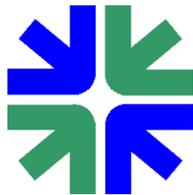


CITY OF EMERYVILLE
SEWER SYSTEM MANAGEMENT PLAN



FEBRUARY 21, 2012
Updated: OCTOBER 22, 2014

City of Emeryville
Department of Public Works
1333 Park Avenue
Emeryville, CA 94608

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INTRODUCTION

I-1. Background on the City's Sanitary Sewer System and Regional Issues Facing the Operations of the Collection System

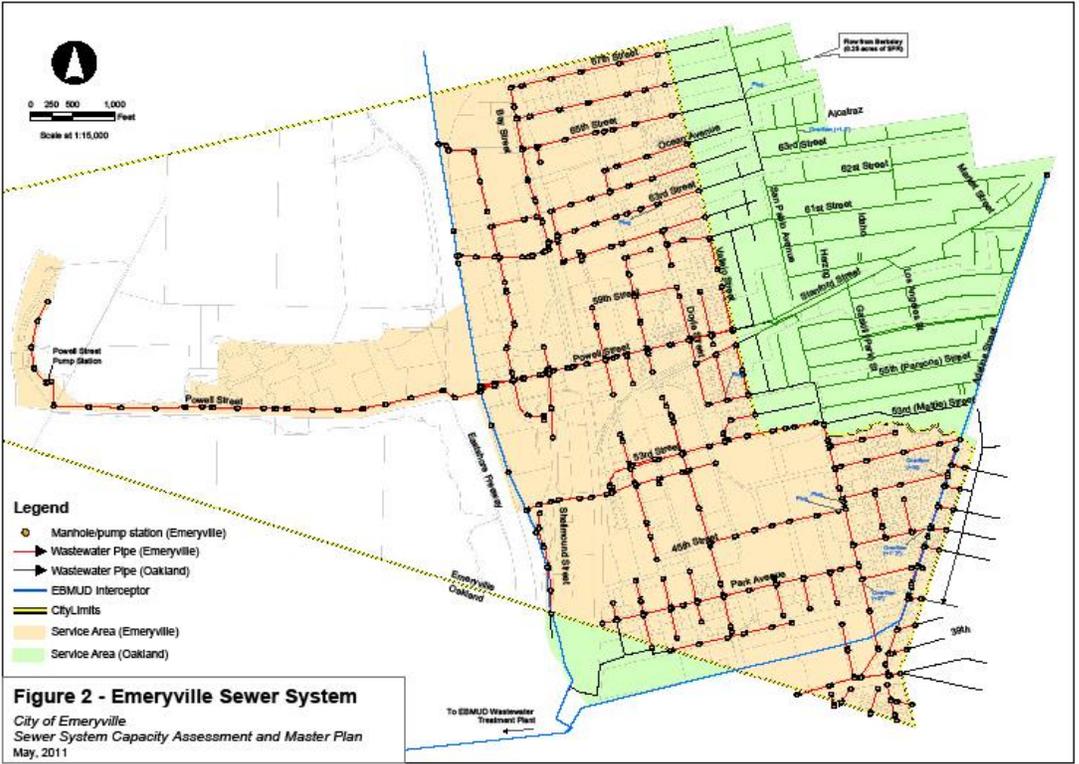
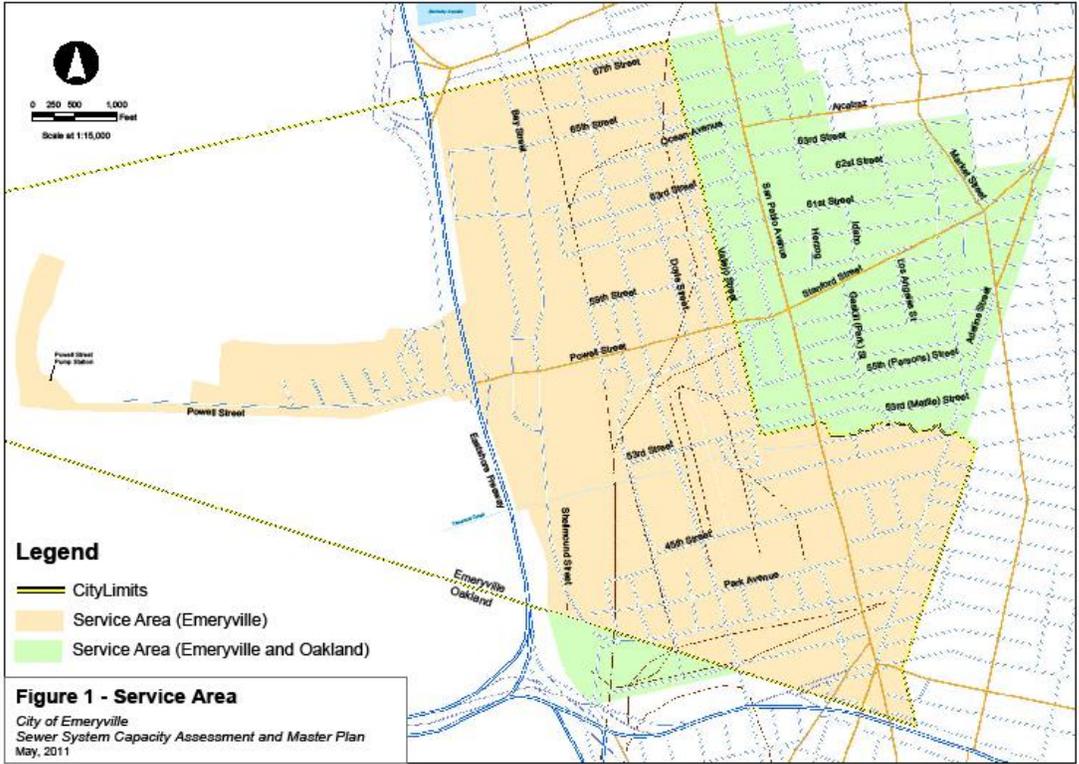
The City of Emeryville is located between the Cities of Berkeley (to the north) and Oakland (to the south and east), with San Francisco Bay to the west. Emeryville is a small community, covering about 670 acres, with a population of about 10,000. Originally, Emeryville was an industrial community with meat packing plants, steel works, manufacturing, and a rail yard. In the 1960's, heavy industries began leaving the City, making way for the current mix of housing, commercial and retail properties, biotech research, and computer and graphic film industries.

The City of Emeryville's sanitary sewer service area is shown on Figure 1 and a schematic of Emeryville's 15 miles of sanitary sewer system is shown on Figure 2. The collection system serves the entire City. In addition, approximately 11 miles of sanitary sewer mains from 370 acres of primarily residential property in the City of Oakland and 0.25 acres of residential property in the City of Berkeley drain into Emeryville's sanitary sewer system.

The first sewers in Emeryville were constructed in the mid-1880s. They were generally small diameter pipes carrying sanitary flows to larger pipes that carried a combination of sanitary sewage and storm water to local creeks and San Francisco Bay. Over the ensuing 50 years, the system was extended and enlarged to handle increasing flow from the growing community. Many of the early sewers were installed by private developers and were not subject to uniform standards and inspection. Because the drainage system was a combined sanitary/storm water system, roof, basement, and area drains were connected to the system. Emeryville's early development was heavily industrialized, with canneries, paint production, wood processing, and steel manufacturing contributing to the wastewater load. In addition, much of the system was below the groundwater table for all or part of the year. The combination of these factors resulted in a sewer system that had inadequate capacity, was subject to frequent overflows during wet weather, and contributed heavy pollution loads to the receiving streams and ultimately the San Francisco Bay.

In the late-1930's, construction of the San Francisco Bay Bridge first brought public awareness to the odors and pollution caused by untreated sewage discharges directly to San Francisco Bay. In 1944, Special Sewer District No. 1 was formed by the East Bay Municipal Utility District (EBMUD) to construct interceptor sewers through the communities bordering San Francisco Bay (from El Cerrito to the Oakland/San Leandro border) and provide primary wastewater treatment at a centralized location near the eastern side of the Bay Bridge. These new regional facilities were brought online in 1951. Persistent overflows within the communities during wet weather prompted EBMUD to undertake a program to separate the storm sewers from the sanitary sewers. This program, begun in the 1940's, was essentially complete by 1975, three years before EBMUD upgraded its treatment plant to include a secondary facility with land-based sludge disposal.

High wet weather flows and associated overflows continued to plague the East Bay communities through the 1970's. Federal and State requirements calling for the reduction and eventual



elimination of sewer overflows prompted EBMUD and its service communities to undertake a systematic, system-wide capacity and condition assessment of the local sewer systems. At the same time, EBMUD undertook an assessment of its interceptor and treatment facilities.

In 1980, the City of Emeryville, the East Bay Communities, and EBMUD, coordinated their efforts and initiated a 6-year infiltration/inflow study (I/I Study) to develop a program to address sanitary sewer overflows that were occurring on City streets and in the Bay during periods of wet weather. The completed 1985 I/I Study was used to develop the East Bay I/I Correction Program (I/ICP), which outlined the long-range sanitary sewer improvements that were necessary to correct overflows occurring within the collection system of each community and along the EBMUD Interceptor. The I/I Study also specified schedules, called Compliance Plans, to complete various sewer rehabilitation projects specified in the I/ICP.

In 1986, the Regional Board issued Cease and Desist Orders (CDOs) to the City of Emeryville, the East Bay Communities, and EBMUD to eliminate all sanitary sewer overflows and to reduce the overall I/I. The immediate objective of the CDOs was to eliminate the public health impacts caused by the overflows. In this enforcement order, the Regional Board accepted the proposed improvements outlined in the I/ICP. The Compliance Plans for each Community were incorporated into the CDOs. The City of Emeryville's Compliance Plan specified a 20-year program to correct the overflows and to reduce the overall I/I. There were eight known overflow locations within the City of Emeryville at the time the CDOs were issued.

In concurrence with the I/ICP, EBMUD underwent its own Wet Weather Program for the treatment plant. The objective of the Wet Weather Program was to equip EBMUD's treatment plant and facilities with the capacity to convey peak flows from the East Bay Communities trunk sewers by the end of the I/ICP implementing period.

Since it was cost-prohibitive to eliminate all I/I into the sanitary sewer collection system as part of the I/I Study, the East Bay Communities performed a cost analysis to determine the most cost-effective level of rehabilitation. The study concluded that the most cost-effective solution was to design the treatment plant and collection system to accommodate peak I/I flows generated during a 5-year design storm. For a storm that was larger than the 5-year design storm, overflows would be permitted to occur.

As a part of EBMUD's Wet Weather Program, each connection to EBMUD's interceptor was allotted a peak wet weather design flow as stated in the I/I Study. The total of these design flows from all the connections in the East Bay communities was the basis for sizing the capacity at the EBMUD treatment plant. The wet weather design flows include three components: a 3-hour peak base flow, a groundwater infiltration flow, and a rain dependent I/I flow. Emeryville has 5 connections to the interceptor. The total peak wet weather flow contribution from Emeryville's system to EBMUD's overall design flow was 25.59 mgd as stated in the 1985 I/I Study. This design flow was about half from Emeryville and half from Oakland. Of the total wet weather flow, only 4.36 mgd or 17% was attributable to dry weather base flow. The dry weather base flows defined in the I/I Study were developed from flow metering in the early 1980's and included a growth factor projected at that time.

In 2006, the City of Emeryville reached the end of the I/ICP implementation period specified in the Compliance Plan. To date, the City spent approximately \$11,000,000 on the program and reconstructed approximately 75% of its sanitary sewer infrastructure. The City successfully performed projects as necessary to correct overflows at the previously identified locations. In addition, EBMUD spent more than \$310 million on its wet weather facilities in order to accommodate the wet weather flows as defined in the Wet Weather Program. These facilities are working as intended and as were permitted by the Regulators.

The City of Emeryville initiated a Sewer System Capacity Analysis and Master Plan in 2005. This study was triggered by an update to the City's General Plan and was completed in 2010. A model of the sanitary sewer system was developed based on upgrades to the sanitary sewer system as a result of the I/ICP. The analysis was performed using the same general approach to system analysis that was used in 1986 and was calibrated with wet weather flow data collected in 2005/06. It was estimated that under design storm conditions with an allowance for an increase in flow from future land use modifications, the design wet weather flow is now 20.4 mgd (versus 25.59 mgd in 1985, or a reduction of 5.19 mgd). The flow contribution from Emeryville was determined to be 7.9 mgd, with the remaining flow of 12.5 mgd from Oakland.

In 2009, the California Regional Water Quality Control Board, San Francisco Bay Region, adopted Order No. R2-2009-0004 reissuing an NPDES permit to EBMUD to operate its Wastewater Treatment Facilities. However, the new NPDES permit prohibited any discharge from its three wet weather sanitary sewage treatment facilities. The reason for prohibiting discharge from the wet weather facilities had to do with a change by the US Environmental Protection Agency (USEPA) in the interpretation of provisions of the Clean Water Act dealing with heavy metals in the effluent of sanitary sewage treatment facilities. Given that the EBMUD wet weather facilities only provide primary treatment to the wet weather wastewater flow, the wet weather facilities do not treat the heavy metals as needed to meet the revised requirements. In order to eliminate discharge from these facilities, further reduction of wet weather flows from the East Bay Communities is needed as well as an expansion of EBMUD's storage capacity.

Shortly after EBMUD received its reissued NPDES permit in 2009, the USEPA and the Regional and State Water Boards filed suit against EBMUD for discharges in violation of this prohibition and entered into a Stipulated Order (SO). One provision of the EBMUD SO required them to pass an ordinance to implement a Regional Private Sanitary Sewer Lateral (PSL) Program. The purpose of the PSL program was to reduce the amount of wet weather sanitary sewage flow to their treatment facilities from old leaky private sewer laterals. Another product of the EBMUD SO was the preparation of a Flow Modeling and Limits Report (FMLR) that could be used in the future by the USEPA as a basis for imposing flow limits on each of the East Bay collection system agencies.

In November 2009, the California Regional Water Quality Control Board (RWQCB) issued the City of Emeryville NPDES Permit No. CA0038792 for the operation of the City's sanitary sewer system. The most notable difference in this renewed NPDES permit was a discharge prohibition stating "The Discharger shall not cause or contribute to discharges from EBMUD's Wet Weather Facilities that occur during wet weather or that are associated with wet weather."

On November 18, 2009, the USEPA issued the City of Emeryville and all the other Collection System Agencies that are part of the service area of EBMUD treatment facilities, an Administrative Order (AO) to reduce Sanitary Sewer Overflows (SSOs) from its collection system and to control I/I into the collection system so as not to cause or contribute to overflows from the EBMUD wastewater facilities. The AO included a number of requirements for the City to implement immediately in order to improve on the current program for controlling SSOs and to reduce I/I.

Then, on September 6, 2011, the United States District Court Northern District of California issued Stipulated Order for Preliminary Relief (SO). The requirements contained in this SO are similar to those in the 2009 AO, with the addition of penalties for failure to comply with the timeline and reporting requirements. The terms of the SO identify the following work to be performed by the City of Emeryville:

- Maintaining its current program for controlling SSOs and reducing I/I set forth in this SSMP (this document)
- Implementing improvements in its current programs
- Preparing an Asset Management Implementation Plan (AMIP) by July 15, 2012
- Participating in EBMUD's Regional PSL program
- Cooperating with EBMUD in the development of the Regional Flow Monitoring Data Assessment Program
- Formulating a program for inflow identification and reduction
- Providing SSO response, recordkeeping, notification, and reporting
- Implementing a Maintenance Management System by October 15, 2011
- Submitting a Sewer Pipe and Maintenance Hole Inspection plan
- Providing EPA with copies of annual SSO reports now provided to the Regional Water Board

On September 22, 2014, after several years of negotiation, a final Consent Decree (CD) was approved in US District Court. This CD supersedes the 2009 SO with slightly different requirements for the City of Emeryville, and more onerous penalties for failure to comply with its provisions. The CD is in effect until December 15, 2036.

The CD contains the following "Work" requirements for the City of Emeryville:

- Implement programs set forth in its SSMP and AMIP for controlling SSOs and reducing I&I. The AMIP, originally required by the SO, has been updated based on the requirements of the CD and is attached hereto as Appendix B.
- By June 30, 2015, perform Collection System Rehabilitation of approximately 6,300 linear feet of sewer (including manholes and lower laterals as needed, and disconnecting abandoned sewer laterals)
- By June 30, 2016, in cooperation with EBMUD and the other Satellite Communities, develop Regional Standards for sewer installation, rehabilitation, and repair
- By June 30, 2017, Repair approximately 35 discrete sewer defects
- CCTV inspect all sewer mains and associated manholes on a 10-year cycle

- Continue to enforce the City’s sewer ordinance including the PSL requirements, and cooperate with EBMUD in the administration of its Regional Sewer Lateral Program
- By September 22, 2024, inspect and repair or rehabilitate as necessary, all Upper Sewer Laterals owned by the City
- Cooperate with EBMUD in the implementation of the Regional Technical Support Program
- Provide information to EBMUD regarding the details of its sewer rehabilitation program for EBMUD’s use in flow modeling
- Continue to clean “Hot Spots” on a regular basis, clean certain trunk sewers every 5 years and perform cleaning of all sewer mains on a 10-year cycle

I-2. Requirement from Regulators for Preparing Sanitary Sewer Management Plans

In a statewide effort to reduce the amount of pollution caused by poor management of sanitary sewer collection systems, the Regional and State Water Boards have developed very strict policies in recent years dealing with Sanitary Sewer Overflows (SSO). Some of the major causes of SSO’s include grease blockages, root blockages, manhole structure failures, vandalism, pump station mechanical failures, power outages, excessive storm or ground water inflow/infiltration, debris blockages, sanitary sewer system material failures, lack of proper operation and maintenance, insufficient capacity and contractor-caused damages. Many SSOs are preventable with adequate and appropriate facilities, source control measures and operation and maintenance of the sanitary sewer system.

