientation of appropriate personnel and posting of work stations with signs, or equally effective methods.

14. Confidential Information. Any information submitted to or collected by the City/District in connection with a waste discharge permit shall be made available to the public without restriction, unless the User specifically requests, and is able to demonstrate to the satisfaction of the City/District, that the release of such information would divulge information that would be detrimental to the User's competitive position and is not required to be disclosed under the California Public Records Act, or similar law. A user may be prohibited from discharging a substance unless its composition is made known to the City/District.

15. Modification or Revision of Permit. The terms and conditions of this permit are subject to modification by the City/District at any time as just cause exists. Any permit modification which results in new conditions in the permit shall include a reasonable time schedule for compliance if necessary.

16. Duration and Transferability of Permit. A waste discharge permit shall be issued for a time period not to exceed five (5) years from the effective date of the permit. Permit effective date and expiration date are indicated on permit. If the User wishes to continue to discharge after the permit expiration date, User must submit an application for renewal not less than 30 days prior to permit expiration date. Permit is issued to a specific user for a specific operation and is not assignable to another user or transferable to any other location.

17. Continuation of Expired Permits. An expired permit will continue to be effective and enforceable until the permit is reissued if the User has submitted a complete application for renewal at least 30 days prior to the expiration date of the User's existing permit, and the failure to reissue the permit prior to the expiration of the previous permit is not due to any act or failure to act on the part of the User.

18. Fees. Routine charges associated with this permit may include, but are not limited to; permit annual fee, wastewater sampling fee, inspection fee, and penalties for noncompliance with permit. Basic sewer service charge applies to discharge of groundwater or other wastes.

19. Appeals. User may have, at its request, a hearing before the San Mateo City Manager or his/her designee, or the Estero Municipal Improvement District Manager or designee, as applicable, before the waste discharge permit is revoked, modified, suspended, or made subject to additional terms and conditions.

20. Noncompliance with Permit. Failure to comply with any of the terms, conditions, or requirements specified in a waste discharge permit shall constitute a violation of the permit. It is the responsibility of the User to make determinations as to the nature of its operation and waste discharge characteristics and to take such actions as may be required to comply with discharge requirements.

21. Enforcement Actions – Administrative. A User found in noncompliance with a waste discharge permit will first be issued a Notice of Violation (NOV) that describes the violation and orders compliance by a certain date. Failure to meet the compliance date may subject the User to administrative citation, inspection fees, and other enforcement remedies available.

22. Enforcement Actions – Civil and Criminal Penalties. A User who has violated, or continues to violate, any provision of a waste discharge permit, shall be liable for a civil penalty of not more than $10,000 per day plus actual damages incurred by the City or District for as long as the violation continues. A user who intentionally or negligently violates any provision of a waste discharge permit shall, upon conviction, be guilty of a misdemeanor punishable by fine or imprisonment or both.

23. Enforcement Remedies Not Exclusive. Remedies cited in a waste discharge permit are not exclusive. City/District may take all or any combination of these remedies against a violator, as well as any other enforcement remedies which the City/District may have available.

24. Annual Publication. At least annually, City/District shall provide public notice in the largest local daily newspaper a list of those significant industrial users that, during the previous 12 months, were found in significant noncompliance, as defined in the Sanitary Sewer Ordinance(s) of the City/District.

25. Hold Harmless. Liability for damages as a result of discharges in violation of the permit is the responsibility of the User causing or responsible for the discharge, and User shall defend, indemnify, and hold harmless the City and/or District in any administrative or judicial enforcement action relating to such discharge.

26. Recovery of Costs Incurred If a User's discharge results in damage to or otherwise inhibits the wastewater disposal system, User shall be liable for any expense, loss, or damage caused by such discharge. The City/District shall bill the User for the costs incurred for any cleaning, repair, or replacement work caused by the discharge.

27. Severability and Validity. If any provision of this permit or the sanitary sewer use ordinances of the City/District, or the application thereof to any person or circumstance, is held invalid, the remainder of this permit shall not be affected.

EXHIBIT 7.10D

CITY OF SAN MATEO/ ESTERO MUNICIPAL IMPROVEMENT DISTRICT
REGULATORY COMPLIANCE DIVISION
1949 PACIFIC BLVD, SAN MATEO, CA 94403
TELEPHONE (650) 522-7300

BEST MANAGEMENT PRACTICES FOR FOOD SERVICE FACILITIES

Implement the following work practices as each may apply to your operation to help minimize discharge of FOG wastes to the sanitary sewer system. For more information call the Regulatory Compliance Division at (650) 522-7300.

- ☑ **Drain Screens**. Clean drain screens on all drains in food preparation areas frequently. Dispose of food solids in trash or food waste recycling container.
- ☑ **Dish Cleaning**. Scrape or wipe fat, oil, grease and other food residue from cookware, utensils, etc., prior to dishwashing. Dispose food waste in trash or food recycling container. Use detergents, not soaps (soaps contain oil)
- ☑ **Used Oils and Grease**. Collect all used cooking oils and grease from pots, pans, and fryers and dispose in designated container for recycling. Do not dispose down drain or in trash.
- ☑ **Spill Prevention**. Use container with cover to transfer cooking oils and grease from kitchen to outdoor storage container. Empty containers before they are full to avoid spills.
- ☑ **Spill Cleanup**. Use absorbents such as cat litter or paper towels to pick up oil and grease spills before mopping. Keep spill cleanup supplies well marked and readily available.
- ☑ **Fryers**. Use absorbent paper under fryer baskets. Dispose in trash or with recycled food waste.
- ☑ **Solid Food Wastes**. Dispose of food waste in trash or food waste recycling container, not in sinks. Transfer a manageable weight to prevent spill. Use heavy duty or double clear container bags to help minimize container odors and leaks.
- ☑ **Liquid Food Wastes**. Do not dispose liquid food, milk shake syrups, batters and gravy, or other oily or fatty wastes down the drain. Use materials to absorb liquid and dispose in trash or food waste container.
- ☑ **Food Grinder**. Minimize or avoid use of food grinder, as food solids can contribute to clogged drain pipes and/or fill grease traps and interceptors.
- ☑ **Trash and Recycling Containers**. Inspect trash and recycling containers regularly for leaks and replace leaking containers promptly.
- ☑ **Drain Cleaning Chemicals**. Avoid use of emulsifiers or solvents other than typical dishwashing detergents. *Use of drain cleaning chemicals is not a substitute for the required physical cleaning of grease traps and interceptors*.
- ☑ **Mats and Range Hood Filters**. Dispose of oily wastewaters from cleaning operations in drain connected to grease interceptor; or use professional service that provides replacement mats and filters and cleans mats and filters at off-site location.
- ☑ **Grease Traps and Drains**. Use professional service to pump and off-haul grease trap wastes. Alternatively, collect skimmed oils, grease and food solids and dispose of properly.
- ☑ **Employee Education**. Post “no Grease” best practices signs in appropriate work areas

EXHIBIT 7.10E

CITY OF SAN MATEO/ ESTERO MUNICIPAL IMPROVEMENT DISTRICT
DEPARTMENT OF PUBLIC WORKS, REGULATORY COMPLIANCE DIVISION
1949 PACIFIC BLVD, SAN MATEO, CA 94403
TELEPHONE: (650) 522-7300

Name of Business: _____

Street Address:

Waste Stream:	Waste Pretreatment System:	Minimum Maint. Frequency:
POT SINK	**GREASE TRAP**	**1x EVERY MOHTH**

WASTE PRETREATMENT SYSTEM MAINTENANCE LOG

Instructions: Maintain complete records of waste treatment system maintenance using this form or equivalent. Use separate form for each treatment system if systems are on different maintenance schedule. Briefly describe type of activity completed (e.g. removed floating matter, removed sludge, pumped tank, rotated cartridges, tested pH, etc.). Keep this completed form and all supporting documentation (e.g service receipts, waste manifests) on site and available for inspection at all times.

Date	Maintenance Activity Description	Initials

I certify that the information recorded above is, to best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

_____ _____

Signature of Supervising Official Title

EXHIBIT 7.10F

CITY OF SAN MATEO/ ESTERO MUNICIPAL IMPROVEMENT DISTRICT
REGULATORY COMPLIANCE DIVISION
1949 PACIFIC BLVD, SAN MATEO, CA 94403
TELEPHONE 650-522-7300

Waste Discharge Permits for Food Service Facilities
Frequently Asked Questions

Who Needs a Waste Discharge Permit?

Any food store, eating place, or food preparer that bakes or cooks food on the premises must apply for a waste discharge permit.

Why these facilities?

Food service facilities commonly generate fat, oil, and grease (FOG) wastes in the cooking process. Wastewater from kitchen cleaning operations typically contains FOG wastes. FOG wastes can build up in the sewer system, and result in partial or total blockage of the sewer. Blockage can result in sewer backups and overflows.

Why a permit?

Federal and state regulations, as well as municipal preventive maintenance costs, are prompting an increased level of sewer system monitoring, maintenance, and recordkeeping. The City/District has found that while periodic inspection of commercial kitchens helps identify and correct problems, the message about effectively preventing FOG discharge into the sewer system is often lost over time. A permit provides the means to formally convey sewer discharge requirements and the consequences of failure to comply with the requirements. The permit also serves as ready reference to these requirements that can be referred to by facility management and staff at any time.

What does the permit cover?

The permit formally conveys the same items that have been and will be inspected by the City/District. These include pretreatment system maintenance procedures and maintenance records, and proper handling of pretreatment system waste. The inspector also inspects for records of cooking grease handling and disposal, and other practices that affect discharge of FOG into the sewer system.

What is a pretreatment system?

An under-counter grease trap and outdoor grease interceptor are examples of pretreatment systems. These are devices that are required to be installed on drain lines that may carry FOG wastes in the wastewater.

How do I know if I need to install or upgrade a pretreatment system?

At minimum, any kitchen utensil cleaning sink or wok range must drain through a pretreatment system. Pretreatment systems must conform to the Uniform Plumbing Code.

When can I anticipate an inspection?

The business will be inspected annually to assure compliance with permit requirements. The municipal code authorizes that inspections be conducted during normal business hours and may be unannounced.

Doesn't the county health department already inspect for compliance with sewer discharge requirements?

No. The City has primary authority over use of the sewer system. The county environmental health inspector does not inspect sewer pretreatment systems for proper operation and maintenance. A county inspector will take action on a sewer issue if they determine that the public health is threatened.

What are the penalties for noncompliance?

A Notice of Violation (NOV) is issued if the noncompliance has likely not resulted in impairment to the sewer system, such as a recordkeeping issue. There is no fee or fine with the first NOV. An administrative citation may accompany the NOV for likely discharge of FOG to the sewer and for repeat violations. Follow-up inspection fees may also apply. There are other enforcement remedies available for chronic violations.

Are there fees associated with the permit?

The City of San Mateo has an annual waste discharge permit fee. For Fiscal Year 2024-25, the fee was $778.00. Foster City/ Estero has adopted a similar fee. The fee recovers a portion of the cost of the program. Please submit payment *upon receiving the annual invoice.*

How do I apply for the permit?

The application for a waste discharge permit is enclosed. Please complete and return the application within 10 days of your receipt of the attached letter (or within 30 days if you have not yet begun discharging wastewater from your business). You will have an opportunity to go over any questions or concerns with the City/District staff.

Who do I talk to for information and assistance with this program?

Please contact the City of San Mateo Department of Public Works, Regulatory Compliance Division, at (650) 522-7300.

