

City of Piedmont  
COUNCIL AGENDA REPORT

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DATE: August 4, 2014

TO: Mayor and Council

FROM: Paul Benoit, City Administrator

SUBJECT: Consideration of a Revised Sewer System Management Plan (SSMP) pursuant to current Federal and State Requirements.

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RECOMMENDATION

By motion, approve the Sewer System Management Plan and recent revisions dated August 4, 2014 in accordance with:

1. The 5-year update required by the State Water Quality Control Board.
2. The 2013 revised State Waste Discharge Reporting requirements.
3. The Environmental Protection Agency Consent Decree lodged on July 28, 2014.
4. The requested revisions of the Regional Water Quality Control Board audit of June 26, 2014.

BACKGROUND

The State Water Resources Control Board adopted the Statewide General Waste Discharge Requirements (WDR) by Order No. 2006-0003 on May 2, 2006 for all publicly owned sanitary sewer collection systems. This WDR required that the City of Piedmont develop a Sewer System Management Plan (SSMP). This has been in effect since its inception in August of 2008. Subsequently, the WDR Monitoring and Reporting Program was amended by Order No. 2013-0058, which further specified that the SSMP be updated every 5 years pursuant to significant program changes.

The basic intent of the SSMP is to have a set of standards and processes to better manage the sanitary sewer collection system. This includes general operations and maintenance procedures, inspection standards and frequency, design and performance provisions for repair and rehabilitation, an emergency overflow response plan, and strict requirements for the reporting of sanitary sewer overflows (SSO) to the statewide database. Similar to other agencies under the same legal obligations, the City of Piedmont SSMP was designed to be a “living document” that requires modifications to reflect changed conditions in the sanitary sewer system, changes in maintenance staffing levels and financial resources, and changes in regional requirements.

The current proposed revisions to the SSMP were driven by four (4) factors:

1. Under the State Water Quality Control Board provisions, the City of Piedmont is required to update the SSMP every 5 years to reflect changed conditions and requirements. The deadline for the current proposed plan with revisions is August 25, 2014.

2. The State 2013 Waste Discharge Reporting Requirements, which changed Sanitary Sewer Overflow (SSO) categories, required information, and timeliness of reporting to the State database.

3. The EPA Consent Decree, which was lodged on July 28, 2014, contains specific provisions which pertain to the Asset Management Implementation Plan (AMIP). The AMIP and the SSMP are closely related documents that must work in unison for the management of our sanitary sewer system. The current proposed revisions to the SSMP reflect the latest revisions contained in the AMIP, which is a direct reflection of the Consent Decree. Revisions to and presentation of both documents hinged on the Consent Decree lodging date.

4. In preparation for renewal of the City's National Pollutant Discharge Elimination System (NPDES) sewer permit in November, the San Francisco Regional Water Quality Control Board conducted their audit of the City's entire sanitary sewer system operations and maintenance procedures on June 26, 2014. Recommended changes to the SSMP have now been incorporated into the proposed document.

**Basically, the revisions are minor in nature with no substantial impact on the City's existing operations and maintenance procedures**

A list of the current proposed revisions follows this report. The proposed full SSMP is attached as Exhibit A with the changes highlighted.

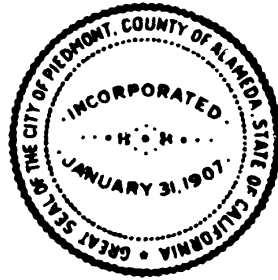
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By: Chester Nakahara, Public Works Director  
Mark Obergfell, Deputy City Engineer

LIST OF MAJOR REVISIONS  
from  
PREVIOUS VERSIONS  
to the  
SEWER SYSTEM MANAGEMENT PLAN  
August 4, 2014

1. Page 1,2,3: Revised Introduction & updated System Overview, added Additional Goals.
2. Page 4: Section ii: Revised Organization Chart and text to correspond to AMIP.
3. Page 7: Section iv: Revised text and Table 1 to reflect percentages of system rehabilitated.
4. Page 8,9: Revised Budget Figures and Table 2 & 3 to update income and expenses per current budget.
5. Page 10, 11: Revised Table 4 and subsequent text to match Consent Decree.
6. Page 12 – 15: Revised Tables 5-9 (deleted former Table 7 & 10) and text to reflect current maintenance and inspection cycles and planned rehabilitation work.
7. Page 15-16: Updated equipment list.
8. Page 17: Revised training description to incorporate NASSCO certification.
- 9 Page 18: Section vi: Revised overflow response plan to incorporate revised State reporting requirements and audit comments.
10. Page 25: Section vii: Updated FOG text.
11. Page 28-30: Section ix. through xi. minor text updates and corrections.
12. Updated Appendices C, D & E
13. Added Appendix F – SSO Work Report Form and copy of signage per audit comment.

# City of Piedmont



## Sewer System Management Plan

**DRAFT July 2014**

Changes from 2011 document highlighted in gray on this draft

August, 2008

**Current Revision: August, 2014**

**Approved by City Council: August 04, 2014**

## **List of Major Changes from Previous Version**

August, 2014

<i>Description of Revision</i>	<i>Page</i>
Revised Introduction & Updated System Overview, Additional Goals	1-3
Revised Organization Chart and text to correspond to AMIP	4
Revised text under Section “iii. Legal Authority” to reflect correct EBMUD Regional PSL ordinance adoption date of August 22, 2011	6
Revised text and Table 1 to reflect percentages of system rehabilitated	7
Revised Budget Figures and Table 2 & 3 to update income and expenses	8-9
Revised Table 4 and subsequent text to match Consent Decree	10-11
Revised text under to reflect majority of CCTV work now done in-house	11
Revised Tables 5-9 (deleted former Table 7 & 10) and text to reflect current maintenance and inspection cycles and planned rehab work	12-15
Updated equipment list; added CCTV-equipped van purchase	15-16
Revised training description to incorporate NASSCO certification	17
Revised OERP to incorporate revised State WDR Monitoring and Reporting Program requirements	18
Updated FOG Section	25
Updated Section ix. through xi. text	28-30
Updated Appendices C, D & E	
Added Appendix F – SSO Work Report Form and copy of signage	

Prior Version: March, 2011

Updated By: Mark N. Obergfell, P.E.  
Deputy City Engineer/LRO  
CA Reg. Engr. C36977  
Exp. 6-30-16

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**APPENDIX “B” – LEGAL AUTHORITY TO ACCESS CITY SEWERS ON  
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**APPENDIX “C” - SANITARY SEWER REHABILITATION PROGRAM MAP**

**APPENDIX “D” - SSO REPORTING – SWRCB MONITORING AND REPORTING  
REQUIREMENTS-ORDER NO. WQO 2013-0058-EXEC**

**APPENDIX “E” - SSMP AUDIT FORM**

**APPENDIX “F” – SSO REPORT FORM & COPY OF SIGNAGE**

**DRAFT**

# **Sewer System Management Plan (SSMP)**

## **INTRODUCTION**

In 2004, the San Francisco Regional Water Quality Control Board (SFRWQCB) indicated its intent to implement new regulations to uniformly monitor sanitary sewer overflows (SSOs). Also envisioned was some type of collection system planning document, which all agencies would be required to produce.

The Bay Area Clean Water Agencies (BACWA), with a broad base of collection system management experience, elected to work collectively with the Regional Board to develop a system which would meet the needs of the Regulators while retaining a common sense approach to the practicalities of managing collection systems. The BACWA collections sub-committee was charged with developing core details of the plan, which had to be negotiated with the SFRWQCB. Although the resulting SSMP was not perfect, it was acceptable to both parties.

The City had developed a Sanitary Sewer Maintenance Manual and implemented numerous processes intended to better manage its collection system. The City has incorporated the contents of that document and its current practices into the SSMP.

As a result of a Stipulated Order signed in 2011 between the United States Environmental Protection Agency (EPA), the State of California and the seven satellite agencies tributary to the East Bay Municipal Utility District (EBMUD) wastewater treatment plant, the City prepared an Asset Management Implementation Plan (AMIP), which the EPA conditionally approved in February, 2013. The AMIP incorporates many of the activities contained in this SSMP, such as inspection and cleaning frequencies, and a 10-year financial plan based upon the City's anticipated annual sewer budget. This document is to be used in conjunction with the AMIP. Additionally, a Consent Decree (CD) was lodged on July 28, 2014. When the CD is finalized, changes to both this SSMP and the AMIP are required.

## **SYSTEM OVERVIEW**

The City of Piedmont currently comprises approximately 1.7 square miles of residential and minor commercial land use. The wastewater generated within the City is collected in approximately 50 miles of sanitary sewer pipelines, 6 to 21 inches in diameter, built mainly between the years of 1900 to 1940. Collected wastewater is discharged through the City of Oakland to the EBMUD Special District No. 1 (District) interceptor, where the interceptor transports the flows to the EBMUD Main Wastewater Treatment Plant (WWTP). After



providing secondary treatment, the WWTP discharges through a submerged outfall into the San Francisco Bay.

In 1975, the California Regional Water Quality Control Board (RWQCB) adopted a Water Quality Control Plan for the San Francisco Bay Basin that recommended regulating discharges from wet weather diversions and overflows for a 5 year storm event. The District and local communities coordinated efforts to resolve the problems of wet weather overflows and diversions, in response to the Regional Board requirements. This coordination effort resulted in the adoption of an Infiltration/Inflow (I/I) Reduction Compliance Plan for each community involved.

In 1986, an infiltration/inflow study was conducted on the sanitary sewer system for the City of Piedmont. Based on the study's findings, nine (9) of the City's twenty-two (22) sub-basins were recommended for rehabilitation. The City completed rehabilitation of these sub-basins along with the lower laterals located in public right-of-way in 2005, which accounted for approximately half of the sewer lines within the City. Since 2005, additional mains have been rehabilitated through various capital improvement projects. Through 2013, approximately 67% of the city sewer mains have been replaced.

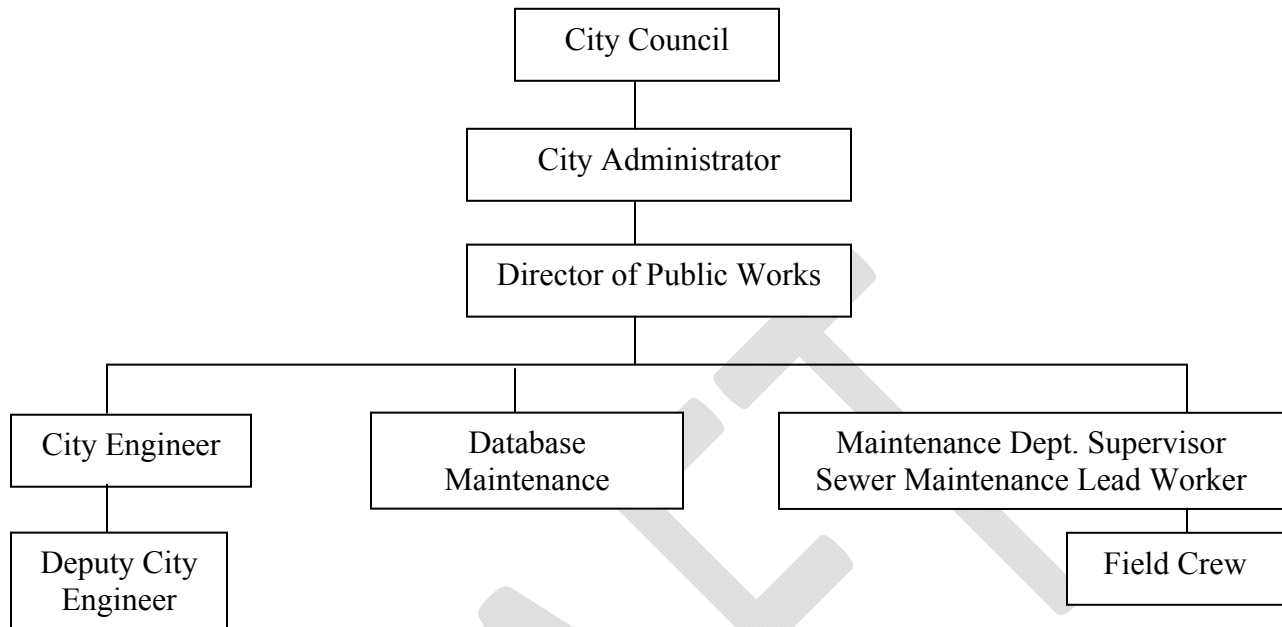
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**(i) GOALS**

- o Continue to professionally manage, operate and maintain all parts of the wastewater collection system
- o Minimize the frequency of Sanitary Sewer Overflows (SSOs)
- o Mitigate the impact of SSOs
- o Audit the SSMP regularly and revise as necessary to reflect changes in regulations and requirements
- o Update the collection system questionnaire annually on the California Integrated Water Quality System (CIWQS) database.

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**(ii) ORGANIZATION**



Director of Public Works (DPW) – Ensures that the staff has the resources necessary to perform services, determines strategy, prepares sewer annual maintenance and capital project budgets, leads staff, delegates responsibility, authorizes outside contractors to perform services, provides updates and information to the City Council. **The Director is also the alternate Legally Responsible Official (LRO).**

City Engineer – Oversees, reviews and approves repair and rehabilitation plans, publicly bids projects and oversees construction of repair and rehabilitation projects.

Deputy City Engineer – Assists the City Engineer with plan review and approval, manages capital improvement delivery system; documents new and rehabilitated assets; assists in updating the SSMP, and coordinates development and implementation of the AMIP. **Evaluates the results of collection system inspection programs. He/she is also the primary Legally Responsible Official (LRO) in charge of overseeing the reporting process.**

Database Maintenance – administrative assistant that enters inspection, maintenance and repair data into the computerized database, generates work orders and data required for reporting purposes. (WAS PERMIT COMPLIANCE SPECIALIST)

Maintenance Supervisor – Manages field operations and maintenance activities, provides verbal report to DPW to ensure that he/she has adequate information to address service related problems on a timely basis, leads emergency response, reviews system inspection, cleaning and maintenance reports generated by field crews, evaluates situation and plan strategy with DPW, reviews and approves SSO reports prior to transmittal to the appropriate authorities, investigate SSOs, and trains field crews. In the event of the

temporary absence of the Maintenance Supervisor, the Sewer Maintenance Lead Worker may assume some of these duties.

Field Crew – Implements emergency response and documents SSOs for reporting, mobilizes sewer cleaning trucks, by-pass equipment, and other field related work.

All service calls are referred directly to the Maintenance Supervisor or Public Works Department during normal business hours. The City uses an after-hours 24-hour dispatch to take emergency calls at the Police Department. The police dispatcher then relays the message to the standby person by telephone (land line or mobile). The standby person makes a determination about the emergency and contacts the Maintenance Supervisor. Additional personnel can be summoned as needed.