In July 2005, in order to facilitate proper funding and management of sanitary sewer systems, the Regional Water Quality Board issued “New Requirements for Preparing Sewer System Management Plans (SSMP)” to all the sewer collection agencies in the San Francisco Bay Area. These requirements provided for a three-year phased compliance schedule and included exemptions from certain requirements for communities with populations less than 10,000. To be effective, the SSMP’s were required to include provisions to provide proper and efficient management, operation, and maintenance of sanitary sewer systems, while taking into consideration risk management and cost benefit analysis. Additionally, the SSMP had to contain a spill response plan that establishes standard procedures for immediate response to an SSO in a manner designed to minimize water quality impacts and potential nuisance conditions. The City’s SSO Response Plan is being updated concurrently with the update to the SSMP.

On May 2, 2006, the State Water Resources Control Board issued order No. 2006-0003 Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WDR). The WDR mirrors the Regional Board’s SSSP requirements, but includes some additional provisions, one of which is that the City Council must approve the SSMP at a public meeting and it must be made available to the Public in the City’s office or on the internet. Also, the SSMP must be updated every five years and the City Council must reapprove the document if significant updates are made.

SECTION 1. GOALS

The goals for the City's SSMP include the following six items:

- To properly manage, operate, and maintain all parts of the wastewater collection system.
- To use a GIS-based system for daily management and operation of all parts of the wastewater collection system.
- To work closely with EBMUD on the FOG program to reduce the amount of fats, oils, and grease in the wastewater collection system in order to prevent SSOs.
- To provide adequate capacity in the collection system to convey the peak wet weather flows to minimize the frequency of SSOs.
- To reduce wet weather I/I by working with EBMUD in the implementation of the Regional PSL Program and by eliminating I/I from pipe defects identified through field work.
- To provide routine training for all personnel involved with the management, reporting, and cleanup of SSOs.

SECTION 2. ORGANIZATION

Figure 3 illustrates the City's organization chart in relationship to the SSMP requirements. The roles and responsibilities of the positions included in this chart are described below. The individuals currently holding key positions are listed in Table 1.

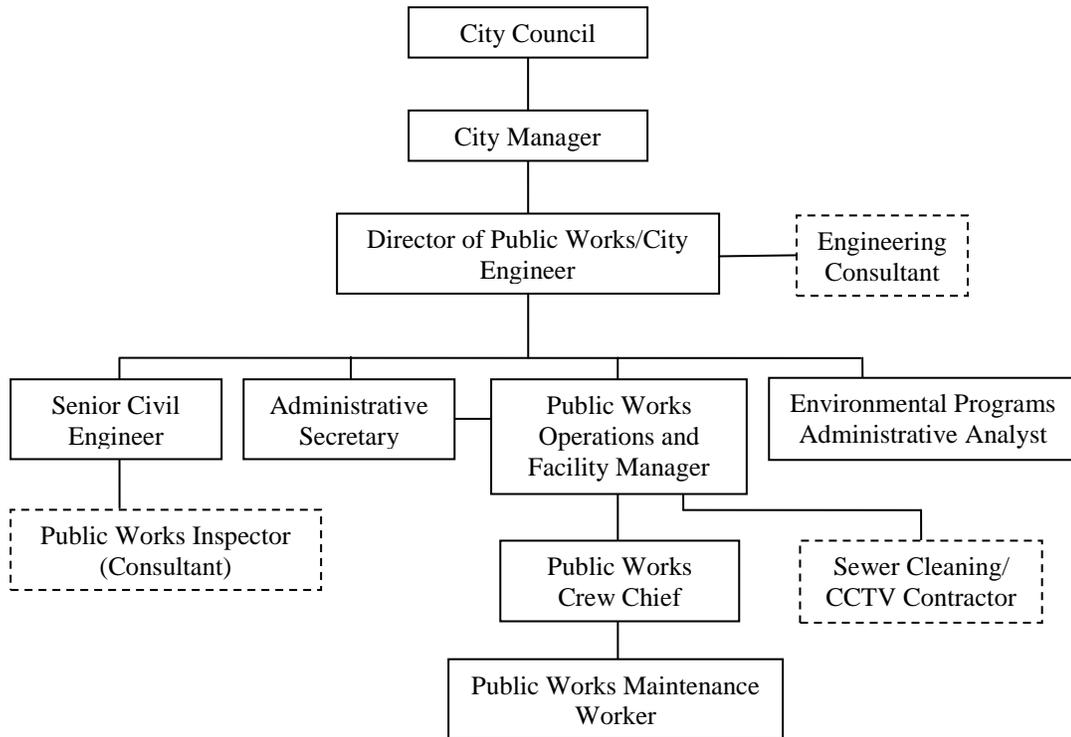
- City Manager - Implements policy, plans strategy, leads staff, allocates resources, delegates responsibility, authorizes outside contractors to perform services, recommends required budget to City Council, and arranges for emergency meetings of City Council if necessary.
- Public Works Director/City Engineer - Provides information updates to the City Council, prepares wastewater collection system planning documents with the help of consultants, oversees preparation of budget for SSMP, coordinates development and implementation of SSMP, oversees the Maintenance Supervisor, Sr. Civil Engineer, and Environmental Programs Administrative Analyst, and is the City's authorized representative for the SSMP.
- Engineering Consultant - Provides technical support to the Public Works Director/City Engineer on issues associated with the sanitary sewer system.
- Sr. Civil Engineer - Assists the City Engineer in the development and implementation of the Capital Improvement Program (CIP), manages the design and oversees construction of CIP projects, manages consulting Public Works Inspectors, and ensures that the new and rehabilitated assets meet the agency standards.
- Public Works Inspector (Consultant) - Inspects construction of City sanitary sewer capital improvement projects and construction of private sewer laterals.
- Environmental Programs Administrative Analyst - Prepares monthly report of SSOs in CIWQS database, submits SSO reports as stated in overflow response plan, prepares written and electronic reports as required, including the annual SSO report.
- Public Works Operations and Facilities Manager- Manages field operations and maintenance activities, manages annual contract for routine and emergency sewer cleaning and closed circuit television (CCTV) inspection, prepares and implements contingency plans, leads emergency response, investigates and reports SSOs, and trains field crew.
- Public Works Administrative Secretary - Directly assists the Public Works Director/City Engineer and Public Works Superintendent with day-to-day efforts of the department, receives and responds to calls from the public.
- Sewer Cleaning/CCTV Contractor - Provides field services for routine and emergency sewer cleaning and CCTV inspection, and structure inspection.
- Public Works Crew Chief - Staffs preventive maintenance activities, mobilizes and responds to notification of stoppages and SSOs, (mobilizes sewer cleaning equipment, by-pass pumping

equipment, and portable generators as needed when contract sewer cleaning firm is not able to respond), rotates on stand-by mode to respond to emergency call-outs during off hours.

- Public Works Maintenance Worker - Works under the direction of the Public Works Crew Chief responding to notification of stoppages and SSOs, rotates on stand-by mode to respond to emergency call-outs during off hours.

As outlined in the “Overflow Response and Reporting Procedure,” in the event of an SSO, the Fire Department is generally the initial responder to the scene and the Fire Department Incident Commander is responsible for reporting the SSO to the Regional Water Board and other applicable agencies.

**FIGURE 3
CITY OF EMERYVILLE ORGANIZATION CHART
FOR SSMP**



**TABLE 1
CITY OF EMERYVILLE CONTACT INFORMATION**

Position	Individual	Contact Phone No.	Email Address
City Manager	Sabrina Landreth	510-596-4371	slandrith@emeryville.org
Director of Public Works, Legally Responsible Individual	Maurice Kaufman	510-596-4334	mkaufman@ci.emeryville.ca.us
Senior Civil Engineer	Michael Roberts	510-596-4333	mroberts@ci.emeryville.ca.us
Public Works O & F Manager	Daniel Stevenson	510-596-4336	dstevenson@ci.emeryville.ca.us
Environmental Program Administrative Analyst*	Nancy Humphrey	510-596-3728	nhumphrey@emeryville.org
Mayor	Jac Asher	510-596-4376	jacasher@ci.emeryville.ca.us
Vice Mayor	Ruth Atkin	510-596-4376	ratkin@ci.emeryville.ca.us
City Council Member	Nora Davis	510-596-4376	ndavis@ci.emeryville.ca.us
City Council Member	Jennifer West	510-596-4376	jwest@ci.emeryville.ca.us
City Council Member	Kurt Brinkman	510-596-4376	kbrinkman@emeryville.org

* The Fire Department is responsible for the initial communication of SSOs to CIWQS; the Environmental Program Administrative Analyst is responsible for compiling the annual SSO reports.

SECTION 3. LEGAL AUTHORITY

The City's legal authority over the sanitary sewers is contained in the City of Emeryville Municipal Code, Chapter 8 of Title 7, Wastewater Collection System. This code was updated and adopted by the City Council on May 3, 2011. A copy of this ordinance is attached in Appendix B.

3-1. Illicit Discharges (Control I/I, FOG)

Article 4. of Chapter 8 of Title 7, "Sewer Use Regulations," addresses illicit discharges into the City's wastewater collection system. This article includes among other items, prohibited uses, requirements for food service establishments (FSEs) to control FOG discharges, the conditions for discharge of radioactive wastes into the City's collection system, and the permitting of industrial waste discharges.

3-2. Proper Design and Construction

Article 2. of Chapter 8 of Title 7, "Building Sewer Lateral," addresses the requirements for and design of privately-owned building sewer laterals or PSLs. The City has streamlined the permit process for the Public Works Encroachment and the Building Department into a single Sewer Lateral Permit that must be obtained before construction of a new building sewer lateral or the repair, replacement, or abandonment of an existing building sewer lateral. This section of the City's municipal code also adopts the EBMUD Regional PSL ordinance (359-13,7-23-2013) attached hereto in Appendix C) by reference (Municipal Code 7-8.211)

3-3. Installation, Testing, and Inspection

The requirements for installation, testing and inspection of Building Sewer Laterals are defined in Article 2. of Chapter 8 of Title 7. "Building Sewer Lateral," of the Municipal Code..

3-4. Enforcement of Sewer Ordinance

Enforcement of the Wastewater Collection system ordinance is described in Article 6 of Chapter 8 of Title 7.

SECTION 4. OPERATION AND MAINTENANCE PROGRAM

4-1. Resources and Budget

The Sewer Fund is an Enterprise Fund that supports operation and maintenance of the City's sanitary sewer system. The fund is supported by Sewer User Charges collected by EBMUD via water bills. The rates were last increased in January, 1995. Capital funds for sewer improvements are also generated by the Sewer Connection Fee Fund when new development occurs. Emeryville's Sewer User Charge is the lowest in the East Bay region at \$8 per month per single family service or \$1.25 per month for each 100 cubic feet of water use for multiple family connections. The new sewer connection fee is in the amount of \$1244 for a single family dwelling equivalent. At this time, there is sufficient revenue generated by the current charges and fees to operate the sanitary sewer system. There is also a sufficient fund balance of assets available to pay for up coming known capital improvements that are needed on the system.

Both the Sewer Rehabilitation Fund and the Sewer Connection Fee Fund are addressed in the City's Operating Budget and Capital Improvement Program. Table 2 outlines the City's sewer operations funds, including the adopted operating budgets for FY 2014/2015 and 2015/2016. In addition to the estimated budget in Table 2, the capital improvement budget for FY2014/2015 is \$2,000,000.

Total Current Assets as reported in the Comprehensive Annual Financial Report Year Ended June 30, 2013, the most recent report available were \$4,622,324.

4-2. Collection System Mapping

The City of Emeryville is currently developing a new maintenance management system for the sanitary sewer system using software provided by Lucity. The system incorporates GIS database files and mapping and is used to manage field activities as well as CCTV inspection and smoke testing data for the collection system. Since the City recently completed CCTV inspection of all of its sanitary sewer system, the GIS mapping was updated to reflect the most up-to-date field configuration including private sewer laterals. It is expected that a complete transition from the previous maintenance management system to the new Lucity system will be complete by June 2015.

4-3. Routine Preventive Operation and Maintenance Activities

In 2011, the City started a system-wide cleaning and CCTV inspection program of the public sanitary sewer system. The project was completed in early 2013.

Given that Emeryville's sanitary sewer system is so small, the system historically used for prioritizing preventative maintenance has been to clean the lines that are known to collect grease and debris. The most frequently cleaned main in Emeryville is the Powell Street main west of I-80. This main is cleaned every four to six months due to the large grease buildup in the line coupled with the irregular grade of the pipe. This issue is an on-going enforcement issue for the FOG program as the City deals with the various restaurants contributing to the grease problem.

TABLE 2 SEWER SYSTEM OPERATING BUDGET

FUND - 510 - SEWER		DIVISION - 4300 - SEWER MAINTENANCE FUND					
FUNCTION - 40 - PUBLIC WORKS		2011-12	2012-13	2013-14	2013-14	2014-15	2015-16
ACCT	TITLE	ACTUAL	ACTUAL	BUDGET	ESTIMATE TO COMPLETE	BUDGET	BUDGET
71000	SALARIES & WAGES - SALARIED	-	91,560	99,000	87,162	149,853	156,745
71030	SALARIES & WAGES-PERM PT	-	2,127	3,000	878	9,300	9,300
71050	OVERTIME PAYMENT	-	66	-	686	-	-
71100	HOLIDAY	-	362	-	6,090	-	-
71250	SICK LEAVE EXPENSE	-	51	-	1,314	-	-
71300	VACATION EXPENSE	-	2,136	-	2,844	-	-
71350	WORKERS COMP PAYMENTS	-	747	800	767	875	913
71410	ALTERNATE MED BENEFITS	-	2,769	2,500	2,769	2,769	2,769
71430	STANDBY PAY	-	21,224	45,000	22,762	30,000	30,000
72000	COMPENSATED EXPENSE	-	1,089	1,100	1,089	1,089	1,089
72150	SOCIAL SECURITY [FICA]	-	1,421	1,500	1,455	2,364	2,464
72200	RETIREMENT [PERS]	-	9,406	10,600	8,623	12,026	12,631
72210	RETIREMENT PERS-MISC	-	941	-	-	-	-
72250	UNEMPLOYMENT INSURANCE	-	96	400	98	159	166
72300	VISION INSURANCE	-	194	200	194	322	322
72350	PSYCHOLOGY INSURANCE	-	26	-	26	43	43
72400	GROUP MEDICAL INSURANCE	-	7,198	6,500	6,148	17,484	19,122
72410	RETIREE MEDICAL BENEFIT	-	600	600	600	1,081	1,081
72450	GROUP DENTAL INSURANCE	-	865	1,200	866	1,965	1,965
72500	LIFE INSURANCE	-	113	200	59	287	291
72510	ACCRUED BENEFITS	-	1,007	1,600	1,042	1,652	1,727
72540	LONG TERM DISABILITY	-	452	500	468	719	752
72990	TRAN SAL/BEN TO SEWER FD	81,599	9,635	15,200	10,000	12,000	12,000
SALARIES AND BENEFITS Total		81,599	154,087	189,900	155,939	243,989	253,383
78000	UTILITIES	954	803	1,200	868	1,200	1,200
UTILITIES Total		954	803	1,200	868	1,200	1,200
77140	CLEANING	98,781	25,591	40,000	4,800	40,000	40,000
77180	VIDEO INSPECTION	32,991	19,772	10,000	-	10,000	10,000
77190	EMERGENCY REPAIR	39,000	-	50,000	-	50,000	50,000
77220	SMOKE TESTING	24,396	8,744	-	-	10,000	10,000
77700	SEWERAGE MAINTENANCE	16,300	9,514	-	17,245	-	-
77750	PUMP STATION MAINTENANCE	4,868	4,607	15,000	-	15,000	15,000
77950	VEHICLE REPL. CHARGE	21,315	9,900	9,900	9,900	19,800	19,800
MAINTENANCE Total		237,651	78,128	124,900	31,945	144,800	144,800
79050	INSURANCE	50,000	50,000	50,000	50,000	50,000	50,000
INSURANCE Total		50,000	50,000	50,000	50,000	50,000	50,000
80050	PROFESSIONAL SERVICES	112,439	113,521	130,000	75,000	75,000	75,000
80120	SEWER TECHNOLOGY	25,800	38,400	25,000	25,000	25,000	25,000
PROFESSIONAL FEES/SVCES Total		138,239	151,921	155,000	100,000	100,000	100,000
86120	SEWER COLLECTION CHARGES	16,063	17,583	27,000	14,696	27,000	27,000
86180	II TAB	63,423	59,113	66,000	57,262	66,000	66,000
FEES & CHARGES Total		79,486	76,696	93,000	71,958	93,000	93,000
88150	DEPRECIATION	9,750	9,750	9,800	9,800	10,000	10,000
88760	GEN FUND CHG FOR MATU/SVC	13,553	6,954	9,500	8,682	9,500	9,500
OTHER Total		23,303	16,704	19,300	18,482	19,500	19,500
91800	OTHER EQUIPMENT	-	-	-	5,568	-	-
CAPITAL Total		-	10,678	-	5,568	-	-
97410	LOAN REPAYMENT - STATE	-	-	25,000	-	-	-
PRINCIPAL AND INTEREST Total		-	-	25,000	-	-	-
99050	TRANSFER TO GENERAL FUND	51,500	51,500	51,500	51,500	51,500	51,500
99200	TRANS TO LITIG FUND 270	30,000	30,000	30,000	30,000	30,000	30,000
99380	TRANS TO SEWER REHAB 511	-	145,000	95,000	95,000	95,000	95,000
INTERFUND TRANSFER Total		81,500	226,500	176,500	176,500	176,500	176,500
SEWER MAINTENANCE FUND Total		692,731	765,516	834,800	811,260	828,989	838,383

There are no mains in Emeryville that have serious root control problems; however recent CCTV inspection has uncovered a limited number of pipes with root intrusion. Odor control has not been an historical issue in the City.