EXHIBIT 7.10G

FOOD SERVICE FACILITY INSPECTION REPORT

CITY OF SAN MATEO/ESTERO MUNICIPAL IMPROVEMENT DISTRICT

Inspection Type: ☐ New ☐ Routine ☐ Follow-up ☐ Complaint ☐ Closed ☐ Stormwater		Date:
Facility Name:	Facility Type:	Inspector:
Site Address:		City:
Contact Name:	Title:	Phone:

WASTEWATER DISCHARGE PERMIT

Current WDP on file? ☐ Yes ☐ No ☐ Exempt (explain):		
WDP Application Provided? ☐ Yes ☐ No	Application Due Date (if "Yes"):	
Description/location of Permitted GRD(s):		Maintenance Frequency Reqd: Clean once every _____

FIXTURES CONNECTED TO GREASE REMOVAL DEVICE: Note "YES"/"NO" if present, "NA" if not present, "UNK" if connection uncertain

Tri-well Sink(s):	Dishwasher:
Dual-Well Sink(s):	Ice Machine:
Pre-Wash Sink(s):	Floor Drain(s):
Prep Sink(s):	Other:
Mop/Janitorial Sink:	Number of fixtures discharging to GRD:

	PRETREATMENT/GREASE REMOVAL DEVICE OPERATION AND MAINTENANCE:		Yes	No	N/A
1	GRD(s) in service?		☐	☐	☐
2	Emulsifiers or enzymes used in traps / interceptors for O&G control?		☐	☐	☐
3	GRD(s) inspection/maintenance frequency (verbal):				
4	GRD(s) maintenance records/logsheet available for review?		☐	☐	☐
5	***Waste Type***	***Maintenance Performed by:***	***Last Service** (date):*		
5a	☐ Brown Grease (GRD Waste)				
5b	☐ Yellow Grease/Oil (Tallow)				
6	GRD(s) opened for inspection?		☐	☐	☐

GREASE REMOVAL DEVICE PHYSICAL INSPECTION

Tee(s) & Riser(s)	☐ Present	☐ Missing	☐ Submerged	☐ Other:
Baffle Wall(s)	☐ Present	☐ Damaged	☐ Submerged	☐ Other:
Lid(s)	☐ Present	☐ Damaged	☐ Improper Fit	☐ Other:
Sample Box	☐ Present	☐ Absent	☐ NA (Trap)	☐ Other:
Flow Regulator	☐ Present	☐ Absent	☐ NA (Interceptor)	☐ Other:

Total Depth of Liquid:_____ **FOG** (avg):_____ **Solids** (avg):_____ FOG+Solids/Total Depth X 100 = _____ **% Accumulation**

Notes:

	OTHER SOURCES DISCHARGING TO THE GREASE REMOVAL DEVICE	Yes	No	N/A
7	Floor Mat Washing	☐	☐	☐
8	Garbage Disposal/Grinder	☐	☐	☐
9	Exhaust Hood Filter Cleaning	☐	☐	☐
10	Exhaust Hood Cleaning	☐	☐	☐

	BEST MANAGEMENT PRACTICES	Yes	No	N/A
11	Are food scraps & grease from cooking and serving equipment scraped into trash for disposal?	☐	☐	☐
12	Is staff aware of proper grease removal device operation and maintenance practices?	☐	☐	☐
13	Are exhaust screens, filters, and hoods routinely maintained?	☐	☐	☐
14	Is Expanded Polystyrene (EPS) used (for service / take-out)?	☐	☐	☐

PRETREATMENT ENFORCEMENT

☐ None (Compliant) ☐ Verbal Warning ☐ Warning Notice ☐ Notice of Violation ☐ Citation ☐ City Attorney

☐ Violation Abated Date:

Notes:

STORMWATER FACILITY INSPECTION REPORT

CITY OF SAN MATEO/ESTERO MUNICIPAL IMPROVEMENT DISTRICT

Reason for Inspection: ☐ New ☐ Routine ☐ Response to Complaint ☐ Follow-up		Date:
Facility Name:	Inspector:	
Site Address:	Business Type/Activity:	
Contact Name:	Title:	Phone:

STORMWATER PERMIT

Is facility subject to the General Industrial Stormwater Permit?	☐ Yes ☐ No ☐ N/A
Has the facility filed a Notice of Intent (NOI) for coverage under the General Permit?	☐ Yes ☐ No ☐ N/A
Is the facility covered under any other program or permits?	☐ None ☐ WDP ☐ Other:
Pollutants of Concern Used at Facility?	☐ None ☐ Copper ☐ Mercury ☐ PCBs ☐ Other:

FACILITY INSPECTION

Please describe specific activity or pollutant source for the categories below. If a facility does not have the specified area, indicate such with an "NA". Check for potential or actual discharge to SDI.

Activity Areas	NA	Potential Discharge	Actual Discharge
Outdoor Process/Manufacturing Areas:	☐	☐	☐
Outdoor Material Storage Areas:	☐	☐	☐
Outdoor Waste Storage/Disposal:	☐	☐	☐
Outdoor Vehicle/Heavy Equipment Storage/Maintenance Areas:	☐	☐	☐
Outdoor Parking Areas/Access Roads:	☐	☐	☐
Outdoor Wash Areas:	☐	☐	☐
Outdoor Drainage From Inside Areas:	☐	☐	☐
Rooftop Equipment	☐	☐	☐
Other (describe):	☐	☐	☐

SUMMARY OF STORMWATER INSPECTION

Were any of the potential or actual discharges conditionally exempt ?	☐ Yes	☐ No
If "Yes" describe:		
Describe specific problems:		
Problem resolution/Corrective action:		
BMPs distributed? ☐ Yes ☐ No	Describe:	

STORMWATER ENFORCEMENT

☐ None (Compliant) ☐ Non-Compliant (Potential) ☐ Non-Compliant (Actual)

☐ Verbal Warning ☐ Warning Notice ☐ Notice of Violation ☐ Citation ☐ City Attorney

☐ Violation Abated Date:

Notes:

CITY OF SAN MATEO / ESTERO MUNICIPAL IMPROVEMENT DISTRICT
DEPARTMENT OF PUBLIC WORKS, REGULATORY COMPLIANCE DIVISION
1949 Pacific Blvd, San Mateo, CA 94403 Telephone: (650) 522-7300

INSPECTION NOTICE

Facility Name: _____ **Address:** _____ ☐ San Mateo ☐ Foster City

I acknowledge that the City of San Mateo, Public Works, Regulatory Compliance Division inspected the facility noted above on: _____.

At the time of inspection, the facility named above was determined to have:

☐ No violations and is compliant with all applicable regulations

☐ The following violation(s) and subsequent corrective action(s) required (SMMC/EMID):

- ☐ 7.38.210/8.37.210: Waste Discharge Permit Required
- ☐ 7.38.170/8.37.170: O&M of Pretreatment Device
- ☐ 7.38.432/8.37.432: Private Sewer Lateral
- ☐ SMMC 7.39.090: Non-Stormwater Discharge Prohibited
- ☐ SMMC 7.39.120: Reduction of Pollutants in Stormwater
- ☐ SMMC 7.39.245: Threatened Discharge
- ☐ Other: _____

(SMMC = San Mateo Municipal Code) (EMID = Estero Municipal Improvement District)

Description of Violation(s): _____

_____

_____

_____

_____

_____

Corrective Action(s) Required: _____

_____

_____

_____

_____

_____

The following Best Management Practices (BMP) documents were provided during the inspection:

_____

Enforcement Action:

Sanitary Sewer:	☐ None	☐ Verbal Warning	☐ Written Warning	☐ Notice of Violation	☐ Citation
Stormwater:	☐ None	☐ Verbal Warning	☐ Written Warning	☐ Notice of Violation	☐ Citation

You are hereby notified to implement the corrections or actions noted above within ____ day(s) from the date of this notice. (No later than _____).

I acknowledge that by doing business/residing in the City of San Mateo/Estero Municipal Improvement District, this facility/residence is required to implement and adhere to **Best Management Practices** and to comply with the Municipal Code Sections **SMMC 7.38/7.39 and EMID 8.37**.

Received by

Print Name: _____

Signature: _____

Title: _____

Inspected by

Inspector: _____

Phone: _____

Date: _____

Exhibit 7.10H
SEWER PREVENTATIVE MAINTENANCE "HOT SPOTS" LIST
Updated – April 24, 2024

MONTHLY SEWER PM'S						
	Location	**Linear Feet**			**Common Cond.**	**Reason for PM**
1	**31st & Hacienda**	603			ROOTS	Smartcover on MH492-13. Clean until repairs can be made by engineering. Smartcover removed due to improved maintenance. Date unknown
2	**El Camino Real @ Baywood**	263			SOLIDS	Referred to engineering for re-engineering of pipe where dips under utility junction box creating a siphon, & to replace broken ECR pipe. Baywood section removed 6-25-2012.
3	**3170 Casa de Campo**	661			FOG	Needs FOG education.
4	**Idaho (1113 College)**	1132			FOG & BAD GRADE	Pipe taps in below water level of trunk line.
5	**Indian**	1169			FOG, SOLIDS	Continue PM's until Pipe upgraded under Hwy 101.
6	**Peninsula Monthly Jet** NOTE: Flail in Jan & July	2581			FOG	Keep on a monthly – but twice a year flail line instead of jet. Refer to Source Control for FOG control & checks of grease trap.
7	**Norfolk & La Selva**	308			FOG	Added to PM's May 2008. Jet main and 100' of Lateral into Marina Market. Cleaning increased from 308 ft to 1,466ft at an unknown date
8	**1st & Delaware**	522			PAPER	Lines consistently plugged with paper.
9	**9th Ave – RR to Palm Ave**	1016			GRADE ISSUES	Continue monthly cleaning until re-engineered.
10	**315 Virginia – Monthly Flail**	338			ROOTS	Roots
11	**Winway Powerrod**	173			SOLIDS	A siphon MH

MONTHLY SEWER PM'S (continued)						
	Location	**Linear Feet**			**Common Cond.**	**Reason for PM**
12	**Shoreview**	853			BREAKS/ROOTS	2049 Shoreview – drop pipe (needs to be fixed in order to reach/cut protruding tap at 2045). Also, nozzle gets stuck at 2001 – 2005. Repairs completed, remains a monthly due to low flow
13	**9th and Laurel (Bi-Weekly)**	682			FOG, SLUDGE	FOG and sludge issues in area.
14	**Peninsula Ave Additional Lines**	735			FOG	
15	**El Parque and Los Prados**	227			SOLIDS	
	TOTAL LF:	**10,925**				

QUARTERLY SEWER PM'S						
	Location	**Linear Feet**			**Common Cond.**	**Reason for PM**
1	**25th Avenue & Lula Belle Alley**	2150			FOG	Restaurants. Needs FOG control.
2	**Bayswater & Idaho Qrtly**	3214			HEAVY FOG	Flat line – holds solids.
3	**Bromfield / Fulton Qrtly Flail**	1733			FOG / SOLIDS	Refer to Engineering for pipe replacement & size upgrade.
4	**Downtown Region 1**	1979			FOG / SOLIDS	Restaurants & Apts
5	**Downtown Region 2A**	1406			FOG / SOLIDS	Restaurants & Apts
6	**Downtown Region 2B**	6605			FOG / SOLIDS	Restaurants & Apts
7	**Downtown Region 3A**	3165			FOG / SOLIDS	Restaurants & Apts
8	**Downtown Region 3B**	2738			FOG / SOLIDS	Restaurants & Apts
9	**Downtown Region 4A**	5183			FOG / SOLIDS	Restaurants & Apts

QUARTERLY SEWER PM'S (continued)						
10	**Downtown Region 4B**	4791			FOG / SOLIDS	Restaurants & Apts
11	**Downtown Region 4C**	2097			FOG / SOLIDS	Restaurants & Apts
12	**Ellsworth / Baldwin (DT 6)**	2830			FOG / SOLIDS	Restaurants & Apts
13	**El Camino Real – Seville to 16th**	2718			FOG	Referred to Engineering for repair of sag.
14	**El Camino Real 21st to 25th**	2097			FOG	Restaurants & Apts.
15	**El Camino Real 25th to 31st**	3080			FOG	Restaurants & Apts.
16	**31st Ave – El Camino to Edison**	1449			FOG	Mall foodcourt grease. FOG Control.
17	**42nd Ave & Dumont**	709			FOG	Continue PM's & identify root control tactics.
18	**Winway Jet & Vacuum MH**	173			SOLIDS	A siphon MH
19	**1750 El Camino Real**	1085			FOG	backups from heavy FOG
20	**El Camino & El Cerrito**	194			FOG	Flat line – holds FOG.
21	**Palm Ave siphons**	166			RAGS	Siphon manholes – fill up with rags, etc.
22	**Mariners Island 6**	316			SOLIDS	Ongoing solids issues in area
23	**111 E Santa Inez**	228			SOLIDS	Solids issues in area
24	**McLellan & Curtiss**	1803			SOLIDS	Solids issues in area
25	**177 N El Camino Real**	229			SOLIDS	Solids issues in area
26	**145 Sylvan**	835			FOG	Heavy FOG
27	**Crystal Springs Road**	1145			SOLIDS	Solids issues in area

28	**37th and ECR**	472			SOLIDS	Solids issues in area
QUARTERLY SEWER PM'S (continued)						
29	**6 Fairoaks**	523			SOLIDS	Solids issues in area
30	**S Norfolk and Budd Ct**	1120			FOG, ROOTS	FOG, roots issues in areaCamilleri, SUPV
31	**Borden**	372			SOLIDS, FOG RAGS	Solids, FOG, rags issues in area Camilleri, SUPV
32	**Poinsettia**	828			ROOTS	Roots / root buildup problem in area from Pacific to Curtiss.
33	**Hamlet / Roberta / Norfolk**	1085			FOG	FOG issues in area
34	**237 Irving**	337				
35	**Fairfax & Amhurst**	148				
36	**1900 Alameda**	596				
37	**824 Highland Ave**	491				Added 2-15-22 Per Tony B. Multiple plugs.
38	**East Hillsdale Qtly**	1288			FOG	Needs FOG education & grease interceptor. Changed to quarterly 4/24/24 per Eric M.
39	**Mariners Island 2 PS to Bridgepointe Circle** *Pumpstation Rehab Complete*	1210			SAG	Pumpstation rehabilitation project complete – repair of pipe sag unknown. Changed to Qtly per Eric M. 4/24/24.
40	**Kingridge Qtly**	983			Roots	Added 2023 per Eric M.
	TOTAL LF:	**63,561**				

