Sewer System Management Plan

for City of Piedmont

Completed Date: August 2008 Revised Date: March 2011

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List of Major Changes from Previous Version March 2011

Description of Revision	Page
Revised text under Section "iii. Legal Authority" due to recently revised sewer code	6
Revised Table 1 due to recent rehabilitation work	7
Revised text under "Replacement Program" due to recent rehabilitation work	13
Included date for recently completed rehabilitation work and revised text to reflect the changes	15
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Included CWEA certification of the City maintenance staff under Section "f. Training"	19
Revised text under Section "vii. Fats, Oils, and Grease (FOG) Control Program" based on recent agreement with EBMUD	26
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Sewer System Management Plan (SSMP)

INTRODUCTION

In 2004, the SFRWQCB indicated its intent to implement new regulations to uniformly monitor sanitary sewer overflows. 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 SFRWQB. Although the resulting SSMP is not perfect, but 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 now incorporated the contents of this document and its current practices into the SSMP.

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 18 inches in diameter, built mainly between the years of 1900 to 1940. Collected wastewater is discharged through the City of Oakland to the East Bay Municipal Utility District (EBMUD) Special District No. 1 (District) interceptor, where the interceptor transports the flows to the EBMUD Water Pollution Control Plant (WPCP). After providing secondary treatment, the WPCP discharges through a submerged outfall into the San Francisco Bay.

In 1975, the California Regional Water Quality Control Board (CRWQCB) 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 and 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 accounts for approximately half of the sewer lines within the City

(i) GOALS

- o Continue to professionally manage, operate and maintain all parts of the wastewater collection system
- o Minimize the frequency of SSO's
- o Mitigate the impact of SSOs
- o Update the SSMP regularly

(ii) ORGANIZATION



Director of Public Works (DPW) – Ensures that the staff has the resources necessary to perform services, plans strategy, leads staff, delegates responsibility, authorizes outside contractors to perform services, arranges for emergency Council meeting if necessary, is also public information officer.

City Engineer – Reviews and approves construction and repair plans.

Deputy City Engineer – Assist the City Engineer with plan review and approval, manages capital improvement delivery system; documents new and rehabilitated assets; and coordinates development and implementation of SSMP. He is also the designated Legally Responsible Official (LRO) in charge of overseeing the reporting process.

Permit Compliance Specialist – Works as needed on applicable permits, laws, and regulations; provides support to all parts of operation.

Maintenance Supervisor/Sewer Maintenance Lead Worker – Manages field operations and maintenance activities, provides verbal report to DPW to ensure that he has adequate information to address service related problems on a timely basis, leads emergency response, 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.

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

Service Calls — The maintenance department is open Monday through Friday, 7:00 a.m. to 3:30 p.m. and all service calls are referred directly to the Maintenance Supervisor or public works department. The City uses an after-hours 24-hour dispatch to take emergency calls at the Police Department. The service then relays the message to the duty

operator by telephone (land line or mobile). The duty operator makes a determination about the emergency, and, if necessary, summons the standby personnel and/or Maintenance Supervisor. Additional help will then be summoned as needed. The supervisor and standby collection worker are each furnished with a City truck and cell phone.

The Maintenance Supervisor/Sewer Maintenance Lead Worker reviews and approves every SSO report prepared by the field crew and ensures that the reports are forwarded to appropriate regulators on a timely basis.

(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 February 7, 2011, the City Council approved a second reading of Ord. 697 N.S., amending Chapter 17A of the Piedmont Municipal Code regarding sewer, included in which is the adoption of East Bay Municipal Utility District's Regional Private Sewer Lateral Ordinance (EBMUD Ord. 311, Title VIII). The Ordinance became effective as of March 7, 2011.

Section 17A.8 makes the private property owner responsible for the repair and maintenance of the entire building sewer, including the connection to the sewer main. Section 17A.8f gives the private property owner 48 hours after notification by the City to make all emergency repairs. If the repairs are not completed in 48 hours, the City shall have the right to make or have made the necessary repairs and recover said costs as authorized by the Sewer Code.

The City of piedmont is able to access sewers located on private property for repairs, maintenance or reconstruction based on a series of legal means, as indicated in the City Attorney Memorandum, dated March 14, 2007 (included in Appendix B).

(iv) OPERATIONS AND MAINTENANCE

a. Collection System Map

The City has hard copy maps of the sewer system that is 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.

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 which meets the requirements for sanitary sewer systems and associated monitoring and reporting. Data entered into the system are linked to the city's Geographic Information System.

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 18 inches in diameter. Since year 2000, the City has rehabilitated approximately 60% (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.