The City's only pump station was reconstructed during fiscal year 2006/2007 and has weekly inspections.

4-4. Scheduled Inspections and Condition Assessment

Beginning in FY 2010/2011, the City began a system-wide smoke testing, CCTV inspection, and structure inspection program. The system used for identifying pipe condition with the CCTV work is the NASSCO PACP version 4.2-4.4 defect codes. The information is stored and accessed on the maintenance management system.

Smoke testing for inflow sources was completed over a three-year period ending in 2012. City-wide sewer cleaning, CCTV inspection and structure inspection was completed in 2013. Moving forward, City-wide main line CCTV and structure inspections will be conducted on a 10-year cycle, with the next cycle to be completed by June 30, 2022. However, certain line segments may require more frequent CCTV inspection to monitor the rate of buildup of sediment and possible deterioration of non-acute defects.

4-5. Rehabilitation and Replacement Plan

The CCTV inspection data-capture technology includes an automated rating system to identify condition-based rehabilitation and replacement needs within the sewer system. As a result of the condition inspections, capital, and operation and maintenance projects can be identified and prioritized. The results of the CCTV inspections were used to formulate a capital improvement plan, including estimated costs, budgets and schedules. This plan also incorporates capacity deficiency projects identified in the Sewer System Capacity Analysis. By June 30, 2017, all known sewer defects that could contribute I/I or lead to other operational issues will be corrected

4-6. Training

Emeryville's training program for the public works crew includes annual training by the Public Works Superintendent on the use and operations of sanitary sewer maintenance equipment. The entire crew was recently trained through a special class on SSO response by an outside consultant and also participated in a seminar by the Alameda County Clean Water Program for hazardous waste spills, including SSOs.

As new crew members are hired, each member is required to complete the SSO response training.

4-7. Outreach to Plumbers and Building Contractors

The City's municipal code is posted in its entirety on the City's website (www.emeryville.org). The Municipal Code includes information on installation, repair and maintenance of privately-owned sewers within the city limits. Information on the PSL Program is also available on the City's website.

4-8. Contingency Equipment and Replacement Inventories

The City maintains the following contingency equipment and replacement parts for its sanitary sewer system.

- Vactor cleaning truck
- Bypass pump with suction and discharge hose
- Trash pump with suction and discharge hose
- Water trailer
- Portable hydrant meter
- Fire hose and nozzle
- Sand bags and rope
- Plastic sheeting
- Wattles
- Hand tools (shovels, rakes, brooms)
- Plastic bags
- Cones/Barricades/Caution Tape/Signage
- Digital camera

In addition to in-house staff, the City contracts with private sewer service contractors to clean and inspect the collection system and to assist in emergency response to system blockages and SSOs.

SECTION 5. DESIGN AND PERFORMANCE STANDARDS

5-1. Standards for Installation, Rehabilitation, and Repair

The City of Emeryville uses the latest edition of the APWA Green Book for the design and construction standards for sanitary sewers.

5-2. Standards for Inspection and Testing of New and Rehabilitated Facilities

Emeryville Public Works uses the APWA Green Book standards for inspection and testing of new and rehabilitated facilities. The testing is performed by the contractors and the City Public Works Inspector ensures that the proper testing procedure is followed and that the results are adequate prior to approval. Testing methods generally include air testing, video inspection, smoke testing, and dye testing.

In addition to the City's requirements for testing new and rehabilitated sewer facilities, the EBMUD Regional PSL ordinance requires that an EBMUD inspector witness a verification test (air or water pressure test) on all rehabilitated or repaired PSLs that are subject to the Regional PSL program requirements. Upon passing a verification test, EBMUD issues the property owner a certificate of compliance that is effective for 20 years if the entire lateral has been rehabilitated and seven years if the existing lateral has been repaired.

SECTION 6. OVERFLOW EMERGENCY RESPONSE PLAN

6-1. Procedures

The City's overflow emergency response plan is a stand-alone document that was approved by the USEPA on July 15, 2010 as part of the requirements of the Administrative Order. A revised and updated plan concurrently with this Plan, is now in use by the City. This document, entitled "Overflow Response and Reporting Procedure" is included as Appendix D. The procedure contains instructions for:

- Incident Notification
- Incident Operations
- Incident Reporting
- Staffing Resources
- Equipment List

6-2. Description of Procedure Elements

The following elements are incorporated in the City's "Overflow Response and Reporting Procedure:"

- Notification - This document outlines the procedures for internal notification of a spill including to the Public Works Superintendent and the Fire Department as well as external notification to Cal-OES.
- Response - This document outlines how the City staff and contracted support staff are to follow the "Overflow Response and Reporting Procedure" when mitigating an overflow, correcting a sewer deficiency, warning the public, and cleaning up during the spill and after it has been stopped.
- Emergency Operations - This document includes instructions on isolating the spill site with barricades and caution tape, and posting warning signs as appropriate. Traffic control may be as required depending on the size and location of the spill.
- Reporting - This document outlines the timeline and responsibility for incident reporting to local, regional, and state agencies.
- Mitigation - This document outlines the procedures for identifying the cause of the spill, the actions necessary to stop and contain the spill, the follow-up activities to prevent similar spills in the future, and necessary clean-up activities.

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

7-1. Purpose

The purpose of having a FOG control program is to eliminate or minimize the discharge of fats, oils, and grease into the sanitary sewer system, thereby reducing the formation of blockages that could result in SSOs. The City's legal authority and requirements for FOG control are included in Article 4 of Chapter 8 of Title 7 of the Municipal Code. In addition, the City participates in the EBMUD Regional FOG Control Program.

7-2. EBMUD Regional FOG Control Program

The EBMUD Regional FOG Control Program consists of permitting, inspections, and multiple-language outreach to food service establishments (FSEs) in the service area. The program requires the installation of a grease interceptor under defined circumstances, maintenance of all grease removal devices at a facility, and maintenance record keeping. This program includes the following elements and is outlined in detail in Appendix E:

- Source identification
- Legal authority
- Program structure/requirements
- Grease removal device technology for FSEs
- Inspections and monitoring for FSEs
- Enforcement for FSEs
- FOG disposal
- Public Education and Outreach

SECTION 8. CAPACITY MANAGEMENT

8-1. Capacity Assessment

In June 2010, the City completed its “Sewer System Capacity Analysis and Master Plan.” This plan includes a hydraulic capacity model of the City’s sanitary sewer system and identifies line segments with existing and projected future capacity deficiencies under design wet weather flow conditions (5-year storm). Since the City has fixed boundaries, additional future flows in the system will stem from land use changes in Emeryville and upstream in Oakland, rather than expansion of the service area.

8-2. System Evaluation and Capacity Assurance Plan

The Sewer System Capacity Analysis and Master Plan identified 18 reaches of pipe within the City of Emeryville that have deficient capacity. Of these, fourteen were replaced by the City in 2011. The remaining deficient pipe segments within the City are four reaches of pipe at the east end of Powell Street near the Oakland City limits. These pipes carry flow primarily from the City of Oakland.

8-3. Capacity Improvement Projects

The City has addressed its sewer capacity deficiencies along with its sewer rehabilitation projects. At this time there are only four reaches of pipe on Powell Street with modeled deficiencies under design storm conditions. The upsizing of these pipes will be determined in the near future based on the City’s Capital Improvement Program.

SECTION 9. MONITORING, MEASUREMENT, AND PROGRAM MODIFICATIONS

In general, Emeryville's sanitary sewer system performs very well since it is mostly new. The City is small geographically and communication is good between departments so various staff can work together to report overflows quickly for rapid response times. During the 2011 and 2012 calendar years there were no overflows in the City. The City reports to the State CIWQS website on a monthly basis to report SSOs should they occur.

The Lucity system will be used to track maintenance activities on the collection system and can also be used to measure the level of effort placed on the program. This tool can be used to determine if SSMP program modifications are necessary.

SECTION 10. SSMP AUDITS

Beginning in 2012, the City conducted an annual audit report of its SSMP. The audit report identifies the results of implementing the SSMP elements, necessary improvements to the SSMP, sewer system improvements undertaken during the reporting year, and planned improvements for the coming year.

Approximately every five years or if significant system changes warrant it, the SSMP will undergo a formal review and revision, which will be taken to the City Council for approval.

Note: The most recent audit of the SSMP was conducted in September 2014. No significant changes were made to the SSMP. The changes that were made include updating the City staffing information, the annual budget, and the completion of maintenance and field data collection efforts, and implementation of a new electronic maintenance management system.

SECTION 11. COMMUNICATIONS

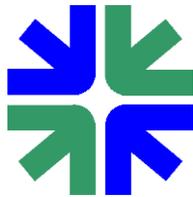
The City maintains a website (www.emeryville.org) to inform the public about all aspects of city government. As a member of the East Bay Technical Advisory Board (TAB) and the East Bay Collections Systems Advisory Committee (EBCSAC), the City communicates and works with other East Bay collection agencies on a regular basis.

APPENDIX A
City of Emeryville Wastewater Collection System
Asset Management Implementation Plan

CITY OF EMERYVILLE

WASTEWATER COLLECTION SYSTEM

ASSET MANAGEMENT IMPLEMENTATION PLAN



UPDATE: October 22, 2014

City of Emeryville
Department of Public Works
1333 Park Avenue
Emeryville, CA 94608

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- A – Inflow Identification and Elimination Plan (Revised January 26, 2011)
- B – Work Plan for Periodic Inspection and Assessment of Condition of Gravity Sewers
and Maintenance Holes April 15, 2010

SECTION 1 INTRODUCTION

The purpose of this Asset Management Implementation Plan (AMIP) is to outline the City of Emeryville's program for routine inspection, maintenance protocols, and condition-based repairs and replacement of its wastewater collection system. This document is a supplement to the City's Sanitary Sewer Management Plan (SSMP) mandated by the State Water Resources Control Board No. 2006-0003 Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WDR).

The SSMP includes the following sections and can be found for reference on the City of Emeryville's website at <http://www.emeryville.org/index.aspx?nid=915>. Level of Service goals are included in the SSMP and performance measures will be documented in the annual report to the EPA.

- Introduction
- Section 1. Goals
- Section 2. Organization
- Section 3. Legal Authority
- Section 4. Operation and Maintenance Program
- Section 5. Design and Construction Standards
- Section 6. Overflow Emergency Response Plan
- Section 7. Fats, Oils and Grease (FOG) Control Plan
- Section 8. Capacity Management
- Section 9. Monitoring, Measurement, and Program Modifications
- Section 10. SSMP Audits
- Section 11. Communications

1-1. Regulatory Mandates

Stipulated Order

The original AMIP was been prepared to satisfy EPA Case No. C 09-05684 RS Stipulated Order for Preliminary Relief Section IX Work-City of Emeryville, Paragraph 50. Asset Management Program, Part B.

The specific requirements for the AMIP contained in the Stipulated Order are as follows:

By July 15, 2012, the City shall submit to EPA for review and approval pursuant to Section XIV an AMIP that uses the EPA comments provided pursuant to subparagraph A above. The City may tailor the EPA comments, and may omit portions of the EPA comments that do not apply to the City. The AMIP shall be updated as necessary to incorporate any revisions to the initial inspection and maintenance schedules, and to ensure that repair, renovation and replacement projects continue to be adequately identified and planned beyond the initial time frames specified in subparagraph 49.B.3. At a minimum, the AMIP shall include a description of the City of Emeryville's programs for:

1. **Routine inspection of the Collection System** according to a specified schedule, and that includes the following:
 - a) Inspection methods to be used, including direct visual inspection and CCTV inspection, and whether CCTV equipment is owned, purchased, leased, or a combination;
 - b) An inspection schedule, and protocol for determining the regular time interval on which repeat inspections will be performed; and
 - c) A system for timely evaluation of inspection findings and documentation of the assessed condition.

2. **Collection system maintenance protocols, including:**
 - a) A schedule for routine cleaning of the City of Emeryville's Collection System using standardized responses developed by the City to typical local problems that cause blockages such as debris, grease and roots. The City shall develop its routine cleaning schedule after evaluating the cleaning needs of the Collection System;
 - b) A list of locations where pipe blockages and SSOs have frequently occurred (hot spots), a hot spot cleaning schedule, and procedures for adjusting the hot spot cleaning schedule based on changing conditions;
 - c) Preventive measures to address blockage of sewer pipes by roots, including a description of root control methods; locations where root control methods may be used within the Collection System; and a schedule for application of root control methods; and
 - d) A plan for staffing the sewer system cleaning and root control programs, indicating whether staffing duties will be carried out by agency staff, by staff from other agencies, or by private contractor(s). To the extent that any sewer cleaning or root control duties conducted under this program will be carried out by private contractor(s), the City of Emeryville shall retain on file and make available for inspection for a period of three years after the completion of work a description of each contractor and a copy of each contract, or a description of the procurement process.
 - e) A Quality Assurance and Quality Control Program ("QA/QC Program") to ensure proper sewer cleaning. The QA/QC Program shall include a plan for inspecting the cleaning quality, which specifies a minimum percentage of cleaned pipe to be inspected at regular intervals and a schedule for inspections, the procedures for conducting the inspections, the time interval for any necessary re-cleaning, and criteria for increasing and decreasing the frequency of inspection.

3. **Condition based repair and replacement of sewer pipe plan.**

This plan shall include elimination of known improper flow connections, according to a schedule informed by the inspection results, and address both short-term (repairs of Acute

Defects to occur within one year of completion of inspection and assessment) and long term repair, rehabilitation and replacement of sewer pipes. The plan shall include the following:

- a) A schedule and 10 year financial plan for repair, rehabilitation, and replacement of sewer pipes. This schedule shall identify pipe reaches presently planned as priorities for rehabilitation or replacement over the next three years, with the understanding that the identified priorities are likely to be further developed and revised through the inspection and assessment process, and as a result of changed conditions. The City shall develop its schedule for repair, rehabilitation and replacement of sewer pipes using standardized responses developed by the City to observed defects, taking into account available peak flow rate data;
- b) Measures to control the inflow and infiltration as needed to reduce flows in the Collection System and reduce the frequency of SSOs; and
- c) The budget allocated for emergency repair and replacement of sewer pipe, the length of sewer pipe which underwent emergency repair and replacement during the previous year, and the cost thereof.

Beginning in 2013, as part of its Annual Report provided for in Section XIII, the City of Emeryville shall submit information to EPA summarizing the City's progress in implementing each element of the AMIP, and must include any proposed revisions to the maintenance and construction schedules along with any accompanying changes to the financial plan. If any Acute Defect has not been addressed within one year of the inspection and assessment identifying it, the City shall explain what new information or changed circumstances warrant not addressing the Acute Defect.

Consent Decree

On May 13, 2013, the USEPA granted approval of “the City’s AMIP with the stipulation that further revisions may be needed, particularly with regard to the rates of sewer cleaning, inspections, and repair/rehabilitation, as a result of ongoing Consent Decree (CD) negotiations.”

This updated AMIP has been prepared to reflect the requirements of the Consolidated Case Nos. C 09-00186-RS and C 09-05684 FINAL CONSENT DECREE, approved on September 22, 2014, as follows:

72. On May 13, 2013, after consultation with the Regional Water Board, EPA conditionally approved the City of Emeryville’s AMIP. For the duration of the Consent Decree, the City shall implement the programs set forth in its SSMP and AMIP for controlling SSOs and reducing I&I. In addition, the City shall implement the Work set forth in this Section to accomplish the goal of eliminating SSOs and further reduce I&I. The City shall revise its AMIP as necessary, so that it is consistent with the requirements of this Section, and to ensure that Repair and Rehabilitation projects continue to be adequately identified and planned for.

The revisions to the AMIP reflect the requirements of the Final Consent Decree, modifications to work based on construction activities to date, and additional information obtained from field investigations and data review.

1-2. Maintenance Management System

Emeryville is currently transitioning from its Redzone ICOM3 maintenance management system (MMS) to a similar system provided by Lucity Software. When this transition is complete, the MMS will include an asset inventory linked to an electronic GIS-based collection system map, and a number of modules associated with the sanitary sewers including pipe, lateral, structure, and pump station asset inventories. It will also include the operation and maintenance history for structure inspection, pipeline cleaning, closed-circuit television (CCTV) inspection, smoke testing, and pump station maintenance that currently resides in ICOM3.

NOTE: The recently-developed lateral database is being used to confirm the number of laterals serving an individual parcel when implementing the Regional Private Sewer Lateral (PSL) Program, and to track PSL permits as they are obtained by the property owners.

Routine and emergency maintenance management activities are also driven by the MMS.