DRAFT

### **(iii) LEGAL AUTHORITY**

Discharges to the wastewater collection system are regulated by the City of Piedmont and EBMUD. EBMUD has adopted a useful ordinance that prohibits discharge of toxic or hazardous wastes, allows the District to monitor discharges, requires industrial discharges to obtain discharge permits and pay user fees in proportion to the amount and strength of their discharge, and prohibits discharge of stormwater inflows. The ordinance sets requirements that are primarily concerned with the District's wastewater treatment facilities.

The City of Piedmont's present ordinance governing sewer is in Chapter 17A of the City code (included in Appendix A). The ordinance deals primarily with the wastewater collection system. On March 9, 2011, the City Council approved a second reading of Ordinance 697 N.S., amending Chapter 17A of the Piedmont Municipal Code regarding sewer, included therein is the adoption of East Bay Municipal Utility District's Regional Private Sewer Lateral Ordinance. The Ordinance became effective as of August 22, 2011 and was updated on August 22, 2013.

Section 17A.8 outlines private property owner responsibilities for the repair and maintenance of the entire private sewer lateral (referred to in the code as the "building sewer"), up to and including the connection to the City sewer main. Section 17A.9(f) gives the private property owner 48 hours after notification by the City to make all emergency repairs. If the repairs are not completed within 48 hours, the City shall have the right to make or have made the necessary repairs and recover said costs as authorized by the Municipal Code.

The City is able to access sewers located on private property for emergency repairs, maintenance or reconstruction as stated in the City Attorney Memorandum, dated March 14, 2007 (included in Appendix B).

## (iv) OPERATIONS AND MAINTENANCE

### a. Collection System Map

The City of Piedmont has a fully functional Geographic Information System (GIS) using ESRI ArcGIS software, which was implemented in 1994, consisting of multiple layers from all City departments. The sewer layer was created in 2001 and has been updated upon completion of each sub-basin of the city's capital improvement project. The City updates the sewer layer based on routine maintenance performed throughout the year. In addition, the City is using system inventory software (OASIS) which meets the requirements for sanitary sewer systems and associated monitoring and reporting. Data entered into the system are linked to the GIS.

The City also has hard copy maps of the sewer system that are available for use by the staff and contractors. A copy of this map, showing the City's entire sewer system, is posted on the wall at the corporation yard, which the staff uses for reference and identifying problem areas. This map is updated electronically as the sewer rehabilitation projects are completed and is used as a planning tool for the yearly Capital Improvement Program. Additionally, the maintenance staff marks the problem areas (known as hot spots) on this map so that they can plan activities, programs and policies that would eliminate the cause of the problem.

**Collection System Characteristics by Pipe Material** - The sanitary sewer system for the City presently consists of approximately 50 miles of sewer mains, with about an equal length of house laterals (serving an estimated 3,800 buildings) comprising the total wastewater collection system. The public sewer lines vary between 6 and 21 inches in diameter. Since 1995, the City has rehabilitated approximately 67% (including emergency repairs) of the existing sewer mains with plastic pipe. The remaining branch and trunk sewers in the City are constructed of vitrified clay pipe. A few segments have been constructed of other materials such as Ductile Iron (DI) and Concrete Pipes (CP). A breakdown of pipe lengths and percentages by material is shown in Table 1.

**TABLE 1 - Percentage of Pipe by Materials**

PIPE MATERIAL	PIPE LENGTH (MI.)	PERCENTAGE
Vitrified Clay	18.50	32%
Plastic	31.00	67%
Misc. (DI, CP)	0.50	1%
TOTAL	49.50	100%

The Piedmont service area comprises 1,120 acres of sloping terrain in the Oakland hills. Land use is primarily residential with minor commercial activity. The population served has varied between 10,000 and 12,000 people over the last 50 years.

**Conveyance** - The City of Piedmont is located in the Lake Merritt/Piedmont Basin (Interceptor Tributary Area ITA-54) of the EBMUD Special District No. 1 service area. Piedmont’s collection system does not tie directly into the EBMUD interceptor system. Instead, in accordance with an 1895 agreement between the Cities of Oakland and Piedmont, wastewater from Piedmont is discharged into the Oakland collection system through seven points located along the southern city limits. It then goes to the EBMUD south interceptor at Embarcadero East near 5<sup>th</sup> Avenue and from there is conveyed by gravity to the District’s treatment plant.

In addition, flow from approximately 220 acres (80,000 linear feet of sewers) in Oakland northeast of Piedmont is conveyed through the City of Piedmont’s collection system.

**b. Resources and Budget**

The City generates approximately \$2 million through its sewer tax that covers the cost of operations, maintenance and general sewer projects. This budget also covers the reimbursement of the State Revolving Fund (SRF) loan that the City has used and will likely continue to use to fund its sanitary sewer capital improvement projects.

The **FY 14-15** sewer fund below represents the typical annual sewer-related income and expenditures.

Current Income

The City of Piedmont is a charter city created under the laws of the State of California. The City derives the majority of its income via a levy of a user charge to its customers. The user charge is comprised of a fixed “connection” fee component and a large user component based upon lot size, which correlates with water usage.

**TABLE 2 – Estimate City Sewer Income**

<u>Income Source</u>	<u>Estimated Amount</u>
1. Sewer Service (User) Charges	\$2,275,200
2. Interest Earned	13,500
3. Contributed or Borrowed Capital	--
4. State Revolving Loan Fund	--
5. EPA Grant Funds	--
<b>Total Income (2014-15)</b>	<b>\$2,288,700</b>

Income is reflected from the user charges. The City anticipates annual increases in rates based upon the CPI.

Current Expenditures

**TABLE 3 – Estimated City Sewer Expenses**

<u>Category</u>	<u>Estimated Amount</u>
1. Maintenance	\$450,000
2. General Sewer Replacement	348,772
3. EPA Compliance	300,000
4. Equipment Maintenance	67,703
5. Alameda County Clean Water	37,031
6. SRF Debt Service	553,963
TOTAL	\$1,757,469

Outstanding Long-Term Indebtedness

Other than State Revolving Fund (SRF) loans for prior rehabilitation phases I through **IV**, the City has no long-term indebtedness to be paid from the Special Municipal Sewer Tax

**c. Prioritized Preventive Maintenance**

The recommended preventive maintenance program consists of the following three components:

1. Operations and Repairs – The work performed continuously, including administration, emergency repairs, major repairs, TV inspection, root control and rodent control.
2. Periodic Line Maintenance – The intermittent activities of cleaning, testing, and inspecting the lines and performing minor rehabilitation as necessary.
3. Replacement Program– The pre-scheduled replacement of the most deteriorated sub-basins.

The recommended program should cost-effectively keep I/I at levels associated with a well-maintained system, maintain the structural integrity of the collection system, reduce operation, maintenance, rehabilitation, and replacement costs, and protect public health. Table 4 lists the components of the recommended long-term preventive maintenance program; each component is discussed in the following sections of the manual.



**TABLE 4 – Recommended Frequencies for Preventive Maintenance Program Activities**

	Activity	Frequency
1	Operations, repairs and minor rehabilitation (including administration, root and rodent control, emergency and major repairs)	Continuous
2	Periodic line maintenance: a. Cleaning c. TV inspection and Manhole inspection d. Root Treatment	5-year cycle 10-year cycle As determined by TV inspection and cleaning
3	Sewer replacement	Emergency lines and CIP

**Operations, Repairs and Minor Rehabilitation**

Operations and repairs, which includes administration, emergency and major repairs, and control of roots, encompasses most of the City’s existing program of sewer system operation and maintenance except line cleaning (which is part of the periodic line maintenance portion of the recommended preventive maintenance program). These essential activities are performed every year throughout the year. Each year, construction and maintenance records, supplemented by TV inspection results from the periodic line maintenance program, are used to determine the main lines that show acute structural damage. These lines are replaced by pipe bursting or spot repaired as appropriate.

**Periodic Line Maintenance**

The periodic line maintenance portion of the preventive maintenance program includes periodic cleaning, manhole inspection and television inspection.

**Cleaning**

Sewer lines in the collection system are cleaned on a 5-year cycle to reduce blockage frequency and increase flow capacity (about 53,000 linear feet of main per year). Line segments that maintenance records show to have required frequent cleaning of blockages (from accumulated debris, grease, and roots) are cleaned more often. After the completion of the first five year cycle from the date of the Consent Decree (June 30, 2019), mains that are greater than 15 inches in diameter may be cleaned based on condition assessment, which shall, at a minimum, take into consideration any information concerning the accumulation of fats, oil and grease, sediment, and debris derived from CCTV inspection or cleaning history.

## Manhole Inspection

Manhole inspection is performed as an ancillary step whenever a manhole is opened or entered for cleaning, TV inspection, or other reasons. A crew member would record any structural problems or evidence of infiltration/inflow on the standard manhole inspection form, which is entered into the computer database. Per the Consent Decree, whenever a sewer main is TV inspected, all manholes associated with that main are inspected.

## Television Inspection

TV inspection of sewer pipes can be effectively employed for evaluating the condition of existing sewer mains and locating sewer laterals prior to final design of major sewer repairs. TV inspection is also used for routine inspection of the entire collection system as part of the preventive maintenance program.

In an attempt to program the future sewer rehabilitation projects, the City embarked on an aggressive CCTV inspection study on the nine (9) sub-basins which had not yet been rehabilitated or scheduled to be rehabilitated. This work was completed in December, 2008. This study inspected 99,000 feet of sewer mains, which encompassed approximately 41% of the entire city's sewer system.

The purpose of this study was to present evaluation of the existing sewer system based on video inspection and offer recommendations for how to address the nine sub-basins not yet programmed for rehabilitation. This study evaluated each individual sewer line run within the nine sub-basins. It then made recommendations based on videotape observations according to a pre-established grading system.

The City's maintenance schedule calls for all mains to be internally inspected with a television camera on a 10-year cycle (about 26,000 linear feet of main a year). Television inspection of lines needing frequent emergency maintenance because of backups and overflows may show that the problem is serious line deterioration or root growth. Any main lines (including manholes) that are found to have serious structural problems will be added to the major repair list. The City staff performs the majority of routine CCTV inspections. After the completion of the first ten year cycle from the date of the Consent Decree (June 30, 2024), the next scheduled inspection for any specific pipe will be based on the previous inspection result and condition assessment, including the consideration of pipes that are believed to be critical (i.e., higher risk for SSOs or pipe failure) such as mains located adjacent to waterways, however no main shall be inspected less frequently than every 20 years.

## Root Treatment

Another maintenance effort involves the removal of tree roots from sanitary sewers. Tree roots can damage sewers and cause plugging. Tree roots seek the moisture and nutrients offered by leaky pipe joints usually found in the older and sometimes broken sewer pipes.

The City controls roots by applying a herbicide foam from within the sanitary sewer, which kills the roots in a confined area, within and around, the sanitary sewer. The herbicide is effective in killing the problem roots and is not harmful to the tree. The foam used by the City is approved by the EPA as an acceptable root control product which does not interfere with wastewater treatment processes.

In general, sewer lines are selected for foaming on an as-needed basis as determined by TV inspection and sewer cleaning. Line segments that maintenance records show to have frequent root problems are cleaned more frequently, as merited.

## **REPLACEMENT PROGRAM**

As a sewer line ages, it gradually deteriorates from wear and tear, root intrusion, corrosion, and other physical and chemical processes. Repair or rehabilitation of an older, more deteriorated sewer can be very expensive. When it becomes more cost-effective to replace a sewer than to repair it or to ignore the problems resulting from its deterioration, the sewer's useful life is ended. Under environmental and operational conditions similar to those of the City collection system, most sewers have a useful life of up to 70 years. At the end of its useful life, the sewer line should be replaced. Sewer mains in Piedmont, which have not been rehabilitated as part of the I/I Reduction Compliance Plan, are reaching their useful service life and should be replaced.

As stated earlier in this report and shown in Table 9, the current I/I correction program for the City of Piedmont was completed in July of 2005. This program rehabilitated 9 of the City's 22 sub-basins. The City completed the construction of 4 additional sub-basins (Phase IV) in 2011. The remaining sub-basins will go through a multi-phase program that encompasses rehabilitating the remaining approximately 90,000 feet of sewer mains and associated lower laterals. See Appendix C for a map of the system.

Table 5 shows the priority list for the remaining 9 sub-basins as determined by the CCTV inspection study (and supplemented with flow monitoring done during the 2010/2011 and 2011/2012 wet-weather seasons) beginning with projects posing the highest risk or higher I/I and ending with those with the lowest risk or I/I. Note that Table 5 could be modified in the future based upon a Regional Technical Support Program (RTSP) being developed by EBMUD or by future inspection work.

Once the replacement program is completed, the City will establish a cyclic replacement program for the most deteriorated sewer mains as determined by the periodic inspection.

**TABLE 5 – Sub-basin Priority List**

Subbasin	Priority Rank
Priority	1
W2	2
W3	3
H1	4
P1	5
G6	6
V1	7
G7	8
W6	9
G2	10

The first priority is to rehabilitate the “priority” lines, which include any pipe segments with more serious defects or higher risk of SSOs. Table 6 shows the estimated cost of rehabilitating the priority lines and each subbasin. The lengths shown reflect only pipes to be rehabilitated. Priority lines were deducted from each subbasin length.

**TABLE 6 - Estimated Rehabilitation Costs for Remaining Sub-basins**

RECOMMENDED PRIORITY	SUB-BASIN	UNIT COST/FT	LENGTH (FT)	ESTIMATED TOTAL COST*
1	Priority	\$130*	24,000	\$3,120,000
2	W2		5,000	\$650,000
3	W3		8,300	\$1,079,000
4	H1 & H1A		8,300	\$1,079,000
5	P1		2,700	\$351,000
6	G6		7,000	\$910,000
7	V1		7,900	\$1,027,000
8	G7		10,300	\$1,339,000
9	W6		10,400	\$1,352,000
10	G2		6,300	\$819,000
<b>TOTAL:</b>			<b>90,200</b>	<b>\$11,726,000</b>

\* Average unit cost includes estimated design, construction, construction management, and construction inspection costs.

#### d. Scheduled Inspection and Condition Assessment

A typical schedule of the recommended preventive maintenance program over several decades is shown In Tables 7 and 8, which incorporates the frequencies for each activity discussed above and listed in Table 4. To facilitate maintenance activity scheduling, the maintenance history and schedules are recorded and stored.

**TABLE 7 – Typical Inspection Schedule**

Activity/Year	1	2	3	4	5	6	7	8	9	10
1. CCTV Inspection	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10
2. CCTV Inspection for problem areas	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5
3. Manhole inspection	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10

**TABLE 8 – Typical Maintenance Schedule**

Activity/Year	1	2	3	4	5	6	7	8	9	10
1. Main Cleaning	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5
2. Hot Spot Inspection & cleaning	X		X		X		X		X	
3. Root Foaming where req'd.	X		X		X		X		X	

#### Collection System Short Term Rehabilitation Plan

Lines selected for repair or replacement within one year are generally the ones that are identified during routine inspection which may potentially pose an imminent service disruption or lines identified as defective during an SSO investigation. Pipelines requiring frequent maintenance such as root intrusion and sags are given secondary priority for replacement.