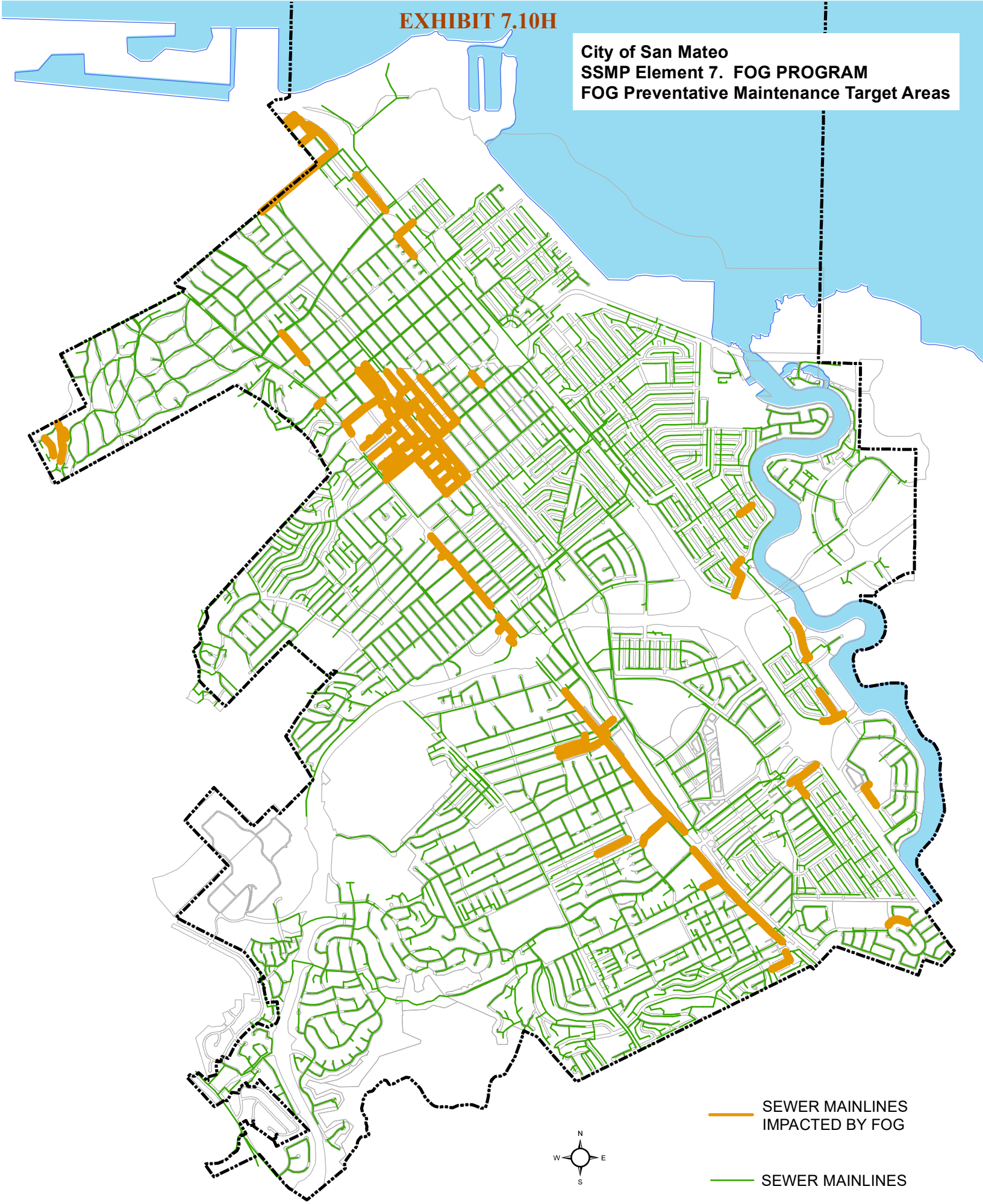
BI-ANNUAL SEWER PM'S (June, December)						
	Location	**Linear Feet**			**Common Cond.**	**Reason for PM**
1	**Alder Easement**	617			Issue?	
2	**Barneson & El Camino Real**	439			ROOTS	Changed back to Jet from PR
3	**509 Castilian Powerrod**	0			ROOTS	Refer to engineering to repair break and offset joint. CCTV'd to confirm repairs were completed, removed 4/2024 per Eric M.
4	**El Camino Real – Hillsdale to 38th**	3073			FOG	
5	**El Camino Real – 38th to 41st**	1347			FOG	
6	**Edison & Bayview**	0			ROOTS	Removed per Eric M. 4/24/24. Multiple repairs performed to fix.
7	**Holland / Norfolk / Hosmer Hydrosaw**	0			FOG	Hydrosaw to clear line. No longer Hydrosaw/Jet only per Eric M. 4/24/24
8	**Holland / Norfolk / Hosmer Jet**	1327			FOG	
9	**1865 Kehoe**	309			FOG & SOLIDS	
10	**Murphy Easement**	1752			ROOTS /BREAKS	
11	**Poplar – Crescent to El Camino**	2103			ROOTS	Refer to Engineering for pipe replacement & upsize – replace possibly past Crescent to where upper Poplar pipe was replaced.
12	**Sunnybrae School** Clean during Summer and Easter Break (July & March/April)	938			DEBRIS	
13	**19 Wildwood**	342			ROOTS	

BI-ANNUAL SEWER PM'S (June, December) (continued)						
	Location	**Linear Feet**			**Common Cond.**	**Reason for PM**
14	**258 East 40th Ave**	248			SAGS	House 258 Backs Up if line not cleared regularly b/c of sags.
15	**139 Arbor**	0			SOLIDS	Solids issues in area per sewer crew feedback. CCTV'd to confirm pipe integrity, removed 4/2024 per Eric M.
16	**Gramercy at El Cerrito (formerly 80 El Cerrito Quarterly)**	157				Sag in pipe. Clean until can be repaired.
17	**Elm Street**	941			FOG	Area notorious for FOG.
18	**20TH Avenue**	2950			DET & ROOTS	Det (from apts) & Roots (by Elks) below City Hall back up line – can overflow in City Hall.
19	**Woodbridge JAN/JULY**	0			FOG	FOG problems in area. Removed 4/24/24 per Eric M. due to PS rehab work
20	**Poplar Creek GC**	433			SOLIDS	Frequent plugs in area.
21	**Grant – 4th to 3rd**	370			FOG	Past SSOs and frequent FOG.
22	**Yew St**	2069				
23	**105 Ontario**	449			FOG/SOLIDS	Added 2022 per Eric M.
	TOTAL LF:	**19,864**				

TOTAL LINEAR FEET IN HOT-SPOT PROGRAM = 94,350

EXHIBIT 7.10H

City of San Mateo
SSMP Element 7. FOG PROGRAM
FOG Preventative Maintenance Target Areas



March 2025

Q:\pw\Field Maintenance\SEWER\SSMP\2025 SSMP Update\FOGImpactAreas_2025.mxd

City of San Mateo
Sewer System Management Plan
Appendix 7.10.I
FSE Inspection Schedule and Other Information

* Priority for inspection: L = low priority; H = high priority. High priority designation of a facility means that SIUs will be inspected annually, and all other high priority facilities are inspected no less than once every 2 years as staffing levels and workloads allow. Low priority designation of a facility means that the goal is for inspections to be conducted once every 2-3 years, but no less than once every permit cycle (5 years) as staffing levels and workloads allow.
**Note: Some facilities have more than 1 grease removal device. Most facilities with multiple grease removal devices have the same cleaning frequency requirement for all devices
***Note: TBD indicates that an inspection has not yet taken place, and this information has not yet been recorded. N/A for "tallow" columns indicates the facility does not have a fryer/use cooking oil

Restaurant Name	**Priority for Inspection*	***Grease Removal Device Cleaning Frequency*	*Tallow bin frequency*	*Tallow Company*
808 ZONE	L	1x EVERY YEAR	N/A	N/A
99 RANCH MARKET	L	1x EVERY 3 MONTHS	As needed (when full)	INTERSTATE
AKISU SUSHI BAR AND GRILL	H	1x EVERY 2 MONTHS	TBD	TBD
AL CARBON	L	1x EVERY 4 MONTHS	TBD	SEQUENTIAL
ALL SPICE	L	1x EVERY 3 MONTHS	As needed (when full)	SEQUENTIAL
AMERICANO DELI AND GRILL	L	1x EVERY 2 MONTHS	"	SEQUENTIAL
AMERICA'S HOUSE	H	1x EVERY 3 DAYS	"	DARLING INT'L
AMICI'S EAST COAST PIZZERIA	L	2x EVERY MONTH	"	SEQUENTIAL
AMIGOS GRILL	L	1x EVERY 2 WEEKS	"	KB GREASE
ANDERSEN BAKERY & CAFÉ	L	1x EVERY 3 MONTHS	N/A	N/A
ANTOINES COOKIE SHOP	L	1x EVERY 3 MONTHS	N/A	N/A
APPLE FRITTER	L	1x EVERY 2 DAYS	As needed (when full)	DARLING
ARMADILLO WILLY'S BARBECUE	L	1x EVERY MONTH	"	DARLING
ATRIA HILLSDALE	L	1x EVERY MONTH	"	DARLING
AVENIDA RESTAURANT	L	1x EVERY 2 WEEKS	"	BAY AREA RESTAURANT SERVICES
AY CARAY TAQUERIA	L	1x EVERY MONTH	N/A	N/A
AYALA PRODUCE MARKET	L	1x EVERY 3 MONTHS	N/A	N/A
B STREET & VINE	L	1x EVERY WEEK	TBD	TBD
BAGEL BOX & COFFEE	L	1x EVERY 6 MONTHS	N/A	N/A
BAMBU SAN MATEO	L	1x EVERY 4 MONTHS	N/A	N/A
BARFIA USA, LLC	L	1x EVERY 6 MONTHS	N/A	N/A
BAY AREA CORPORATE CATERING	L	1x EVERY WEEK	TBD	TBD
BAY WATCH RESTAURANTTAURANT	H	1x EVERY 2 MONTHS	As needed (when full)	DARPRO
BEACH HUT DELI SAN MATEO	L	1x EVERY 6 MONTHS	N/A	N/A
BEACH PARK PLAZA	L	1x EVERY 3 WEEKS	N/A	N/A
BEARD PAPA'S SWEETS	L	1x EVERY 3 MONTHS	N/A	N/A
BEL MATEO BOWL	L	1x EVERY 3 MONTHS	TBD	TBD
BELLINI BISTRO	H	1x EVERY 6 WEEKS	As needed (when full)	UNIVERSAL RESTAURANT SVCS
BIZZA	H	1x EVERY TWO WEEKS	"	UNIVERSAL RESTAURANT SVCS
BJ'S RESTAURANT #443	L	1x EVERY 3 MONTHS	"	DARLING
BLUE BOTTLE COFFEE	L	1x EVERY 6 WEEKS	N/A	N/A
BLUE BOTTLE COFFEE	L	1x EVERY 6 WEEKS	N/A	N/A
BLUE WHALE	L	1x EVERY 2 MONTHS	As needed (when full)	HANDLED BY MALL
BONCHON	L	1x EVERY 3 MONTHS	"	SEQUENTIAL
BROOKSIDE SKILLED NURSING	L	1x EVERY WEEK	N/A	N/A
BURGER KING #3323	L	1x EVERY 3 MONTHS	As needed (when full)	ONE MORE TIME INC
BUSINESS PARK CAFÉ	H	1x EVERY 3 MONTHS	"	DARLING
CAFÉ 2K	L	1 X EVERY QUARTER	N/A	N/A
CAFÉ SAVINI	L	1x EVERY 6 MONTHS	"	PIONEER TRANSPORT
CALIFORNIA CATERING (ELKS LODGE)	H	1x EVERY 3 MONTHS	As needed (when full)	DARLING
CALIFORNIA CUISINE	L	1x EVERY MONTH	TBD	TBD
CALIFORNIA PIZZA KITCHEN	H	1x EVERY MONTH	As needed (when full)	SEQUENTIAL
CARL'S JR RESTAURANT	L	1x EVERY 3 MONTHS	"	ONE MORE TIME INC
CELIA'S #2 MEXICAN RESTAURANT	L	1x EVERY MONTH	"	INTERSTATE
CELIA'S MEXICAN RESTAURANT	L	1x EVERY 2 WEEKS	"	DARLING INTL