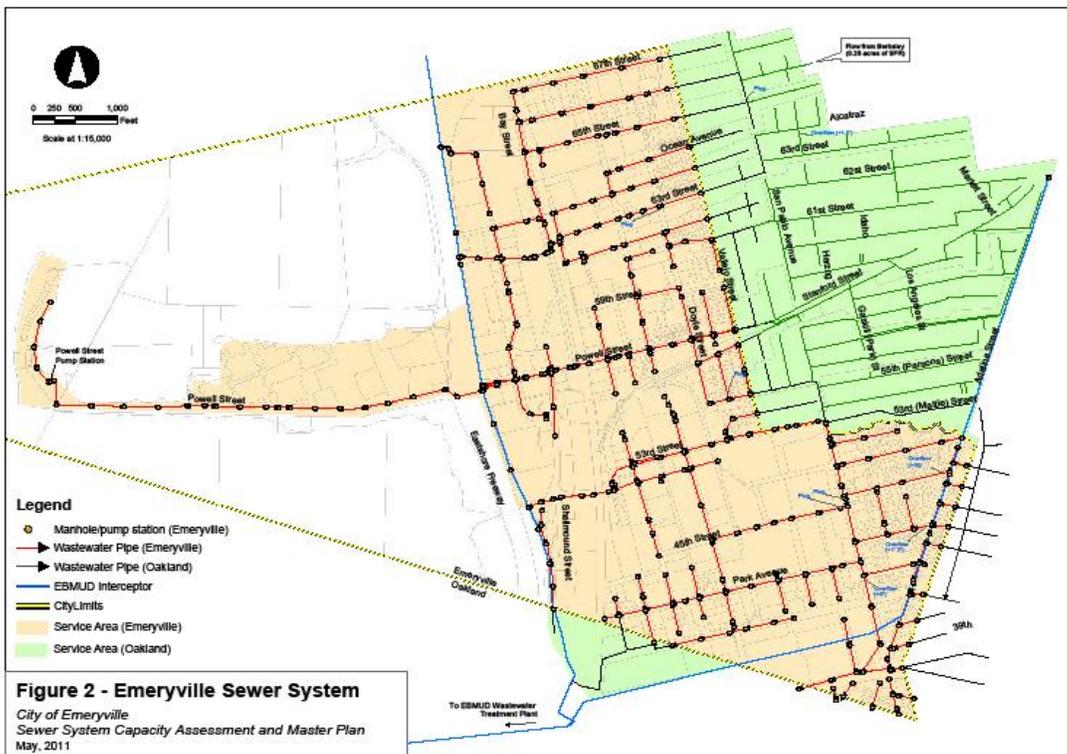
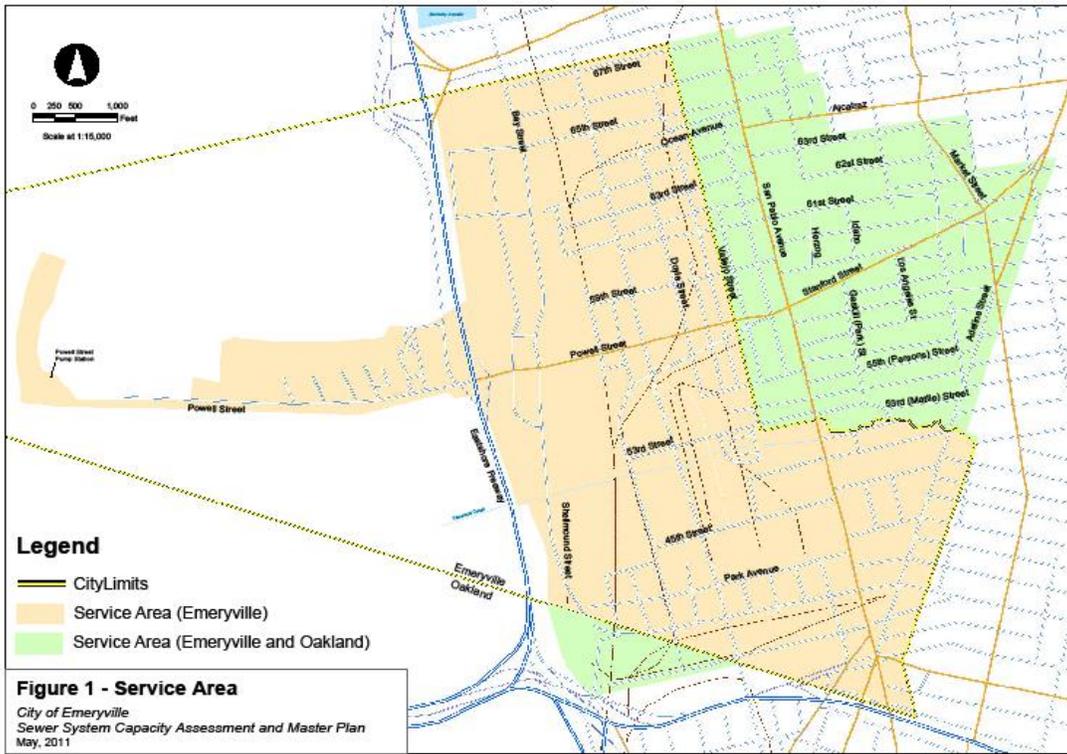
1-3. Collection System

Emeryville's sanitary sewer service area is shown on Figure 1 and a schematic of the wastewater collection system is shown on Figure 2. The collection system serves the entire city. In addition, approximately 11 miles of sanitary sewer mains from 370 acres of primarily residential property in the City of Oakland and 0.25 acres of residential property in the City of Berkeley drain into Emeryville's wastewater collection system.

The City of Emeryville's wastewater collection system consists of 15.3 miles of gravity sewers, ranging in size from 4 to 30 inches in diameter. Over 85% of the system has been replaced or fully rehabilitated (including manholes and in most cases lower laterals) in the past 25 years or was installed since 1970. This rehabilitation program has resulted in a reduction of modeled wet weather flows of about 10% based on Emeryville's peak wet weather flow allocation in the September 1987 *Final Cost Effectiveness Analysis Update to the Infiltration/ Inflow Correction Program*. In addition, all wet weather overflows have been eliminated from the wastewater collection system.

There are 365 manhole structures in Emeryville. The age and condition of these manholes generally tracks the age of the associated gravity sewers. There are approximately 1,100 PSLs, owned and maintained entirely by the property-owners from the building to the connection with the city main.

In addition, Emeryville owns and operates one pump station, equipped with two, 10-hp pumps having a rated capacity of 1600 gpm each. There is a 6-inch diameter, 1,886-foot long force main associated with this pump station.



SECTION 2

ROUTINE INSPECTION OF THE COLLECTION SYSTEM

From FY2010/2011 through FY2011/2012, Emeryville implemented a comprehensive collection system inspection program in accordance with the EPA-approved *Inflow Identification and Elimination Plan* and the *Work Plan for Periodic Inspection and Assessment of Condition of Gravity Sewers and Maintenance Holes*. The preparation and implementation of these plans were a requirement of EPA AO, Docket No. CWA 309(a)-10-008. They are attached hereto as Appendix A and Appendix B.

The work performed on the system-wide inspection program as of August 31, 2013, included the following:

- Smoke testing to determine potential sources of inflow – 100% of system completed
- Mainline cleaning followed immediately with mainline CCTV inspection – 99% of pipes completed (inspection was not performed on some pipes that are scheduled for rehabilitation or that were difficult to access at the time the CCTV inspection field work was performed)
- Mainline structure inspection – 363 of 365 structure inspections completed

As part of this effort, Emeryville was able to verify and modify the collection system configuration and base map, have uniformity in the evaluation of pipe features and defects, and develop an accurate baseline condition database of the collection system.

2-1. Methods

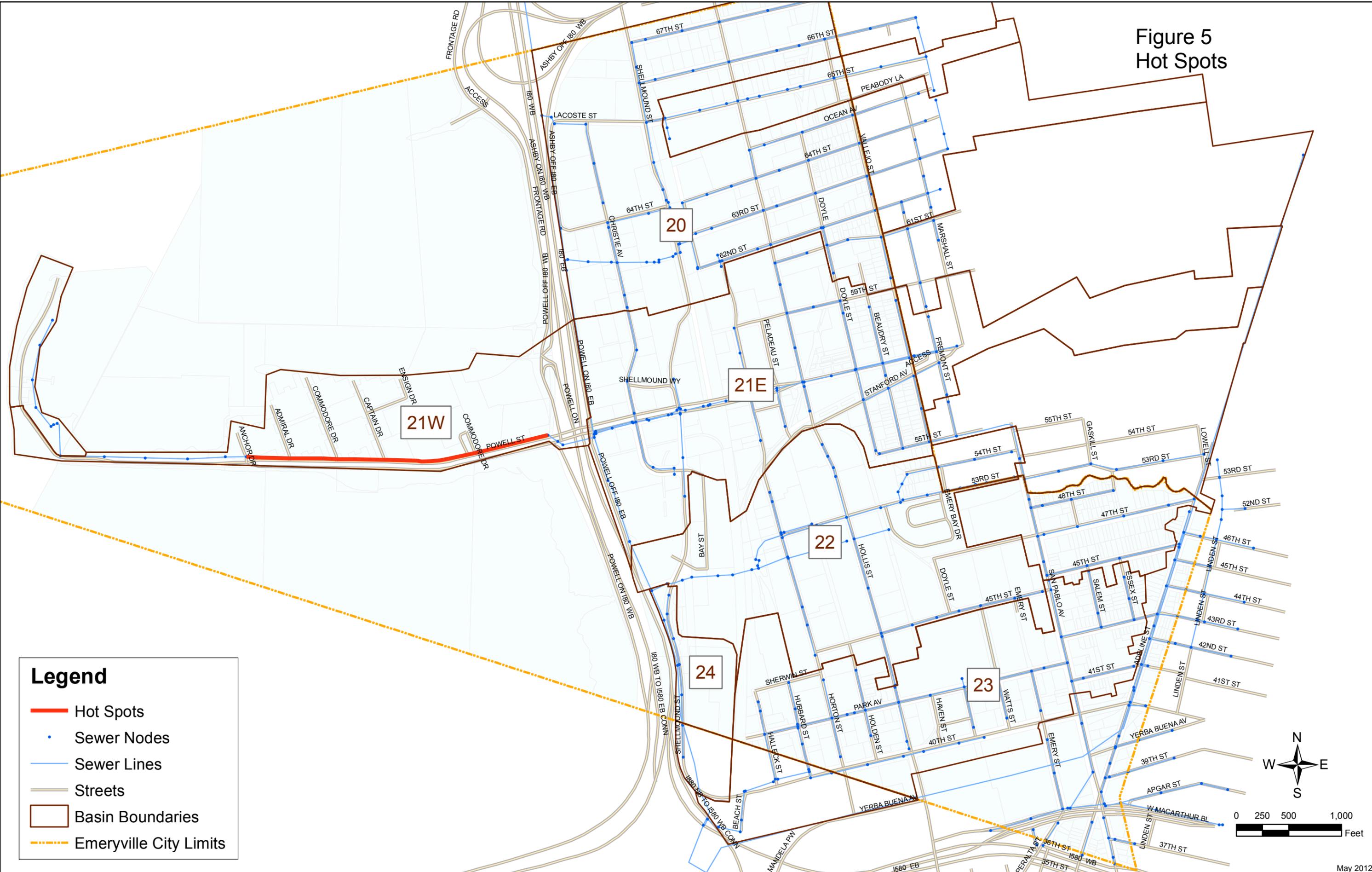
The pipe cleaning and CCTV inspection work effort to date was performed by outside contractors using their own equipment. Emeryville owns a small push-camera that is used in cases where a lateral blockage is suspected, but it is not used on a routine basis for inspecting the sewer mains.

The CCTV inspection, performed using the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) standards, conforms to the EPA-approved *Work Plan for Periodic Inspection and Assessment of Condition of Gravity Sewers and Maintenance Holes*. All routine inspection is from manhole-to-manhole, for incorporation into the City's MMS.

2-2. Schedule for Routine Inspection

The system-wide comprehensive cleaning and CCTV inspection project was completed in FY2011/2012, with a small amount of follow-up work in 2013. Emeryville intends to adopt the re-inspection schedule outlined below. Because of the limited scope of this work, re-inspection will generally be planned during the wet weather season in order to help identify possible

Figure 5
Hot Spots



Legend

- Hot Spots
- Sewer Nodes
- Sewer Lines
- Streets
- Basin Boundaries
- Emeryville City Limits

North Arrow

0 250 500 1,000 Feet

sources of infiltration into the wastewater collection system (some sewers carrying hot industrial flow are better inspected in the spring or summer when the ambient temperatures are higher and there is less vapor in the pipes). In addition, as part of any Capital Improvement Project (CIP), all new, repaired, or rehabilitated pipes will be CCTV inspected end-to-end and the data incorporated into the database.

- YEAR 2 (FY2013/2014) ***NOTE: This work has been completed***

The pipes identified in the FY2011/2012 Cleaning and CCTV inspection project with the worst debris accumulation that are not currently subject to routine “hot spot” cleaning were inspected without prior cleaning to evaluate the level of debris build-up. The purpose of this inspection was to confirm that the proposed schedule for routine cleaning of these lines is adequate. These pipes, listed in Table 1 and shown on Figure 3, include the following sewers:

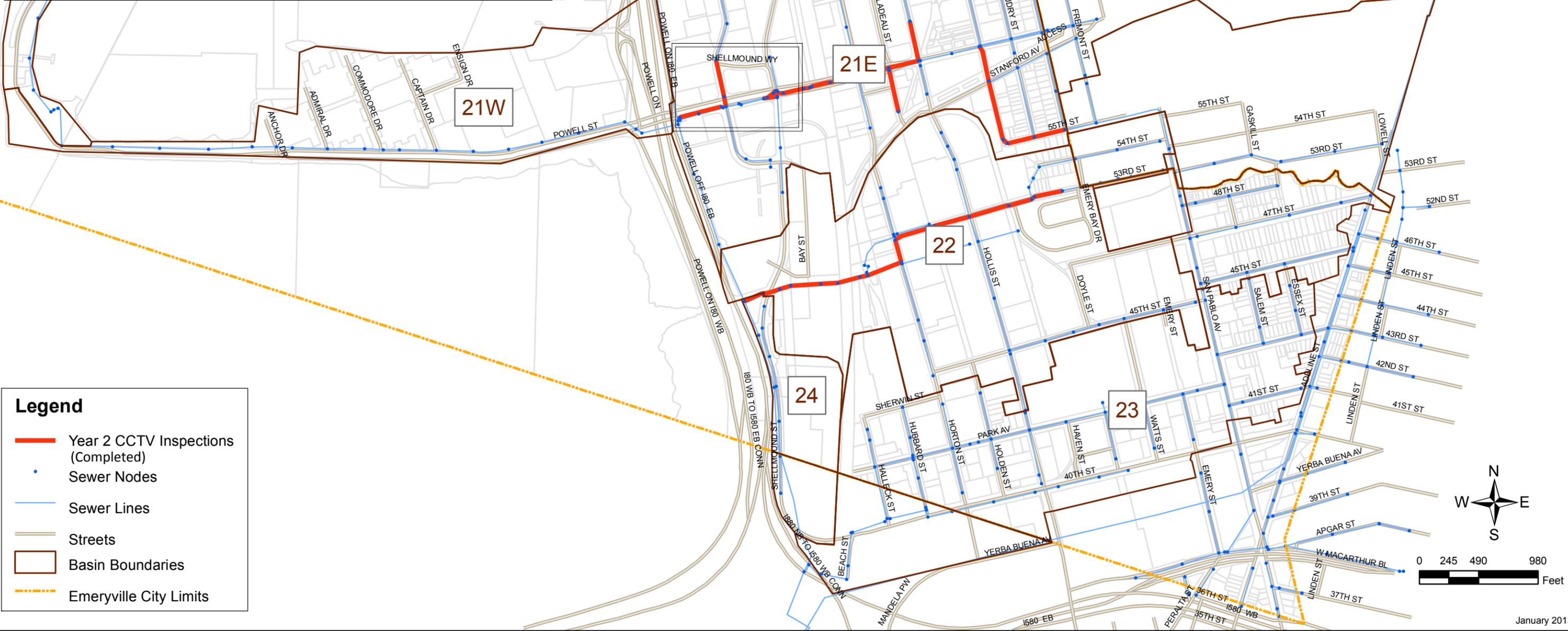
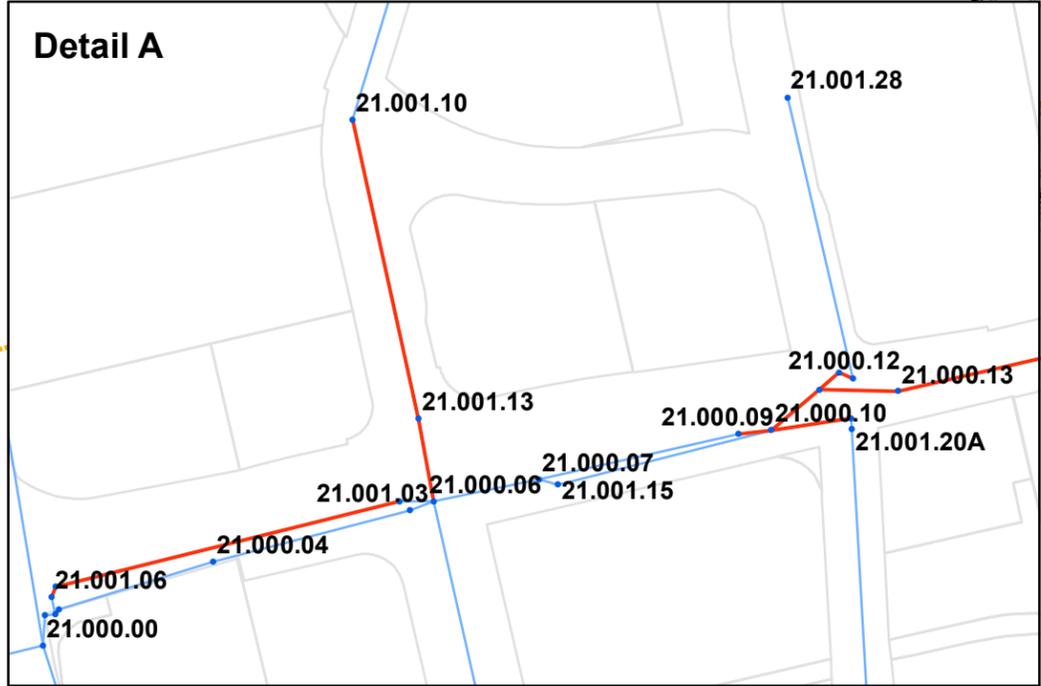
- Basin 20 – Trunk Sewer on Shellmound Street between 67th Street and 63rd Street, through an easement (Emeryville Market Place) to the EBMUD Interceptor, and the trunk sewer extension beneath the Union Pacific Railroad at 63rd Street
- Basin 21E – Trunk Sewer on 55th Street from Vallejo Street to Doyle Street, along Doyle Street to Powell Street, and along Powell Street to the EBMUD Interceptor, plus sewers on Shellmound Street to the north and south of Powell Street and on Peladeau Street south of Powell Street
- Basin 22 – Trunk Sewer on 53rd Street from Boyer Street to Horton Street, through an easement (Temescal Creek alignment) to the EBMUD Interceptor

Based on the results of this CCTV inspection, several reaches of pipe were identified as having closed cracks. These pipes will be added to the YEAR 5 (FY2016/2017) program, discussed in the following paragraphs. In addition, several pipes have been added to the routine cleaning program on an annual basis (see SECTION 3).