#### Collection System Long Term Rehabilitation Plan

As stated earlier in this report and shown in Table 9 below, thirteen (13) of the City's twenty-two (22) sub-basins have been rehabilitated. The remaining pipes will be rehabilitated at the minimum rates prescribed in the CD, with anticipated completion on a more accelerated basis if allowed by available funding.

## Summary of Sewer Work Completed

The following Table summarizes sewer work completed to date and the color coded map included in Appendix C shows the sub-basins for which the described work was completed. It should be noted that the length of sewer mains were taken from the 1986 SSES report for consistency and simplicity. The actual footage of sewer mains within the sub-basins varies slightly from those indicated in the report.

**TABLE 9 – Summary of Sewer Work Completed to date**

DESCRIPTION OF WORK	SUB-BASIN	Program Year	LENGTH OF SEWER MAINS WITHIN SUB-BASIN (FT)	PERCENT COMPLETED
	G1	1995	21,000	
Phase I SS Program	G4	2001-2002	11,800	
Phase I SS Program	W1A	2001-2002	31,800	
Phase II SS Program	W1B	2003-2004		
Phase II SS Program	F1	2003-2004	6,160	
Phase II SS Program	W7	2003-2004	2,360	
Phase II SS Program	N1	2003-2004	7,500	
Phase II SS Program	W4	2003-2004	11,400	
Phase III SS Program	W5	2004-2005	11,500	
Phase III SS Program	T1	2004-2005	22,250	
Phase IV SS Program	G3	2009-2011	10,600	
Phase IV SS Program	G5	2009-2011	11,000	
Phase IV SS Program	N2	2009-2011	5,260	
Phase IV SS Program	T2	2009-2011	6,540	
Priority/Emergency Work	various		20,700	
		Subtotal:	179,870	

### **e. Contingency Equipment and Replacement Inventories**

The City maintains its collection system with a supervisor/manager and a crew of four. They currently utilize the following equipment for repair and maintenance purposes:

- o 2001 Sreco HS Continuous Rodding Machine for sewer cleaning and servicing maintenance. Cleaning method for root and grease removal cutting heavy material from sanitary sewer lines.
- o 2005 Sreco Hydro flusher Truck Jet 800-HPR Series II used for sewer cleaning and servicing, and cutting and removing hard deposits encrusted at the wall of sewer

- pipe. High pressure jetting for penetrating through mud, sand and various sediments and loosening hard debris (80 gallons of water per minute at 2000 psi).
- o 1995 Sreco Hydro flusher truck jet 800-H used for sewer cleaning and servicing maintenance, and cutting and removing hard deposits encrusted at the wall of sewer pipes. High pressure jetting for penetrating through mud sand and various sediments and loosening hard debris (65 gallons of water per minute at 2000 psi).
  - o Spartan Heavy Duty Electric power cable machine model 1065 for medium and heavy duty jobs used for sewer cleaning and maintenance, root and grease removal.
  - o CUES Multi-Conductor CCTV system, with an OZ-3 pan/tilt/optical zoom camera head, contained within a Sprinter 3500 series van for use in video inspection and condition assessment of sewer mains. A CUES push-cam links with the CCTV system and can be used in easement areas where access with a vehicle is not possible.
  - o Gator Cam System provides a means of viewing the internal condition of small diameter. 200 ft location cable.
  - o Pearpoint P300+ flexiprobe system provides advanced pipeline video inspection. It records up to 1 hour and 45 minutes of video, with 2 gigabyte storage.
  - o One backhoe: Case (yr 1999) 580 Super L available for any emergency sewer repairs.
  - o Four pumps: 1) Dominator Submersible Sewage pump 115Volt, 2) Tsunami 110Volt pump (x2), 3) Honda WT30X Trash pump, 4) Wacker PT3 Trash pump. All pumps are stored in a central location with all essential quick connect couplings and lengths of hoses.
  - o Six generators: 1) Honda EX1000 120Volt Gas Generator, 2) Honda Inverter 1000 120Volt Gas Generator, 3) Honda EM5000S 120-240Volt Gas Generator, 4) Honda ES4500 115-230Volt Gas Generator, 5) Wacker G3000 115-230Volt Mixed Fuel Generator, Honda EU Inverter 2000i V Gas Generator. All generators are stored in a central location.
  - o 2003 Dodge 3500 flat bed truck. Emergency response vehicle for sanitary sewer overflows. This vehicle is equipped with, gas generators, pumps, hoses, pipe plugs, appropriate signage, lighting, air compressor, PPE's, hooks and other misc equipment needed to deal with SSOs.

For the City, keeping critical replacement parts available encompasses stocking spare pumps that can be used as replacements while pumps are serviced or replaced.

## **f. Training**

The City staff regularly attends workshops on various sewer related topics. Additionally, the field crew participates in cross-training exercises with other sanitation agencies on an as-needed basis. The four collection system personnel have 20 or more years of service with the City and participate in vendor-sponsored trainings on a regular basis. The City staff also attends the Bay Area Clean Water Agencies (BACWA) Collection Systems Committee meetings where sewer-related topics and challenges are discussed and ideas are exchanged. The City sewer maintenance personnel are CWEA certified. In 2012, four of the sewer maintenance staff became PACP and MACP (Pipeline and Manhole Assessment Certification Program) certified through NASSCO.

As a result of the Infiltration/Inflow Correction Program (ICP), the East Bay communities including Piedmont and East Bay Municipal Utility District (EBMUD) entered into a Joint Powers Agreement to study and develop a plan for addressing I/I in the communities' collection system. The community members (Satellite agencies) and EBMUD formed a committee called Technical Advisory Board (TAB) that meets as needed. The Satellite agencies also formed a committee called East Bay Collection System Advisory Committee (EBCSAC) that meets on an as-needed basis.



## (v) DESIGN AND PERFORMANCE STANDARDS

### a. Standards for Installation, Rehabilitation and Repair

To minimize I/I and lower the long-term costs of operating the wastewater collection system, all relief, rehabilitation and replacement work must be performed to proper standards. The City maintains Design Standards, which are required for both new installations and replacement facilities. These standard plans are available to contractors and citizens at no charge, and are being updated at the current time, with anticipated adoption in 2014. For details not included in the City standards, the latest edition of the Standard Plans for Public Works Construction is used. The latest edition of the Standard Specifications for Public Works Construction (“the Greenbook”) has been adopted as the standards for sewer and other public works construction specifications. Note that per the Consent Decree, regional design and construction standards are to be developed.

### b. Inspection and Testing of New and Rehabilitated Facilities

The City retains the services of outside consultants for inspection of new construction. The inspector insures that all construction meets City standards and codes. All sewers constructed by outside contractors are cleaned, tested and video-inspected before acceptance.

## (vi) OVERFLOW EMERGENCY RESPONSE PLAN

**PURPOSE:** To provide guidance to maintenance crew personnel when servicing an overflow of the collection system.

**SCOPE:** This procedure is applicable to all overflows of the sewage collection system.

**DEFINITIONS:** Overflow or spill: Any condition of sewage emitted or discharged from the collection system to the surrounding environment that is caused by a problem in the City’s main lines. A major overflow is defined as any overflow which exceeds 1,000 gallons or which is of sufficient quantity and in a location such that is poses a threat to public health or the environment. According to the State Monitoring and Reporting Program (MRP) for Statewide General Waste Discharge Requirements (WDR), a Category 1 overflow is a spill of any volume that reaches surface waters, a drainage channel tributary to a surface water, or to a municipal separate storm sewer system (MS4) and is not fully captured. A Category 2 overflow is a spill of 1,000 gallons or greater that does not reach surface waters, a drainage channel, or a MS4 unless the entire spill discharged to the storm drain system is fully recovered and disposed of properly. A Category 3 overflow is a spill less than 1,000 gallons that does not reach surface waters, a drainage channel, or a MS4), however appropriate clean-up and investigation procedures shall be undertaken.

**RESPONSIBILITY:** The Collection System Supervisor (Supervisor) is responsible for carrying out this procedure. When the Supervisor is not available, a Collection System

Worker shall assume the responsibility to carry out this procedure and to direct the efforts of the maintenance crew. One of these individuals (Supervisor or Worker) is responsible for reporting to regulatory agencies.

**PROCEDURE:** This procedure is to be followed by City field maintenance personnel when servicing an overflow of the collection system.

## I. REPORTING

A. Overflows shall be reported in accordance with the requirements of the State of California State Water Resources Control Board, Order No. 2006-003 DWQ and Order No. WQ 2013-0058-EXEC (included in Appendix D).

1. Emergency Reporting: If the overflow is a Category 1 and equal to or greater than 1,000 gallons that has discharged to surface water, a drainage channel or MS4 and has not been fully captured or is located in an area that it will probably be discharged to surface waters, the California Office of Emergency Services (Cal OES) shall be notified within at 1-800-852-7550 and a notification control number shall be obtained. The OES shall be notified as soon as possible, but no later than 2 hours after the City has been notified of or notices the overflow, notification is possible and the notification can be provided without substantially impacting the cleanup or emergency measures.
2. Internal Reporting: The Lead Worker, or any Collection System Worker if the Lead Worker is not present, is responsible for reporting any major overflows immediately to the Maintenance Supervisor, or Lead Worker. They in turn will make the appropriate reports.

An “SSO Report” form (sample form included in Appendix F) shall be completed and provided to the Supervisor after field response to a spill is completed. The Supervisor will then follow the Overflow Response Actions Procedures described herein.

3. Regulatory Reporting: Category 1 and 2 overflows shall be reported to the State CIWQS (California Integrated Water Quality System) database within 3 business days of the City becoming aware of the SSO and shall be certified within 15 calendar days of the end of the SSO. A Category 3 overflow shall be reported and certified within 30 calendar days of the end of the month in which the SSO occurred. A SSO technical report (see MRP for report requirements) shall be prepared and submitted within 45 calendar days of the end date of any Category 1 SSO with 50,000 or more gallons spilled to surface waters. No-spill certifications shall be submitted within 30 calendar days of the end of the month in which no SSOs occurred (or if quarterly, within 30 days of the end of the quarter).

## II. RESPONSE

### A. Major Overflows

1. Clean Up Response and Warning Sign Posting - Dry Weather Conditions:
  - a. Identify yourself to the property owner who called for service, if applicable, and briefly explain what you will be doing.
  - b. Identify problem (take digital photos and/or video to document flow) and restore flow (if this takes longer than 30 minutes, call for assistance).
  - c. Report spill to the Supervisor or Lead Worker (they will notify appropriate agencies).
  - d. Contain spill (call for assistance if needed):
    - 1) Build dike with hay bales or sandbags and plastic sheeting;
    - 2) Build earthen berm;
    - 3) Use pipe plug to plug storm drain/use plastic sheet over inlet to stop flow.
  - e. Take digital photos to document conditions for follow-up investigation.
  - f. Report back to property owner and deal with their concerns (possibility of property damage).
  - g. Warning Signs: Signs warning the public of a sewage release should be posted in the affected area where there is the potential for public contact. Signs shall be posted when there is a 10,000 gallon or larger spill that is not contained or there is a discharge directly to a creek. Signs should include, at a minimum, the wording: "raw sewage". Sample signs are included in Appendix F.

In critical areas such as creeks and parks, warning signs should remain posted until Alameda County Public Health Department or Regional Board staff authorizes their removal, or until receiving EBMUD water sample results indicating background levels have been attained.
  - h. Cleanup Flushing: The affected area shall be flushed with clean water. All flush water shall be contained and subsequently pumped to the nearest sanitary sewer or removed by vector truck. Cleanup flushing shall be done only with clean, dechlorinated water. Disinfectants shall NOT be used due to their toxicity to fish and wildlife.
  - i. Receiving Water Sampling: If a Category 1 spill of 50,000 gallons or more occurs, sampling is required within 48 hours of notification of the SSO. However, the City will sample Category 1 spills of 10,000 gallons or more. At a

minimum, sampling shall be done for ammonia, a bacterial indicator (such as enterococci) along with temperature and pH. Sampling should be done at a minimum near the sewage discharge point, 100 feet downstream and 100 feet upstream of the discharge point (to establish background levels).

The sampling services are currently contracted with EBMUD. The contact numbers for the EBMUD Supervising Wastewater Control Inspector are: office (510) 287-1655; mobile (510) 385-6156 with alternate Supervising Wastewater Control Representative: office (510) 287-0345; mobile: 415-710-9875.

- j. Return spilled sewage to collection system for treatment, when possible.
- k. Clean up affected area:
  - 1) Remove all signs of gross pollution (solids, toilet paper, grease, etc.);
  - 2) Flush areas with dechlorinated potable water (use three times volume of overflow); all flush water shall be contained and subsequently pumped to the nearest sanitary sewer or removed by vacuum truck;
  - 3) Apply deodorizer after flushing and only in incidents where this material will not cause further pollution. Disinfectants shall NOT be used due to their toxicity to fish and wildlife.
- l. Follow up:
  - 1) Investigate cause of spill and check lines downstream of the spill to ensure lines are free of debris or blockages;
  - 2) Add line segment to cleaning schedule, change frequency, or change cleaning method;
  - 3) Add notes as needed to cleaning schedule;
  - 4) Inspect by video camera and re-run as needed;
  - 5) Report on the need for any correction measures;
  - 6) Repair or replace line segment;
  - 7) Reinstate the line to normal maintenance.
- m. Complete follow-up contacts and service to property owner(s).
- n. Conduct debriefs to evaluate response.



- d. Inspect by video camera and re-run as needed;
  - e. Report on the need for any correction measures;
  - f. Repair or replace line segment;
  - g. Reinstate the line to normal maintenance.
- C. Property Damage: (Overflow inside residence/building that causes damage to private property)
1. Identify yourself to property owner who called for service, if applicable, and briefly explain what you will be doing.
  2. Stop or reduce flow entering building (remove or break cleanout cap, plus lateral).
  3. Identify problem, take digital photos and/or video to document situation and restore service (if this takes longer than 30 minutes, call for assistance).
  4. If the problem is in the private lateral, inform property owner and respond to their questions.
  5. Report spill to Supervisor, or Lead Worker.
  6. Contain spill and return spilled sewage to collection system for treatment.
  7. Report progress to property owner and deal with their concerns (damage to property).
  8. Advise property owner of claims procedure for backup related damage or cleaning costs, if appropriate. Provide emergency sewer packet.
  9. Continue follow-up contacts and service to property owner(s) as needed.
  10. Follow up:
    - a. Investigate cause of spill and check lines downstream of the spill to ensure lines are free of debris or blockages;
    - b. Add line segment to cleaning schedule, change frequency, or change cleaning method;
    - c. Add notes as needed to cleaning schedule;
    - d. Inspect by video camera and re-run as needed;

- e. Report on the need for overflow device and check valve;
- f. Repair or replace line segment;
- g. Reinstate the line to normal maintenance.