PIPE MATERIAL	PIPE LENGTH (MI.)	PERCENTAGE
Vitrified Clay	18.50	37%
Plastic	31.00	62%
Misc. (DI, CP)	0.50	1%
TOTAL	49.50	100%

Table 1. Percentage o	f Pipe by	Materials
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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 varies 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 (Basin 54) of the East Bay Municipal Utility District (EBMUD) Special District No. 1 (District) 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 5th 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 and northeast of Piedmont is conveyed through the City of Piedmont's collection system.

b. Resources and Budget

The City generates approximately \$1.80 million through its sewer tax that covers the cost of sewer related operations, maintenance and general sewer projects. This budget also covers the reimbursement of the SRF loan that the City has used and will continue to use to fund its sanitary sewer capital improvement projects.

The 09-10 sewer fund below represent the typical annual sewer related expenditures and revenue.

Current Income

The City of Piedmont is a City 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 on lot size and which correlates with water usage.

Income Source	Estimated Amount (Dollars)
Sewer Service (User) Charges	\$2,100,000
Interest Earned	50,000
Contributed or Borrowed Capital	-
State Revolving Loan Fund	-
EPA Grant Funds	<u> </u>
Total Income (2009-10)	\$2,150,000

PROJECTED INCOME (2009-2010)

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

Current Expenditures

Expenditures of the City are classified as Labor, Materials and Equipment Maintenance, Administration and Overhead and Capital.

Table 3 below shows the projected planned expenditures which exclude maintenance capital expenditures:

PROJECTED CITY EX	KPENSES (2009-2010)
Expenses	Estimated Amount (Dollars)
Salaries & Wages Material & Maintenance Administration & Overhead	\$ 360,000 80,000 190,000
Capital Outlay/Contract Service Sanitary Sewer/Trash Disposal Total Expenses (2009-10)	0 <u>250,000</u> \$ 880.000
SRF Debt Service - Phases I-III (Existing) Total	<u>447,635</u> <u>\$1,327,635</u>

Table 3. City Expenses

Outstanding Long-Term Indebtedness

Other than State Revolving Loans for Phases I-III, 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 ProgramActivities

	Activity	Frequency
1.	Operations, repairs and minor rehabilitation	Continuous
	(including administration, root and rodent control,	
	emergency and major repairs)	
2.	Periodic line maintenance:	
	a. Cleaning	4-year cycle
	b. Manhole inspection	Continuous
	c. TV inspection	8-year cycle
	d. Root Treatment	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 would be 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 serious 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, building inspection, manhole inspection and television inspection.

Cleaning

Sewer lines in the collection system are cleaned at least once every four years to reduce blockage frequency and increase flow capacity. Typically sewer lines are selected for cleaning based on CCTV inspection. Line segments that maintenance records show to have required frequent cleaning of blockages (from accumulated debris, grease, and roots) are cleaned more often.

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.

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 of 2008. This study inspected 99,000 feet of sewer mains, which encompasses 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 9 sub-basins. It then made recommendations based on videotape observations according to a pre-established grading system.

In general, the City's maintenance schedule calls for all mains to be internally inspected with a television camera every 8 years (about 32,500 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 routine TV inspection. However, to meet the maintenance schedule for CCTV inspection and allow the City personnel to focus on other pressing tasks, the majority of the CCTV work is outsourced.

Root Treatment

Another maintenance effort involves the removal of tree roots from sanitary sewers. Tree roots can be a real menace, damaging sewers and causing sewers to plug. Tree roots seek the moisture and nutrients offered by leaky pipe joints usually found in the older and often broken sewer pipes

City of piedmont currently 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. It should be noted that 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 considered for replacement.

As stated earlier in this report and shown in Table 10, 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 recently completed the construction of 4 additional sub-basins (phase IV) in December 2010. The remaining 9 sub-basins will go through a multiphase program that encompasses rehabilitating the remaining approximately 143,000 feet of sewer mains and associated lower laterals.

Table 5 shows the priority list for the remaining 9 sub-basins as determined by the CCTV inspection study beginning with projects posing the highest public health threat an ending with those with the lowest threat to the public.

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

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

Table 5: Sub-basin Priority List

The first priority is to rehabilitate the "emergency" lines, which include any pipe segments with a break, collapse or major hole. Table 6 shows the estimated cost of rehabilitating the emergency lines and each subbasin. The lengths shown reflect only pipes to be rehabilitated. Emergency lines were deducted form each subbasin length.