- YEAR 5 (FY2016/2017)

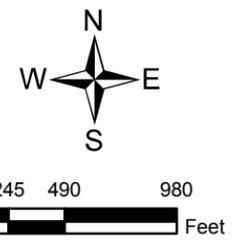
- The pipes with low priority hairline cracks revealed in the 2011/2012 CCTV inspection that were not identified as needing to be repaired (see Section 4.2 for rehabilitation program) will be cleaned and CCTV inspected to determine if cracks are expanding and warrant repair work. Any pipes with hairline cracks that show an expanding movement after the FY2016/2017 reinspection will be put on a 5-year CCTV inspection cycle or added to the spot repair list in the Condition Based Repair and Replacement of Sewer Pipe Plan. Any pipes with hairline cracks that do not show appreciable change after the FY 2021/2022 system-wide CCTV inspection will be placed on a 10-year inspection cycle.
- All pipes currently identified as having potential for root intrusion will be CCTV inspected and cleaned, if necessary, on a 5-year cycle unless circumstances indicate

Figure 3
 Year 2 (FY 2013/2014)
 CCTV Inspections



Legend

- Year 2 CCTV Inspections (Completed)
- Sewer Nodes
- Sewer Lines
- Streets
- Basin Boundaries
- Emeryville City Limits



that a more or less frequent inspection cycle is justified. The next round of inspection will be completed by the end of FY 2016/2017. These pipes are listed in Table 2 and shown on Figure 4.

**TABLE 1
LIST OF PIPES FOR YEAR 2 (FY2013/2014)
CCTV INSPECTION¹**

NOTE: This work has been completed

Basin 20 Trunk		Basin 21E Trunk		Basin 22 Trunk	
Line Segment	Length, ft	Line Segment	Length, ft	Line Segment	Length, ft
20.102.15-20.100.11	235	21.000.31-21.000.29	260	22.002.09D-22.002.08	237
20.100.11-20.102.01	154	21.000.29-21.000.27	229	22.002.08-22.002.06	31
20.102.01-20.100.09	381	21.000.27-21.000.27A	49	22.002.06-22.002.16	196
20.100.09-20.100.07	385	21.000.27A-21.000.25	544	22.002.16-22.000.21	338
20.100.07-20.100.06	273	21.000.25-21.000.23	298	22.000.21-22.001.09	293
20.100.06-20.100.05A	271	21.000.23-21.000.22 ³	231	22.001.09-22.000.17	349
20.100.05A-20.100.05	26	21.000.22-21.000.22A ³	267	22.000.17-22.000.15	191
20.100.05-20.100.04B	56	21.000.22A-21.000.21 ³	15	22.000.15-22.000.11	299
20.100.04B-20.100.04A	55	21.000.21-21.000.20 ³	253	22.000.11-22.000.09	66
20.100.04A-20.100.04	32	21.000.20-21.001.14 ³	126	22.000.09-22.000.07	187
20.100.04-20.000.18	268	21.001.14-21.001.12	37	22.000.07-22.000.06	142
20.100.03-20.100.02	162	21.001.12-21.000.19	100	22.000.06-22.000.05	249
20.100.02-20.100.01	153	21.000.19-21.000.18	235	22.000.05-22.000.03	93
20.000.19-20.000.18	115	21.000.18-21.000.16	158	22.000.03-22.000.01	149
20.000.18-20.000.16 ²	10	21.000.16-21.000.15	19	Total Length, ft	2,820
20.000.16-20.000.15 ²	81	21.000.15-21.000.14	48		
20.000.15-20.000.13 ²	47	21.000.14-21.000.13	176		
20.000.13-20.000.12 ²	31	21.000.13-21.001.05	80		
20.000.12-20.000.11 ²	140	21.001.05-21.000.10	46		
20.000.11-20.000.10 ²	22	21.000.10-21.000.09	34		
20.000.10-20.000.09 ²	46	21.000.06-21.000.6A	35		
20.000.09-20.000.08 ²	72	21.000.06A-21.000.06B	359		
20.000.08-20.000.07 ²	280	21.000.06B-21.001.06	11		
20.000.07-20.000.05	56	21.000.12-21.000.11⁴	46		
20.000.05-20.000.03	222	21.000.11-21.001.05⁴	26		
20.000.03-20.000.01	197	21.001.10-21.001.13	310		
20.000.01-20.000.00	27	21.001.13-21.000.06	85		
20.001.20-20.000.07	15	21.001.19-21.000.10	82		
Total Length, ft	3,812	21.001.48-21.000.21	334		
		21.001.45-21.001.20	371		
		Total Length, ft	4,792		

¹ Performed to verify adequacy of 5-year cleaning cycle

² These pipes are scheduled to be relocated by the property owner within the next 5 years and may not require assessment in the future

³ These pipes are scheduled to be rehabilitated in FY2014/2015 and may not require assessment in the future

⁴ These pipes have been removed from the wastewater collection system

**TABLE 2
LIST OF PIPES FOR YEAR 5 (FY2016/2017)
CCTV INSPECTION**

Pipes with Closed Hairline Cracks¹		Pipes with Potential for Root Intrusion	
Line Segment	Length, ft	Line Segment	Length, ft
20.000.29-20.000.27	174	20.001.04-20.001.03	69
20.001.08-20.001.07	388	20.001.03-20.001.02	91
20.002.09-20.000.31	398	23.000.23-23.000.21	309
20.101.03-20.101.02	246	23.002.23-23.002.47	136
20.101.11-20.101.10	508	23.002.47-23.002.46	246
21.000.06-21.001.03	26	23.002.46-23.002.45	277
21.000.10-21.001.15	223	23.002.45-23.002.44	80
21.000.21-21.000.20²	253	23.002.44-23.002.14	197
21.000.25-21.000.23	298	23.002.71-23.002.70	90
21.000.27-21.000.27A	16	23.002.70-23.002.04	459
21.000.27A-21.000.25	533	23.002.04-23.002.03	251
21.000.29-21.000.27	229	23.002.03-23.002.14	229
21.000.31-21.000.29	260	50.001.52-50.001.57	315
21.001.19-21.000.10 ³	82	50.001.53-50.001.51	327
21.001.25-21.001.23	202	50.001.57-50.001.56	399
21.001.60-21.000.21	18	50.001.85-50.001.84	417
21.001.61-20.001.60	241	Total Length, ft	3,892
21.002.02-21.002.04 ⁴	543		
21.002.10-21.002.09	558		
21.003.10-21.000.31	276		
22.001.05-22.001.04	19		
22.001.09-22.000.17	349		
22.001.17-22.001.10	482		
22.001.27-22.001.26	241		
22.001.31-22.001.30	272		
22.002.01-22.002.00	84		
22.002.02-22.002.03	123		
22.002.16-22.000.21	338		
22.002.20-22.002.06²	403		
22.002.21-22.002.20³	405		
22.002.22-22.002.21²	304		
23.001.04-23.001.03	259		
23.001.10-23.000.21	150		
23.002.03-23.002.02	229		
23.002.10-23.002.29	126		
24.000.04-24.000.03	183		
50.001.89-50.001.91	31		
50.001.95-50.001.89	119		
52.701.20-52.701.20A	22		
52.701.22-52.701.24	64		
Total Length, ft	8,310		

¹ Cracks that do not appear to compromise the structural integrity of the pipe or be a source on infiltration

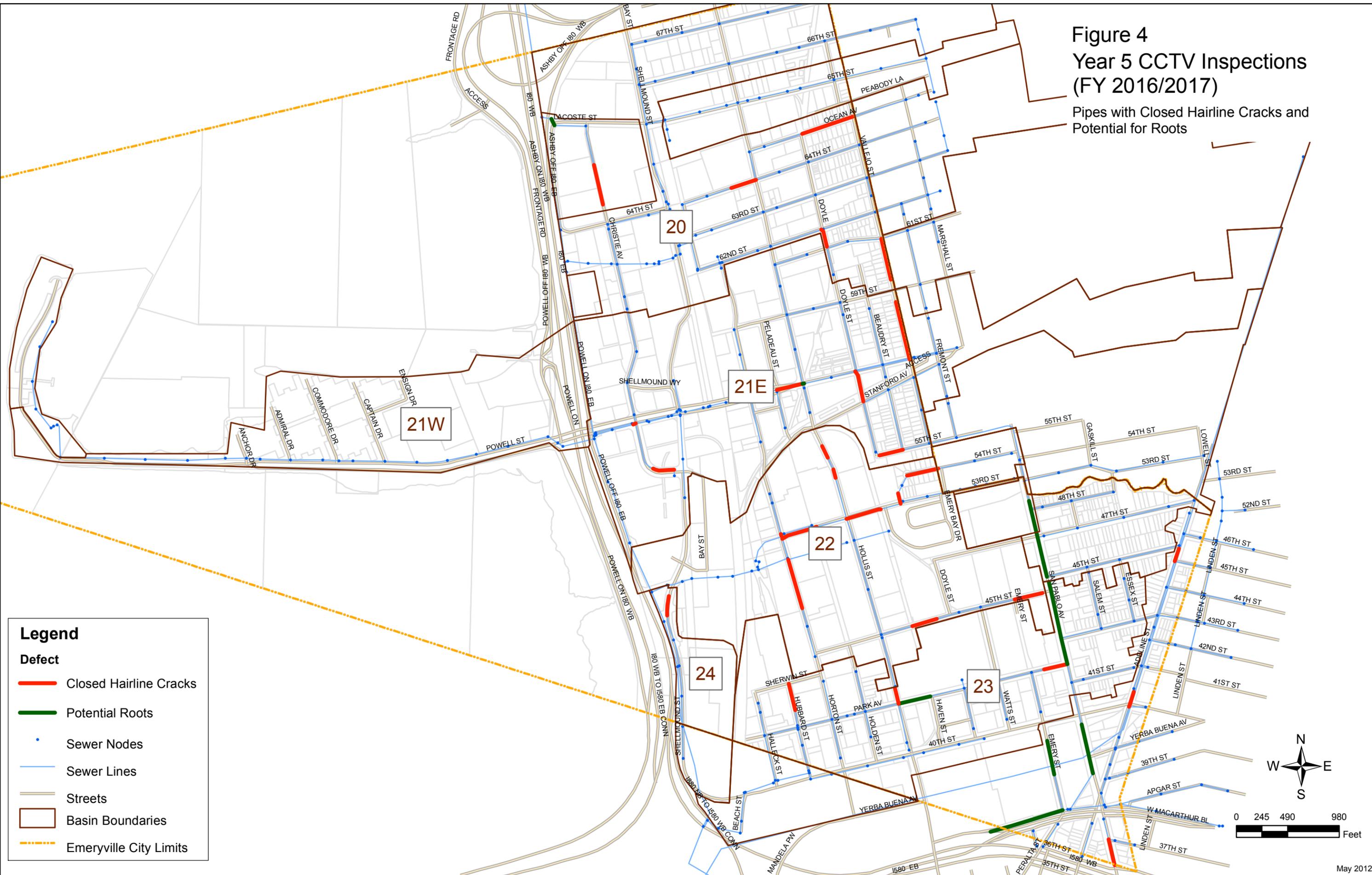
² These pipes have been or are scheduled to be rehabilitated by the end of FY2014/2015

³ This pipe should be inspected without prior cleaning to determine debris build-up

⁴ This pipe route may be abandoned with the replacement of the Basin 21 Trunk Sewer on Powell Street between Vallejo Street and Doyle Street and may be deleted from this list

Figure 4
Year 5 CCTV Inspections
(FY 2016/2017)

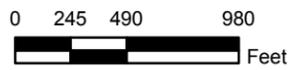
Pipes with Closed Hairline Cracks and
 Potential for Roots



Legend

Defect

- Closed Hairline Cracks
- Potential Roots
- Sewer Nodes
- Sewer Lines
- Streets
- ▭ Basin Boundaries
- - - - - Emeryville City Limits



- YEAR 6 – YEAR 9 (FY2017/2018 – FY2020/2021)

Re-inspection, as necessary, based on the results of the YEAR 5 program.

- YEAR 10 (FY2021/2022)

Unless otherwise noted, the entire wastewater collection system will be cleaned and CCTV inspected on a 10-year cycle. Effort will be made to perform the CCTV inspection during the wet weather season in order to help identify infiltration sources. This work program will also include the inspection of all manhole structures. The next round of inspection will be completed by the end of FY 2021/2022.

2-3. Evaluation

The CCTV inspection data complies with NASCO PACP coding rules for uniform automated structure and operation and maintenance (O&M) rating. While the PACP coding for “Structural Quick” and “O&M Quick” provides an overview of possible problems with the sewer mains, it is not fool-proof in rating pipe defects. For example, an offset joint or change in alignment may not allow the CCTV camera to advance through a pipe, however, this is not specifically identified as a problem in the PACP rating system. The PACP also does not allow for coding features that may be visible in front of the camera, but that are not recorded because the camera could not advance in the pipe and actually encounter them.

Because there are some limitations to the PACP ratings, Emeryville Engineering staff/consultant performed a detailed foot-by-foot review all CCTV inspection data completed. This review was possible because of the small size of the collection system (less than 2% of the pipes served by the EBMUD interceptor system are in Emeryville). The review of the CCTV data by an experienced professional engineer provided a more critical, and sometimes more accurate, assessment of the defects noted by the CCTV inspection technician. It is important to note, also, that the pipe defects identified as requiring repairs in this report might have a much lower priority in a larger collection system having many old pipes that require full rehabilitation. The CCTV inspection data collected in the future will be reviewed on the same basis.

The structure inspections conducted by the private contractor in conjunction with the system-wide cleaning and CCTV inspection program were reviewed by Engineering staff/consultant for defects and signs of infiltration. Two manhole structures were referred to the Public Works Maintenance Supervisor for remediation. One structure had a configuration issue that required correction and the other needed sealing to prevent infiltration. The structure inspections to be conducted under the YEAR 10 (FY 2021/2022) program will also be reviewed by Engineering staff.

SECTION 3

COLLECTION SYSTEM MAINTENANCE PROTOCOLS

Collection system maintenance requires a combination of activities to maintain full flow capacity in the pipes. These activities include routine cleaning throughout the system, hot spot (grease- or root-related blockages or recurring spill locations that require increased maintenance) cleaning in conjunction with a FOG control program, and root control. These topics are addressed in the following paragraphs.

3-1. Schedule for Routine Cleaning

The entire wastewater collection system was cleaned prior to the CCTV inspections in FY2010/2011 and FY2011/2012. While a pipe typically was cleaned with one or two passes of a hydrojet, about one-third of the reaches in the collection system required much more aggressive cleaning to remove accumulated debris. The pipes requiring significant extra cleaning were typically the downstream trunk sewers. The normal rate of debris build-up in these pipes is not known at this time. Therefore, Emeryville performed CCTV inspection of the pipes listed previously in Table 1 in YEAR 2 (FY2013/2014) to determine an appropriate future cleaning schedule for them. Based on this CCTV evaluation several pipes have been placed on an annual cleaning program.

The City plans on performing the following cleaning activities:

- YEAR 1 – YEAR 4 (FY2012/2013 – FY2015/2016)
 - Routine “Hot Spot” Cleaning and Select Annual Cleaning (beginning in FY2014/2015)
- YEAR 5 (FY2016/2017)
 - Routine “Hot Spot” Cleaning
 - Basin 20, 21E, and 22 Trunk Sewer pipes, including the pipes added to the Select Annual Cleaning program
 - The pipes listed previously in Table 2 as having hairline cracks will be cleaned prior to CCTV, while the pipes listed in Table 2 as having potential for root intrusion will be cleaned after CCTV inspection if necessary.
- YEAR 6 – YEAR 9 (FY2017/2018 – FY2020/2021)
 - Routine “Hot Spot” Cleaning and Select Annual Cleaning

- YEAR 10 (FY2021/2022)
 - Routine “Hot Spot” Cleaning
 - The entire wastewater collection system will be cleaned prior to CCTV inspection

The above schedule for Routine “Hot Spot” Cleaning may be adjusted depending on the results of the CCTV inspection to be performed in YEAR 5. In addition, in the event that 2 or more spills are experienced in a reach of pipe, the City will evaluate the cause and consider placing the pipe on a more frequent cleaning cycle.

3-2. Hot Spots and Pipes Requiring Select Annual Cleaning

- Hot Spots

In general, SSOs have not been a problem in Emeryville. With the exception of a few reaches of pipe, the wastewater collection system is relatively new, has sufficient capacity for modeled wet weather flows, and is not subject to heavy root intrusion. In the past three years, there have not been any SSOs in the system.