## **(vii) FATS, OILS AND GREASE (FOG) CONTROL PROGRAM**

The City does not have any restaurants or other businesses that generate large amounts of fats, oils or grease (FOG). The only registered food service establishment (FSE) is the local grocery and delicatessen, which generates minimal FOG. As the majority of the City is residential, no spills have occurred as a result of grease blockages. Accordingly, there have not been any FOG occurrences of note in the collection system in recent years and there is not a need to have a commercial FOG control program in place. Small areas of grease deposits have been isolated. Upon the discovery of these areas, the line is cleaned and EBMUD FOG materials (see below) are distributed to the affected area.

Piedmont is one of the seven collection systems EBMUD's wastewater treatment area. The agencies and EBMUD have developed a regional FOG program, as part of the East Bay Collection Systems Technical Advisory Board (TAB) programs, to reduce FOG related SSOs and continue working collaboratively on development and implementation of FOG control. This regional FOG program consists of FOG hot spot investigations, residential hotspots response, enforcement support, reporting, public education and public outreach throughout EBMUD's wastewater service area. If, through CCTV inspection, the maintenance crew flags an area as a potential FOG problem, they distribute door hangers prepared by EBMUD in that area. In addition, the City provides educational information periodically on the City website.



## **(viii) SYSTEM EVALUATION & CAPACITY ASSURANCE PLAN**

### **a. Capacity Assessment**

As part of the Sewer System Evaluation Survey Study conducted in February 1986, a computerized collection system routing model was created to identify the bottlenecks in the system. The parameters for the computer simulation included the study area characteristics expected during the project life, a description of the collection system, and the characteristics of the design storm.

Three scenarios were evaluated: “no rehabilitation”, “rehabilitation”, and “optimum combination” scenarios. In the “no rehabilitation” case, the total storm flow, including base flow, was routed through the collection system with the assumption that no corrective measures would be taken on the existing collection system to reduce I/I. This simulation established the baseline conditions for comparison with the maximum rehabilitation case. If the simulated flow exceeded the capacity of the existing pipeline, the model sized a relief pipeline to carry the excess flow. This alternative, which does not consider I/I control measures, was not the recommended plan and was developed for comparison and analysis.

The “rehabilitation” alternative is derived by comparing the cost of reducing I/I flow by rehabilitation to the cost of conveying and treating those same flows. Based on this, a cost-effectiveness (C/E analysis) method was established to identify the most cost-effective sub-basins for rehabilitation. The results of C/E analysis identified 9 sub-basins for comprehensive rehabilitation.

The “optimum combination” alternative was the final determination of where relief sewers would be necessary to eliminate the bypasses and overflows that remained after cost-effective rehabilitation was completed. To do this, the estimated flow remaining after rehabilitation was routed through the collection system, using the computer model. The routing program sized relief sewers where the peak flow following the five-year design storm exceeded the capacity of the existing sewer lines.

Between 1990 and 1993, the City replaced the pipe segments where flows generated by the five-year storm would cause surcharging. The nine sub-basins identified as cost-effective for rehabilitation were also rehabilitated prior to 2005. Completion of this work rendered the system’s capacity sufficient for a five-year storm event.

It should be noted that the population of Piedmont is not expected to grow significantly, and has remained relatively stable over the last 50 years, because of the lack of additional land for development and zoning restrictions. Because growth and the opportunity for growth in the City are limited and future land use patterns are not expected to change significantly, no extra allowance for growth was considered in calculating the base sanitary sewer flow for future. Therefore, it is concluded that the sanitary sewer improvements implemented in recent years and scheduled for the future should address the current and future capacity requirements for the collection system facilities for a 5-year storm event.

## b. System Evaluation and Capacity Assurance Plan

As explained above, no short-term or long-term improvements are required to improve the capacity of the sewer system. However, replacing the old clay pipes with plastic pipes should provide for additional capacity in the system. To date, approximately 67% of the sewer mains and associated lower laterals with the public right-of-way system have been replaced with plastic pipes with plans to replace the remaining sewer mains by 2044.

~~The topographic survey data and as-built information for the sewer projects is being used to update the GIS and sewer maps.~~

**(ix) MONITORING, MEASUREMENT AND PROGRAM MODIFICATIONS**

The SSMP will be reviewed periodically to insure all the provisions are implemented and the effectiveness of the sewer management plan will be discussed at the monthly Maintenance Department staff meetings. The SSMP and its elements will be updated in accordance with the results of the monitoring and staff recommendations.

Records documenting SSMP implementation and revisions; SSO event records; water quality monitoring for SSOs of 50,000 gallons or greater spilled to surface waters; and collection system telemetry records if used to document or estimate SSO volumes shall be maintained for a minimum period of five years and shall be made available to the Water Board during inspections or upon request.

The City anticipates continuing to apply for the State Revolving Fund (SRF) loan funding to finance future sanitary sewer capital rehabilitation projects.

**(x) SSMP AUDIT**

The City will perform biennial internal audits evaluating the SSMP, which will include the effectiveness, including efforts to reduce or eliminate SSOs and their impacts, any deficiencies and steps to correct them. The results of the audit along with recommendations and suggested improvements shall be maintained for a period of five (5) years and shall be made available to the Regional Water Quality Control Board upon request.

The Collection System Questionnaire shall be updated at least every 12 months and certified on CIWQS.

The form included in Appendix E, which is based on the format developed by the BACWA members, will be used for the audit.

**(xi) COMMUNICATIONS**

The City will provide interested parties with status updates on implementation of the various components of the SSMP and will also consider comments made by interested parties. A current copy of the SSMP will be maintained on the City's website.

**APPENDIX “A”**

**CITY BUILDING SEWERS CODE**

Chapter 17A  
BUILDING SEWERS<sup>1</sup>

§17A.1	Definitions
§17A.2	Building Sewer Lateral Required
§17A.3	Prohibited Uses
§17A.4	Building Sewer Lateral Connection Bond and Building Permit
§17A.5	Building Sewer Lateral: Standards, Design, and Materials for Construction
§17A.6	Building Sewer Lateral Standards for Measurements, Tests, and Analyses
§17A.7	Abandonment of Existing Building Sewer Laterals
§17A.8	Building Sewer Lateral Maintenance and Required Inspection
§17A.9	Required Time of Compliance
§17A.10	Sewer Service Charges
§17A.11	Sewer Connection Charge Fund
§17A.12	Septic Tanks and Cesspools Prohibited
§17A.13	Cost Recovery – Building Sewer Lateral Overflows
§17A.14	Administrative Penalties – Non Compliance
§17A.15	Adoption of the EBMUD Regional PSL Ordinance

SECTION 17A.1      DEFINITIONS

Unless otherwise defined by this Code, terms in this chapter shall be as defined in the latest editions of American Public Works Association Standard Specifications for Public Works Construction, the California Plumbing Code, and the Standard Methods for the Examination of Water and Wastewater, published jointly by the American Public Health Association, the American Water Works Association, and the Water Pollution Control Federation.

- (a) APWA: shall refer to the American Public Works Association
- (b) ASTM: shall refer to the American Society for Testing and Materials.
- (c) BUILDING SEWER LATERAL: The section of sewer pipe that carries sewage and liquid waste from a point two (2) feet from the building or structure served, up to and including the connection to the public sewer. The building sewer lateral is comprised of the upper and lower sewer lateral and is the sole responsibility of the property owner.
- (d) CCTV: shall refer to a closed-circuit television method of inspecting any underground sewer piping system.
- (e) CITY: When used herein shall refer to the City of Piedmont

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<sup>1</sup>1-4600 et seq. As to authority of city to construct, establish and maintain drains and sewers, see Gov. C., Section 38900. As to sewer right-of-way law of 1921, see Gov. C., Section 3900 et seq. As to trees obstructing sewers, etc., declared a nuisance, see section 12.13 of this Code. As to sewers in subdivisions, see Section 19.24.

(f) CLEANOUT: A segment of pipe connected to a building sewer lateral which rises vertically to the ground surface and provides access to the building sewer lateral for purposes of routine inspection, flushing, and servicing in order that the building sewer lateral remain free-flowing.

(g) CODE: Shall refer to Chapter 17A of the Piedmont Municipal Code.

(h) COMPLIANCE CERTIFICATE: A certificate issued by EBMUD indicating that a building sewer lateral complies with the requirements as set forth in the EBMUD Regional PSL Ordinance No. 311, Title VIII.

(i) DIRECTOR: Shall mean the Director of Public Works for the City of Piedmont and his authorized representative.

(j) EBMUD or DISTRICT: The East Bay Municipal Utility District, Special District No. 1

(k) EBMUD REGIONAL PSL ORDINANCE: Shall refer to East Bay Municipal Utility District Ordinance 311, Title VIII, Regulation of Private Sewer Laterals, its implementation and any future amendments or modifications thereto.

(l) FOG: Shall refer to Fats, Oils, and Grease in the sanitary sewer system.

(m) INFILTRATION and INFLOW (I/I): Stormwater that enters a sanitary sewer system intended only for wastewater flows.

(n) LOWER SEWER LATERAL: That part of the building sewer lateral extending from the property line and/or two-way cleanout to the publicly-owned sewer main.

(o) NOTICE TO PROCEED: A written notice from the City specifying that the temporary City action preventing the repair or replacement of any part of the building sewer lateral is lifted and further, that the property owner shall proceed with the repair or replacement of that part of the building sewer lateral such that it is completed and the appropriate Compliance Certificate be obtained within the specified time limit set by the Director.

(p) NOTICE OF VIOLATION: A written notice from the City specifying that a building sewer lateral is not in compliance with this Code .

(q) PLUMBING CODE: Shall refer to the latest adopted edition of the California Plumbing Code.

(r) PUBLIC SEWER: The publicly-owned collection system that carries sewage and liquid waste from building sewer laterals to the wastewater treatment facilities.

(s) REPAIR: For purposes of this Code, "repair" means a spot mending of an



existing building sewer lateral to address a specific section of pipe that is not in compliance with this Code.

(t) **REPLACEMENT:** For purposes of this Code, “replacement” means that entirely new underground pipes, fittings, joint connections, clean-outs, caps, and other required components of the new building sewer lateral are installed and constructed in conformance with this Code. Complete lining of an existing building sewer lateral in conformance with this Code shall also be considered a replacement.

(u) **SANITARY SEWER SYSTEM:** The entire wastewater collection system including public sewers and all building sewer laterals.

(v) **SEWER MAIN:** the publicly owned sanitary sewer piping system.

(w) **STORMWATER:** natural occurring water created by the weather, underground springs, and surface or subsurface drainage of said water.

(x) **UPPER SEWER LATERAL:** That part of the building sewer lateral extending from the property line and/or cleanout, running on private property to the building or structure served. When an upper sewer lateral connects to a rear or side yard sewer main located on private property in an easement, the entire lateral, including the connection to the sewer main, shall be considered the building sewer lateral.

(y) **VERIFICATION TEST:** A specific on-site testing of the building sewer lateral established by EBMUD to assure compliance with the EBMUD Regional PSL Ordinance and this Code.

(z) **WASTEWATER:** All sewage, industrial and other waste and waters, whether treated or untreated, discharged into or permitted to enter a sanitary sewer system.

## SECTION 17A.2 BUILDING SEWER LATERAL REQUIRED

(a) **Building Sewer Lateral Required:** Every building in which plumbing fixtures are installed and every premise having waste drainage piping shall have a connection to the public sewer in conformance with this Code.

(b) **No Direct Discharges to Public Sewers:** No person shall discharge any substance directly to a manhole or other opening in a public sewer other than through an approved building sewer lateral except with the written approval of the Director.

(c) **Cleanout Required.** In addition to the required building sewer lateral as defined in Section 17A.2 (a) above, the property owner shall be responsible for the installation of a two (2) way cleanout in the building sewer lateral between the upper and lower lateral in a location approved by the Director. Such cleanout shall be a double-wye conforming to the City of Piedmont Standard Details.

SECTION 17A.3      PROHIBITED USES

(a)      Limitation on Use.

1.      Use of the sanitary sewer system is limited to the discharge of sewage and/or industrial wastes in such a quantity and of such a quality as shall not endanger the condition, operation or capacity of the sanitary sewer system and the wastewater treatment facilities.
2.      No person shall discharge, deposit, or throw into a building sewer lateral or the sanitary sewer system, any substance which may cause an obstruction or damage to the sewer system, or which may cause a nuisance or hazard, or which will in any manner obstruct the efficient operation or maintenance of the sewer system treatment facilities.

(b)      Stormwater and Groundwater Prohibited. It shall be unlawful for any person to discharge any stormwater, surface water, groundwater, roof runoff or subsurface drainage into any building sewer lateral or public sewer.

(c)      Prohibited Discharges. No discharge shall be made to a building sewer lateral or public sewer that does not meet all requirements set by the City or the District. No one required by the City or the District to have a waste discharge permit shall discharge to a building sewer lateral or public sewer without a valid permit from the City or the District.

(d)      Additional Prohibited Uses. No person shall discharge any of the following waters or waste into a building sewer lateral or the sanitary sewer system:

1.      Any unpolluted industrial process water.
2.      Any liquid or vapor having a temperature detrimental to the sewer system.
3.      Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid, or gas.
4.      Any water or waste which contains fats, oils, or grease in excess of those standards established by EBMUD and the City.
5.      Any garbage, except garbage from dwellings and establishments where food is prepared and consumed on the premises, and which has been ground to such a degree that all particles will be carried freely under the flow conditions prevailing in the public sewers. No particle shall in any event be greater than 3/8-inch in any dimension.
6.      Any sand, cement, lime, plaster, cinders, ashes, metal, glass or other heavy solids; any straw, shavings, animal hair, feathers, paunch manure or other fibrous matter; any tar, asphalt, resins, plastics or other viscous substance;

or any other matter of such a nature as to obstruct the flow in sewers or cause other interference with the proper operation of the sewer system.

7. Any waters or wastes containing excessive amounts of acid, alkali, or dissolved sulfide, or having any other corrosive property capable of causing damage or hazard to sanitary sewer system structures, equipment or personnel.
8. Any waters or wastes containing a toxic or poisonous substance in sufficient quantity to injure or interfere with the operation and maintenance of the sanitary sewer system.
9. Any waters or wastes containing more than 500 milligrams per liter of suspended solids.
10. Any noxious or malodorous gas or substance capable of creating a public nuisance.
11. Any radioactive wastes.
12. Any waste having more than 1 milligram per liter of sulfides.
13. Any waste having a pH of less than 5.5 or more than 10.5.
14. Any material that obstructs or prevents the effective maintenance or normal operation of the building sewer lateral or sewer main.