RECOMMENDED PRIORITY	SUB-BASIN	UNIT COST/LF	LF	ESTIMATED TOTAL CONSTRUCTION COSTS*
1	Emergency		21,000	\$2,100,000
2	W3		5,700	\$570,000
3	W2		5,000	\$500,000
4	V1		7,900	\$790,000
5	H1	¢100*	6,800	\$680,000
6	G6	\$100	7,000	\$700,000
7	P1		2,700	\$270,000
8	G7		14,700	\$1,470,000
9	W6		10,400	\$1,040,000
10	G2		6,300	\$630,000
		TOTAL:	87,500	\$8,750,000

 Table 6: Estimated Rehabilitation Costs for Remaining Sub-basins

* Average unit cost includes construction only

With a projected construction budget of \$3.0 million per phase, it will take the City approximately three more phases to complete rehabilitation of the existing sanitary sewer system. As stated earlier in this report, phase IV (sub-basins G3, G5, N2, and T2) of the

program was completed in 2010. Our proposed schedule for rehabilitation can be seen in Table 7 below.

Phase	Subbasins	Estimated Construction	Estimated Total
		Cost	Cost*
V	Emergency and W3	\$2,670,000	\$3,204,000
VI	W2, V1, H1, G6 and P1	\$2,940,000	\$3,528,000
VII	G7, W6 and G2	\$3,140,000	\$3,768,000

 Table 7: Recommended schedule for rehabilitating the remaining subbasins.

* Total cost includes planning, design, construction, administration, construction management and inspection

d. Schedule Inspection and Condition Assessment

A typical schedule of the recommended preventive maintenance program over several decades is shown on Table 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.

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	Activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1.	Operations and repairs (including administration, root control, emergency and major repairs)	X	Х	Х	Х	Х	Х	Х	Х	Х	х	х	Х	Х	х	Х	X	Х	X	Х	Х	х	х	х	х	х
2.	Periodic line maintenance: a. Cleaning b. TV inspection and minor rehabilitation c. Manhole inspection	x x x	x	x	x	x x	x	x	x	x x x	х	х	х	x x	х	х	х	x x x	х	х	х	x x	х	х	х	x x x
3.	Replacement program	Х			Х			Х			Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х

Table 8.Typical Maintenance Schedule

Table 9 shows, for the entire collection system, the months of the year which each of the maintenance tasks should typically be performed.

Priority for maintenance is given to sub-basins with sewer mains in poor condition and will change accordingly as the sub-basins are rehabilitated. As shown in Table 10, thirteen of the twenty-two sub-basins have been rehabilitated. These thirteen sub-basins, which were at the top of the list, have moved to the bottom of the list because of their recently finished

or scheduled maintenance. Similarly, as the sub-basins at the top of the list are rehabilitated, they will move to the bottom of the maintenance cycle.

	Activity	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
1. Operations and repairs (including administration, root and rodent control, emergency and major repairs)		X	X	X	Х	X	X	X	X	X	X	X	X	
2.	Periodic line maintenance													
	a. Cleaning	Х	Х	Х	Х	Х	X	Х	Х	Х	Х	Х	Х	
	b. Manhole inspection	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	
	c. TV inspection			Х	Х	Х	Х	Х	Х	Х	Х			
	d. Root Treatment					Х	Х	Х	Х	Х	Х			
3.	Sewer replacement				X	X	X	X	X	X	X			

 Table 9.
 Seasonal Schedule of Preventive Maintenance Activities

Collection System Short Term Rehabilitation Plan

Lines selected for immediate repair or replacements are generally the ones that are identified during routine inspection, which may potentially pose an imminent service disruption or a sinkhole. Pipelines requiring frequent maintenance such as root intrusion and sags are given secondary priority for replacement. The City uses several long-standing contractors for emergency repairs.

Collection System Long Term Rehabilitation Plan

As stated earlier in this report and shown in Table 10 below, thirteen (13) of the City's twenty-two (22) sub-basins have been rehabilitated. As described earlier, the City has an in-house plan to rehabilitate the remaining sub-basins by 2020.

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.

			LENGTH	
			OF SEWER	
			MAINS	
			WITHIN	
			SUB-	
	SUB-	Program	BASIN	PERCENT
DESCRIPTION OF WORK	BASIN	Year	(FT)	COMPLETED
CONSTRUCTION				
COMPLETED				
	G1	1995	21,000	
Phase I SS Program	G4	2001-2002	11,800	
Phase I SS Program	W1A	2001-2002	21.900	
Phase II SS Program	W1B	2003-2004	31,800	
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	2009-2010	10,600	
Phase IV SS Program	G5	2009-2010	11,000	
Phase IV SS Program	N2	2009-2010	5,260	
Phase IV SS Program	T2	2009-2010	6,540	
		Subtotal:	159,170	59%
CCTV INSPECTION				
COMPLETED – TO BE				
REHABILITATED				
	G6	TBD	12,600	
	V1	TBD	16,560	
	G2	TBD	8,800	
	G7	TBD	22,830	
	W2	TBD	7,170	
	H1	TBD	11,300	
	W6	TBD	13,410	
	W3	TBD	9,480	
	P1	TBD	7,500	
		Subtotal:	109,650	41%
		TOTAL:	268,820	100%