The City participates in the EBMUD FOG program and requires all food service establishments (FSEs) to install and maintain grease control devices.

There is only one portion of the wastewater collection system that is currently considered a “hot spot.” It is located downstream of the Emeryville Marina Pump Station force main and carries wastewater from public and private restrooms at the marina, two restaurants, a small commercial complex, and the Watergate Condominium complex (1,247 high-density residential units). This hot spot is twelve reaches of 10- and 16-inch diameter asbestos cement pipe (ACP) that is approximately 3,098 feet long. The line segments included in this hot spot are listed in Table 3 and shown on Figure 5. The pipes, along with all the private collection systems owned and maintained by the Watergate Condominium Homeowners Association and commercial property owners, are located at the site of an historic landfill. Consequentially, they have numerous sags due to settlement. The combination of grease discharged from the restaurants and housing, and the vertical alignment irregularities of the sewer main, necessitates that this pipe is cleaned every 4 to 6 months. Emeryville has requested that EBMUD conduct a residential outreach program for Watergate Condominium Homeowners Association in an attempt to reduce the FOG load to this portion of the collection system.

It should be noted that no significant I/I has been identified specifically in these segments of pipe or generally in the entire drainage subbasin. These segments of pipe will remain a “hot spot” until Emeryville believes that it is warranted to perform a rehabilitation project in the area.

The criteria for changing the cleaning frequency of hot spots is based on the effort involved in getting a particular reach of pipe clean. Hot spots are currently on a 4- to 6-

month cleaning cycle. It is anticipated that the cleaning cycle may be lengthened when upstream private laterals are rehabilitated and more aggressive FOG control is implemented in the high-density residential development tributary to the sewer main.

- Select Annual Cleaning

Based on the YEAR 2 CCTV Inspection, several reaches of pipe have been added to a new Select Annual Cleaning category. These pipes showed debris accumulation that was greater than expected or that impeded CCTV camera travel through them. The pipes are listed in Table 3 and tend to be associated with alignment changes within the pipe reach or at points where the flow has a 90° change in horizontal alignment at a manhole.

**TABLE 3
LIST OF HOT SPOTS AND SELECT ANNUAL
CLEANING**

Line Segment	Diameter, in.	Length, ft
Hot Spots (Cleaning required every 4 to 6 months)		
21.100.05-21.100.03	16	391
21.100.07-21.100.05	16	311
21.100.09-21.100.07	16	280
21.100.11-21.100.09	16	295
21.100.13-21.100.11	16	304
21.100.15-21.100.13	16	303
21.100.17-21.100.15	10	135
21.100.19-21.100.17	10	152
21.100.21-21.100.19	10	308
21.100.23-21.100.21	10	289
21.100.25-21.100.23	10	130
21.100.27-21.100.25	10	200
Length		3,098
Select Annual Cleaning		
20.000.10-20.000.09 ¹	30	46
21.000.27A-21.000.25	14	533
21.000.25-21.000.23	14	305
22.000.17-22.000.15	18	186
Length		1,070

¹ This pipe is scheduled to be to be relocated by the property owner within the next 5 years and may not require increased cleaning in the future.

3-3. Root Control

Emeryville does not currently have a notable root problem in its wastewater collection system. Most of the system is along paved streets or otherwise in the public right-of-way. Roots were identified and removed during the recent sewer cleaning and CCTV inspection project in a pipe

segment that passes through a landscaped area on 65th Street upstream of the EBMUD Interceptor. Hairline roots were also observed in a few other pipes in the wastewater collection system. There is a possibility that roots may occur in the future in select reaches of pipe that are beneath roadway median strips landscaped with trees (see Figure 4 for these locations).

Part of the YEAR 5 CCTV inspection schedule outlined in Section 2.2 includes re-inspection of these pipes to observe the level of root intrusion that may develop over time. Emeryville does not anticipate the need for a large scale chemical root control program. However, if the YEAR 5 CCTV inspections reveal that root intrusion is becoming a problem or if other operational considerations dictate, then a chemical root control program will be developed and implemented.

3-4. Staffing

Because of the small size of the wastewater collection system, Emeryville does not have in-house staff dedicated to routine collection system cleaning. However, Emeryville has staff on-call to respond to wastewater collection system emergencies. All scheduled wastewater collection system maintenance is managed by the Public Works Department staff and performed by a private contractor. A complete organization chart of Emeryville's wastewater collection system operations staff can be found online in the City's SSMP at the following link: <http://www.emeryville.org/index.aspx?NID=915> .

3-5. QA/QC

Experienced field crews can judge the thoroughness of cleaning based on the resistance of the hydrojet, the sound of material being sucked through the hydrojet hose, and the contents of the "catch basket" inserted in the manholes of the pipes being cleaned. Routine post-cleaning CCTV inspection follows the cleaning within one week and is used to evaluate the quality of the cleaning work. If there is no scheduled manhole-to-manhole CCTV inspection after cleaning is performed, the City will spot-check 10% of the pipes included in the cleaning effort using its push-camera.

The City's routine sewer cleaning is typically performed by outside contractors with site supervision by the City's Public Works Maintenance Manager. The crews are given immediate feedback if cleaning is not thorough based on the "catch basket" contents. Review of the CCTV inspection performed in conjunction with the cleaning will determine if immediate recleaning is required.

SECTION 4

CONDITION-BASED REPAIR AND REPLACEMENT OF SEWER PIPE PLAN

Given Emeryville’s aggressive wastewater collection system replacement program over the past 25 years, the majority of the pipes in the system are in very good condition. This fact has been validated through the condition assessment program completed in 2012. There are just a few sewer mains within the system that are in need of manhole-to-manhole rehabilitation due to poor condition, and several pipes requiring repairs of isolated defects. In addition, as noted in the *City of Emeryville Sewer System Capacity and Analysis Master Plan* completed by the City in 2010 and conditionally approved by the EPA to satisfy the requirements of a Sub Basin Flow Monitoring/-I&I Assessment Plan Report, several pipe segments have been identified as being undersized relative to a wet weather design flow.

4-1. 10-year Financial Plan

Emeryville anticipates spending approximately \$4.5 million through FY 2021/2022 for wastewater collection system capital improvements. The required projects include several sewer main rehabilitation projects and various repairs of the individual defects identified through CCTV inspection and smoke testing. Because the City has rehabilitated the vast majority of pipes in the wastewater collection system, these projects were identified based on condition rather than subbasin priority relative to significant infiltration. For the purposes of this discussion, “repair” refers to fixing a short, isolated portion of a pipe that is defective and may require inserting a new piece of pipe or merely realigning the pipe that is already in place, but has an alignment offset. “Rehabilitation” is manhole-to-manhole renewal or reconstruction of a reach of pipe and may involve any one of several technologies including, but not limited to, open cut trenching, pipe bursting, or cured-in-place pipe (CIPP).

Table 4 summarizes the anticipated capital improvement budget for the next 10 years, beginning in FY2012/13. It is anticipated that the projects in the first 3 years of the program will cost about \$3.6 million. The capital budgets for YEARS 4 and 5, and 7 through 10 are to deal with repairs that may be needed, but are not included in the YEARS 1 through 3 projects. The YEAR 6 annual capital budget is higher to provide for repairs that may be identified through the YEAR 5 CCTV inspection of pipes with cracks. It should be noted that this financial plan will be incorporated into Emeryville’s citywide capital improvement plan and will be updated periodically.

The Sewer Fund is an Enterprise Fund that supports operation and maintenance of the City’s wastewater collection system. The fund is supported by Sewer User Charges collected by EBMUD via water bills and by the Sewer Connection Fee, a one-time fee that is paid to the City when a property owner/developer pulls a building permit that includes new connections to the wastewater collection system. The funds generated by the Sewer Connection Fee are restricted for use on Capital Improvements to the collection system while the Sewer User Charges may be used for operations, maintenance, and capital improvements. There is a

current fund balance of approximately \$4,000,000 in the Sewer Fund that can be used on Capital Projects.

**TABLE 4
SCHEDULE AND BUDGET FOR 10-YEAR FINANCIAL PLAN**

TIME FRAME	ACTIVITY	BUDGET, \$1,000
YEAR 1¹ (FY2012/2013) <i>NOTE: This work has been completed</i>	<ul style="list-style-type: none"> Rehabilitation of 307 linear feet of 24-inch diameter trunk sewer on Powell Street between Shellmound Street and Christie Avenue; 793 linear feet of 8-inch diameter pipe on Shellmound Street south Powell Street; and 295 linear feet of 8-inch diameter pipe on Shellmound Street north of Powell Street Rehabilitation of 316 feet of 8-inch diameter pipe on Halleck Street north of Park Avenue Emeryville Industrial Sewer Project, Phase 1 Repairs of defects identified by CCTV inspection² 	1,600
YEAR 3³ (FY2014/2015)	<ul style="list-style-type: none"> Rehabilitation of 1,457 linear feet of 10- and 18-inch diameter sewer on Powell Street between Vallejo Street and Hollis Street Rehabilitation of 619 linear feet of 8-inch diameter sewer between the City Limits on 54th Street and 53rd Street east of Spur Alley Rehabilitation of 1,110 linear feet of 6-inch diameter pipe in Subbasin 21-100 between the public restrooms at the end of the Powell Street by the Emeryville Marina and the Powell Street Pump Station Rehabilitation of 615 linear feet of 10-inch diameter pipe on Horton Street north of Powell Street Repairs of defects identified by CCTV inspection² 	2,000
YEAR 5⁴ (FY2016/2017)	<ul style="list-style-type: none"> Repair budget for pipes listed in Table 6 that have not been included in YEAR 1 and YEAR 3 	200
YEAR 6 (FY2017/2018)	<ul style="list-style-type: none"> Annual repair budget for any significant defects identified in the YEAR 5 CCTV inspection 	250
YEAR 7 (FY2018/2019)	<ul style="list-style-type: none"> Annual repair budget 	100
YEAR 8 (FY2019/2020)	<ul style="list-style-type: none"> Annual repair budget 	100
YEAR 9 (FY2020/2021)	<ul style="list-style-type: none"> Annual repair budget 	100
YEAR 10 (FY2021/2022)	<ul style="list-style-type: none"> Annual repair budget 	100
TOTAL 10-YEAR BUDGET		4,450

¹ Manholes within the main replacement project boundaries will be rehabilitated as needed.

² The scheduling of repairs identified through CCTV inspection will be at the discretion of the City Engineer

³ Previously identified YEAR 2 and YEAR 3 projects have been consolidated to reduce engineering and administration costs and are scheduled to be completed by June 30, 2015

⁴ Previously identified YEAR 4 and YEAR 5 projects have been consolidated to reduce engineering and administration costs and are scheduled to be completed by June 30, 2017

The proposed 10-year Capital Improvement Plan includes approximately \$4,500,000 in projects. In the first three years of the program, there are several major Capital Improvement Projects with an estimated cost of \$3,600,000. When these projects are completed, it is estimated that there will be a fund balance in the order of \$400,000, plus the additional revenue not expended from the Sewer User Fees and the Sewer Connection Fees collected during those three years.

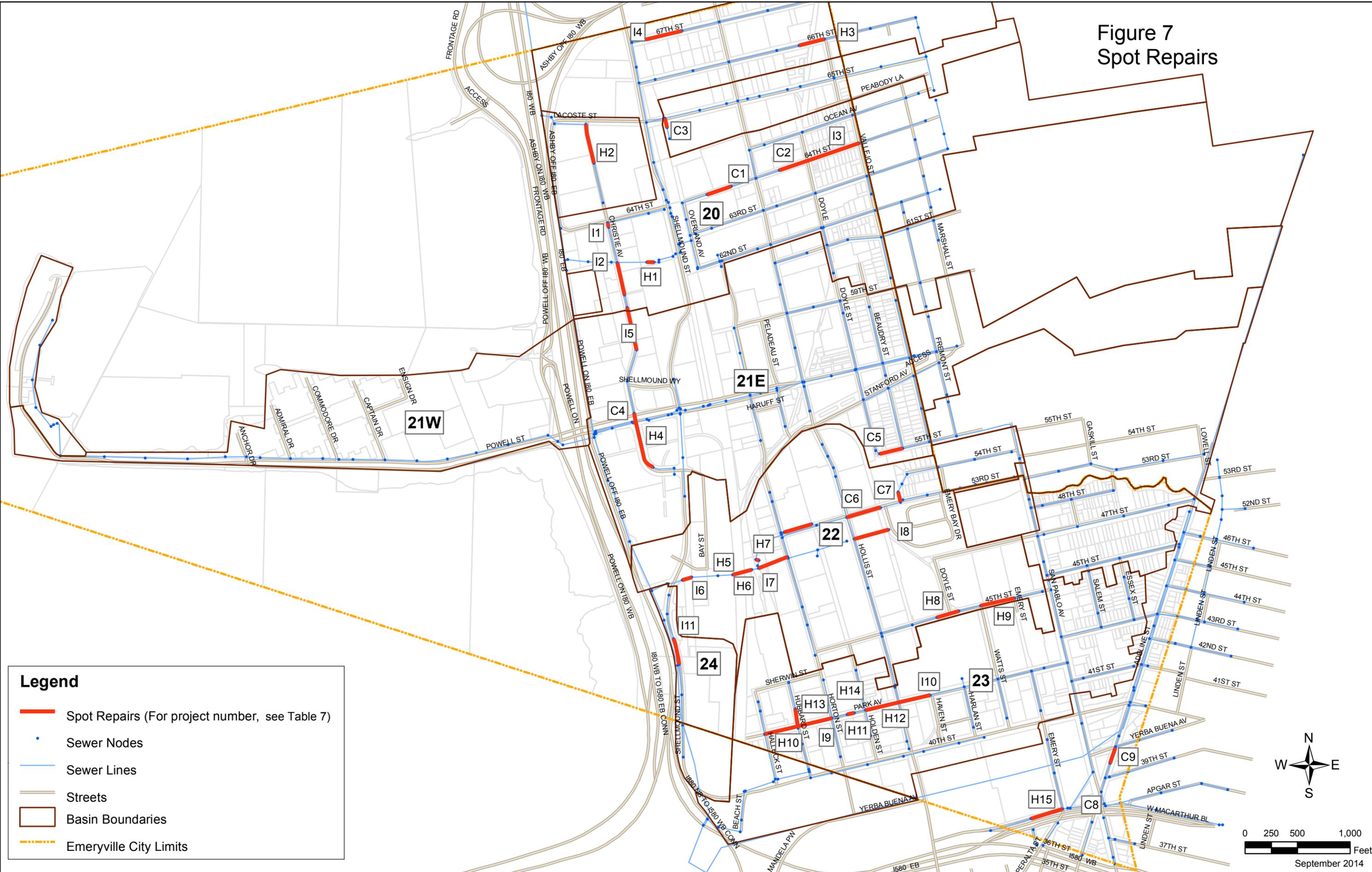
The Public Works operating budget for FY2012/2013 and FY2013/2014 included transfers of \$145,000 and \$95,000, respectively, from the Sewer User Charges into the Capital Fund. The anticipated revenue to be generated from the Sewer Connection Fees during the first three years of the Capital Improvement Program is dependent on the type of building permits that are approved. As previous years have shown, the annual amounts have varied from as little as \$23,000 to over \$400,000 over the past six years.

It is important for Emeryville to maintain a healthy reserve in its Sewer Fund in order to cover the cost of unanticipated construction. The last seven years of the 10-year CIP include a budget for \$850,000 for necessary repairs to the system. It is most likely that revenue collected from the current Sewer User Charges and Sewer Connection Fees would cover this amount. However, it is highly possible that additional repair work could be revealed while performing these repairs. In addition, Emeryville needs to start saving for a major rehabilitation of the sanitary sewer main on Powell Street west of I-80 adjacent to Watergate. This sewer main is in the landfill and is identified as a 3,098-linear foot “hot spot” that requires much more frequent cleaning than other sewer mains in the system due to sags in the pipe caused by settlement of the landfill. At some point in the future, (possibly within the next 10 years) it may be necessary to perform rehabilitation work on this pipe. NOTE: this pipe is not in the current program because it does not contribute I/I to the EBMUD regional interceptor.

Lastly, the City has 15.3 miles of sanitary sewer main in its collection system with a replacement value of approximately \$30,000,000. In the event of a major earthquake that causes severe damage to multiple sewer mains, it is wise to maintain a healthy reserve in the sewer fund to perform emergency repairs. The Sewer User Charges and Sewer Connection Fees were last increased in 1994. Emeryville’s Sewer User Charge is the lowest in the East Bay region at \$8 per month per single family service or \$1.25 per month for each 100 cubic feet of water use for multiple family connections. An increase in the Sewer User Fee is subject to the requirements of California’s Proposition 218.

In order to be proactive with maintaining a healthy reserve in the Sewer Fund, in 2012, the City Council voted to raise the Sewer Connection Fee, which is not subject to the requirements of Proposition 218. The Sewer Connection Fee was raised from \$746 to \$1,185 per single family dwelling equivalent. This fee was raised again in 2014 to \$1,245 per single family dwelling equivalent.

Figure 7
Spot Repairs



Legend

- Spot Repairs (For project number, see Table 7)
- Sewer Nodes
- Sewer Lines
- Streets
- Basin Boundaries
- Emeryville City Limits



September 2014

4-2. List of Projects for 3 Years

The specific sewer main rehabilitation projects are listed by reach in Table 5 and Table 6 and are shown on Figure 6.