CENTRAL MARKET	L	1x EVERY 6 MONTHS	"	PIONEER
CENTRAL PARK BISTRO	L	1x EVERY 2 MONTHS	"	SEQUENTIAL
CENTURY 12	L	1x EVERY 3 MONTHS	N/A	NA
CHABAD NORTH PENINSULA	L	1x EVERY 3 MONTHS	N/A	N/A
CHARLIE'S TAQUERIA	L	1x EVERY MONTH	As needed (when full)	SEQUENTIAL
CHARM THAI EATERY	H	1x EVERY 2 MONTHS	"	UNIVERSAL RESTAURANT SERVICE INC.
CHAVEZ SUPERMARKET #10	H	1x EVERY 3 MONTHS	"	AMERIGUARD MAINTENANCE SERVICES
CHEESECAKE FACTORY, THE	L	1x EVERY MONTH	"	LIQUID ENVIRONMENTAL
CHEF ZHAO BISTRO	H	1x EVERY 2 WEEKS	"	BAY AREA RESTAURANT SERVICES
CHESS CORNER RETAIL CENTER	L	1x EVERY 3 MONTHS	"	PIONEER LIQUID
CHEUNG HING BBQ RESTAURANT	L	2x EVERY MONTH	"	DARPRO SOLUTIONS
CHEZ XUE	L	1x EVERY 2 MONTHS	"	GREASE TRAP CLEANERS LLC
CHILD NUTRITION SERVICES	L	1x EVERY 2 YEARS	N/A	N/A
CHIPOTLE MEXICAN GRILL #1517	L	1X EVERY 3 MONTHS	As needed (when full)	ALL VALLEY ENV.
CHIPOTLE MEXICAN GRILL #2028	L	1 X EVERY 3 MONTHS	"	ALL VALLEY ENV.
CHUAN CHIM THAI CUISINE	L	2x PER YEAR	"	A-1 SEPTIC TANK
CINEPOLIS LUXURY CINEMAS	L	1 X EVERY 3 MONTHS	"	INTERSTATE
CLAY OVEN CUISINE OF INDIA	H	1x EVERY MONTH	"	DARLING
COBANI GYRO & KEBAB	L	2x EVERY WEEK	"	BAY AREA RESTAURANT SERVICES
COOKIEZ BY SARA	L	1x EVERY 2 WEEKS	N/A	N/A
COSTCO WHOLESALE # 147	L	1x EVERY 3 MONTHS	As needed (when full)	DAR PRO
COURTYARD BY MARRIOTT FOSTER CITY	L	1x EVERY MONTH	"	AMERIGAURD/DARO PRO
CROWNE PLAZA HOTEL	H	1x EVERY MONTH	"	DARLING
CRUMBL - FOSTER CITY	L	1X EVERY 2 MONTHS	TBD	TBD
CUBAN KITCHEN	L	1x EVERY MONTH	As needed (when full)	SEQUENTIAL
CURRY UP NOW/MORTAR AND PESTLE	H	1x EVERY MONTH	"	SEQUENTIAL
DAEHO KALBIJJIM & BEEF SOUP	L	TBD	TBD***	TBD
DAIKI SUSHI	L	2x EVERY MONTH	As needed (when full)	SEQUENTIAL
DASH JAPANESE TAPAS & OMAKASE	H	1x EVERY TWO MONTHS	"	GOLDEN VALLEY PUMPING
DENNY'S RESTAURANT #8538	L	1x EVERY 2 MONTHS	"	ONE MORE TIME INC
DESSERT REPUBLIC	L	1x EVERY MONTH	"	BAY AREA RESTAURANT SERVICES
DONUT DELITE	L	1x EVERY 2 WEEKS	"	GOLDEN VALLEY PUMPING
DOUGH ZONE DUMPLING HOUSE	L	1X EVERY 2 MONTHS	N/A	N/A
DRAEGERS SUPERMARKET	L	1x EVERY 4 MONTHS	As needed (when full)	DARLING
DULZURA	L	1x EVERY MONTH	"	DARLING
DUMPLING KITCHEN	L	1x EVERY WEEK	TBD	TBD
EJC CHESS DRIVE (2011-2019 CHESS DR)	L	1x EVERY 3 MONTHS	As needed (when full)	SEQUENTIAL
EL PALENQUE TAQUERIA	L	1x-2x EVERY MONTH	N/A	N/A
EL RINCONCITO CATRACHO	L	1x EVERY MONTH	TBD	TBD
EL SINALOENSE RESTAURANT	L	1x EVERY WEEK	As needed (when full)	DARLING
ESPETUS CHURRASCARIA	H	1x EVERY MONTH	N/A	N/A
ETERNA PRIMAVERA	H	1x EVERY 2 MONTHS	As needed (when full)	UNIVERSAL
FALAFEL TAZAH	L	2x PER YEAR	"	SEQUENTIAL
FEN CUISINE 650 LLC.	L	1x EVERY 2 MONTHS	"	SEQUENTIAL
FERNANDO'S RESTAURANT	H	1x EVERY WEEK	"	SEQUENTIAL
FIELDWORK BREWING	L	1 X EVERY 3-6 MONTHS	N/A	N/A
FIERO CAFFE	L	1 x EVERY 2 MONTHS	As needed (when full)	GRAINERS
FIESTA LATINA MARKET	H	1x EVERY MONTH	"	SEQUENTIAL
FIRE WINGS	L	1 x EVERY MONTH	"	RESTAURANT TECHNOLOGIES
FISH WITH YOU	L	1X EVERY 3 MONTYHS	"	STATE OIL COMPANY
FIVE GUYS BURGERS & FRIES	L	1x EVERY 2 MONTHS	"	DARLING

FLETCH'S TAQUERIA	L	1x EVERY MONTH	"	INTERSTATE
FLORES	H	1x EVERY MONTH	"	SEQUENTIAL
FOREIGNER	L	1x EVERY 1-3 MONTHS	"	SEQUENTIAL
FORTUNE STAR RESTAURANT	L	2x EVERY MONTH	"	SEQUENTIAL
FRANKLIN TEMPLETON	L	1x EVERY 3 MONTHS	"	DAR PRO
FUJI SUKIYAKI	L	1x EVERY 2 WEEKS	"	H.P. OIL
FURAGU SUSHI	H	1x EVERY MONTH	"	SEQUENTIAL
GAO VIET KITCHEN	L	1x EVERY MONTH	"	SSF LOCATION
GOBI MONGOLIAN GRILL	L	2x PER YEAR	"	TRINITY LIQUID WASTE SERVICES
GOLDEN BELL DONUTS	L	2x EVERY YEAR	N/A	N/A
GOLDEN WOK BISTRO	H	1x EVERY MONTH	As needed (when full)	DARLING
GUADALAJARA GRILL	L	1x EVERY WEEK	"	SEQUENTIAL
GYU KAKU-SAN MATEO	L	1x EVERY 3 MONTHS	"	SEQUENTIAL/ENCORE OILS
HAAGEN-DAZ SHOP 1299	L	1x EVERY 2 MONTHS	N/A	N/A
HAMPTON INN & SUITES SAN MATEO	L	1x EVERY YEAR	TBD	TBD
HAPPY LAMB HOT POT	L	1x EVERY 2 WEEKS	As needed (when full)	UNIVERSAL RESTAURANT SERVICE
HAPPY LEMON	L	2x PER YEAR	N/A	N/A
HEIDI'S PIES	L	1x EVERY WEEK	As needed (when full)	DARLING
HILLSDALE SHOPPING CENTER	L	1x EVERY 3 MONTHS	"	SEQUENTIAL
HILTON GARDEN INN - SAN MATEO	H	1x EVERY MONTH	TBD	TBD
HIMAWARI TEI	L	1x EVERY MONTH	As needed (when full)	TRAP RECYCLERS
HIRO NORI CRAFT RAMEN	L	1x EVERY MONTH	"	BUILDING PROVIDES
HOLIDAY INN, SAN MATEO	H	1x EVERY 3 MONTHS	"	PIONEER
HOT WOK BISTRO	L	1x EVERY WEEK	"	GOLDEN VALLEY PUMPING
HOT WOK CAFE	L	1x EVERY 2 MONTHS	"	PIONEER
HOTARU JAPANESE RESTAURANT	H	1x EVERY MONTH	"	SEQUENTIAL
HUMMUS MEDITERRANEAN KITCHEN	L	1x EVERY MONTH	"	SEQUENTIAL
IHOP RESTAURANT #3063	L	1x EVERY 3 MONTHS	"	DAR PRO
IKES PLACE	L	1x EVERY MONTH	"	DAR PRO
ILLUMINA	L	4x PER YEAR	"	A-1 SEPTIC
INDIA CASH & CARRY	L	2x PER YEAR	"	SEQUENTIAL
IZAKAYA GINJI	L	1x EVERY 3 MONTHS	"	INTERSTATE
IZAKAYA MAI	L	1x EVERY MONTH	"	DARLING
JACK IN THE BOX #495	L	1x EVERY 3 MONTHS	"	RESTAURANT TECHNOLOGIES
JACK'S PRIME BURGERS & SHAKES	L	1x EVERY MONTH	"	BAY AREA RESTAURANT SERVICES
JACKS RESTAURANT AND BAR	L	1x EVERY 2 MONTHS	"	LIQUID ENVIRONMENTAL SOLUTIONS
JEFFREY'S HAMBURGER COURT	H	1x EVERY 3 MONTHS	"	SEQUENTIAL
JERSEY MIKES SUBS	L	1x EVERY 3 MONTHS	TBD	TBD
JETFINITY	L	1x EVERY MONTH	TBD	TBD
JOHNNY'S FIRST TOAST	L	1x EVERY WEEK	As needed (when full)	SEQUENTIAL
JOY SUSHI	H	EVERY 2 MONTHS	"	SEQUENTIAL
JOYS RESTAURANT	H	1x EVERY MONTH	"	BENTLEY BIOFUELS
JUANITA CHAPINA	H	1x EVERY 2 WEEKS	"	SELF
JUN YUE CHINESE RESTAURANT	L	TBD	TBD***	TBD
KARAAGE BURGER	L	1x EVERY 3 MONTHS	As needed (when full)	BAY AREA RESTAURANT SERVICE
KATS VIETNAM HOUSE	L	1x EVERY MONTH	"	KRAUSE & NAGY
KAZ TERIYAKI GRILL	H	1x EVERY MONTH	"	KB GREASE
KENTA RAMEN	H	1x EVERY 2 MONTHS	"	SEQUENTIAL
KIKI'S COFFEE SHOP	L	1x EVERY MONTH	"	KB GREASE
KITCHENTOWN	L	1x EVERY MONTH	"	PIONEER
KIYOI - FISH WAREHOUSE	H	TBD	TBD***	TBD

KOBE YA	L	1x EVERY 2 WEEKS	As needed (when full)	SEQUENTIAL
KOKKO	L	1x EVERY MONTH	"	SEQUENTIAL
KURO OBI BY IPPUDO	L	1x EVERY 3 MONTHS	"	MALL HANDLES
L & L HAWAIIAN BBQ	L	1x EVERY 2 MONTHS	"	SEQUENTIAL
LA FONDA DE SAN MATEO, INC.	L	1x EVERY 2 WEEKS	"	SEQUENTIAL
LA GUATEMALTECA MINI MARKET	L	1x EVERY MONTH	TBD	TBD
LA HACIENDA MARKET	L	1x EVERY MONTH	As needed (when full)	DARLING
LA HUERTA MARKET #7	L	1x EVERY MONTH	"	SEQUENTIAL
LA LANTERNA RESTAURANT	L	1x EVERY WEEK	"	SEQUENTIAL
LA MORENITA MARKET	L	1x EVERY MONTH	N/A	N/A
LA NORTENA TORTILLA FACTORY	H	1x EVERY WEEK	As needed (when full)	INTERSTATE
LA PINATA MEXICATTESSEN	L	1x EVERY 2 WEEKS	"	SELF
LAS PALOMAS TAQUERIA	L	1x EVERY MONTH	N/A	N/A
LITTLE CAESAR'S PIZZA	H	1x EVERY 3 MONTHS	N/A	N/A
LITTLE HUNAN RESTAURANT	L	1x EVERY 2 WEEKS	As needed (when full)	DARLING
LITTLE SHANGHAI	L	1x EVERY WEEK	"	SEQUENTIAL
LIUYISHOU HOTPOT, SAN MATEO	H	1x EVERY MONTH	"	SEQUENTIAL
LOBSTER CHEF	L	1x EVERY 2 MONTHS	"	PROPERTY MNG HANDLES
LOS MORENO TAQUERIA	L	1x EVERY 2 WEEKS	"	SEQUENTIAL
LUCETI'S ON 25TH AVE	L	1x EVERY WEEK	"	SEQUENTIAL
LUCKY STORES #710	L	1x EVERY 2 MONTHS	"	BAKER COMMODITIES
MARIA'S RESTAURANT	H	1x EVERY MONTH	"	DARLING
MARINA FOOD #1	H	1x EVERY MONTH	"	DAR PRO
MARINA PLAZA TRASH ENCLOSURE	H	1x EVERY 2 WEEKS	"	PROPERTY MNG HANDLES
MARINER'S POINT GOLF LINKS	L	1x EVERY MONTH	"	SEQUENTIAL
MARISCOS Y TAQUERIA IXPALINO SINALOA	L	2x EVERY MONTH	"	SEQUENTIAL
MARUYAMA	L	1x EVERY MONTH	"	SEQUENTIAL
MCDONALD'S #5804	L	1x EVERY 3 MONTHS	"	RESTAURANT TECHNOLOGIES
MCDONALDS RESTAURANT	H	1x EVERY 3 MONTHS	"	RESTAURANT TECHNOLOGIES
MEET FRESH SAN MATEO	L	1x EVERY DAY	N/A	N/A
MENDOCINO FARMS SANDWICH MARKET	L	1x EVERY 3 MONTHS	"	SEQUENTIAL
MI RANCHO MARKET	L	1x EVERY 2 MONTHS	"	SEQUENTIAL
MINAKO ORGANIC-ISH JAPANESE CUISINE	L	1x EVERY MONTH	N/A	N/A
MOD PIZZA	L	1x EVERY 3 MONTHS	N/A	N/A
MOLLIE STONE'S MARKET	H	1x EVERY MONTHS	As needed (when full)	SACRAMENTO COMPANY
MORDISKO BANH MI	L	1x EVERY MONTH	TBD	TBD
MR. GREEN BUBBLE	L	1x EVERY MONTH	As needed (when full)	PROPERTY MNG HANDLES
MR. PIZZA MAN	L	2x EVERY MONTH	"	INTERSTATE
MUMU HOT POT	L	2x EVERY YEAR	"	SEQUENTIAL
MYUNG DONG TOFU CABIN (YU & YOO INC.)	L	1x EVERY MONTH	"	PIONEER LIQ TRANSP
NEAL'S COFFEE SHOP	L	1x EVERY WEEK	"	DARLING
NEIGHBORHOOD MARKET AND CAFÉ	H	1x EVERY 2 WEEKS	TBD	TBD
NEW PHO SAIGON	L	1x EVERY MONTH	As needed (when full)	SEQUENTIAL
NEW THAI ELEPHANT	L	TBD	TBD***	TBD
NEW WING FAT	H	1x EVERY 2 WEEKS	As needed (when full)	SEQUENTIAL
NEW YORK PIZZA LLC	L	1x EVERY MONTH	"	DARLING
NOMA SUSHI	L	1x EVERY MONTH	"	SEQUENTIAL
NOODLE SHOP	L	1x EVERY WEEK	"	SEQUENTIAL
NORDSTROM MARKETPLACE CAFÉ	L	1x EVERY MONTH	N/A	N/A
NORTH BEACH PIZZA	H	1x EVERY MONTH	As needed (when full)	SEQUENTIAL
OCEANIC RESTAURANT	L	1x EVERY WEEK	"	SEQUENTIAL