(e) Special Agreements. The City, the District, and any individual or industrial concern discharging any water or waster of unusual strength, character, composition or volume into the sanitary sewer system may enter into a contract permitting such discharge. If the discharge shall cause additional or extraordinary expense to the City, the individual or industrial concern shall be required to reimburse the City as determined by the Director.

(f) Sampling Structures. The Director shall have the right to require any property owner to construct and maintain, at their own expense, a sampling structure in an accessible location for the purpose of sampling and determining the flow of sewage or industrial wastes through their building sewer lateral. The design of the structure shall be completed by a licensed engineer approved by the Director.

#### SECTION 17A.4 BUILDING SEWER LATERAL CONNECTION BOND and BUILDING PERMIT

(a) Bond Required. If required by the Director, every person engaged in the business of installing building sewer laterals in the City, which installation will connect to any sewer main owned by the City, shall deposit with the City Clerk the sum of one thousand dollars (\$1,000) as a guarantee that all such installations will be accomplished in the manner specified

by the Director and in accordance with this Code. Said bond shall be held for one year following completion and acceptance of the installation. As an alternative to the deposit of cash as called for herein, this requirement may be satisfied (a) with a surety company bond in a form and with a bonding company acceptable to the City Clerk in the amount of the cash deposit or (b) with an interest bearing deposit in the amount of the cash deposit, which deposit would be assigned to the City in a form and with a depository acceptable to the city clerk, all for the purposes of carrying out the requirements set forth herein, and upon satisfactory compliance with such requirements, the bond or interest bearing deposit shall be released by the City.

(b) Permit Required. A written permit shall be obtained from the Director before construction, repair, or abandonment of a building sewer lateral. However, no permit shall be required for the clearance of sewer stoppages in a privately-owned building sewer lateral.

(c) Permit Application. The applicant or applicant's representative shall apply in person for the permit. No permit shall be issued until the following has been submitted by the applicant and approved by the Director.

1. Site plan showing the proposed location of the building sewer lateral including location of the connection to the public sewer and of all clean outs on the building sewer lateral.
2. List of materials that shall be used to construct the building sewer lateral.
3. Verification that the contractor to permit construction/repairs of the building sewer lateral has an active City business license.
4. Payment of sewer permit fees as follows:
  - a. For a new sewer connection and inspection thereof, the applicant shall pay the current New Sewer Connection Fee as set from time to time by a resolution of the City Council.
  - b. For replacement or repair of a building sewer lateral and inspection thereof, the permit fee shall be in accordance with the City Building Permit Fees as set from time to time by a resolution of the City Council.

(d) Form and Conditions of the Permit. The permit, when signed by the Director, shall constitute permission to do the work. The permit shall be void if the work is not commenced and completed within the period specified on the permit unless an extension of time is granted in writing by the Director. Permits shall not be transferable.

(e) Notice of Commencement of Work. The permittee shall give notice of the time of commencement of the work to the Director and Underground Service Alert, as required by law, at least forty-eight (48) hours before the work is started. Similar notice shall be given to the Police Department, Fire Department and utility companies if required on the permit.

(f) Revocation of Permit. The Director may revoke a building sewer lateral permit for non-compliance with any applicable laws or regulations.

(g) Final Inspection Unless otherwise deemed an exception by this Code, any building permit issued by the City for any property that is subject to the provisions of this Code and the EBMUD Regional PSL Ordinance shall not receive a Final Inspection unless a Compliance Certificate is issued by EBMUD and filed with the City.

SECTION 17A.5      BUILDING SEWER LATERAL: STANDARDS, DESIGN, and MATERIALS FOR CONSTRUCTION

(a) Standards:

1. All construction standards and methods shall comply with the City of Piedmont Standard Plans, the current adopted edition of the California Plumbing Code, the latest edition of the APWA Standard Specifications for Public Works Construction, applicable standard of the American Society for Testing and Materials, and the current edition of the EBMUD Regional PSL Ordinance. The Director shall be responsible for resolving possible conflicts between any of these standards.

(b) Design:

1. All aspects of the building sewer lateral design, including but not limited to the size, slope, and alignment, the method of excavation, placing of the pipe, testing of the building sewer lateral and the backfilling the trench shall be in conformance with this code, the current adopted edition of the California Plumbing Code, the latest edition of the APWA Standard Specifications for Public Works Construction, and the current edition of the EBMUD Regional PSL Ordinance. All connection joints shall be watertight and free of defects and shall conform to the standards as set forth in ASTM D 3212. All gaskets shall conform to the standard set forth in ASTM F477.

2. Any new connection of a new building sewer lateral to the sewer main, or any connection of a new building sewer lateral to an existing fitting at the sewer main, shall be inspected by the Director prior to the actual connection construction occurring for verification of the proper design, materials, and methods, which shall be in compliance with this Code. Unauthorized and non-conforming connections to the sewer main can only be repaired by the City. The cost of repairing any unauthorized or non-conforming connections to the sewer main shall be the responsibility of the property owner to which such connection serves.

3. Whenever possible, the building sewer lateral shall be brought to the building at an elevation below the basement floor. Within buildings where any interior building sewage drain is below the building sewer lateral such that proper flow via gravity as specified by this Code cannot be achieved, this sanitary sewage can be discharged by means of an approved mechanical sewage pump facility and discharged into the building sewer system. The design of said pumping system shall be in accordance with this Code, other applicable regulations, and receive the approval of the Director during the building permit plan check process.

(c) Materials:

1. All materials used in the construction, repair, or replacement of any building sewer lateral shall be in conformance with the City of Piedmont Standard Plans, the current adopted edition of the California Plumbing Code, the latest edition of the APWA Standard Specifications for Public Works Construction, applicable standard of the American Society for Testing and Materials.

SECTION 17A.6 BUILDING SEWER LATERAL STANDARDS for MEASUREMENTS, TESTS, and ANALYSES

(a) All measurements, tests, and analyses of the characteristics of waters, wastewaters and their conveyance to which reference is made in this Code, shall be determined in accordance with the latest editions of the EBMUD Regional PSL Ordinance , APWA Standard Specifications for Public Works Construction, the California Plumbing Code, and the Standard Methods for the Examination of Water and Wastewater, published jointly by the American Public Health Association and the American Water Works Association.

SECTION 17A.7 ABANDONMENT OF EXISTING BUILDING SEWERS

An existing building sewer lateral or its connection, which is to be abandoned shall be removed or sealed with a permanent, watertight plug at the connection to the public sewer in a manner satisfactory to the Director. All other openings of the abandoned building sewer lateral including plumbing connections, clean outs, rat holes, etc. shall also be similarly sealed.

SECTION 17A.8 BUILDING SEWER LATERAL: MAINTENANCE and REQUIRED INSPECTION

(a) Responsibility. It shall be the responsibility of the property owner to perform all required maintenance, repairs and inspections to keep the building sewer lateral in the condition as specified by paragraph (b)1 below.

(b) Required Maintenance.

1. The building sewer lateral must be maintained to meet the following minimum requirements:

- a. The building sewer lateral shall be kept free from roots, grease deposits, and other solids which may impede the flow or obstruct the transmission of waste.
- b. All joints shall be tight and all pipes shall be sound to prevent exfiltration by waste or infiltration by groundwater or stormwater.
- c. The building sewer lateral pipe shall be free of any structural defects, cracks, breaks, or missing portions and the grade shall be uniform without

sags or offsets.

d. No area drains, foundation drains, roof leaders, sump pumps or other direct connections that allow stormwater or groundwater into the building sewer lateral will be allowed.

e. The building sewer lateral shall have a two-way clean out located approximately at the property line or, in the case where the building sewer is all within private property, in a location approved by the Director. All clean outs shall be securely capped with an approved cap at all times, except during maintenance activities.

f. The building sewer lateral shall be free from breaks, openings, and rat holes.

g. The building sewer lateral shall be free of any material that obstructs or prevents the effective maintenance or normal operation of the building sewer lateral or the City sewer main.

h. . Property owners and food service operators are required to control the discharge of fats, oils, and grease (FOG) into the sanitary sewer system from their properties or food service establishments, and not cause or contribute to FOG related sanitary sewer overflows, blockages, or increased maintenance in the sanitary sewer systems according to the current standards established by EBMUD and the City.

2. The Director shall determine the criteria and acceptable methods of evaluating building sewers to ensure compliance with the above requirements.

(c) Required Inspections, Replacement and Compliance Certificate

1. OWNER RESPONSIBILITIES:

It shall be the responsibility of the property owner to perform all required inspections of their building sewer lateral, obtain all required building permits, perform all required construction, schedule and pass the EBMUD Verification Test, obtain and file with the City, a Compliance Certificate from EBMU, and obtain a Final Inspection from the City for their building sewer lateral when one or more of the following triggering events occurs:

a. TITLE TRANSFER:

Prior to the sale or transfer of an entire real property estate or the fee interest in that real property estate and does not include the sale or transfer of partial interest, including a leasehold. In addition, the following shall not be considered a “title transfer” for purposes of Chapter 17A:

(i) transfer by a fiduciary in the course of the administration of a decedent's estates, guardianship, conservatorship, or trust.

(ii) transfer from one co-owner to one or more other co-owners, or from one or more co-owners into or from a revocable trust, if the trust is for the benefit of the grantor or grantors.

(iii) transfer made by a trustor to fund a living trust.

(iv) transfer made to a spouse, to a registered domestic partner as defined in Section 297 of the State of California Family Code, or to a person or persons in the lineal line of co-sanguinity of one or more of the transferors.

(v) transfers between spouses or registered domestic partners resulting from a decree of dissolution of marriage or domestic partnership, or a decree of legal separation or from a property settlement agreement incidental to a decree.

**b. CONSTRUCTION and REMODELING:**

Whenever a property owner or authorized agent applies for a building permit for any type of construction on the subject property that exceeds \$100,000 in construction cost.

**c. CHANGE IN WATER SERVICE SIZE:**

Whenever a property owner or authorized agent applies to EBMUD to increase or decrease the size of the property's water meter.

**d. NOTICE OF VIOLATION:**

Whenever a property owner or authorized agent has received a written Notice of Violation from the City with respect to the condition of the building sewer lateral based on testing conducted by the City or its authorized representative.

**e. CITY INSPECTION:**

Whenever the property owner or authorized agent has received a written communication from the City with respect to the condition of the building sewer lateral based on observations from the City or its authorized representative.

**2. INDIVIDUALLY OWNED UNITS IN A MULTI UNIT BUILDING:** For all individually-owned units within a multi-unit building, such as a condominium, which is served by a single or shared building sewer lateral(s) the homeowners' association or the responsible party for this type of multi-unit building, shall be responsible for compliance to the following requirements within ten (10) years of the adoption of this Code.



- a. authorize the required inspection(s) to determine if the building sewer lateral(s) serving said property are, as determined by the Director, in compliance with this Code and the EBMUD Regional PSL Ordinance.
- b. if repair or replacement is required by the Director, obtain the required building permit, perform such work, and obtain the required inspections as specified by this Code.
- c. obtain a Compliance Certificate from EBMUD as specified in the EBMUD Regional PSL Ordinance and a Final Inspection from the City as specified in this Code.

### 3. EXCEPTIONS

- a. A property owner of a structure may request an exemption from EBMUD if the building sewer lateral is less than 10 years old from the date of any triggering event described above, and said property owner provides a valid building permit showing that the building sewer lateral was replaced in total, received a Final Inspection, and said building sewer lateral is deemed by the Director to not otherwise be in violation of this Code.
- b. If at the time of repair or replacement of any building sewer lateral, there is an action in place by the City that would prevent the repair or replacement of the lower sewer lateral in compliance with this Code, the City may temporarily waive the requirements of this Code for the lower sewer lateral. In such case, a Compliance Certificate will only be required for the upper sewer lateral. Upon conclusion of the City action, the City will rescind the waiver and shall issue a Notice to Proceed to the affected property owner, now directing them to complete the repair or replacement of the lower sewer lateral within a specific time limit such that the lower sewer lateral will be in compliance with this Code and the EBMUD Regional PSL Ordinance. Failure to obtain a valid Compliance Certificate for the lower sewer lateral in a timely manner and to otherwise not comply with the terms in the Notice to Proceed shall constitute a violation of this Code and will be subject to enforcement by the City according to this Code.

### SECTION 17A.9      REQUIRED TIME OF COMPLIANCE

(a) It shall be the responsibility of the property owner to comply with all time limits set forth by the Director for any work related to this Code that is pertinent to their property. The time limit for compliance will be established by the Director and specified in the first written communication and/or Notice of Violation to the property owner. Non-compliance in excess of said time limits may be deemed a violation of this Code and could subject the property owner to Cost Recovery and Administrative Penalties as specified in this Code.

(b) Emergency Work

Nothing in this Code shall prevent any reasonable person from doing such work and making such excavations as may be necessary for the preservation of life or property when such necessity arises; provided, however, that the person doing such work or excavations shall obtain a building permit as specified in this Code on the next working day.

(c) Right of Entry

The Director may enter, inspect, and test any buildings, structures, or premises to secure compliance or prevent a violation of any portion of this Code. No premises shall be entered until a reasonable notice is given to the property owner or authorized agent except to protect life or public safety.

(d) Emergency Work by City

1. Whenever, in the opinion of the Director, the public health, safety, or welfare shall require that repairs or protective measures to a building sewer lateral be made or instituted immediately, he is hereby authorized to proceed with all necessary work to abate the condition and may enter upon private property for such purpose. He may erect and maintain all necessary barricades, warning lights, and other protective devices upon public or private property. He shall notify the owner of the premises as the circumstances shall permit.

2. The owner of the property upon which the condition exists and the person creating such condition shall be jointly and severally liable to the City for all costs incurred by it in abating the emergency condition and erecting and maintaining said protective devices.

(e) Order to Abate

The Director shall investigate all dangerous and unsanitary conditions existing in or about building sewers laterals and shall periodically require that building sewer laterals be tested. If such a condition is a menace to life, health, safety, or property, or is in violation of law, he shall, in writing, order the owner of the premises to discontinue use of the sewer, or to discontinue all construction work with respect to the sewer, and to abate the condition in such manner as shall comply with the law. Any stoppage in the building sewer lateral or break in the watertight integrity of the building sewer lateral shall be conclusively presumed to be a menace to life, health, safety or property for purposes of requiring abatement of such a condition.

(f) Time Requirement for Emergency Building Sewer Lateral Repair

Upon notification by the City of a faulty building sewer lateral which has been deemed an emergency situation by the Director, the property owner shall repair or replace said faulty building sewer lateral within forty-eight (48) hours from the date of notification, verbal or

written. If the property owner fails to comply with said order, the City shall have the right to make or have made the necessary repairs and recover said costs as authorized by this Code.

#### SECTION 17A.10 SEWER SERVICE CHARGES

(a) Every person owning real property which is connected to the City sanitary sewer facilities shall pay a charge for sewer service based upon the use of such property in accordance with Chapter 20E of the Municipal Code

#### SECTION 17A.11 SEWER CONNECTION CHARGE FUND

The Sewer Connection Charge fund is hereby established. Money collected by the City for sewer connection charges as herein set forth shall be placed in the Sewer Connection Charge Fund and shall be used only to expand the capacity of the sewer system by construction or modification and activities required thereby.