Table 10: Summary of Sewer Work Completed to date

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.
- 2005 Sreco Hydro flusher Truck Jet 800-HPR Series II used for sewer cleaning and servicing Maintenance Cleaning Method 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 cleaning method 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. Ideal for medium & heavy duty jobs used for sewer cleaning and servicing maintenance cleaning method for root and grease removal.
- o Gator Cam System provides a means of viewing video taping the internal condition of pipes recording functions and accurate camera location and depth measurements are made possible with the Gator can video locator. 200th location cable.
- o Two backhoes: 1) Case (yr 1986) 580K, 2) Case (yr 1999) 580 Super L. Both pieces of equipment are available for any and all emergency sewer repairs.
- 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.
- 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 Invter 2000i V Gas Generator. All generators are stored in a central location.

- Pearpoint P300+ flexiprobe system provides advanced pipeline video inspection. It records up to 1 hour and 45 minutes of video, with 2 gigabyte.
- 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. In addition to small tools, the City also has a backup flusher and backhoe for emergency situations.

f. Training

The City staff regularly attends workshops on various sewer related issues. Additionally, the filed crew participates in cross training exercises with other sanitation agencies on an as-needed basis. The four collection system personnel have 15 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 issues and challenges are discussed and ideas are exchanged. All City maintenance staff is CWEA certified.

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 quarterly. The Satellite agencies also formed a committee called East Bay Collection System Advisory Committee (EBCSAC) that meets monthly.

g. Outreach to Plumbers and Building Contractors

The City is using a flyer, which is given to contractors when they apply for a permit, to inform sewer contractors and plumbers about the impacts of SSO's and offers free assistance to help clear root balls, grease blockages and other debris from a main sewer line or to open a manhole in the City's service area. The format and text of the flyer was prepared by the Bay Area Clean Water Agencies (BACWA) and Bay Area Pollution Prevention Group (BAPPG) and was customized for the City.

(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 a newly revised Design Standards, which are required for both new installations and replacement facilities. These standard plans are available to contractors and citizens at no charge. 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.

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 pressure 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 sewage overflow is defined as any overflow which exceeds 1,000 gallons <u>or</u> which is of sufficient quantity and in a location such that is poses a threat to public health or the environment.

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. WQ 2008-0002-EXEC (included in Appendix D).

- 1. <u>Emergency Reporting</u>. If the overflow is a Category 1, the following telephone calls are required within 2 hours of a sewage spill or release: The State Office of Emergency Services (OES) (1-800-852-7550 or 916-845-8911) and the Alameda County Department of Environmental Health (510-567-6700) and the Regional Water Quality Control Board (510-622-2369).
- 2. <u>Internal Reporting.</u> 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 "Overflow Report" form should 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.

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 as required, to 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. <u>Warning Signs:</u> Signs warning the public of a sewage release should be posted in the affected area. Signs should include, at a minimum, the wording of "raw sewage".
 - h. <u>Warning Sign Removal:</u> In critical areas such as creeks and parks, warning signs should remain posted until County Health or Regional Board staff authorize their removal, and until receiving water sample results indicate background levels (levels as determined by upstream samples) have been attained.
 - i. <u>Cleanup Flushing</u>: The affected area should be flushed with clean water. All flush water should be contained and subsequently pumped to the nearest sanitary sewer or removed by vactor truck. Cleanup flushing should be done only with clean, dechlorinated water. Disinfectants should <u>NOT</u> be used due to their toxicity to fish and wildlife.
 - j. <u>Receiving Water Sampling:</u> If the spill or overflow volume exceeds 10,000 gallons, or in incidents where sewage flows into storm drains and/or surface water, sampling should be conducted for Dissolved Oxygen, and Un-ionized Ammonia as soon as possible to insure that the following limits are not violated:

(1) Dissolved Oxygen: 5.0 mg/L, minimum

(2) Un-ionized ammonia: 0.16 mg/L as N, maximum

The sampling services are currently contracted with EBMUD.