OX 9 LANZHOU HANDPULLED NOODLES	L	1x EVERY WEEK	"	UNIVERSAL RESTAURANT SERVICE
PACIFIC CATCH	L	1x EVERY MONTH	"	RESTAURANT TECHNOLOGIES
PACIFIC DINING (CSM CAFETERIA)	L	1x EVERY 3 MONTHS	"	SEQUENTIAL
PACIFIC RIM INTERNATIONAL SCHOOL	H	1x EVERY DAY	N/A	N/A
PALETTE TEA GARDEN	L	1x EVERY 3 WEEKS	As needed (when full)	SEQUENTIAL
PANADERIA GUATEMALTECA TIKAL	L	1x EVERY 4 MONTHS	TBD	TBD
PANCHO VILLA TAQUERIA	H	1x EVERY 2 WEEKS	As needed (when full)	GOLDEN GATE ENVIRONMENTAL
PANDA EXPRESS #1923	L	1x EVERY 3 MONTHS	"	DARLING
PANDA EXPRESS #3018	L	1x EVERY 3 MONTHS	"	HANDLED BY MALL
PANTRY RESTAURANT, THE	H	1x EVERY MONTH	"	INTERSTATE
PAPA JOHN'S PIZZA	L	1x EVERY 3 MONTHS	N/A	N/A
PAR3 AT POPLAR CREEK	L	1x EVERY 3 MONTHS	As needed (when full)	DAR PRO
PATIO COFFEE SHOP #1	L	1x EVERY MONTH	TBD	TBD
PAUL MARTIN'S AMERICAN GRILL	L	1x EVERY 2 MONTHS	As needed (when full)	SRC PUMPING
PAUSA BAR & COOKERY	L	1x EVERY MONTH	"	KB GREASE
PEKING ALLEY	H	1x EVERY WEEK	"	AMERIGUARD MAINTENANCE SERVICES
PENINSULA JEWISH COMMUNITY CENTER	L	1x EVERY 9 MONTHS	N/A	N/A
PENINSULA REGENT	H	1x EVERY 3 MONTHS	As needed (when full)	DAR PRO
PHILZ COFFEE	L	1x EVERY YEAR	N/A	N/A
PHO ELEMENT	H	1x EVERY 2 MONTHS	As needed (when full)	CENTRAL GREASE COMPANY
PHO LITTLE SAIGON	L	1x EVERY WEEK	"	SEQUENTIAL
PIAZZA'S FINE FOODS	L	1x EVERY 2 WEEKS	N/A	N/A
PINSTRIPES	L	1x EVERY 2 MONTHS	As needed (when full)	RESTAURANT TECHNOLOGIES
PIZZA MY HEART	L	1x EVERY 3 MONTHS	N/A	N/A
PORTERHOUSE STEAK	L	1x EVERY MONTH	As needed (when full)	SEQUENTIAL
POTATO GUYS	L	1x EVERY 3 MONTHS	TBD	TBD
QUICKLY	L	1x EVERY MONTH	As needed (when full)	PROPERTY MNG HANDLES
RAINBOW PIZZA	L	1x EVERY MONTH	"	PIONEER
RAMEN DOJO	L	1x EVERY TWO WEEKS	"	DARLING
RAMEN PARLOR	H	1x EVERY MONTH	"	DARLING
RAVIOLI HOUSE	L	1x EVERY 2 WEEKS	NA	N/A
RESIDENCE INN BY MARRIOTT	H	1x EVERY 3 MONTHS	As needed (when full)	SEQUENTIAL
RICKSHAW CORNER	H	1x EVERY WEEK	"	CA BIO FUELS
RIN-TEI RESTAURANT	L	1x EVERY WEEK	"	GOLDEN VALLEY PUMPING
RISE WOODFIRE	L	1x EVERY MONTH	"	GREASE TRAP CLEANERS
RITHA INDIAN RESTAURANT	H	1x EVERY MONTH	"	EVERGREEN
ROAM ARTISAN BURGERS	L	1x EVERY MONTH	"	BAY AREA RESTAURANT SERVICES
ROBLOX STATION 1	L	1x EVERY 6 MONTHS	"	SEQUENTIAL
ROBLOX STATION 2	L	1x EVERY 6 MONTHS	"	SEQUENTIAL
ROBLOX STATION 5	L	1x EVERY 6 MONTHS	"	SEQUENTIAL
ROMOLO'S CANNOLI	L	1x EVERY 3 MONTHS	"	KB GREASE
ROUND TABLE PIZZA	L	1x EVERY 3 MONTHS	"	SEQUENTIAL
ROUND TABLE PIZZA	L	1x EVERY MONTH	"	SEQUENTIAL
ROUND TABLE PIZZA #1000	L	1x EVERY MONTH	"	SEQUENTIAL
ROUND TABLE PIZZA #880	L	1x EVERY MONTH	"	SEQUENTIAL
S EL CAMINO TAQUERIA	L	1x EVERY 2 WEEKS	TBD	TBD
SAFEWAY #639	L	1x EVERY MONTH	As needed (when full)	SACRAMENTO RENDERING COMPANY
SAFEWAY #694	L	1x EVERY MONTH	"	SACRAMENTO RENDERING COMPANY
SAFEWAY #970	L	1x EVERY MONTH	"	SACRAMENTO RENDERING COMPANY
SAFEWAY #999	H	1x EVERY 3 MONTHS	"	SACRAMENTO RENDERING COMPANY
SAIGON CITY RESTAURANT	L	1x EVERY MONTH	TBD	TBD

SAJJ MEDITERRANEAN	L	1x EVERY MONTH	As needed (when full)	GREASE TRAP CLEANERS
SAN MATEO CO. EVENT CENTER	L	1x EVERY 6 MONTHS	TBD	TBD
SAN MATEO FOOD MALL	H	1x EVERY 6 MONTHS	As needed (when full)	SEQUENTIAL
SAN MATEO MEDICAL CENTER	L	1x EVERY 6 MONTHS	TBD	TBD
SAN MATEO PRIME	L	1x EVERY MONTH	As needed (when full)	KB GREASE
SAN MATEO SENIOR CENTER	L	1x EVERY YEAR	N/A	N/A
SANDWICH MONKEY	H	1x EVERY 6 MONTHS	N/A	N/A
SANTA RAMEN	L	1x EVERY WEEK	As needed (when full)	DAR PRO
SARKU JAPAN	L	1x EVERY 3 MONTHS	"	HANDLED BY MALL
SEAPOT	L	1x EVERY 2 WEEKS	"	DARPRO
SENIORE'S PIZZA	L	1x EVERY 2 WEEKS	"	DARLING
SERVERS STANDING BY	L	1x EVERY MONTH	"	GREASE TRAP CLEANERS LLC
SHABU WAY	L	1x EVERY 2 WEEKS	N/A	N/A
SHAKE SHACK #1298	L	1x EVERY MONTH	As needed (when full)	RESTAURANT TECHNOLOGIES
SHARED TRASH ENCLOSURE	L	1x EVERY MONTH	"	MAHONEY ENVIRONMENTAL
SHARETEA	L	1x EVERY YEAR	TBD***	TBD
SHENG KEE BAKERY	L	1x 2 MONTH	As needed (when full)	DARLING
SHIHLIN TAIWAN STREET SNACKS	L	1x EVERY MONTH	"	SEQUENTIAL
SHIKI JAPANESE RESTAURANT	H	1x EVERY MONTH	"	SEQUENTIAL
SHIKI JAPANESE RESTAURANT	L	1x EVERY 3 MONTHS	"	SEQUENTIAL
SIBBY'S CUPCAKERY	L	1x EVERY 2 MONTHS	N/A	N/A
SILVER HOUSE RESTAURANT	H	1x EVERY WEEK	As needed (when full)	SEQUENTIAL
SILVER LAKE SEAFOOD REST	L	1x EVERY WEEK	"	SEQUENTIAL
SIZZLING LUNCH	L	2X PER YEAR	"	UNIVERSAL
SNACKS ANTOJITOS MEXICANOS	L	1x EVERY 2 MONTHS	"	SELF
SOLE RISTORANTE ITALIANO	L	1x EVERY MONTH	"	MAHONEY
SONY COMPUTER ENTERTAINMENT AMERICA	L	1x EVERY 3 MONTHS	"	SEQUENTIAL
SOON'S TOFU AND KOREAN BBQ	H	1x EVERY 3 MONTHS	"	SEQUENTIAL
SOUTHWEST CONCESSIONS (KELLY'S DELI)	H	1x EVERY 2 WEEKS	"	DARLING
SPICY EMPIRE	L	1x EVERY MONTH	"	SEQUENTIAL
STARBIRD	L	1x EVERY 2 MONTHS	"	SEQUENTIAL
STARBUCKS	L	1x EVERY MONTH	N/A	N/A
STARBUCKS #5336	L	1x EVERY 3 MONTHS	N/A	N/A
STARBUCKS #5602	L	1x EVERY MONTH	N/A	N/A
STARBUCKS #5934	L	2x PER YEAR	N/A	N/A
STRATFORD, THE	L	1x EVERY MONTH	As needed (when full)	DARLING
STREET FOOD CAFÉ (INSHOU)	L	1x EVERY MONTH	As needed (when full)	PIONEER
SUBWAY SANDWICHES #15994	L	1x EVERY 6 MONTHS	N/A	N/A
SUBWAY SANDWICHES #46400	L	1x EVERY 6 MONTHS	N/A	N/A
SUBWAY SANDWICHES #52556	L	1x EVERY 3 MONTHS	N/A	N/A
SUNRISE OF SAN MATEO	L	1x EVERY 3 MONTHS	N/A	N/A
SUPER DUPER BURGER	L	1x EVERY 2 MONTHS	As needed (when full)	MAHONEY ENVIRONMENTAL
SUPERSTAR DIM SUM AND SEAFOOD RESTAURANT	H	1x EVERY 2 WEEKS	"	GREASE TRAP CLEANERS AND OIL COLLECTORS
SURUKI SUPERMARKET	L	1x EVERY 3 MONTHS	"	RD RECYCLING
SUSHI SAM'S EDOMATA	H	1x EVERY MONTH	"	EVERGREEN
SUSHI YOSHIZUMI	H	1x EVERY 1.5 MONTHS	N/A	N/A
SWEET BASIL THAI HOUSE	H	1x EVERY MONTH	As needed (when full)	DARLING
SWEET HONEY DESSERT	L	1x EVERY 3 MONTHS	"	DAR PRO
SWEET MOMENT	L	1x EVERY 3 MONTHS	"	SEQUENTIAL
TABLA INDIAN	H	1x EVERY MONTH	"	SEQUENTIAL
TACO BELL #30746	L	1x EVERY 2 WEEKS	"	LIQUID ENVIRONMENTAL SOLUTIONS