#### SECTION 17A.12 SEPTIC TANKS and CESSPOOLS PROHIBITED

Septic tanks and cesspools are specifically prohibited in the City notwithstanding any statement in the latest adopted edition of the Plumbing Code to the contrary. (Ord. No. 479 N.S., §2 (11/3/86))

#### SECTION 17A.13 COST RECOVERY – BUILDING SEWER LATERAL OVERFLOWS

The City shall have the authority to recover from the property owner, the City's expenses incurred in responding to, abating, or repairing any sewer overflow from a defective building sewer not otherwise addressed by the property owner in a timely manner as specified in this Code. The City may collect the incurred costs by use of all legal means, including the recordation of a lien against said property.

#### SECTION 17A.14 ADMINISTRATIVE PENALTIES – NON COMPLIANCE

The City shall have the authority to assess administrative penalties on the property for the property owner's failure to meet any requirement of this code, or for continued violation of any requirement of this code, according to the following schedule. The City may collect the incurred costs by use of all legal means, including the recordation of a lien against said property. The City shall have the authority to waive, suspend, or otherwise modify any administrative penalty established by this code.

- (a) \$500 for the first violation which remains out of compliance in excess of the time limit established in the first Notice of Violation.
- (b) \$1,000 for the second violation occurring within three(3) years of the first violation.
- (c) \$2,500 for each additional violation exceeding two (2) violations within three (3) years of the first violation.

SECTION 17A.15    ADOPTION of the EBMUD REGIONAL PSL ORDINANCE

The East Bay Municipal Utility District Ordinance 311, Title VIII, Regulation of Private Sewer Laterals is hereby adopted by reference. The City Council may from time to time designate by resolution, any amendments or modifications to the ordinance thereto, as the ordinance may be periodically revised by the District. One copy of the EBMUD Regional PSL Ordinance shall be kept on file at the Department of Public Works.

DRAFT

**APPENDIX “B”**

**LEGAL AUTHORITY TO ACCESS CITY SEWERS  
ON PRIVATE PROPERTY**

DRAFT

**City of Piedmont**  
California



**MEMORANDUM**

**Date:** March 14, 2007  
**To:** Russell Moore, City Engineer  
**From:** George Peyton, City Attorney  
**Subject:** Access to City Sewers on Private Property

**SUMMARY**

The City of Piedmont is able to access sewers located on private property for repairs, maintenance or reconstruction based on a series of means.

**BACKGROUND**

Parts of Piedmont were laid out around the turn-of-the-century before the City was officially incorporated, so that a number of sewers in the City were initially built many years ago, and some do not have clearly recorded easements. It has been my practical experience as the City Attorney and the Deputy City Attorney since 1966 that I have never encountered any legal problem with the City gaining access to repair or maintain or rebuild sewers, specifically including sewers that are located on private property.

**ANALYSIS**

There are various legal means for the City to obtain access to sewers located on private property, as follows:

1. The City itself has a series of provisions in the Piedmont City Code under Chapter 17A relating to sewers, building sewers, and maintenance thereof. In Section 17A.8 of the Piedmont City Code there is a specific provision entitled "Right of Entry", allowing the Director of Public Works the right to carry out the provisions of Section 17A of the Code.
2. Assuming that the City desires legal access to a City sewer on private property in an unrecorded sewer easement, the City can claim title to the property based on adverse possession.

Memorandum  
March 14, 2007  
Page Two

3. Another legal basis for cities to acquire access to easements is through easements by right of prescription, and an important case based on this reasoning is Reinsch v. City of Los Angeles, 243 Cal. App. 2d 737, 744, 52 Cal. Rptr. 613 (1966). There are various requirements for an easement by prescription, including the fact that it has been used continuously for at least 5 years. In Piedmont's situation, these unrecorded sewer easements have been used by the City in most cases well in excess of 50 years, and often for a least 75 or 80 years. The Reinsch case dealt with the City of Los Angeles having the right of access to a storm sewer or drain where there was no recorded easement involved, but there was evidence that the City had used the storm sewer for many years, just as in the case in Piedmont.

4. An additional legal approach to access for an unrecorded easement is on the basis of implied dedication, particularly with evidence of acquiescence, or consent of the private property owner. An important case for this precedent is Union Transportation Company v. Sacramento County, 42 Cal. 2d 235, 241, 267 P.2d 10 (1954).




**APPENDIX “C”**

**SANITARY SEWER REHABILITATION  
PROGRAM MAP**

DRAFT



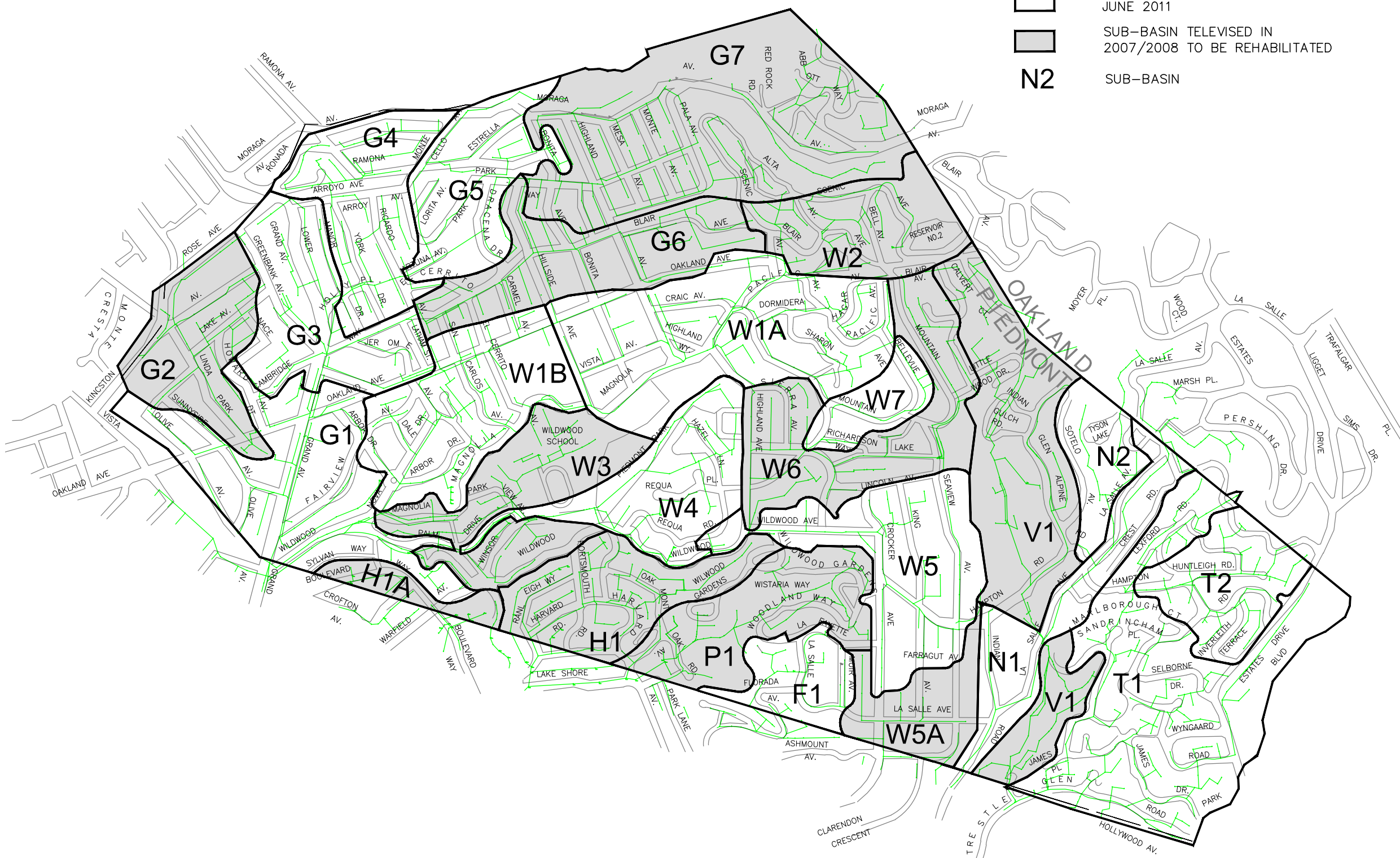
**LEGEND**

-  SANITARY SEWER MAIN
-  SUB-BASIN REHABILITATED AS OF JUNE 2011
-  SUB-BASIN TELEVISED IN 2007/2008 TO BE REHABILITATED
- N2** SUB-BASIN



NOT TO SCALE

Remaining Sub-basin Priority List	
Sub-basin	Priority Rank
Priority Lines	1
W3	2
W2	3
V1	4
H1	5
G6	6
P1	7
G7	8
W6	9
G2	10



**Coastland Civil Engineering, Inc.**  
 1400 Neotomas Avenue, Santa Rosa, CA 95405  
 707.571.8005 707.571.8037 Fax

**CITY OF PIEDMONT**  
**SANITARY SEWER**  
**REHABILITATION PROGRAM**

**APPENDIX “D”**

**SSO REPORTING  
SWRCB MONITORING AND REPORTING  
REQUIREMENTS - ORDER NO. WQO 2013-0058-EXEC**

DRAFT

STATE OF CALIFORNIA  
WATER RESOURCES CONTROL BOARD  
**ORDER NO. WQ 2013-0058-EXEC**

AMENDING MONITORING AND REPORTING PROGRAM  
FOR  
STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR  
SANITARY SEWER SYSTEMS

The State of California, Water Resources Control Board (hereafter State Water Board) finds:

1. The State Water Board is authorized to prescribe statewide general Waste Discharge Requirements (WDRs) for categories of discharges that involve the same or similar operations and the same or similar types of waste pursuant to Water Code section 13263(i).
2. Water Code section 13193 *et seq.* requires the Regional Water Quality Control Boards (Regional Water Boards) and the State Water Board (collectively, the Water Boards) to gather Sanitary Sewer Overflow (SSO) information and make this information available to the public, including but not limited to, SSO cause, estimated volume, location, date, time, duration, whether or not the SSO reached or may have reached waters of the state, response and corrective action taken, and an enrollee's contact information for each SSO event. An enrollee is defined as the public entity having legal authority over the operation and maintenance of, or capital improvements to, a sanitary sewer system greater than one mile in length.
3. Water Code section 13271, *et seq.* requires notification to the California Office of Emergency Services (Cal OES), formerly the California Emergency Management Agency, for certain unauthorized discharges, including SSOs.
4. On May 2, 2006, the State Water Board adopted Order 2006-0003-DWQ, "Statewide Waste Discharge Requirements for Sanitary Sewer Systems"<sup>1</sup> (hereafter SSS WDRs) to comply with Water Code section 13193 and to establish the framework for the statewide SSO Reduction Program.
5. Subsection G.2 of the SSS WDRs and the Monitoring and Reporting Program (MRP) provide that the Executive Director may modify the terms of the MRP at any time.
6. On February 20, 2008, the State Water Board Executive Director adopted a revised MRP for the SSS WDRs to rectify early notification deficiencies and ensure that first responders are notified in a timely manner of SSOs discharged into waters of the state.
7. When notified of an SSO that reaches a drainage channel or surface water of the state, Cal OES, pursuant to Water Code section 13271(a)(3), forwards the SSO notification information<sup>2</sup> to local government agencies and first responders including local public health officials and the applicable Regional Water Board. Receipt of notifications for a single SSO event from both the SSO reporter

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<sup>1</sup> Available for download at:

[http://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/water\\_quality/2006/wqo/wqo2006\\_0003.pdf](http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2006/wqo/wqo2006_0003.pdf)

<sup>2</sup> Cal OES Hazardous Materials Spill Reports available Online at:

[http://w3.calema.ca.gov/operational/mal haz.nsf/\\$defaultview](http://w3.calema.ca.gov/operational/mal haz.nsf/$defaultview) and <http://w3.calema.ca.gov/operational/mal haz.nsf>

and Cal OES is duplicative. To address this, the SSO notification requirements added by the February 20, 2008 MRP revision are being removed in this MRP revision.

8. In the February 28, 2008 Memorandum of Agreement between the State Water Board and the California Water and Environment Association (CWEA), the State Water Board committed to re-designing the CIWQS<sup>3</sup> Online SSO Database to allow “event” based SSO reporting versus the original “location” based reporting. Revisions to this MRP and accompanying changes to the CIWQS Online SSO Database will implement this change by allowing for multiple SSO appearance points to be associated with each SSO event caused by a single asset failure.
9. Based on stakeholder input and Water Board staff experience implementing the SSO Reduction Program, SSO categories have been revised in this MRP. In the prior version of the MRP, SSOs have been categorized as Category 1 or Category 2. This MRP implements changes to SSO categories by adding a Category 3 SSO type. This change will improve data management to further assist Water Board staff with evaluation of high threat and low threat SSOs by placing them in unique categories (i.e., Category 1 and Category 3, respectively). This change will also assist enrollees in identifying SSOs that require Cal OES notification.
10. Based on over six years of implementation of the SSS WDRs, the State Water Board concludes that the February 20, 2008 MRP must be updated to better advance the SSO Reduction Program<sup>4</sup> objectives, assess compliance, and enforce the requirements of the SSS WDRs.

**IT IS HEREBY ORDERED THAT:**

Pursuant to the authority delegated by Water Code section 13267(f), Resolution 2002-0104, and Order 2006-0003-DWQ, the MRP for the SSS WDRs (Order 2006-0003-DWQ) is hereby amended as shown in Attachment A and shall be effective on September 9, 2013.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Thomas Howard  
Executive Director

<sup>3</sup> California Integrated Water Quality System (CIWQS) publicly available at <http://www.waterboards.ca.gov/ciwqs/publicreports.shtml>

<sup>4</sup> Statewide Sanitary Sewer Overflow Reduction Program information is available at: [http://www.waterboards.ca.gov/water\\_issues/programs/sso/](http://www.waterboards.ca.gov/water_issues/programs/sso/)

**ATTACHMENT A**

STATE WATER RESOURCES CONTROL BOARD  
**ORDER NO. WQ 2013-0058-EXEC**  
 AMENDING MONITORING AND REPORTING PROGRAM  
 FOR  
 STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR  
 SANITARY SEWER SYSTEMS

This Monitoring and Reporting Program (MRP) establishes monitoring, record keeping, reporting and public notification requirements for Order 2006-0003-DWQ, “Statewide General Waste Discharge Requirements for Sanitary Sewer Systems” (SSS WDRs). This MRP shall be effective from September 9, 2013 until it is rescinded. The Executive Director may make revisions to this MRP at any time. These revisions may include a reduction or increase in the monitoring and reporting requirements. All site specific records and data developed pursuant to the SSS WDRs and this MRP shall be complete, accurate, and justified by evidence maintained by the enrollee. Failure to comply with this MRP may subject an enrollee to civil liabilities of up to \$5,000 a day per violation pursuant to Water Code section 13350; up to \$1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement. The State Water Resources Control Board (State Water Board) reserves the right to take any further enforcement action authorized by law.