- k. Return spilled sewage to collection system for treatment, when possible.
- 1. 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 should be contained and subsequently pumped to the nearest sanitary sewer or removed by vactor truck;
 - 3) Apply deodorizer after flushing and only in incidents where this material will not cause further pollution. Disinfectants should <u>NOT</u> be used due to their toxicity to fish and wildlife.
- m. Follow up:
 - 1) Investigate cause of spill:
 - 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.
- n. Complete follow-up contacts and service to property owner(s).
- o. Conduct debriefs to evaluate response.
- p. Implement needed changes and improvements.
- 2. <u>Wet Weather Conditions:</u> The response cleanup and warning sign posting procedures given above for Dry Weather Conditions should be followed, except that steps i and j (Flushing and Sampling) may be omitted if storm waters are high and sampling is impractical.

- B. <u>Minor Overflows:</u> (Overflow at manhole/lateral less than 1,000 gallons, no environmental impact, limited potential for human contact.)
 - 1. Identify yourself to property owner who called for service, if applicable, and briefly explain what you will be doing.
 - 2. Identify problem (take digital photos and/or videos to document flow) and restore service (if this takes longer than 30 minutes, call for assistance).

3. If the problem is in the private lateral, inform property owner and respond to their questions.

4. Contain spill and return contained flow to collection system for treatment, when possible.

- 5. Clean up affected area:
 - a. Remove all signs of gross pollution (solids, toilet paper, grease, etc.);
 - b. Flush areas with dechlorinated potable water (use approximately three times volume of overflow); all flush water should be contained and subsequently pumped to the nearest sewer or removed by vactor truck.
 - c. Apply deodorizer after flushing and only in incidents where this material will not cause further pollution. Disinfectants should <u>NOT</u> be used due to their toxicity to fish and wildlife.
- 6. Advise property owner of claim procedure for backup related repair or cleaning cost, if appropriate.
- 7. Follow up to prevent recurrence:
 - a. Investigate cause of spill;

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 any correction measures;
- f. Repair or replace line segment;
- g. Reinstate the line to normal maintenance.

- C. <u>Property Damage:</u> (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 as required, 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;

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 of Piedmont does not have any restaurants or other businesses that generate large amounts of grease, and there have not been any FOG occurrences of note in the collection system in recent years. Therefore, there is currently no commercial FOG control program in place.

Piedmont is one of the seven agencies in the EBMUD's wastewater service area. The agencies and EBMUD have developed a regional FOG program, as part of the 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 immediately begin distributing door hangers that are prepared for this purpose in that area.

(viii) SYSTEM EVALUATION AND 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 remaining after cost-effectiveness 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 62% (including emergency lines throughout the City) of the sewer system has been replaced with plastic pipes with plans to replace the remaining sewer mains by 2020.

The topographic survey data and as-built information for the sewer projects will be used to update the City sewer map.

(ix) MONITORING, MEASUREMENT AND PROGRAM MODIFICATIONS

The SSMP will be reviewed periodically to insure all the provisions are implemented and the effectiveness 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.

The City plans to continue to apply for the State Revolving Fund (SRF) loan funding to finance the future sanitary sewer rehabilitation projects. Since year 2000, the City has rehabilitated approximately 59% (excluding emergency lines) of the sewer mains and their associated sewer laterals within public right-of-way. The goal is to eventually replace all the sewer mains by 2020.

(x) SSMP AUDIT

The City will perform an internal audit evaluating the SSMP which will include any deficiencies and steps to correct them and submit the results of the audit along with recommendations and suggested improvements to the Regional Water Board.

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 component of the SSMP and will also consider comments made by interested parties.

APPENDIX "A"

CITY'S BUILDING SEWERS CODE

Chapter 17A BUILDING SEWERS¹

§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

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.

(1) 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 is it 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) <u>Building Sewer Lateral Required</u>: 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) <u>No Direct Discharges to Public Sewers</u>: 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) <u>Cleanout Required</u>. 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.

<u>SECTION 17A.3</u> <u>PROHIBITED USES</u>

- (a) <u>Limitation on Use</u>.
 - 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) <u>Stormwater and Groundwater Prohibited</u>. 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) <u>Prohibited Discharges</u>. 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) <u>Additional Prohibited Uses</u>. 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) <u>Special Agreements</u>. 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) <u>Sampling Structures</u>. 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) <u>Bond Required</u>. 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 of (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) <u>Permit Required</u>. 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) <u>Permit Application</u>. 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.
 - 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) <u>Form and Conditions of the Permit</u>. 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) <u>Notice of Commencement of Work</u>. The permitee 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) <u>Revocation of Permit</u>. The Director may revoke a building sewer lateral permit for non-compliance with any applicable laws or regulations.