TACO BELL #30758	L	1x EVERY 3 MONTHS (Quarterly)	"	LIQUID ENVIRONMENTAL SOLUTIONS
TACO BELL #30788	L	1x EVERY 3 MONTHS (Quarterly)	"	LIQUID ENVIRONMENTAL SOLUTIONS
TACOS AL VAPOR NUEVA ITALIA	L	1x EVERY MONTH	"	DARPRO
TACOS EL GRULLENES C AND D	L	1x EVERY 3 MONTHS	"	HANDLED BY MALL
TAI ER SICHUAN CUISINE	L	1x EVERY MONTH	"	ENVIRONMENTAL LOGISTICS
TAI WU RESTAURANT	H	1x EVERY WEEK	"	SEQUENTIAL
TAISHOKEN	L	1x EVERY MONTH	"	SEQUENTIAL
TAKAHASHI MARKET	L	1x EVERY 6 MONTHS	"	DARLING
TAKI NORI HANDROLL	L	1x EVERY 4 MONTHS	"	SEQUENTIAL
TANNOURINE RESTAURANT	L	1x EVERY MONTH	"	SEQUENTIAL
TAQUERIA EL NAYARITA	L	1x EVERY 2 WEEKS	"	SEQUENTIAL
TAQUERIA LA CUMBRE	L	1x EVERY 2 WEEKS	"	SEQUENTIAL
TAQUERIA LAS PENCAS 2	L	1x PER WEEK	"	DARPRO
TAQUERIA LOS PRIMOS	L	1x EVERY WEEK	TBD	TBD
TAQUERIA LOS PRIMOS #2	L	1x EVERY WEEK	TBD	TBD
THE BARREL BISTRO WINE BAR	L	1x EVERY MONTH	As needed (when full)	GOLDEN VALLEY PUMPING
THE HABIT BURGER GRILL	L	1x EVERY 3 MONTHS	"	BAKER COMMODITIES
THE NUEVA SCHOOL	L	1x EVERY 1 MONTH	"	TRINITY LIQUID WASTE SERVICES
THE REFUGE	L	1x EVERY 2 MONTHS	"	BAY POWERWASH
THONGLOR THAI BISTRO	L	1x EVERY MONTH	"	SEQUENTIAL
TIANFU RESTAURANT	H	1x EVERY MONTH	"	MAHONEY
TOA YUEN RESTAURANT	L	1x EVERY WEEK	"	DARLING
TOKIE'S DOWNTOWN	H	1x EVERY MONTH	"	PIONEER LIQUID TRANSPORT
TOMATINA	L	1x EVERY 3 MONTHS	"	AMERIGUARD
TOTORO RAMEN	L	1x EVERY MONTH	"	SEQUENTIAL
TOWN OF DUMPLING	H	1x EVERY 2 MONTHS	"	BAY AREA RESTAURANT SERVICES
TRUFFLE BUTTER POKE BAR	L	1x MONTH	"	SEQUENTIAL
UNCLE TETSU CHEESECAKE	L	1x EVERY 3 MONTHS	"	MALL HANDLES
URBAN MOMO	L	1x EVERY 2 MONTHS	"	UNIVERSAL RESTAURANT SERVICES
VELO CITY BITES	L	1x EVERY 2 MONTHS	N/A	N/A
VERKADA	L	2x EVERY MONTH	As needed (when full)	GREASE TRAP CLEANERS LLC.
VESPUCCI RISTORANTE ITALIANO	L	1x EVERY MONTH	"	3-D OIL SERVICES
VILLAGE HUMMUS	H	1x EVERY MONTH	"	EVERGREEN
VINEYARD CAFÉ, THE	L	1x EVERY 2 MONTHS	"	DARLING INT'L
VISA INC	H	1x EVERY 3 MONTHS	"	SEQUENTIAL
WAKURIYA JAPANESE KITCHEN	L	1x EVERY MONTH	TBD	TBD
WAREHOUSE BUFFET, THE	L	1x EVERY 2 MONTHS	As needed (when full)	VSP WASTEWATER MANAGEMENT
WATERFRONT PIZZA	H	1x EVERY 3 MONTHS	"	DARLING
WETZEL'S PRETZELS	L	1x EVERY MONTH	"	SEQUENTIAL
WETZEL'S PRETZELS	L	1x EVERY MONTH	"	SEQUENTIAL
WHOLE FOODS MARKET	H	1x EVERY MONTH	"	BENTLEY BIOFUELS
WILLIAM JAY CATERING INC/SUAVECITO BIRRIA & TACOS	L	1x EVERY MONTH	"	SEQUENTIAL
WING STOP #762	H	1x EVERY WEEK	"	SEQUENTIAL
WINGSTOP RESTAURANT	L	1x EVERY 3 MONTHS	"	SEQUENTIAL
WURSTHALL	H	1x EVERY MONTH	"	SEQUENTIAL
YAYOI	L	1x EVERY 3 MONTHS	"	SEQUENTIAL
YUZU SUSHI AND GRILL	L	2x EVERY MONTH	"	INTERSTATE
ZEN NOODLE BAR	L	1x EVERY WEEK	TBD	TBD
ZOOX LABS, INC	L	1x EVERY 3 MONTHS	As needed (when full)	SEQUENTIAL

SSMP
ELEMENT 10 – SSMP PROGRAM AUDITS

Appendix 10.1 – SSMP Change Log

Appendix 10.2 – SSMP Audit Blank Form

Appendix 10.3 – Recent SSMP Audit Report

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SSMP

ELEMENT 10 – SSMP Program Audits

APPENDIX 10.1

SSMP Change Log

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SSMP Change Log

Date	SSMP Element	Description of Change/Revision Made	Change Authorized by

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SSMP

ELEMENT 10 – SSMP Program Audits

APPENDIX 10.2

SSMP Audit Blank Form

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City of San Mateo
Sewer System Management Plan
20XX SSMP Triennial Internal Audit
Audit Period: May 2, 20XX to May 2, 20XX

This 20XX SSMP Triennial Internal Audit was prepared for submittal into the online CIWQS Sanitary Sewer System Database per the requirements in section 3.10 of Attachment E1 of State Water Resources Control Board Order WQ 2022-0103-DWQ ("Statewide WDR"). The City's sewer system operators' input has been considered in compiling the audit findings below.

This purpose of this audit is as follows:

- Evaluate the implementation and effectiveness of the City's Sewer System Management Plan in preventing spills;
- Evaluate the City's compliance with the Statewide WDR;
- Identify Sewer System Management Plan deficiencies in addressing ongoing spills and discharges to waters of the State; and
- Identify necessary modifications to the Sewer System Management Plan to correct deficiencies.

This report includes audit findings and recommended corrective actions and a proposed schedule for the City to address the identified deficiencies.

Each of the SSMP Elements and Sub-elements below have been graded using the following sufficiency ranking system. Written descriptions to explain rankings of SC, PC, MC, and/or DNC are added at the bottom of each Element.

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

Element I – Sewer System Management Plan Goal and Introduction	Rating
A. Does the Element include a narrative introduction section that discusses (1) regulatory context, (2) SSMP update schedule, (3) sewer system asset overview? a. General description of program, implementation, and updates b. Schedule for SSMP updates and audits c. Asset overview including location, service area boundary and reference to sewer system maps, population and community served, system size, structures diverting stormwater to the sewer system, data management systems, sewer system ownership and operation responsibilities between the City and private entities for upper and lower sewer laterals, estimated number or percent of residential, commercial, and industrial service connections, and unique service boundary conditions and challenge(s).	
B. Are the City's goals consistent with the following Statewide WDR goals: a. Properly manage, operate, and maintain all parts of the City's sanitary sewer system(s); b. Reduce and prevent spills; and c. Contain and mitigate spills that do occur.	
Discussion: •	

Element II – Organization		Rating
A.	Are City LRO and data submitters stated in the SSMP currently identified in CIWQS? Have they been properly designated by the City?	
B.	Does the SSMP include names, contact information (titles, telephone numbers, email) for management, administrative and maintenance positions responsible for specific Elements of the SSMP?	
C.	Are the organizational lines of authority current and up-to-date on the City Organization chart?	
D.	Is the chain of communications for spill reporting complete from complaint through final approval of all spill event reporting?	
Discussion:		

Element III – Legal Authority		Rating
A.	Does the Element include an electronic link to City sewer system use ordinances, service agreements or other legally binding requirements?	
B.	Have the sewer system use ordinances been changed or modified recently? If so, are the changes identified in the SSMP Change Log?	
C.	Does the Element include the following specific legal authorities: a. Prevent illicit discharges to the sewer system? b. Procedures for collaboration with storm sewer agencies for access during spill responses? c. Assure proper design and construction of connections to sewer system assets? d. Proper access agreements and easement to assure for maintenance, repair s and replacement of sewer laterals owned or operated by the City? e. Easement accessibility agreements for sewer system O&M, as applicable? f. Proper enforcement authorities for violations of sewer program legal requirements? g. Has the City conducted enforcement activities during the audit period? If so, please list the action.	
Discussion:		

Element IV – Operations and Maintenance Program		Rating
A.	Does the City have an updated sewer system map and procedures for updating and submitting the map? Does the map include gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities within the sewer system service area boundaries?	
B.	Is the service area boundary map current? Will it be uploaded to CIWQS prior to 12/31/25?	
C.	Does the City have a scheduling system and a data collection system for preventive operation and maintenance activities? The scheduling system must include: Inspection and maintenance activities; higher-frequency inspections and maintenance of known problem areas, including areas with tree root problems; regular visual and closed-circuit television (CCTV) inspections of manholes and sewer pipes.	
D.	Does the City's data include information on system areas/components prone to root-intrusion potentially resulting in system backup and/or failure.	
E.	Is in-house and external training provided on a regular basis for sanitary sewer system operations and maintenance staff and contractors? The training must cover: The requirements of the Statewide WDR; Spill Emergency Response Plan procedures and practice drills; spill volume estimation; and electronic CIWQS reporting procedures data submitters.	
F.	Does the City maintain an inventory of sewer system equipment, including the identification of critical replacement and spare parts.	
Discussion:		

Element V – Design and Performance Provisions		Rating
A.	Does the City's design criteria and construction standards and specifications address the construction, installation, repair, rehabilitation, and hydraulic capacity needs for existing and proposed system infrastructure components, including but not limited to pipelines, pump stations, and other system appurtenances?	
B.	Does the City have procedures and standards for inspection and testing of newly constructed, newly installed, repaired, and rehabilitated system pipelines, pumps, and other equipment and appurtenances?	
Discussion:		

Element VI – Spill Emergency Response Plan		Rating
A.	Does the City have a spill emergency response plan that describes procedures to reduce spill volumes and collect information for prevention of future spills? Does the plan include procedures for the following: a. Address emergency system operations, traffic control and other necessary response activities; b. Contain a spill and prevent/minimize discharge to waters of the State or any drainage conveyance system; c. Minimize and remediate public health impacts and adverse impacts on beneficial uses of waters of the State; d. Remove sewage from the drainage conveyance system; e. Clean the spill area and drainage conveyance system in a manner that does not inadvertently impact beneficial uses in the receiving waters; f. Implement technologies, practices, equipment, and interagency coordination to expedite spill containment and recovery; g. Conduct post-spill assessments of spill response activities; h. Annually, review and assess effectiveness of the Spill Emergency Response Plan and update the Plan as needed.	
B.	Does the SERP include procedures for notification to primary responders, appropriate local officials, and appropriate regulatory agencies of a spill in a timely manner? Do the SERP procedures comply with the documentation, notification, monitoring and reporting requirements of the Statewide WDR? Note that all spill notification and reporting requirements meet during the audit period. No changes in the SERP or spill procedures were required as a result of post-spill assessments.	
C.	Does the SERP include procedures for notification to other potentially affected entities (health agencies, water suppliers, etc.) of spills that potentially affect public health or reach waters of the State?	
D.	Does the SERP require appropriate staff and contractors who implement the Spill Emergency to be appropriately trained?	
E.	Has the City implemented pre-planned coordination and collaboration with storm drain and other utility agencies? Is the coordination documented?	
F.	Did the City prepare and submit to CIWQS spill event technical reports within the required timeline?	
Discussion:		

Element VII – Sewer Pipe Blockage Control Program		Rating
A.	Does the City's SSMP include procedures for the evaluation of whether a sewer pipe blockage control program is needed to control fats, oils, grease, rags and debris. The procedures should include: • An implementation plan and schedule for a public education and outreach program that promotes proper disposal of pipe-blocking substances; • A plan and schedule for the disposal of pipe-blocking substances generated within the sanitary sewer system service area.	
B.	Do the City's procedures include: • The legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages; • Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, best management practices requirements, recordkeeping and reporting requirements; • Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the fats, oils, and grease ordinance; • An identification of sanitary sewer system sections subject to fats, oils, and grease blockages and establishment of a cleaning schedule for each section; and • Implementation of source control measures for all sources of fats, oils, and grease reaching the sanitary sewer system for each section identified above.	
C.	Does the City have a comprehensive public outreach and education program including schedule for activities?	
D.	Does the City have a plan and schedule for disposal of pipe blockage substances?	
Discussion:		

Element VIII – System Evaluation, Capacity Assurance and Capital Improvements	Rating
A. Does the City's SSMP include procedures and activities for: • Routine evaluation and assessment of system conditions; • Capacity assessment and design criteria; • Prioritization of corrective actions; and • A capital improvement plan.	
B. Does the SSMP include procedures and/or discuss completed tools that identify system components with hydraulic deficiency and/or limited capacity, considering: • Dry-weather peak flow conditions that cause or contributes to spill events; • The appropriate design storm(s) or wet weather events that causes or contributes to spill events; • The capacity of key system components; and • Major sources that contribute to the peak flows associated with sewer spills.	
C. Does the SSMP include procedures to: • Evaluate the sanitary sewer system assets utilizing the best practices and technologies available; • Identify and justify the amount (percentage) of its system for its condition to be assessed each year; • Prioritize the condition assessment of system areas that: o Hold a high level of environmental consequences if vulnerable to collapse, failure, blockage, capacity issues, or other system deficiencies; o Are located in or within the vicinity of surface waters, steep terrain, high groundwater elevations, and environmentally sensitive areas; o Are within the vicinity of a receiving water with a bacterial-related impairment on the most current Clean Water Act section 303(d) List; o Assess the system conditions using visual observations, video surveillance and/or other comparable system inspection methods; o Utilize observations/evidence of system conditions that may contribute to exiting of sewage from the system which can reasonably be expected to discharge into a water of the State; o Maintain documents and recordkeeping of system evaluation and condition assessment inspections and activities; and o Identify system assets vulnerable to direct and indirect impacts of climate change, including but not limited to: sea level rise; flooding and/or erosion due to increased storm volumes, frequency, and/or intensity; wildfires; and increased power disruptions.	
D. Does the capacity assessment use data from existing system condition assessments, system inspections, system audits, spill history, and other available information?	