The YEAR 1 (FY 2012/2013) project, which has been completed, included rehabilitating an existing 24-inch diameter, 307-foot long corrugated metal pipe (CMP) and associated manholes on Powell Street between Shellmound Street and Christie Avenue, rehabilitating the 8-inch diameter pipe and associated manholes on Shellmound Street south of Powell Street, and rehabilitating the 8-inch diameter pipe and associated manholes on Shellmound Street north of Powell Street. It also includes rehabilitating an existing 8-inch diameter, 316-foot long pipe and associated manholes on Halleck Street north of Park Avenue. A third project was to add two manholes and replace a portion of the Emeryville Industrial Sewer in the vicinity of a future pedestrian/bicycle bridge project west of Horton Street at 53rd Street and to rehabilitate the remaining sections of pipe and associated manholes between MH 22.001.04 and MH 22.000.11. NOTE: this project was extended to include pipe 22.000.11-22.000.09 (49 feet).

**TABLE 5
YEAR 1 (FY2012/2013) REHABILITATION PROJECT
(COMPLETED)**

Line Segment	Diameter, in.¹	Length, ft²
Powell Street between Shellmound Street and Christie Avenue		
21.000.09-21.000.07	24	203
21.000.07-21.000.06	24	104
21.001.21-21.001.20	8	370
21.001.20-21.001.20A ³	8	419
21.001.20A-21.001.19	8	4 ⁴
21.001.28-21.000.12 ⁵	14	295
Halleck Street		
23.001.02A-23.001.02	8	95
23.001.02-23.000.11 ⁶	8	221
Emeryville Industrial Sewer		
22.001.04-22.001.03 ⁷	12	365
22.001.03-22.001.02	12	37
22.001.02-22.001.01	12	62
22.001.01-22.000.11	15	25
22.000.11-22.000.09 ⁸	21	49
Total Length, ft		2,249
Repairs of defects H5 and I7 listed in Table 7		

¹ Actual diameter

² Actual length

³ New manhole installed between MH21.001.20 and MH21.001.20A

⁴ This is not actually a pipe but a manhole structure with two lids

⁵ MH 21.000.12 relocated; two pipes and MH 21.000.11 abandoned

⁶ New manhole installed between MH23.000.11 and MH23.000.12 at Emeryville/Oakland City limits

⁷ New manhole installed between MH22.001.04 and MH24.001.03

⁸ Pipe added to rehabilitation project

**TABLE 6
YEAR 3 (FY2014/2015) REHABILITATION PROJECT**

Line Segment	Diameter, in.¹	Length, ft²
Powell Street between Vallejo Street and Hollis Street		
21.002.09-21.002.06	16	259
21.002.06-21.000.23	16	271
21.000.23-21.000.22	22	200
21.000.22-21.000.22B	22	240
21.000.22B-21.000.22A	22	26
21.000.22A-21.000.21	22	48
21.000.21-21.000.20	22	255
20.000.20-21.001.14A	22	30
20.001.14A-21.001.12	22	128
21.002.02-21.002.04³	10	543
21.002.04-21.000.23³	10	42
Easement between 54th Street and 53rd Street east of Spur Alley		
22.002.22-22.002.21 ⁴	8	283
22.002.21-22.002.21A	8	146
22.001.21A-22.002.20	8	43
22.002.20-22.002.06	8	146
Powell Street from Emeryville Marina to the Powell Street Pump Station		
21.100.47-21.100.45	6	258
21.100.45-21.100.43	6	320
21.100.43-21.100.41	6	229
21.100.41-21.100.39	6	293
21.100.39-21.100.37	6	10
21.100.37-21.100.36 ⁵	6	n/a
Horton Street north of Powell Street		
21.001.31-21.001.30	12	300
21.001.30-21.000.19	12	315
Total Length, ft		3,800
Repairs of defects listed in Table 7 at the discretion of the City Engineer		

¹ Design diameter

² Surveyed length from bid documents

³ Pipes are no longer receiving flow and will be abandoned

⁴ Pipe added to AMIP

⁵ This is not actually a pipe but the inlet to the pump station

The YEAR 3 (FY 2014/2015) project listed in Table 6 will be completed by June 30, 2015. This project is to rehabilitate (by replacement) 1,457 linear feet of trunk sewer and associated manholes on Powell Street between Vallejo Street and Hollis Street. This pipe was identified in the *Sewer System Capacity Analysis and Master Plan* as having insufficient capacity to carry the wet weather design flows, including a sizable contribution of flow from the City of Oakland. There is a parallel pipe on Powell Street between Vallejo Street and Doyle Street that is in poor condition, but is no longer receiving flow from Oakland. Therefore, it will be abandoned. Also included in YEAR 3 is the rehabilitation of four reaches of pipe in an easement between 54th Street and 53rd Street. These pipes run between residential properties on 54th Street and through a parking lot to the sewer on 53rd Street. The rehabilitation of the 6-inch diameter, 1,110-foot long PVC gravity pipe and associated manholes serving the Emeryville Marina. It was not possible to

complete the CCTV inspection of this pipe because it is out-of-round. While the capacity of this pipe is not an issue at this time, if the deflection were allowed to continue, the pipe might become unserviceable or rupture. Also included in YEAR 3 are the rehabilitation of 615 linear feet of 10-inch diameter pipe and associated manholes on Horton Street north of Powell Street and 619 linear feet of 8-inch diameter pipe on 54th Street and Spur Alley

The completion of repairs listed in Table 7 and shown on Figure 7 will be scheduled to be completed by June 30, 2017. These projects include pipes with a variety of problems that do not typically require immediate or manhole-to-manhole rehabilitation. These projects will be scheduled at the discretion of the City Engineer based on the severity of the problem, other underground work undertaken in vicinity of a particular project, and the pavement management program. It should be noted that Emeryville does not have any pipes in its wastewater collection system that meet the CD definition of “Acute Defect”; i.e. *“Acute Defect” shall mean a failing in a sewer pipe in need of an urgent response to address an imminent risk of an SSO.*”

4-3. Measures to Control I/I

Emeryville completed smoke testing of its wastewater collection system in the summer of 2012. The smoke testing identified about 100 smoke returns. These included a variety of inflow and infiltration problems in both the public and private portions of the wastewater collection system. These defects are being addressed as appropriate. In the future, Emeryville will participate in the Regional Technical Support Program (RSTP) sponsored by EBMUD at part of the CD.

Emeryville also has some information about infiltration from the CCTV inspection of the mains. As indicated in Table 7, several of the repairs will address infiltration sources. There are limitations using CCTV inspections to identify infiltration if the groundwater table is below the pipe while the CCTV inspections are conducted. In order to maximize the capture of mainline infiltration, future CCTV inspection will be conducted in the wet weather season if possible. In addition, Emeryville has an ordinance to address I/I in PSLs and participates in EBMUD’s Regional PSL program.

Under the CD, the laterals serving Emeryville city-owned properties are required to pass verification tests within the first 10 years of the CD. Table 8 lists these properties along with the number laterals serving them.

**TABLE 7
PIPES WITH DEFECTS REQUIRING SPOT REPAIRS¹**

Project No.²	PIPE REACH	DISTANCE FROM UPSTREAM MANHOLE, ft	DEFECT
Defect Type: Hole			
H1	20.000.09-20.000.08	7	Hole in pipe with infiltration
H2	20.001.07-20.001.06	372	Hole on both sides of pipe immediately upstream of MH 20.001.06
H3	20.102.06-20.102.80	212	Hole at lateral tap with soil visible
H4	21.001.23-21.000.06	427	Hole impacted with grease
H5	22.000.09-22.000.07 ³	51	Hole in pipe with infiltration
H6	22.000.15-22.000.11	17, 205	Separated joint at alignment left with soil visible and broken pipe with soil visible
H7	22.001.07-22.001.05⁴	49,77	Cracked and quartered; soil visible
H8	22.001.28-22.001.27	31	Possible hole in invert at grade break
H9	22.001.30-22.001.29	320	Separated off-set joint with soil visible
H10	23.000.13-23.000.11	156	Hole at lateral tap; protruding lateral
H11	23.000.19A-23.000.17	29	Hole at lateral tap
H12	23.000.21-23.000.19	85	Hole at lateral tap
H13	23.001.03-23.001.03A	91	Seal or replace PVC patch in crown with infiltration
H14	23.001.06-23.000.15	348	Cracks at joint with infiltration spouts in crown of pipe
H15	50.001.52-50.001.57	5	Cracks and hole with soil visible
Defect Type: Open Crack			
C1	20.101.02-20.101.01	81	Crack and quartered pipe with infiltration
C2	20.101.05-20.101.04	79	Cracked and quartered
C3	20.102.11A-20.102.11	19	Chip at joint with soil visible
C4	21.000.06-21.001.03	12	Crack and quartered; piece missing
C5	21.000.29-21.000.27	79	Cracked and quartered
C6	22.002.16-22.000.21	11,255	Crack at separated joint with roots; tap defect with infiltration
C7	22.002.20-22.002.06 ⁵	10, 52	Cracks radiating from hammer tap at two locations
C8	50.001.72-50.001.70	5, 15	Large off-set joint with soil visible; cracked and quartered
C9	50.001.83A-50.001.83B	130	Cracked and quartered
Defect Type: Infiltration			
I1	20.001.10-20.000.07A	2	Circumferential crack with infiltration
I2	20.001.20-20.000.07	375	Infiltration through joint
I3	20.101.06-20.101.05	124, 197, 303	Lateral tap with infiltration; two joints with infiltration
I4	20.102.21-20.102.16	73	Infiltration gushing at lateral connection
I5	21.001.26-21.001.11	234	Infiltration gusher at joint
I6	22.000.05-22.000.03	25	Infiltration gusher at joint
I7	22.000.11-22.000.09 ³	1, 25	Infiltration dripper at joint; infiltration weeper at crack
I8	22.001.15-22.001.13	298	Infiltration from lateral cap
I9	23.000.15-23.000.13	143, 275	Broken lateral tap with infiltration
I10	23.000.23-23.000.21	213, 226	Protruding lateral tap; infiltration gusher at lateral tap
I11	24.000.02-24.000.01	3	Crack with infiltration

¹ Spot repairs typically involve one or two pipe segments about 10 to 15 feet in total length

² Sequential project ID for reference on Figure 7; not a rehabilitation priority

³ Fixed YEAR 1 FY2012/2013

⁴ Pipe is owned by Novartis and will be included in their PSL program

⁵ Will be fixed YEAR 3 FY2014/2015

Figure 6
Rehabilitation/
Replacement Projects



Legend

- Year1
- Year 3
- Emeryville City Limits
- Sewer Nodes
- Sewer Lines
- Streets
- Basin Boundary

N
W —+— E
S

0 500 1,000
Feet

**TABLE 8
LATERALS SERVING CITY-OWNED BUILDINGS**

BUILDING	ADDRESS	# OF LATERALS
Amtrak Overcrossing	5885 Horton Street	0
Child Development Center	1220 53rd Street	1
Hong Kong East Ocean	3199 Powell Street	1
City Hall	1333 Park Avenue	4
Community Swimming Pool	1100 47th Street	1
Corporation Yard	Horton Street & Stanford Avenue	2
Doyle-Hollis Park Restroom	62nd & Doyle Street	4
Fire Station #34	2333 Powell Street	1
Fire Station #35	6303 Hollis Street	1
Marina Offices	3310 Powell Street	1
Marina Restroom	Marina Park	1
Police Station	2449 Powell Street	2
Recreation Center	4300 San Pablo Avenue	2
Senior Center	4321 Salem Street	1

¹ Located on Emery High School campus

² Lateral shared with Fire Station #34

4-4. Budget for Emergency Repairs

Given the fact that Emeryville has replaced a large part of its wastewater collection system in the past 25 years and has cleaned and inspected the vast majority of its mains, it is unlikely that emergency repairs to the system will be required in the foreseeable future. The few remaining pipes with documented structural issues will be addressed in by the end of FY2014/2015. Emeryville's pro-active approach to maintaining the integrity of the sewer mains has eliminated the need for any emergency repairs in recent years. Emeryville budgets \$25,000 each fiscal year for emergency repairs and can always increase this amount as needed given the existing sewer fund balance reserve.

APPENDIX A
Inflow Identification and Elimination Plan
(Revised January 26, 2011)

Inflow Identification and Elimination Plan

(Revised January 26, 2011)

With respect to item IV.A. Submit Inflow Identification and Elimination Plan, of the AO due on July 15, 2010, the City hereby submits the following:

1. *Description of the methods to be used for identifying cross connections...*

The City of Emeryville plans to contract with a consulting firm to perform smoke testing of all the Sanitary Sewer Basins within the City. The work will involve smoke testing and visual inspections of the limits of the basin.

2. *Description of method to identify areas for routine testing.*

Routine smoke testing will be conducted on a 10-to 15-year cycle.

3. *Schedule for routine testing*

The schedule for smoke testing will be as follows:

Basin 20	Fiscal Year 2010/2011 (completed)
Basin 21E	Fiscal Year 2011/2012
Basin 23	Fiscal Year 2011/2012
Basins 22, 24 and remainder of the City	Fiscal Year 2012/2013

4. *List of manhole locations in areas of the collection system prone to wet weather flooding.*

The two areas in the City of Emeryville that are prone to flooding during extreme wet weather are as follows:

Overland Avenue from 62nd Street to 64th Street.
Christie Avenue from Shellmound Way to Christie Avenue Park.

5. *Description of the system used to track locations tested, results of testing, and follow up actions.*

The City plans to use a GIS based Maintenance Management System to keep track of the locations that are smoke tested, results of the testing, and any follow up actions.

6. *Copy of ordinance prohibiting illicit connections and legal authority to require and enforce disconnecting illicit connections.*

Please see attached copy of Chapter 8 of Title 7 Emeryville Municipal Code, "Sanitary Sewer Use". In particular, see Section 7-8.305 "Prohibited Infiltration/Inflow Discharges", as well as Article 5 "Enforcement".

7. *Description of enforcement mechanisms including coordination with the applicable permitting entities within the City.*

Please refer to Article 5 of Chapter 8 of Title 7 of the Emeryville Municipal Code regarding “Enforcement” of the “Sanitary Sewer Use” provisions of the Code.

APPENDIX B
Work Plan for Periodic Inspection and Assessment of Condition of Gravity Sewers and
Maintenance Holes
April 15, 2010

April 15, 2010

City of Emeryville
Department of Public Works

Work Plan for Periodic Inspection and Assessment of Condition of Gravity Sewers and
Maintenance Holes

In April 2010, provide training for City Staff to implement use of ICOMMM GIS Software for Sanitary Sewer Infrastructure Asset Management.

Beginning in Fiscal Year 2010/11, issue a Request for Proposals and award a contract to a private company to perform annual sewer main cleaning in conjunction with CCTV inspection of the City's sanitary sewer collection system.

A minimum of 10% of the collection system will be cleaned and inspected each fiscal year such that the entire system is inspected within 10 years. In Fiscal Year 2010/11 and in 2011/12 a minimum of 1.56 miles of sewer main and corresponding manhole will be inspected each year.

The CCTV inspection will be performed using the following requirements:

- Collected by NASSCO PACP certified technician
- Defects captured/identified using NASSCO PACP 4.2/4.4 standard codeset and rules
- Inspection header information captured to NASSCO PACP 4.2/4.4 standard
- Inspection project delivered in a consolidated PACP 4.2/4.4 standard Access database
- Video of inspection run captured in MPEG-4 format
- A single video file per pipe segment inspection capturing the entire inspection footage
- Digital still image captured in JPEG format at each defect location
- All inspections reference upstream and downstream manhole identifiers for inspected pipe segment based on City GIS.
- Consolidated digital inspection files (Access database, video, still images, reports, etc.) will be delivered on a USB hard drive.

Upon receipt of the CCTV inspection files, the information will be loaded into the ICOMMM GIS system for reviewing. Reports will be run to determine the need for any emergency repairs to the system.

Following any blockage related overflow, the CCTV inspection firm will be directed to perform an inspection of the impacted sewer main to determine the condition of the pipe.

Repeat inspections would be performed at an interval of once every 10 years or immediately after a sewer rehabilitation project on the main is completed.