(g) <u>Final Inspection</u> 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) <u>Standards</u>:

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) <u>Design</u>:

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-comforming 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) <u>Materials</u>:

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) <u>Responsibility</u>. 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) <u>Required Maintenance</u>.

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) <u>Required Inspections, Replacement and Compliance Certificate</u>

1. OWNER RESPONSIBILITES:

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 <u>not</u> 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 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 REMODELNG:

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 it's 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 it's 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.

to

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) <u>Emergency Work</u>

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) <u>Right of Entry</u>

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) <u>Emergency Work by City</u>

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) <u>Order to Abate</u>

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)

<u>SECTION 17A.13</u> <u>COST RECOVERY – BUILDING SEWER LATERAL OVERFLOWS</u>

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.

APPENDIX "B"

LEGAL AUTHORITY TO ACCESS CITY SEWERS ON PRIVATE PROPERTY

City of Piedmont California		MEMORANDUM
Autor Louver di te	Date:	March 14, 2007
(D) (То:	Russell Moore, City Engineer
Starry , partit	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:

 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.

 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 <u>Reinsch v. City of Los Angeles</u>, 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 <u>Reinsch</u> 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 <u>Union Transportation</u> <u>Company v. Sacramento County</u>, 42 Cal. 2d 235, 241, 267 P.2d 10 (1954).

APPENDIX "C"

SANITARY SEWER REHABILITATION PROGRAM MAP



APPENDIX "D"

SSO REPORTING

SWRCB MONITORING AND REPORTING REQUIREMENTS-ORDER NO. WQ 2008-2002-EXEC

STATE OF CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

ORDER NO. WQ 2008-0002-EXEC

ADOPTING AMENDED MONITORING AND REPORTING REQUIREMENTS FOR STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR SANITARY SEWER SYSTEMS

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

- The State Water Board is authorized to prescribe statewide general waste discharge requirements for categories of discharges that involve the same or similar operations and the same of similar types of waste pursuant to Water Code 13263, subdivision (i).
- The State Water Board on May 2, 2006, adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Order No. 2006-0003-DWQ, pursuant to that authority.
- The State Water Board on May 2, 2006, adopted Monitoring and Reporting Requirements to implement the General Waste Discharge Requirements for Sanitary Sewer Systems.
- State Water Board Order No. 2006-0003-DWQ, paragraph G.2., and the Monitoring and Reporting Requirements, both provide that the Executive Director may modify the terms of the Monitoring and Reporting Requirements at any time.
- 5. The time allowed in those Monitoring and Reporting Requirements for the filing of the initial report of an overflow is too long to adequately protect the public health and safety or the beneficial uses of the waters of the state when there is a sewage collection system spill. An additional notification requirement is necessary and appropriate to ensure the Office of Emergency Services, local public health officials, and the applicable regional water quality control board are apprised of a spill that reaches a drainage channel or surface water.
- Further, the burden of providing a notification as soon as possible is de minimis and will allow response agencies to take action as soon as possible to protect public health and safety and beneficial uses of the waters of the state.

IT IS HEREBY ORDERED THAT:

Pursuant to the authority delegated by Resolution No. 2002-0104 and Order No. 2006-0003-DWQ, the Monitoring and Reporting Requirements for Statewide General Waste Discharge Requirements for Sanifary Sewer Systems No. 2006-0003-DWQ is hereby amended as shown in Attachment A, with new text indicated by double-underline.

Dated: February 20,2008

Executive Director

ATTACHMENT A

STATE WATER RESOURCES CONTROL BOARD MONITORING AND REPORTING PROGRAM NO. 2006-0003-DWQ (AS REVISED BY ORDER NO. WQ 2008-0002-EXEC)

STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR SANITARY SEWER SYSTEMS

This Monitoring and Reporting Program (MRP) establishes monitoring, record keeping, reporting and public notification requirements for Order No. 2006-2003-DWQ, "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems." Revisions to this MRP may be made at any time by the Executive Director, and may include a reduction or increase in the monitoring and reporting.

NOTIFICATION

Although State and Regional Water Board staff do not have duties as first responders, this Monitoring and Reporting Program is an appropriate mechanism to ensure that the agencies that do have first responder duties are notified in a timely manner in order to protect public health and beneficial uses.

- For any discharges of sewage that results in a discharge to a drainage channel or a surface water, the Discharger shall, as soon as possible, but not later then two (2) hours after becoming aware of the discharge, notify the State Office of Emergency Services, the local health officer or directors of environmental health with jurisdiction over affected water bodies, and the appropriate Regional Water Quality Control Board.
- 2. As soon as possible, but no later then twenty-four (24) hours after becoming aware of a discharge to a drainage channel or a surface water, the Discharger shall submit to the appropriate Regional Water Quality Control Board a certification that the State Office of Emergency Services and the local health officer or directors of environmental health with jurisdiction over the affected water bodies have been notified of the discharge.