E.	Does the analysis consider the capacity of systems with regard to the following: • Flood-prone systems subject to increased infiltration and inflow, under normal local and regional storm condition; • Increased infiltration and inflow due to larger and/or higher-intensity storm events as a result of climate change; • Increases of erosive forces in canyons and streams near underground and aboveground system components due to larger and/or higher-intensity storm events; • Capacity of major system elements to accommodate dry weather peak flow conditions, and updated design storm and wet weather events; and • Necessary redundancy in pumping and storage capacities.	
F.	Are the capital recommendations prioritized to consider the severity of the consequences of potential spills?	
G.	Does the capital improvement plan include the following items: • Project schedules including completion dates for all portions of the capital improvement program; • Internal and external project funding sources for each project; • Joint coordination between operation and maintenance staff, and engineering staff/consultants during planning, design, and construction of capital improvement projects; and • Interagency coordination with other impacted utility agencies.	
Discussion:		

Element IX – Monitoring, Measurement and Program Modifications		Rating
A.	Does the SSMP include an Adaptive Management section that addresses Plan implementation effectiveness and the steps for necessary Plan improvement, including: • Maintaining relevant information, including audit findings, to establish and prioritize appropriate SSMP activities; • Monitoring the implementation and measuring the effectiveness of each Plan Element; • Assessing the success of the preventive operation and maintenance activities through tracking and reporting of selected performance indicators; • Updating Plan procedures and activities, as appropriate, based on results of monitoring and performance evaluations; and • Identifying and illustrating spill trends, including spill frequency, locations and estimated volumes.	
B.	Has the City identified and illustrated spill trends, including frequencies, locations and estimated volumes, maintenance performance results and other effectiveness indicators?	
C.	Have the performance trends resulted in modifications or changes to SSMP elements and are the changes identified in the Change Log?	
Discussion:		

Element X – Internal Audit		Rating
A.	Does the SSMP include internal audit procedures that are sufficient for the City to comply with section 5.4 (Sewer System Management Plan Audits) of the Statewide WDR?	
B.	Does the Audit Report include operational personnel participation?	
C.	Does the Audit describe SSMP effectiveness evaluated for spill impacts and include corrective actions and timelines?	
Discussion: X.A. The current SSMP includes audit requirements and timelines that were established in the prior WDR. The audit requirements from the Statewide WDR will be **incorporated into this element by December 15, 2024.** Note that although the section itself has not been updated, this SSMP is being audited in accordance with the timelines established in the Statewide WDR.		

Element XI – Communications		Rating
A.	Does the SSMP include procedures for the City to communicate with the public for: • Spills and discharges resulting in closures of public areas, or that enter a source of drinking water; • The development, implementation, and update of the SSMP, including opportunities for public input to Plan implementation and updates; • Coordination with owners/operators of systems that connect into the City's system, including satellite systems, for system operation, maintenance, and capital improvement-related activities.	
Discussion:		

SSMP

ELEMENT 10 – SSMP Program Audits

APPENDIX 10.3

Recent SSMP Audit Report

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City of San Mateo
Sewer System Management Plan
2024 SSMP Triennial Internal Audit
Audit Period: May 2, 2021 to May 2, 2024

This 2024 SSMP Triennial Internal Audit was prepared for submittal into the online CIWQS Sanitary Sewer System Database per the requirements in section 3.10 of Attachment E1 of State Water Resources Control Board Order WQ 2022-0103-DWQ ("Statewide WDR"). The City's sewer system operators' input has been considered in compiling the audit findings below.

This purpose of this audit is as follows:

- Evaluate the implementation and effectiveness of the City's Sewer System Management Plan in preventing spills;
- Evaluate the City's compliance with the Statewide WDR;
- Identify Sewer System Management Plan deficiencies in addressing ongoing spills and discharges to waters of the State; and
- Identify necessary modifications to the Sewer System Management Plan to correct deficiencies.

This report includes audit findings and recommended corrective actions and a proposed schedule for the City to address the identified deficiencies.

Each of the SSMP Elements and Sub-elements below have been graded using the following sufficiency ranking system. Written descriptions to explain rankings of SC, PC, MC, and/or DNC are added at the bottom of each Element.

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

Element I – Sewer System Management Plan Goal and Introduction	Rating
A. Does the Element include a narrative introduction section that discusses (1) regulatory context, (2) SSMP update schedule, (3) sewer system asset overview? a. General description of program, implementation, and updates b. Schedule for SSMP updates and audits c. Asset overview including location, service area boundary and reference to sewer system maps, population and community served, system size, structures diverting stormwater to the sewer system, data management systems, sewer system ownership and operation responsibilities between the City and private entities for upper and lower sewer laterals, estimated number or percent of residential, commercial, and industrial service connections, and unique service boundary conditions and challenge(s).	DNC
B. Are the City's goals consistent with the following Statewide WDR goals: a. Properly manage, operate, and maintain all parts of the City's sanitary sewer system(s); b. Reduce and prevent spills; and c. Contain and mitigate spills that do occur.	C
Discussion: • The City's SSMP begins with (prior WDR) Element 1, Goals. The updated SSMP, **to be completed by May 2, 2025**, will include a new Element 1 – SSMP Goal and Introduction – that includes all of the information listed in A.a, A.b, and A.c, above. • Completion of this new section is not expressly required to improve the effectiveness of the SSMP in preventing spills, as this section is a summary and introductory section only.	

Element II – Organization		Rating
A.	Are City LRO and data submitters stated in the SSMP currently identified in CIWQS? Have they been properly designated by the City?	DNC
B.	Does the SSMP include names, contact information (titles, telephone numbers, email) for management, administrative and maintenance positions responsible for specific Elements of the SSMP?	SC
C.	Are the organizational lines of authority current and up-to-date on the City Organization chart?	SC
D.	Is the chain of communications for spill reporting complete from complaint through final approval of all spill event reporting?	SC

Discussion:

II.A. The LRO and data submitters are not specifically identified in the SSMP. However, staff has reviewed and confirmed the LRO and data submitters listed in CIWQS.

II.B. The SSMP is missing email addresses. The remaining information (titles, telephone numbers) is included in the SSMP.

II.C, D. The City has reorganized and no longer has an Environmental Services Section. This organization chart and references will be removed from the SSMP.

The items that require updating in II.A, II.B, and II.C, above will be **completed by December 15, 2024**. These administrative changes to contact information and organization names will be updated for recordkeeping purposes. The information does not result in any changes to spill response, which continues to be implemented in compliance with the Statewide WDR.

Element III – Legal Authority		Rating
A.	Does the Element include an electronic link to City sewer system use ordinances, service agreements or other legally binding requirements?	C
B.	Have the sewer system use ordinances been changed or modified recently? If so, are the changes identified in the SSMP Change Log?	C
C.	Does the Element include the following specific legal authorities: a. Prevent illicit discharges to the sewer system? b. Procedures for collaboration with storm sewer agencies for access during spill responses? c. Assure proper design and construction of connections to sewer system assets? d. Proper access agreements and easement to assure for maintenance, repair s and replacement of sewer laterals owned or operated by the City? e. Easement accessibility agreements for sewer system O&M, as applicable? f. Proper enforcement authorities for violations of sewer program legal requirements? g. Has the City conducted enforcement activities during the audit period? If so, please list the action.	SC

Discussion:

III.B. There have been no changes to the City's Ordinances that should be reflected in the SSMP.

III.C. The SSMP includes all legal authorities listed. As related to III.C.b - Collaboration with storm sewer agencies for access during spill responses, the City manages storm sewers. The SSMP will make this clarification that sewer and stormwater functions will coordinate efforts during sewer spills. Note that III.C.d does not apply, as the City does not own or operate any portion of the private sewer lateral. Finally, the City has not conducted enforcement activities during the audit period.

The City will update the SSMP language to clarify III.C.b – Collaboration between the City's storm sewer functions for access during spill response. The changes will be included in the **May 2, 2025 SSMP update.**

Element IV – Operations and Maintenance Program		Rating
A.	Does the City have an updated sewer system map and procedures for updating and submitting the map? Does the map include gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities within the sewer system service area boundaries?	C
B.	Is the service area boundary map current? Will it be uploaded to CIWQS prior to 12/31/25?	C
C.	Does the City have a scheduling system and a data collection system for preventive operation and maintenance activities? The scheduling system must include: Inspection and maintenance activities; higher-frequency inspections and maintenance of known problem areas, including areas with tree root problems; regular visual and closed-circuit television (CCTV) inspections of manholes and sewer pipes.	C
D.	Does the City's data include information on system areas/components prone to root-intrusion potentially resulting in system backup and/or failure.	PC
E.	Is in-house and external training provided on a regular basis for sanitary sewer system operations and maintenance staff and contractors? The training must cover: The requirements of the Statewide WDR; Spill Emergency Response Plan procedures and practice drills; spill volume estimation; and electronic CIWQS reporting procedures data submitters.	C
F.	Does the City maintain an inventory of sewer system equipment, including the identification of critical replacement and spare parts.	C

Discussion:

IV.C. During the audit period, the City complied with the established schedules for gravity sewer inspection and maintenance activities. The City did not find deficiencies in or cause to modify the maintenance program during the audit period as a result of post spill assessment evaluations.

IV.D. The City records roots identified through CCTV inspection. However, an analysis of whether these roots are related to system backup or failure has not been completed. This analysis will be **completed and documented in the May 2, 2025 SSMP Update**. Also see Element 7, Pipe Blockage Control Plan.

The City's Operations and Maintenance Program is in compliance with the Statewide WDR as discussed above. The program has been effective in helping the City to meet established goals related to cleaning, inspection, operations, and maintenance. Effectiveness of the program is measured by a reduction in sewer spills as discussed in Section 9, Monitoring, Measurement, and Modifications.

Element V – Design and Performance Provisions		Rating
A.	Does the City's design criteria and construction standards and specifications address the construction, installation, repair, rehabilitation, and hydraulic capacity needs for existing and proposed system infrastructure components, including but not limited to pipelines, pump stations, and other system appurtenances?	C
B.	Does the City have procedures and standards for inspection and testing of newly constructed, newly installed, repaired, and rehabilitated system pipelines, pumps, and other equipment and appurtenances?	C

Discussion:

V.A. The City has adopted the most current Public Works "Green Book" as its design standard for sewer pipelines. Design criteria for specific pump stations and pressurized pipes are not included in the Green Book and are established on a facility-by-facility basis by the respective design engineer for that project. Further, hydraulic capacity needs are discussed in Element 8, Capacity Assurance. Pump station and hydraulic capacity needs from Element 8 will be restated in Element V, as needed to meet the requirements of the Statewide WDR. **Updates will be completed as part of the May 2, 2025 SSMP Update**.

Element VI – Spill Emergency Response Plan		Rating
A.	Does the City have a spill emergency response plan that describes procedures to reduce spill volumes and collect information for prevention of future spills? Does the plan include procedures for the following: a. Address emergency system operations, traffic control and other necessary response activities; b. Contain a spill and prevent/minimize discharge to waters of the State or any drainage conveyance system; c. Minimize and remediate public health impacts and adverse impacts on beneficial uses of waters of the State; d. Remove sewage from the drainage conveyance system; e. Clean the spill area and drainage conveyance system in a manner that does not inadvertently impact beneficial uses in the receiving waters; f. Implement technologies, practices, equipment, and interagency coordination to expedite spill containment and recovery; g. Conduct post-spill assessments of spill response activities; h. Annually, review and assess effectiveness of the Spill Emergency Response Plan and update the Plan as needed.	C
B.	Does the SERP include procedures for notification to primary responders, appropriate local officials, and appropriate regulatory agencies of a spill in a timely manner? Do the SERP procedures comply with the documentation, notification, monitoring and reporting requirements of the Statewide WDR? Note that all spill notification and reporting requirements meet during the audit period. No changes in the SERP or spill procedures were required as a result of post-spill assessments.	C
C.	Does the SERP include procedures for notification to other potentially affected entities (health agencies, water suppliers, etc.) of spills that potentially affect public health or reach waters of the State?	SC
D.	Does the SERP require appropriate staff and contractors who implement the Spill Emergency to be appropriately trained?	C
E.	Has the City implemented pre-planned coordination and collaboration with storm drain and other utility agencies? Is the coordination documented?	C
F.	Did the City prepare and submit to CIWQS spill event technical reports within the required timeline?	C

Discussion:

VI.6.C. The City's water source would not be directly impacted by a sewer spill. Therefore, the SERP does not include special notifications to water agencies, etc. in the event of a spill to waters of the State. However, City staff will discuss whether other supplemental notifications are required, and will **include any updated information in the May 2, 2025 SSMP Update**.

VI.6.D. Training is provided to City staff. Contractors are not used during spill response, operations, or maintenance activities. As related to construction contractors, the City includes contract language referencing the Statewide WDR, and holds the contractor responsible for prevention, management, and proper response and reporting of spills.

VI.6.E. The City manages both sewer and stormwater functions, and these staff coordinate during spill response. See Element 3.

The City has reduced the risk of sewage spills by reducing the impact and probability of spills, as documented through the City's spill record. See Element 9.

The City's SERP was updated in May 2023 as required by the Statewide WDR. This SERP is effective in maintaining compliance with the spill response and reporting requirements of the Statewide WDR. No deficiencies or necessary modifications have been identified through this audit.