**A. SUMMARY OF MRP REQUIREMENTS**

**Table 1 – Spill Categories and Definitions**

<b>CATEGORIES</b>	<b>DEFINITIONS</b> [see Section A on page 5 of Order 2006-0003-DWQ, for Sanitary Sewer Overflow (SSO) definition]
<b>CATEGORY 1</b>	Discharges of untreated or partially treated wastewater of <b><u>any volume</u></b> resulting from an enrollee’s sanitary sewer system failure or flow condition that: <ul style="list-style-type: none"> <li>• Reach surface water and/or reach a drainage channel tributary to a surface water; or</li> <li>• Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).</li> </ul>
<b>CATEGORY 2</b>	Discharges of untreated or partially treated wastewater of <b><u>1,000 gallons or greater</u></b> resulting from an enrollee’s sanitary sewer system failure or flow condition that <b><u>do not</u></b> reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.
<b>CATEGORY 3</b>	All other discharges of untreated or partially treated wastewater resulting from an enrollee’s sanitary sewer system failure or flow condition.
<b>PRIVATE LATERAL SEWAGE DISCHARGE (PLSD)</b>	Discharges of untreated or partially treated wastewater resulting from blockages or other problems <b><u>within a privately owned sewer lateral</u></b> connected to the enrollee’s sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of may be <u>voluntarily</u> reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.

**Table 2 – Notification, Reporting, Monitoring, and Record Keeping Requirements**

ELEMENT	REQUIREMENT	METHOD
<b>NOTIFICATION</b> (see section B of MRP)	<ul style="list-style-type: none"> <li>• Within two hours of becoming aware of any Category 1 SSO <b>greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water</b>, notify the California Office of Emergency Services (Cal OES) and obtain a notification control number.</li> </ul>	Call Cal OES at: <b>(800) 852-7550</b>
<b>REPORTING</b> (see section C of MRP)	<ul style="list-style-type: none"> <li>• Category 1 SSO: Submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date.</li> <li>• Category 2 SSO: Submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date.</li> <li>• Category 3 SSO: Submit certified report within 30 calendar days of the end of month in which SSO the occurred.</li> <li>• SSO Technical Report: Submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters.</li> <li>• “No Spill” Certification: Certify that no SSOs occurred within 30 calendar days of the end of the month or, if reporting quarterly, the quarter in which no SSOs occurred.</li> <li>• Collection System Questionnaire: Update and certify every 12 months.</li> </ul>	Enter data into the CIWQS Online SSO Database ( <a href="http://ciwqs.waterboards.ca.gov/">http://ciwqs.waterboards.ca.gov/</a> ), certified by enrollee’s Legally Responsible Official(s).
<b>WATER QUALITY MONITORING</b> (see section D of MRP)	<ul style="list-style-type: none"> <li>• Conduct water quality sampling <b>within 48 hours</b> after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.</li> </ul>	Water quality results are required to be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.
<b>RECORD KEEPING</b> (see section E of MRP)	<ul style="list-style-type: none"> <li>• SSO event records.</li> <li>• Records documenting Sanitary Sewer Management Plan (SSMP) implementation and changes/updates to the SSMP.</li> <li>• Records to document Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters.</li> <li>• Collection system telemetry records if relied upon to document and/or estimate SSO Volume.</li> </ul>	Self-maintained records shall be available during inspections or upon request.

## **B. NOTIFICATION REQUIREMENTS**

Although Regional Water Quality Control Boards (Regional Water Boards) and the State Water Board (collectively, the Water Boards) staff do not have duties as first responders, this MRP is an appropriate mechanism to ensure that the agencies that have first responder duties are notified in a timely manner in order to protect public health and beneficial uses.

1. For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water or spilled in a location where it probably will be discharged to surface water, either directly or by way of a drainage channel or MS4, the enrollee shall, as soon as possible, but not later than two (2) hours after (A) the enrollee has knowledge of the discharge, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures, notify the Cal OES and obtain a notification control number.
2. To satisfy notification requirements for each applicable SSO, the enrollee shall provide the information requested by Cal OES before receiving a control number. Spill information requested by Cal OES may include:
  - i. Name of person notifying Cal OES and direct return phone number.
  - ii. Estimated SSO volume discharged (gallons).
  - iii. If ongoing, estimated SSO discharge rate (gallons per minute).
  - iv. SSO Incident Description:
    - a. Brief narrative.
    - b. On-scene point of contact for additional information (name and cell phone number).
    - c. Date and time enrollee became aware of the SSO.
    - d. Name of sanitary sewer system agency causing the SSO.
    - e. SSO cause (if known).
  - v. Indication of whether the SSO has been contained.
  - vi. Indication of whether surface water is impacted.
  - vii. Name of surface water impacted by the SSO, if applicable.
  - viii. Indication of whether a drinking water supply is or may be impacted by the SSO.
  - ix. Any other known SSO impacts.
  - x. SSO incident location (address, city, state, and zip code).
3. Following the initial notification to Cal OES and until such time that an enrollee certifies the SSO report in the CIWQS Online SSO Database, the enrollee shall provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s).
4. PLSDs: The enrollee is strongly encouraged to notify Cal OES of discharges greater than or equal to 1,000 gallons of untreated or partially treated wastewater that result or may result in a discharge to surface water resulting from failures or flow conditions within a privately

owned sewer lateral or from other private sewer asset(s) if the enrollee becomes aware of the PLSD.

### **C. REPORTING REQUIREMENTS**

1. **CIWQS Online SSO Database Account:** All enrollees shall obtain a CIWQS Online SSO Database account and receive a “Username” and “Password” by registering through CIWQS. These accounts allow controlled and secure entry into the CIWQS Online SSO Database.
2. **SSO Mandatory Reporting Information:** For reporting purposes, if one SSO event results in multiple appearance points in a sewer system asset, the enrollee shall complete one SSO report in the CIWQS Online SSO Database which includes the GPS coordinates for the location of the SSO appearance point closest to the failure point, blockage or location of the flow condition that caused the SSO, and provide descriptions of the locations of all other discharge points associated with the SSO event.
3. **SSO Categories**
  - i. **Category 1** – Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee’s sanitary sewer system failure or flow condition that:
    - a. Reach surface water and/or reach a drainage channel tributary to a surface water;  
or
    - b. Reach a MS4 and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).
  - ii. **Category 2** – Discharges of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from an enrollee’s sanitary sewer system failure or flow condition that does not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.
  - iii. **Category 3** – All other discharges of untreated or partially treated wastewater resulting from an enrollee’s sanitary sewer system failure or flow condition.
4. **Sanitary Sewer Overflow Reporting to CIWQS - Timeframes**
  - i. **Category 1 and Category 2 SSOs** – All SSOs that meet the above criteria for Category 1 or Category 2 SSOs shall be reported to the CIWQS Online SSO Database:
    - a. Draft reports for Category 1 and Category 2 SSOs shall be submitted to the CIWQS Online SSO Database within three (3) business days of the enrollee becoming aware of the SSO. Minimum information that shall be reported in a draft Category 1 SSO report shall include all information identified in section 8.i.a. below. Minimum information that shall be reported in a Category 2 SSO draft report shall include all information identified in section 8.i.c below.
    - b. A final Category 1 or Category 2 SSO report shall be certified through the CIWQS Online SSO Database within 15 calendar days of the end date of the SSO.



Minimum information that shall be certified in the final Category 1 SSO report shall include all information identified in section 8.i.b below. Minimum information that shall be certified in a final Category 2 SSO report shall include all information identified in section 8.i.d below.

- ii. **Category 3 SSOs** – All SSOs that meet the above criteria for Category 3 SSOs shall be reported to the CIWQS Online SSO Database and certified within 30 calendar days after the end of the calendar month in which the SSO occurs (e.g., all Category 3 SSOs occurring in the month of February shall be entered into the database and certified by March 30). Minimum information that shall be certified in a final Category 3 SSO report shall include all information identified in section 8.i.e below.
- iii. **“No Spill” Certification** – If there are no SSOs during the calendar month, the enrollee shall either 1) certify, within 30 calendar days after the end of each calendar month, a “No Spill” certification statement in the CIWQS Online SSO Database certifying that there were no SSOs for the designated month, or 2) certify, quarterly within 30 calendar days after the end of each quarter, “No Spill” certification statements in the CIWQS Online SSO Database certifying that there were no SSOs for each month in the quarter being reported on. For quarterly reporting, the quarters are Q1 - January/ February/ March, Q2 - April/May/June, Q3 - July/August/September, and Q4 - October/November/December.

If there are no SSOs during a calendar month but the enrollee reported a PLSD, the enrollee shall still certify a “No Spill” certification statement for that month.

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

## 5. **SSO Technical Report**

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

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

ii. **Enrollee's Response to SSO:**

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

iii. **Water Quality Monitoring:**

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

6. **PLSDs**

Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately owned sewer lateral connected to the enrollee's sanitary sewer system or from other private sanitary sewer system assets may be voluntarily reported to the CIWQS Online SSO Database.

- i. The enrollee is also encouraged to provide notification to Cal OES per section B above when a PLSD greater than or equal to 1,000 gallons has or may result in a discharge to surface water. For any PLSD greater than or equal to 1,000 gallons regardless of the spill destination, the enrollee is also encouraged to file a spill report as required by Health and Safety Code section 5410 et. seq. and Water Code section 13271, or notify the responsible party that notification and reporting should be completed as specified above and required by State law.
- ii. If a PLSD is recorded in the CIWQS Online SSO Database, the enrollee must identify the sewage discharge as occurring and caused by a private sanitary sewer system asset and should identify a responsible party (other than the enrollee), if known. Certification of PLSD reports by enrollees is not required.

7. **CIWQS Online SSO Database Unavailability**

In the event that the CIWQS Online SSO Database is not available, the enrollee must fax or e-mail all required information to the appropriate Regional Water Board office in accordance with the time schedules identified herein. In such event, the enrollee must also enter all required information into the CIWQS Online SSO Database when the database becomes available.

8. **Mandatory Information to be Included in CIWQS Online SSO Reporting**

All enrollees shall obtain a CIWQS Online SSO Database account and receive a "Username" and "Password" by registering through CIWQS which can be reached at [CIWQS@waterboards.ca.gov](mailto:CIWQS@waterboards.ca.gov) or by calling (866) 792-4977, M-F, 8 A.M. to 5 P.M. These accounts will allow controlled and secure entry into the CIWQS Online SSO Database. Additionally, within thirty (30) days of initial enrollment and prior to recording SSOs into the CIWQS Online SSO Database, all enrollees must complete a Collection System

Questionnaire (Questionnaire). The Questionnaire shall be updated at least once every 12 months.

i. **SSO Reports**

At a minimum, the following mandatory information shall be reported prior to finalizing and certifying an SSO report for each category of SSO:

- a. **Draft Category 1 SSOs**: At a minimum, the following mandatory information shall be reported for a draft Category 1 SSO report:
1. SSO Contact Information: Name and telephone number of enrollee contact person who can answer specific questions about the SSO being reported.
  2. SSO Location Name.
  3. Location of the overflow event (SSO) by entering GPS coordinates. If a single overflow 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 SSO appearance point explanation field.
  4. Whether or not the SSO reached surface water, a drainage channel, or entered and was discharged from a drainage structure.
  5. Whether or not the SSO reached a municipal separate storm drain system.
  6. Whether or not the total SSO volume that reached a municipal separate storm drain system was fully recovered.
  7. Estimate of the SSO volume, inclusive of all discharge point(s).
  8. Estimate of the SSO volume that reached surface water, a drainage channel, or was not recovered from a storm drain.
  9. Estimate of the SSO volume recovered (if applicable).
  10. Number of SSO appearance point(s).
  11. Description and location of SSO appearance point(s). If a single sanitary sewer system failure results in multiple SSO appearance points, each appearance point must be described.
  12. SSO start date and time.
  13. Date and time the enrollee was notified of, or self-discovered, the SSO.
  14. Estimated operator arrival time.
  15. For spills greater than or equal to 1,000 gallons, the date and time Cal OES was called.
  16. For spills greater than or equal to 1,000 gallons, the Cal OES control number.
- b. **Certified Category 1 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 1 SSO report, in addition to all fields in section 8.i.a :
1. Description of SSO destination(s).
  2. SSO end date and time.
  3. SSO causes (mainline blockage, roots, etc.).
  4. SSO failure point (main, lateral, etc.).
  5. Whether or not the spill was associated with a storm event.

6. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the overflow; and a schedule of major milestones for those steps.
  7. Description of spill response activities.
  8. Spill response completion date.
  9. Whether or not there is an ongoing investigation, the reasons for the investigation and the expected date of completion.
  10. Whether or not a beach closure occurred or may have occurred as a result of the SSO.
  11. Whether or not health warnings were posted as a result of the SSO.
  12. Name of beach(es) closed and/or impacted. If no beach was impacted, NA shall be selected.
  13. Name of surface water(s) impacted.
  14. If water quality samples were collected, identify parameters the water quality samples were analyzed for. If no samples were taken, NA shall be selected.
  15. If water quality samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA shall be selected.
  16. Description of methodology(ies) and type of data relied upon for estimations of the SSO volume discharged and recovered.
  17. SSO Certification: Upon SSO Certification, the CIWQS Online SSO Database will issue a final SSO identification (ID) number.
- c. **Draft Category 2 SSOs**: At a minimum, the following mandatory information shall be reported for a draft Category 2 SSO report:
1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO.
- d. **Certified Category 2 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 2 SSO report:
1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-9, and 17 in section 8.i.b above for Certified Category 1 SSO.
- e. **Certified Category 3 SSOs**: At a minimum, the following mandatory information shall be reported for a certified Category 3 SSO report:
1. Items 1-14 in section 8.i.a above for Draft Category 1 SSO and Items 1-5, and 17 in section 8.i.b above for Certified Category 1 SSO.
- ii. **Reporting SSOs to Other Regulatory Agencies**
- These reporting requirements do not preclude an enrollee from reporting SSOs to other regulatory agencies pursuant to state law. In addition, these reporting requirements do not replace other Regional Water Board notification and reporting requirements for SSOs.
- iii. **Collection System Questionnaire**

The required Questionnaire (see subsection G of the SSS WDRs) provides the Water Boards with site-specific information related to the enrollee's sanitary sewer system. The enrollee shall complete and certify the Questionnaire at least every 12 months to facilitate program implementation, compliance assessment, and enforcement response.

iv. **SSMP Availability**

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

- a. Submit an **electronic** copy of the enrollee's approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP to the State Water Board, within 30 days of that approval and within 30 days of any subsequent SSMP re-certifications, to the following mailing address:

State Water Resources Control Board  
Division of Water Quality  
Attn: SSO Program Manager  
1001 I Street, 15<sup>th</sup> Floor, Sacramento, CA 95814

**D. WATER QUALITY MONITORING REQUIREMENTS:**

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

1. Contain protocols for water quality monitoring.
2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g. safety, access restrictions, etc.).
3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.
4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.
5. Within 48 hours of the enrollee becoming aware of the SSO, require water quality sampling for, at a minimum, the following constituents:
  - i. Ammonia
  - ii. Appropriate Bacterial indicator(s) per the applicable Basin Plan water quality objective or Regional Board direction which may include total and fecal coliform, enterococcus, and e-coli.