A. SANITARY SEWER OVERFLOW REPORTING

SSO Categories

- Category 1 All discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system that:
 - A. Equal or exceed 1000 gallons, or
 - B. Result in a discharge to a drainage channel and/or surface water; or
 - C. Discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system.

- Category 2 All other discharges of sewage resulting from a failure in the Enrollee's sanitary sewer system.
- Private Lateral Sewage Discharges Sewage discharges that are caused by blockages or other problems within a privately owned lateral.

SSO Reporting Timeframes

4. Category 1 SSOs – Except as provided above, all SSOs that meet the above criteria for Category 1 SSOs must be reported as soon as: (1) the Enrollee has knowledge of the discharge, (2) reporting is possible, and (3) reporting can be provided without substantially impeding cleanup or other emergency measures. Initial reporting of Category 1 SSOs must be reported to the Online SSO System as soon as possible but no later than 3 business days after the Enrollee is made aware of the SSO. Minimum information that must be contained in the 3-day report must include all information identified in section 9 below, except for item 9.K. A final certified report must be completed through the Online SSO System, within 15 calendar days of the conclusion of SSO response and remediation. Additional information may be added to the certified report, in the form of an attachment, at any time.

The above reporting requirements are in addition to do not preclude other emergency notification requirements and timeframes mandated by other regulatory agencies (local County Health Officers, local Director of Environmental Health, Regional Water Boards, or Office of Emergency Services (OES)) or State law.

- Category 2 SSOs All SSOs that meet the above criteria for Category 2 SSOs must be reported to the Online SSO Database within 30 days after the end of the calendar month in which the SSO occurs (e.g. all SSOs occurring in the month of January must be entered into the database by March 1st).
- 6. Private Lateral Sewage Discharges All sewage discharges that meet the above criteria for Private Lateral sewage discharges may be reported to the Online SSO Database based upon the Enrollee's discretion. If a Private Lateral sewage discharge is recorded in the SSO Database, the Enrollee must identify the sewage discharge as occurring and caused by a private lateral, and a responsible party (other than the Enrollee) should be identified, if known.
- If there are no SSOs during the calendar month, the Enrollee will provide, within 30 days after the end of each calendar month, a statement through the Online SSO Database certifying that there were no SSOs for the designated month.
- In the event that the SSO Online Database is not available, the enrollee must fax all required information to the appropriate Regional Water Board office in

accordance with the time schedules identified above. In such event, the Enrollee must also enter all required information into the Online SSO Database as soon as practical.

Mandatory Information to be Included in SSO Online Reporting

All Enrollees must obtain SSO Database accounts and receive a "Username" and "Password" by registering through the California Integrated Water Quality System (CIWQS). These accounts will allow controlled and secure entry into the SSO Database. Additionally, within thirty (30) days of receiving an account and prior to recording SSOs into the SSO Database, all Enrollees must complete the "Collection System Questionnaire", which collects pertinent information regarding an Enrollee's collection system. The "Collection System Questionnaire" must be updated at least every 12 months.

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

- 9. Category 2 SSOs:
 - Location of SSO by entering GPS coordinates;
 - B. Applicable Regional Water Board, i.e. identify the region in which the SSO occurred;
 - C. County where SSO occurred;
 - D. Whether or not the SSO entered a drainage channel and/or surface water;
 - E. Whether or not the SSO was discharged to a storm drain pipe that was not fully captured and returned to the sanitary sewer system;
 - F. Estimated SSO volume in gallons;
 - G. SSO source (manhole, cleanout, etc.);
 - H. SSO cause (mainline blockage, roots, etc.);
 - Time of SSO notification or discovery;
 - J. Estimated operator arrival time;
 - K. SSO destination;
 - L. Estimated SSO end time; and
 - M. SSO Certification. Upon SSO Certification, the SSO Database will issue a Final SSO Identification (ID) Number.

10. Private Lateral Sewage Discharges:

- All information listed above (if applicable and known), as well as;
- Identification of sewage discharge as a private lateral sewage discharge; and
- C. Responsible party contact information (if known).