Element VII – Sewer Pipe Blockage Control Program		Rating
A.	Does the City's SSMP include procedures for the evaluation of whether a sewer pipe blockage control program is needed to control fats, oils, grease, rags and debris. The procedures should include: • An implementation plan and schedule for a public education and outreach program that promotes proper disposal of pipe-blocking substances; • A plan and schedule for the disposal of pipe-blocking substances generated within the sanitary sewer system service area.	DNC
B.	Do the City's procedures include: • The legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages; • Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, best management practices requirements, recordkeeping and reporting requirements; • Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the fats, oils, and grease ordinance; • An identification of sanitary sewer system sections subject to fats, oils, and grease blockages and establishment of a cleaning schedule for each section; and • Implementation of source control measures for all sources of fats, oils, and grease reaching the sanitary sewer system for each section identified above.	C
C.	Does the City have a comprehensive public outreach and education program including schedule for activities?	SC
D.	Does the City have a plan and schedule for disposal of pipe blockage substances?	C

Discussion:

VII.A. The City has an established maintenance procedures to address fats, oils, grease, roots, and debris within the gravity sewer system. However, this section as related to other materials besides fats, oils, and grease is new in the Statewide WDR. As a result, the City has not evaluated whether a formal sewer blockage control program that extends beyond fats, oils, and grease is required. City staff will develop and implement an evaluation process. If a sewer blockage program is required, **the program will be documented in the May 2, 2025 SSMP update**. If this program is not required, the May 2, 2025 update will explain why such a program is not required.

VII.C. The City has a public outreach and education program for fats, oils, and grease. If a similar program is required for roots and debris, as determined through the evaluation described in VII.A., this program will be **added to the May 2, 2025 SSMP Update**.

Element VIII – System Evaluation, Capacity Assurance and Capital Improvements	Rating
A. Does the City's SSMP include procedures and activities for: • Routine evaluation and assessment of system conditions; • Capacity assessment and design criteria; • Prioritization of corrective actions; and • A capital improvement plan.	C
B. Does the SSMP include procedures and/or discuss completed tools that identify system components with hydraulic deficiency and/or limited capacity, considering: • Dry-weather peak flow conditions that cause or contributes to spill events; • The appropriate design storm(s) or wet weather events that causes or contributes to spill events; • The capacity of key system components; and • Major sources that contribute to the peak flows associated with sewer spills.	C
C. Does the SSMP include procedures to: • Evaluate the sanitary sewer system assets utilizing the best practices and technologies available; • Identify and justify the amount (percentage) of its system for its condition to be assessed each year; • Prioritize the condition assessment of system areas that: o Hold a high level of environmental consequences if vulnerable to collapse, failure, blockage, capacity issues, or other system deficiencies; o Are located in or within the vicinity of surface waters, steep terrain, high groundwater elevations, and environmentally sensitive areas; o Are within the vicinity of a receiving water with a bacterial-related impairment on the most current Clean Water Act section 303(d) List; o Assess the system conditions using visual observations, video surveillance and/or other comparable system inspection methods; o Utilize observations/evidence of system conditions that may contribute to exiting of sewage from the system which can reasonably be expected to discharge into a water of the State; o Maintain documents and recordkeeping of system evaluation and condition assessment inspections and activities; and o Identify system assets vulnerable to direct and indirect impacts of climate change, including but not limited to: sea level rise; flooding and/or erosion due to increased storm volumes, frequency, and/or intensity; wildfires; and increased power disruptions.	SC
D. Does the capacity assessment use data from existing system condition assessments, system inspections, system audits, spill history, and other available information?	C

E.	Does the analysis consider the capacity of systems with regard to the following: • Flood-prone systems subject to increased infiltration and inflow, under normal local and regional storm condition; • Increased infiltration and inflow due to larger and/or higher-intensity storm events as a result of climate change; • Increases of erosive forces in canyons and streams near underground and aboveground system components due to larger and/or higher-intensity storm events; • Capacity of major system elements to accommodate dry weather peak flow conditions, and updated design storm and wet weather events; and • Necessary redundancy in pumping and storage capacities.	PC
F.	Are the capital recommendations prioritized to consider the severity of the consequences of potential spills?	C
G.	Does the capital improvement plan include the following items: • Project schedules including completion dates for all portions of the capital improvement program; • Internal and external project funding sources for each project; • Joint coordination between operation and maintenance staff, and engineering staff/consultants during planning, design, and construction of capital improvement projects; and • Interagency coordination with other impacted utility agencies.	C

Discussion:

VIII.A. Element 8 covers capacity-related assessments. The condition-related assessment described in the Statewide WDR are currently discussed in Element 4. **Relevant sections will be added to or referenced in Element 8 in the May 2, 2025 SSMP Update**.

VIII.C and VIII.E. These sections include new requirements of the Statewide WDR. City staff are developing the approach to address all items discussed in Element VIII.C that are not already discussed in the current SSMP. In particular, the **May 2, 2025 SSMP update will** describe the following topics as they relate to the capacity assessment: Pipes located within the vicinity of surface waters, steep terrain, high groundwater elevations, and environmentally sensitive areas; within the vicinity of a receiving water with a bacterial-related impairment on the most current Clean Water Act section 303(d) List; vulnerable to direct and indirect impacts of climate change, including but not limited to: sea level rise; flooding and/or erosion due to increased storm volumes, frequency, and/or intensity; wildfires; and increased power disruptions. All other topics are included in the current SSMP.

This element describes analyses and capital improvement program components that have been instrumental in reducing the number of sewer spill and improving City's compliance with the Statewide WDR. The section will be updated to be compliant with the new requirements of the Statewide WDR by the required SSMP update deadline of May 2, 2025.

Element IX – Monitoring, Measurement and Program Modifications		Rating
A.	Does the SSMP include an Adaptive Management section that addresses Plan implementation effectiveness and the steps for necessary Plan improvement, including: • Maintaining relevant information, including audit findings, to establish and prioritize appropriate SSMP activities; • Monitoring the implementation and measuring the effectiveness of each Plan Element; • Assessing the success of the preventive operation and maintenance activities through tracking and reporting of selected performance indicators; • Updating Plan procedures and activities, as appropriate, based on results of monitoring and performance evaluations; and • Identifying and illustrating spill trends, including spill frequency, locations and estimated volumes.	SC
B.	Has the City identified and illustrated spill trends, including frequencies, locations and estimated volumes, maintenance performance results and other effectiveness indicators?	C
C.	Have the performance trends resulted in modifications or changes to SSMP elements and are the changes identified in the Change Log?	C

Discussion:

IX.A. The current SSMP includes the assessments described, but does not include them in one section, in Element IX, called Adaptive Management. This information will be consolidated into an Adaptive Management section **in the May 2, 2025 SSMP Update**. Specifically, Element 10 contains audit findings; prior audits stored in Element 10 have reviewed each plan element for its effectiveness and individual elements have been updated over time in response to these findings. Element 9 has tracked selected performance indicators and provided findings related to these indicators, including summarizing and tracking spill frequency, locations, and estimated volumes.

See the attached charts for updated performance indicators findings for the three-year audit period ending May 2, 2024.

The performance indicators confirm the effectiveness of the City's Sewer System Management Plan in preventing spills in compliance with the Statewide WDR. Based on the information in this audit as confirmed through performance indicators, there are no deficiencies or modifications recommended in the SSMP, other than the administrative updates that are discussed in this audit.

Element X – Internal Audit		Rating
A.	Does the SSMP include internal audit procedures that are sufficient for the City to comply with section 5.4 (Sewer System Management Plan Audits) of the Statewide WDR?	SC
B.	Does the Audit Report include operational personnel participation?	C
C.	Does the Audit describe SSMP effectiveness evaluated for spill impacts and include corrective actions and timelines?	C
Discussion: X.A. The current SSMP includes audit requirements and timelines that were established in the prior WDR. The audit requirements from the Statewide WDR will be **incorporated into this element by December 15, 2024.** Note that although the section itself has not been updated, this SSMP is being audited in accordance with the timelines established in the Statewide WDR.		

Element XI – Communications		Rating
A.	Does the SSMP include procedures for the City to communicate with the public for: • Spills and discharges resulting in closures of public areas, or that enter a source of drinking water; • The development, implementation, and update of the SSMP, including opportunities for public input to Plan implementation and updates; • Coordination with owners/operators of systems that connect into the City's system, including satellite systems, for system operation, maintenance, and capital improvement-related activities.	SC
Discussion: XI.A The SSMP discusses the City's outreach processes and tools for a variety of topics, including spills, community information, and fats, oils, and grease management. The City discusses sewer-related topics, including topics related to SSMP development (up to and including adoption of SSMP updates) at its regularly-scheduled City Council meetings. These meetings are publicly noticed and open to the public. Although public discussions are held, the SSMP does not include confirmation that the SSMP is discussed at these meetings. Element XI will **be updated to include this clarification as part of the May 2, 2025 SSMP Update**.		

Recommended Actions and Timelines

Element 1. Add a new narrative introduction section that discusses (1) regulatory context, (2) SSMP update schedule, (3) sewer system asset overview?	May 2, 2025
Element 2. Identify LRO and data submitters by name and position in the SSMP (to be consistent with information in CIWQS). Add email addresses to contact information. Remove Environmental Services Section organization chart.	December 15, 2024
Element 3. Update the SSMP language to clarify that there is collaboration between the City's storm sewer functions for access during spill response.	May 2, 2025
Element 4. Complete an analysis of whether roots found in the City's gravity sewer pipelines are related to system backups or failures. If there is a correlation, develop a plan to address these specific areas through the O&M program.	May 2, 2025
Element 5. Pump station and hydraulic capacity needs from Element 8 will be restated in Element V, as needed to meet the requirements of the Statewide WDR.	May 2, 2025
Element 6. No updates are required	
Element 7. The City will evaluate whether a program to address materials in additional to fats, oils, and grease is required and include in the updated SSMP or explain why such a program is not required. The City will expand its outreach program to include materials related to disposable wipes.	May 2, 2025
Element 8. The City will add/reference relevant sections from Element 4 related to condition-related assessments in Element 8. The City will discuss the approach to address the following items in the capacity assessment: pipes located within the vicinity of surface waters, steep terrain, high groundwater elevations, and environmentally sensitive areas; within the vicinity of a receiving water with a bacterial-related impairment on the most current Clean Water Act section 303(d) List; vulnerable to direct and indirect impacts of climate change, including but not limited to: sea level rise; flooding and/or erosion due to increased storm volumes, frequency, and/or intensity; wildfires; and increased power disruptions.	May 2, 2025
Element 9. The City will consolidate a number of discussions in the various SSMP sections into one section titled, "Adaptive Management." This information will include a combination of Element 9 summarizing and tracking data and Element 10 audit findings.	May 2, 2025
Element 10. Update the discussion of audit schedules to reflect the new 3-year audit requirement of the Statewide WDR.	May 2, 2025
Element 11. Add confirming language stating that the City discusses sewer-related topics, including topics related to SSMP development (up to and including adoption of SSMP updates) at its regularly-scheduled City Council meetings. These meetings are publicly noticed and open to the public.	May 2, 2025

Audit Team:

Prepared By:	**Vivian Housen, VWHA**	**Date:**	**10/23/2024**
Reviewed By:	**Tony Baltodano, City of San Mateo**	**Date:**	**10/31/2024**
Certified By:	**Tony Baltodano, City of San Mateo**	**Date:**	**10/31/2024**
	Approved for Filing On	**Date:**	**11/02/2024**

Table 1. Cleaning Performance Indicators

	To 5/3/2024	2023	2022	2021
Dry Weather Spills	2	3	5	22
Miles of Sewer Mainline Cleaned	135	310	264	266
% of Total	~58%	100%	100%	100%

Table 1 shows a decrease in dry weather spills over the audit period, confirming the effectiveness of the City' operations and maintenance program (Element 4).

Table 2. Number of Spills by Total Volume Spilled

Size of Spill (gallons)	To 5/3/2024	2023	2022	2021
Greater than or equal to 1,000	2	7	3	5
From 100 to 999	0	2	2	12
From 10 to 99	0	1	2	6
Less than 10 (can include in line above)	0	0	0	2
Total	2	10	7	25

Table 2 shows a decrease in the number of spills in all size categories over the audit period. The only exception to this trend is the number of spills greater than 1,000 gallons in 2023, which were due to wet weather events that have since been resolved through the completion of the City's Underground Flow Equalization Storage Project ("UFES") in December 2023. Table 2 confirms the effectiveness of the City's operations and maintenance program (Element 4) and capacity assurance program (Element 8).

Table 3. Volume of Spills

Spill Destination	To 5/3/2024 (gal)	2023 (gal)	2022 (gal)	2021 (gal)
Total volume contained and returned to sewer system for treatment	100	80,267	1,240	6,067
Total volume reaching waters of the United States	7,050	2,130,525	505,425	364,061
Total volume not contained but not reaching waters of the United States (everything else)	0	0	0	832
Total	7,150	2,210,792	506,665	370,960

Table 3 shows a substantial decrease in the volume of spills in 2024 as compared to prior years. This change is due to the completion of the City's UFES project, which has addressed the City's wet weather spills at 25th and Delaware. Table 3 confirms the effectiveness of the City's capacity assurance program (Element 8).

Table 4. Causes of Spills

Cause of Spill	# to 5/2/2024	# in 2023	# in 2022	# in 2021
Blockage:				
Roots	1	2	4	8
Grease	0	1	0	9
Debris	1	0	1	2
Subtotal for Blockage	**2**	**3**	**5**	**19**
Infrastructure Failure	0	0	0	3
Flow Capacity Deficiency	0	6	2	3
Bypass	0	1	0	0
Total	**2**	**10**	**7**	**25**

Table 4 shows a decrease in the number of spills in all categories over the audit period. The only exception to this trend is the number of spills related to capacity deficiencies, which increased in 2023. The City's most significant capacity issues at 25th and Delaware have been addressed through completion of the City's UFES project. Table 4 confirms the effectiveness of the City' operations and maintenance program (Element 4) and capacity assurance program (Element 8).