**E. RECORD KEEPING REQUIREMENTS:**

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

1. General Records: The enrollee shall maintain records to document compliance with all provisions of the SSS WDRs and this MRP for each sanitary sewer system owned including any required records generated by an enrollee's sanitary sewer system contractor(s).
2. SSO Records: The enrollee shall maintain records for each SSO event, including but not limited to:
  - i. Complaint records documenting how the enrollee responded to all notifications of possible or actual SSOs, both during and after business hours, including complaints that do not result in SSOs. Each complaint record shall, at a minimum, include the following information:
    - a. Date, time, and method of notification.
    - b. Date and time the complainant or informant first noticed the SSO.
    - c. Narrative description of the complaint, including any information the caller can provide regarding whether or not the complainant or informant reporting the potential SSO knows if the SSO has reached surface waters, drainage channels or storm drains.
    - d. Follow-up return contact information for complainant or informant for each complaint received, if not reported anonymously.
    - e. Final resolution of the complaint.
  - ii. Records documenting steps and/or remedial actions undertaken by enrollee, using all available information, to comply with section D.7 of the SSS WDRs.
  - iii. Records documenting how all estimate(s) of volume(s) discharged and, if applicable, volume(s) recovered were calculated.
3. Records documenting all changes made to the SSMP since its last certification indicating when a subsection(s) of the SSMP was changed and/or updated and who authorized the change or update. These records shall be attached to the SSMP.
4. Electronic monitoring records relied upon for documenting SSO events and/or estimating the SSO volume discharged, including, but not limited to records from:
  - i. Supervisory Control and Data Acquisition (SCADA) systems
  - ii. Alarm system(s)
  - iii. Flow monitoring device(s) or other instrument(s) used to estimate wastewater levels, flow rates and/or volumes.

## **F. CERTIFICATION**

1. All information required to be reported into the CIWQS Online SSO Database shall be certified by a person designated as described in subsection J of the SSS WDRs. This designated person is also known as a Legally Responsible Official (LRO). An enrollee may have more than one LRO.
2. Any designated person (i.e. an LRO) shall be registered with the State Water Board to certify reports in accordance with the CIWQS protocols for reporting.

3. Data Submitter (DS): Any enrollee employee or contractor may enter draft data into the CIWQS Online SSO Database on behalf of the enrollee if authorized by the LRO and registered with the State Water Board. However, only LROs may certify reports in CIWQS.
4. The enrollee shall maintain continuous coverage by an LRO. Any change of a registered LRO or DS (e.g., retired staff), including deactivation or a change to the LRO's or DS's contact information, shall be submitted by the enrollee to the State Water Board within 30 days of the change by calling (866) 792-4977 or e-mailing [help@ciwqs.waterboards.ca.gov](mailto:help@ciwqs.waterboards.ca.gov).
5. A registered designated person (i.e., an LRO) shall certify all required reports under penalty of perjury laws of the state as stated in the CIWQS Online SSO Database at the time of certification.

### CERTIFICATION

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of an order amended by the Executive Director of the State Water Resources Control Board.

Signed 7/30/13

\_\_\_\_\_

Date

\_\_\_\_\_

Jeanine Townsend  
Clerk to the Board

**APPENDIX "E"**  
**SSMP AUDIT FORM**



**City of Piedmont  
Sewer System Management Plan (SSMP)**

**Calendar Years 20xx-20xx Internal Audit Report**

**DATE**

*The purpose of the Annual SSMP Audit is to evaluate the effectiveness of the City of Piedmont SSMP and to identify deficiencies, if any, and steps to correct them. The audit is completed pursuant to the San Francisco Bay Regional Water Quality Control Board's Sewer System Management Plan Development Guide, July 2005 and State Water Board Monitoring and Reporting Program (MRP) for Statewide General Waste Discharge Requirements (WDR) Order No. WQ 2013-0058-EXEC.*

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**Directions:** Please check **YES** or **NO** for each question. If **NO** is answered for any question, describe the updates/changes needed and the timeline to complete those changes in the "Description of Scheduled Updates/Changes to the SSMP and Key Progress" section on Page 4 of this form.

**ELEMENT I. GOALS**

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

**ELEMENT II. ORGANIZATION**

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

**ELEMENT III. LEGAL AUTHORITY**

3. Does the SSMP contain or reference up-to-date information about the legal authority? **YES / NO**
4. Does the agency have sufficient legal authority to control sewer use and maintenance? **YES / NO**

**ELEMENT IV. OPERATIONS AND MAINTENANCE (MEASURES AND ACTIVITIES)**

**a. COLLECTION SYSTEM MAPS**

5. Does the SSMP contain or reference up-to-date information about relevant maps? **YES / NO**
6. Are the collection system maps complete, up-to-date, and sufficiently detailed? **YES / NO**

**b. RESOURCES AND BUDGET**

7. Does the SSMP contain or reference up-to-date information about resources and budget? **YES / NO**
8. Are resources and budget sufficient to support effective sewer system management? **YES / NO**
9. Do planning efforts support long-term goals? **YES / NO**

**c. PRIORITIZED PREVENTIVE MAINTENANCE**

10. Does the SSMP contain or reference up-to-date information about preventive maintenance activities? Note annual cleaning and root foaming footage vs. goals. **YES / NO**
11. Based upon information in the Annual SSO Report, are preventive maintenance activities sufficient and effective in reducing and preventing SSOs and blockages? Note performance for audit period. **YES / NO**

**d. SCHEDULED INSPECTIONS AND CONDITION ASSESSMENT**

12. Does the SSMP contain or reference up-to-date information about inspections and condition assessment? Note annual inspection footage vs. goals. **YES / NO**
13. Are scheduled inspections and the condition assessment system effective in locating, identifying, and addressing deficiencies? **YES / NO**

**e. CONTINGENCY EQUIPMENT AND REPLACEMENT INVENTORIES**

14. Does the SSMP contain or reference up-to-date information about equipment and replacement inventories? **YES / NO**
15. Are contingency equipment and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance? **YES / NO**

**f. TRAINING**

16. Does the SSMP contain or reference up-to-date information about training expectations and programs? **YES / NO**
17. Do supervisors believe that their staff are sufficiently trained? **YES / NO**
18. Are staff satisfied with the training opportunities and support offered to them? **YES / NO**

**g. OUTREACH TO PLUMBERS AND BUILDING CONTRACTORS**

19. Does the SSMP contain or reference up-to-date information about outreach to plumbers and building contractors? **YES / NO**
20. Has the agency conducted or participated in any outreach activities to plumbers and building contractors? **YES / NO**

**ELEMENT V. DESIGN AND CONSTRUCTION STANDARDS**  
*(DESIGN AND PERFORMANCE STANDARDS)*

21. Does the SSMP contain or reference up-to-date information about design and construction standards? **YES / NO**
22. Are design and construction standards, as well as standards for inspection and testing of new and rehabilitated facilities sufficiently comprehensive and up-to-date? **YES / NO**

**ELEMENT VI. OVERFLOW EMERGENCY RESPONSE PLAN**

23. Does the SSMP contain or reference an up-to-date version of the Overflow Emergency Response Plan? **YES / NO**
24. Considering the information in the Annual SSO Report, is the Overflow Emergency Response Plan effective in handling SSOs? **YES / NO**

**ELEMENT VII. FATS, OILS, AND GREASE (FOG) CONTROL PLAN**

25. Does the SSMP contain or reference up-to-date information about the FOG control program? **YES / NO**
26. Based upon information in the SSO Annual Report, is the current FOG program effective in documenting and controlling FOG sources? **YES / NO**

**ELEMENT VIII. CAPACITY MANAGEMENT**  
*(SYSTEM EVALUATION AND CAPACITY EVALUATION PLAN)*

27. Does the SSMP contain or reference up-to-date information about capacity assessment? **YES / NO**
28. Has the agency completed a capacity assessment and identified and addressed any hydraulic deficiencies in the system? **YES / NO**

**ELEMENT IX. MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS**

29. Does the SSMP contain or reference up-to-date information about data collection and organization? **YES / NO**

**30.** Are data collection and organization sufficient to evaluate the effectiveness of the SSMP? **YES / NO**

**ELEMENT X. SSMP AUDITS**

**31.** Complete internal audit every two years (by May 2, even numbered years) and maintain/make available for inspection. **YES / NO**

**32.** Update plan and obtain city council approval of plan every five (5) years (August 2014, 2019, 2024 etc.) **YES / NO**

**ELEMENT XI. COMMUNICATION PROGRAM**

**33.** Has the agency effectively communicated with the public and other agencies about the development, implementation and performance of the SSMP? **YES / NO**

**34.** Has the agency provided the public the opportunity for input as the program is developed and implemented? **YES / NO**

**Description of Scheduled Updates & Changes to the SSMP and Key Progress**

*Directions: For each question answered NO, please reference the SSMP Element and the audit question number when describing the content of any updates/changes needed and the timeline to completion. Note progress vs. goals for items 10, 11 & 12.*

**APPENDIX "F"**

**SSO REPORT FORM & COPY OF SIGNAGE**

City of Piedmont  
SSO Report

**Weather Condition:**  Dry  Wet    **Easement:**  Yes  No

Spill Location:

\_\_\_\_\_

Street Number: \_\_\_\_\_ Street Name: \_\_\_\_\_

Cross Street: \_\_\_\_\_

City: \_\_\_\_\_ State: CA Zip: 94611

**Notifications:** *(required within 2 hours of notification of, or discovering, the SSO only for Category 1 spill - over 1,000 gallons with discharge to surface water, a drainage channel or a storm drain and the spill has not been fully captured or is located in an area that will probably be discharged to surface waters)*

Has **OES** been notified at 1-800-852-7550?  Yes  No

**OES Control Number:** \_\_\_\_\_

**OES called Date/Time:** \_\_\_\_/\_\_\_\_/\_\_\_\_ (mm/dd/yyyy) \_\_\_\_:\_\_\_\_ (military time)

**Spoke to** *(name of OES staff member):*

\_\_\_\_\_

**GPS**

Latitude: Degrees \_\_\_\_\_ Minutes \_\_\_\_\_ Seconds \_\_\_\_\_

Longitude: Degrees \_\_\_\_\_ Minutes \_\_\_\_\_ Seconds \_\_\_\_\_

**Estimated spill start date/time:**

\_\_\_\_/\_\_\_\_/\_\_\_\_ (mm/dd/yyyy) \_\_\_\_:\_\_\_\_ (military time)

**Date and time sanitary sewer system agency was notified of or discovered spill:**

\_\_\_\_/\_\_\_\_/\_\_\_\_ (mm/dd/yyyy) \_\_\_\_:\_\_\_\_ (military time)

**Estimated Operator arrival date/time:**

\_\_\_\_/\_\_\_\_/\_\_\_\_ (mm/dd/yyyy) \_\_\_\_:\_\_\_\_ (military time)

**Estimated spill end date/time: (blow down time)**

\_\_\_\_/\_\_\_\_/\_\_\_\_ (mm/dd/yyyy) \_\_\_\_:\_\_\_\_ (military time)

**Approximate spill area:**

Length: \_\_\_\_\_ (feet) Width: \_\_\_\_\_ (feet) Depth: \_\_\_\_\_ (inches)

**SSO Volume:**

Estimated SSO Rate: \_\_\_\_\_ gallons per minute (*refer to San Diego chart*)

Duration of SSO in Minutes (from start to blow down): \_\_\_\_\_ Min.

Estimated Spill Volume: Rate: \_\_\_\_\_ x Minutes: \_\_\_\_\_ = \_\_\_\_\_ gallons

Estimated volume of spill recovered: \_\_\_\_\_ gallons

Estimated volume of spill that reached surface water, drainage channel, or not recovered from a storm drain: \_\_\_\_\_ gallons

**Spill appearance point:**  Building or Structure  Manhole  Other Sewer System Structure  
 Other: \_\_\_\_\_

**Overflowing structure ID:** \_\_\_\_\_ **Sub-basin:** \_\_\_\_\_  
**Upstream structure ID:** \_\_\_\_\_ **Downstream structure ID:** \_\_\_\_\_

**Final spill destination:**  Building or Structure  Other paved surface  Storm drain  
 Street curb/gutter  Surface water  Unpaved surface  
 Other: \_\_\_\_\_

**Spill cause:**  Debris-General  Debris-Rags  Flow exceeding capacity  Grease deposition FOG  
 Operator error  Pipe structural problem/failure  Rainfall exceeded design  Root intrusion  Vandalism  
 Other: \_\_\_\_\_

**Where did failure occur?**  Upper lateral  Lower lateral  Main  
 Other: \_\_\_\_\_

**Spill Response Activities** (select all that apply):  Cleaned-up (mitigated effects of spill)  
 Contained all or portion of spill  Inspected sewer using CCTV to determine cause  
 Restored flow  Returned all or portion of spill to sanitary sewer system  
 Other: \_\_\_\_\_

**Photographs or video taken?**  Yes  No

**Spill response completion date:** \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_ (*mm/dd/yyyy*)

**Were Health Warning Signs Posted?**  Yes  No

*(required per SSMP when 10,000 gallon or larger spill that is not contained or is discharged directly to a creek; should be posted in smaller spills when there is the potential for public contact)*

**Name of impacted beach(es) or surface water** (enter NA if not applicable):

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**Any On-going Investigation?**  Yes  No

**Were Water Quality Samples Collected?**  Yes  No

*(required per SSMP if Category 1 spill of 10,000 gallons or more within 48 hours of notification of, or discovering, the SSO; sampling may be omitted if unsafe or impractical due to high storm water levels)*

EBMUD supervising wastewater control inspector office: 510-287-1655; cell: 510-385-6156

By: \_\_\_\_\_

**Date** \_\_\_\_/\_\_\_\_/\_\_\_\_ (mm/dd/yyyy)      \_\_\_\_: \_\_\_\_ (military time)

**Spill corrective actions taken:**  Added sewer to preventive maintenance program

Adjusted schedule method of preventive maintenance     Enforcement action against FOG

Plan rehabilitation or replacement of sewer     Repaired sewer

Other: \_\_\_\_\_

Prepared by: \_\_\_\_\_ **Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_ (mm/dd/yyyy)





Typical Spill Sign