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11. Category 1 SSOs:

- A. All information listed for Category 2 SSOs, as well as;
- B. Estimated SSO volume that reached surface water, drainage channel, or not recovered from a storm drain;
- C. Estimated SSO amount recovered;
- D. Response and corrective action taken;
- E. If samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA must be selected.
- F. Parameters that samples were analyzed for (if applicable);
- G. Identification of whether or not health warnings were posted;
- H. Beaches impacted (if applicable). If no beach was impacted, NA must be selected;
- Whether or not there is an ongoing investigation;
- Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
- K. OES control number (if applicable);
- L. Date OES was called (if applicable);
- M. Time OES was called (if applicable);
- N. Identification of whether or not County Health Officers were called;
- O. Date County Health Officer was called (if applicable); and
- P. Time County Health Officer was called (if applicable).

Reporting to Other Regulatory Agencies

These reporting requirements do not preclude an Enrollee from reporting SSOs to other regulatory agencies pursuant California state law. These reporting requirements do not replace other Regional Water Board telephone reporting requirements for SSOs.

 The Enrollee shall report SSOs to OES, in accordance with California Water Code Section 13271.

Office of Emergency Services Phone (800) 852-7550

- The Enrollee shall report SSOs to County Health officials in accordance with California Health and Safety Code Section 5410 et seq.
- 3. The SSO database will automatically generate an e-mail notification with customized information about the SSO upon initial reporting of the SSO and final certification for all Category 1 SSOs. E-mails will be sent to the appropriate County Health Officer and/or Environmental Health Department if the county desires this information, and the appropriate Regional Water Board.

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B. Record Keeping

 Individual SSO records shall be maintained by the Enrollee for a minimum of five years from the date of the SSO. This period may be extended when requested by a Regional Water Board Executive Officer.

[2. Omitted.]

- All records shall be made available for review upon State or Regional Water Board staff's request.
- All monitoring instruments and devices that are used by the Enrollee to fulfill the prescribed monitoring and reporting program shall be properly maintained and calibrated as necessary to ensure their continued accuracy;
- The Enrollee shall retain records of all SSOs, such as, but not limited to and when applicable:
 - Record of Certified report, as submitted to the online SSO database;
 - b. All original recordings for continuous monitoring instrumentation;
 - c. Service call records and complaint logs of calls received by the Enrollee;
 - d. SSO calls;
 - e. SSO records;
 - f. Steps that have been and will be taken to prevent the SSO from recurring and a schedule to implement those steps.
 - g. Work orders, work completed, and any other maintenance records from the previous 5 years which are associated with responses and investigations of system problems related to SSOs;
 - A list and description of complaints from customers or others from the previous 5 years; and
 - Documentation of performance and implementation measures for the previous 5 years.
- 6. If water quality samples are required by an environmental or health regulatory agency or State law, or if voluntary monitoring is conducted by the Enrollee or its agent(s), as a result of any SSO, records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical technique or method used; and,
 - f. The results of such analyses.

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C. Certification

- All final reports must be certified by an authorized person as required by Provision J of the Order.
- Registration of authorized individuals, who may certify reports, will be in accordance with the CIWQS' protocols for reporting.

Monitoring and Reporting Program No. 2006-0003 will become effective on the date of adoption by the State Water Board. <u>The notification requirements added by Order</u> <u>No. WQ 2008-0002-EXEC will become effective upon issuance by the Executive</u> <u>Director.</u>

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 Board.

UMLON

Jeanine Townsend Clerk to the Board

APPENDIX "E"

SSMP AUDIT FORM

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Appendix E City of Piedmont Sewer System Management Plan (SSMP) Year____ Annual Audit Report

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 submitted pursuant to the San Francisco Bay Regional Water Quality Control Board's Sewer System Management Plan Development Guide, July 2005.

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*" 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	
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	
 Does the SSMP contain or reference up-to-date information about resources and budget? 	YES / NO
 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?	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?	YES / NO
d. SCHEDULED INSPECTIONS AND CONDITION ASSESSMENT	
12. Does the SSMP contain or reference up-to-date information about inspections and condition assessment?	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 INVENTORI	ES
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	YES / NO

comprehensive and up-to-date?

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 PLA	N
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 F	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 MODI	FICATIONS
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. Will this SSMP Audit be submitted with the Annual Report to the Regional Water Board by March 15?	YES / NO
ELEMENT XI. COMMUNICATION PROGRAM	
32. Has the agency effectively communicated with the public and other agencies about the development, implementation and performance of the SSMP?	YES / NO
33. Has the agency provided the public the opportunity for input as the program is developed and implemented?	YES / NO

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Description of Scheduled Updates/Changes to the SSMP

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.

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Description of Scheduled Updates/Changes to the SSMP

Directions: For each NO answer, please describe the planned revision and indicate the date the revision will be completed. Reference the SSMP element and question number with each explanation.