APPENDIX B
City of Emeryville Municipal Code Pertaining to Wastewater Collection

CHAPTER 8. WASTEWATER COLLECTION SYSTEM

Sections:

Article 1. Title and Definitions

- [7-8.101](#) Title
- [7-8.102](#) Definitions

Article 2. Building Sewer Lateral

- [7-8.201](#) Building Sewer Lateral Required
- [7-8.202](#) Building Sewer Lateral Permit
- [7-8.203](#) Building Sewer Lateral Standards, Design, and Materials for Construction
- [7-8.204](#) Building Sewer Lateral Standards for Measurements, Tests, and Analyses
- [7-8.205](#) Abandonment of Existing Building Sewers
- [7-8.206](#) Building Sewer Lateral Maintenance and Required Inspection
- [7-8.207](#) Building Sewer Lateral Inspections, Replacement and Compliance Certificates
- [7-8.208](#) Emergency Work by City
- [7-8.209](#) Order to Abate
- [7-8.210](#) Time Requirement for Emergency Building Sewer Lateral Repair
- [7-8.211](#) Adoption of the EBMUD Regional PSL Ordinance by Reference

Article 3. Sewer Connections

- [7-8.301](#) Sewer Connection Fee Fund
- [7-8.302](#) Sewer Connection Requirement
- [7-8.303](#) Connection Applications
- [7-8.304](#) Cost of Sewer Connection
- [7-8.305](#) Sewer Connection Fees
- [7-8.306](#) Amount of Charge
- [7-8.307](#) Construction of Trunk Sewer in Lieu of Payment of Sewer Construction Fees

Article 4. Sewer Use Regulations

- [7-8.401](#) Use of Public Sewers Required
- [7-8.402](#) Prohibited Uses
- [7-8.403](#) Requirements for Food Service Establishments
- [7-8.404](#) Authority to Require Special Treatment Facilities or Measures
- [7-8.405](#) Discharge into Storm Drain Prohibited
- [7-8.406](#) Prohibited Infiltration/Inflow Discharges
- [7-8.407](#) Prohibition on Use of Diluting Waters

- [7-8.408](#) Prohibition on Unpolluted Water
- [7-8.409](#) Prohibitions on Radioactive Wastes
- [7-8.410](#) Limitations on the Use of Garbage Grinders
- [7-8.411](#) Limitations on Point of Discharge
- [7-8.412](#) Prohibitions on Stored Liquid Wastes
- [7-8.413](#) Wastewater Volume Determination: Metered Water Supply
- [7-8.414](#) Metered Wastewater Volume and Metered Diversions
- [7-8.415](#) Discharge Reports
- [7-8.416](#) Mandatory Wastewater Discharge Permits
- [7-8.417](#) Monitoring Facilities
- [7-8.418](#) Inspection and Sampling
- [7-8.419](#) Pretreatment
- [7-8.420](#) Protection from Accidental Discharge
- [7-8.421](#) Confidential Information
- [7-8.422](#) Special Agreements
- [7-8.423](#) Septic Tanks and Cesspools Prohibited

Article 5. Charges and Fees

- [7-8.500](#) General
- [7-8.501.](#) Sewer Funds Are Established
- [7-8.502](#) User Classifications Established
- [7-8.503](#) User Rates Established
- [7-8.504](#) Collection of User Charges
- [7-8.505](#) Appeal Procedures
- [7-8.506](#) Special Charges
- [7-8.507](#) City User Charges Are in Addition to User Charges Levied by Others

Article 6. Enforcement

- [7-8.601](#) Responsibility
- [7-8.602](#) Accidental Discharges: Notification of Discharge
- [7-8.603](#) Accidental Discharges: Notices to Employees
- [7-8.604](#) Issuance of Cease and Desist Orders
- [7-8.605](#) Submission of Time Schedule
- [7-8.606](#) Emergency Corrections
- [7-8.607](#) Damage to Facilities: Additional Remedy
- [7-8.608](#) Right of Entry
- [7-8.609](#) Termination of Service
- [7-8.610](#) Appeals
- [7-8.611](#) Falsification of Information
- [7-8.612](#) Public Nuisance

- [7-8.613](#) Damage to Sewerage System
- [7-8.614](#) Cost Recovery – Building Sewer Lateral Overflows
- [7-8.615](#) Administrative Penalties – Noncompliance
- [7-8.616](#) Civil Penalties
- [7-8.617](#) Misdemeanor
- [7-8.618](#) Remedies Cumulative; Attorneys’ Fees
- [7-8.619](#) Validity

Article 1. Title and Definitions

7-8.101 Title.

This chapter shall be known as the “wastewater collection system ordinance of the City of Emeryville.”

(Sec. 1, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

7-8.102 Definitions.

Except as otherwise defined in the latest editions of the 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, the terms in this chapter shall be defined as follows:

- (a) “APWA” shall mean the American Public Works Association;
- (b) “ASTM” shall mean the American Society for Testing and Materials;
- (c) “Building sewer lateral” shall mean 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 mean a closed-circuit television method of inspecting any underground sewer piping system;
- (e) “City” shall mean the City of Emeryville;
- (f) “Cleanout” shall mean 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) “Compliance certificate” shall mean 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 and this chapter;

(h) "Director" shall mean the Director of Public Works for the City of Emeryville and his or her authorized representative;

(i) "EBMUD" shall mean the East Bay Municipal Utility District, Special District No. 1;

(j) "EBMUD Regional PSL Ordinance" shall mean the East Bay Municipal Utility District Ordinance 311, Title VIII, Regulation of Private Sewer Laterals, its implementation and any future amendments or modifications thereto;

(k) "Food service establishment" shall mean an operation that prepares, packages, serves, vends, or otherwise provides food for human consumption, including, but not limited to, the following:

(1) An operation where food is prepared on the premises, regardless of whether there is a charge for the food.

(2) Permanent and nonpermanent facilities, including, but not limited to, the following:

(i) Public and private school cafeterias.

(ii) Restricted food service facilities.

(iii) Licensed health care facilities.

(iv) Commissaries.

(v) Temporary food facilities;

(l) "FOG" shall mean fats, oils and grease in the sanitary sewer system;

(m) "Infiltration and inflow (I/I)" shall mean stormwater that enters a sanitary sewer system intended only for wastewater flows;

(n) "Lower sewer lateral" shall mean that part of the building sewer lateral extending from the property line and/or two (2) way cleanout to the publicly owned sewer main;

(o) "Notice to proceed" shall mean a written notice from the City specifying that the temporary City action preventing the repair or replacement of any part of the building sewer lateral is lifted and, further, that the property owner shall proceed with the repair or replacement of that part of the building sewer lateral such that it is completed and the appropriate compliance certificate be obtained within the specified time limit set by the Director;

(p) "Notice of violation" shall mean a written notice from the City specifying that a building sewer lateral is not in compliance with this chapter;

- (q) "Person" shall mean and include any person, firm, association, organization, partnership, corporation, public corporation, political subdivision, county, district, or the State of California or the United States of America or any department or agency thereof;
- (r) "Plumbing Code" shall mean the latest adopted edition of the California Plumbing Code;
- (s) "Public sewer" shall mean the publicly owned collection system that carries sewage and liquid waste from building sewer laterals to the wastewater treatment facilities;
- (t) "Repair" shall mean a spot mending of an existing building sewer lateral to address a specific section of pipe that is not in compliance with this chapter;
- (u) "Replacement" shall mean 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 chapter. Complete lining of an existing building sewer lateral in conformance with this chapter shall also be considered a replacement;
- (v) "Sanitary sewer system" shall mean the entire wastewater collection system including public sewers and all building sewer laterals;
- (w) "Sewer main" shall mean the publicly owned sanitary sewer piping system;
- (x) "Stormwater" shall mean naturally occurring water created by the weather, underground springs, and surface or subsurface drainage of said water;
- (y) "Upper sewer lateral" shall mean 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;
- (z) "Verification test" shall mean a specific on-site testing of the building sewer lateral consisting of a low pressure air or water exfiltration test to ensure the lateral is free of leaks in compliance with the EBMUD Regional PSL Ordinance and this chapter;
- (aa) "Wastewater" shall mean all sewage, industrial and other waste and waters, whether treated or untreated, discharged into or permitted to enter a sanitary sewer system;
- (bb) "Wastewater treatment facilities" shall mean the wastewater treatment plant operated and maintained by EBMUD near the eastern anchorage of the Bay Bridge as well as the interceptor system that transports wastewater originating from the public sewer.

(Sec. 1, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

Article 2. Building Sewer Lateral

7-8.201 Building Sewer Lateral Required.

- (a) Building Sewer Lateral Required. Every building in which plumbing fixtures are installed and every premises having waste drainage piping shall install, operate and maintain a building sewer lateral connected to the public sewer in conformance with this chapter.
- (b) No Direct Discharges to Public Sewers. No person shall discharge any substance directly to a manhole or other opening in a public sewer other than through an approved building sewer lateral except with the written approval of the Director.
- (c) Cleanout Required. In addition to the required building sewer lateral as defined in subsection (a) of this section, 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 Emeryville Standard Details.

(Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

7-8.202 Building Sewer Lateral Permit.

- (a) Sewer Lateral Permit Required. A sewer lateral permit shall be obtained from the Building Official before construction of a new building sewer lateral, or the repair, replacement or abandonment of an existing building sewer lateral. However, no sewer lateral permit shall be required for the clearance of sewer stoppages in a building sewer lateral. The issuance of a sewer lateral permit in accordance with the provisions of this chapter shall satisfy the requirements of Chapter 2 of Title 7 regarding excavations and encroachments in the public right-of-way.
- (b) Permit Application. The applicant or applicant's representative shall apply in person for the permit. No permit shall be issued until the following has been submitted by the applicant and approved by the Building Official and Director.
 - (1) The name, address, telephone number and e-mail address of the owner, applicant and contractor. A telephone number shall be provided for a twenty-four (24) hour contact.
 - (2) A site plan showing the proposed location of any new building sewer lateral including the location of the connection to the public sewer, all cleanouts on the building sewer lateral, and all areas of excavation within the public right-of-way (sidewalk and street).
 - (3) The name and address of the entity responsible for hauling, transporting and disposing of any excess soils and the name and address of the disposal facility. Prior to receiving a final inspection, the applicant shall provide the City a copy of the manifest or receipt for all soils disposed of as a result of the work undertaken pursuant to the sewer lateral permit.
 - (4) List of materials that shall be used to construct the building sewer lateral and written verification that all material to be used in the work, including materials for restoration of the public right-of-way, will be on hand and ready to use prior to any portion of the work beginning.

(5) Payment of sewer lateral permit fees as follows:

(i) For a new sewer connection and inspection thereof, the applicant shall pay the current sewer connection fee as set from time to time by resolution of the City.

(ii) For a new building sewer lateral or a repair, replacement, or abandonment of a building sewer lateral and inspection thereof, the sewer lateral permit fee shall be as set forth in the master fee schedule approved annually by resolution of the City.

(6) Performance Security. In order to ensure the completion of the work authorized by the sewer lateral permit is completed in accordance with this chapter, as determined by the Director, the applicant shall either (i) deposit one thousand dollars (\$1,000.00) with the City, (ii) require their contractor to provide the City of Emeryville a performance bond in the amount of ten thousand dollars (\$10,000.00), issued by an admitted surety insurer in the State of California on a form provided by the City, or (iii) provide security in the form of cash or bond or both in such amount as deemed acceptable to the Director.

(7) Evidence of workers' compensation insurance and general liability insurance for the contractor in such amounts and type as specified by the City on the sewer lateral permit. The general liability insurance shall name the City as an additional insured.

(c) Business License. The contractor applying for the sewer lateral permit shall possess an active City of Emeryville business license and any and all fees shall be paid and current.

(d) Form and Conditions of the Permit. The sewer lateral permit, when signed by the Director and Building Official, 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) Work on Building Sewer Lateral by Appropriately Licensed Contractor Only. Any and all work authorized by issuance of a sewer lateral permit shall only be undertaken by an appropriately licensed contractor with a current State of California contractor's license. No work authorized by the sewer lateral permit may be undertaken by an owner-builder unless such owner-builder has an appropriate contractor's license issued by the State of California.

(f) Notice of Commencement of Work. The applicant 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.

(g) Revocation of Permit. The Director or Building Official may revoke a building sewer lateral permit for noncompliance with any applicable laws, regulations or field directives of the Director, Building Official or their authorized representatives.

(h) Final Inspection. Unless otherwise deemed an exception by this Code, any sewer lateral 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.

(Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

7-8.203 Building Sewer Lateral Standards, Design, and Materials for Construction.

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

(b) Design.

(1) All aspects of the building sewer lateral design, including but not limited to the size, slope, and alignment, the method of excavation, placing of the pipe, testing of the building sewer lateral and backfilling the trench, shall be in conformance with this chapter, 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 D3212. 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 chapter. Unauthorized and nonconforming connections to the sewer main can only be repaired by the City. The cost of repairing any unauthorized or nonconforming 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 chapter cannot be achieved, the 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 chapter and other applicable regulations, and receive the approval of the Building Official and Director during the building permit plan check process.

(4) The building sewer lateral shall have a two (2) way cleanout located approximately at the property line or, in the case where the building sewer lateral is all within private property, in a location approved by the Director.

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

(Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

7-8.204 Building Sewer Lateral Standards for Measurements, Tests, and Analyses.

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.

(Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

7-8.205 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 sewer main in a manner satisfactory to the Director. All other openings of the abandoned building sewer lateral including plumbing connections, cleanouts, rat holes, etc., shall also be similarly sealed.

(Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

7-8.206 Building Sewer Lateral Maintenance and Required Inspection.

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

(b) Required Maintenance.

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

(i) 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.

(ii) All joints shall be tight and all pipes shall be sound to prevent exfiltration by waste or infiltration by groundwater or stormwater.

(iii) 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.

(iv) 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.

(v) All cleanouts shall be securely capped with an approved cap at all times, except during maintenance activities.

(vi) The building sewer lateral shall be free from breaks, openings, and rat holes.

(vii) 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 public sewer.

(viii) 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 overflows, blockages, or increased maintenance in the sanitary sewer system or wastewater treatment facilities 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.

(Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

7-8.207 Building Sewer Lateral Inspections, Replacement and Compliance Certificates.

(a) Owner Responsibilities. It shall be the responsibility of the property owner to perform all required inspections of their building sewer lateral, obtain all required building sewer lateral permits, perform all required construction, schedule inspections with the City and EBMUD, pass a verification test witnessed by the City and EBMUD, obtain and file with the City a compliance certificate from EBMUD as specified in the EBMUD Regional PSL Ordinance, and obtain a final inspection from the City for their building sewer lateral when one or more of the following triggering events occurs:

(1) Title Transfer. Prior to the sale or transfer of an entire real property estate or the fee interest in that real property estate. The following shall not be considered a title transfer for purposes of this chapter:

(i) The sale or transfer of a partial interest, including a leasehold.

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

(iii) 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.

(iv) Transfer made by a trustor to fund a living trust.

(v) Transfer made to a spouse, to a registered domestic partner as defined in Section 297 of the California Family Code, or to a person or persons in the lineal line of consanguinity of one or more of the transferors.

(vi) 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.

(2) Construction and Remodeling. Whenever a property owner or authorized agent applies for a building permit for any type of construction on the subject property that exceeds one hundred thousand dollars (\$100,000.00) in construction valuation or exceeds one hundred thousand dollars (\$100,000.00) in cumulative construction valuation for all building permits issued for any type of construction on the subject property over a three (3) year period.

(3) 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.

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

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

(b) Notwithstanding the provisions of subsection (a) of this section, the Director may waive the requirement for the verification test if the property owner or its duly authorized agent agrees in writing to replace the building sewer lateral serving said property.

(c) A compliance certificate issued by EBMUD to a property owner pursuant to subsection (a) of this section shall be valid for seven (7) years if the building sewer lateral is repaired, or twenty (20) years if the building sewer lateral is replaced.

(d) Individually Owned Units in a Multi-Unit Structure. For all individually owned units within a multi-unit structure, such as a condominium or other common interest development, 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 structure shall be responsible for compliance with all of the following requirements within ten (10) years of the adoption of the ordinance codified in this chapter.

(1) Within three (3) years of the adoption of the ordinance codified in this chapter, authorize the required verification test witnessed by the City and EBMUD to determine if the building sewer lateral(s) serving said property are, as determined by the Director, in compliance with this chapter and the EBMUD Regional PSL Ordinance. The Director may waive the requirement for the verification test if the homeowners' association or its duly authorized agent agrees in writing to replace all of the building sewer laterals serving said property.

(2) If repair or replacement is required by the Director, or otherwise agreed to by the homeowners' association or its duly authorized agent, obtain the required building sewer lateral permit, perform such work, and obtain the required inspections as specified by this chapter.

(3) 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 chapter. If building sewer laterals are repaired, a compliance certificate issued by EBMUD shall be valid for seven (7) years. If building sewer laterals are replaced a compliance certificate issued by EBMUD shall be valid for twenty (20) years.

(e) Property Developments Other Than Those Specified in Subsection (d) of This Section with Sewer Laterals Totalling Greater Than One Thousand Feet (1,000') in Length. Within five (5) years of adoption of the ordinance codified in this article, upon the sale of the property, or upon the performance of building remodeling in excess of one hundred thousand dollars (\$100,000.00) in valuation, whichever is sooner, property owners or responsible parties for property developments with sewer laterals totaling greater than one thousand feet (1,000') in length shall authorize the required verification test witnessed by the City and EBMUD to determine if the building sewer lateral(s) serving said property are, as determined by the Director and EBMUD, in compliance with this chapter and the EBMUD Regional PSL Ordinance. The Director may waive the requirement for the verification test if the property owner or its duly authorized agent agrees in writing to replace all of the building sewer laterals serving said property. If repair or replacement of the building sewer lateral(s) is required by the Director or EBMUD, or otherwise agreed to by the property owner or its duly authorized agent, the property owners or responsible parties shall submit work plans for approval by EBMUD and the Director. Work plans shall include information about the quantity and schedule of work to be performed to bring the property's building sewer laterals into compliance with the requirements of the EBMUD Regional PSL Ordinance and this chapter and 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 chapter. If building sewer laterals are repaired, a compliance certificate issued by EBMUD shall be valid for seven (7) years. If building sewer laterals are replaced, a compliance certificate issued by EBMUD shall be valid for twenty (20) years.

(f) Exceptions.

(1) A property owner of a structure with a building sewer lateral that is less than ten (10) years old from the date of (i) intended title transfer, (ii) obtaining a permit for remodeling, or (iii) obtaining an approval from EBMUD for a change in water service and has sufficient evidence, such as a valid building permit showing that the building sewer lateral was replaced in total and received a final inspection from the City, may request an exemption certificate from EBMUD and does not have to pass a verification test or obtain a compliance certificate.

(2) A property owner of a structure with a building sewer lateral for which the Director determines that it replaced the lower sewer lateral within ten (10) years from the date that a certificate of compliance is required by this chapter is exempt from the requirement of passing a verification test

on the lower sewer lateral, but must still pass a verification test and obtain a certificate of compliance from EBMUD as to the upper lateral.

(3) 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 chapter, the Director may temporarily waive the requirements of this chapter 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 Director 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 chapter 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 chapter and will be subject to enforcement by the City according to this chapter.

(4) A property owner of a structure with a compliance certificate issued by EBMUD pursuant to the EBMUD Regional PSL Ordinance and this chapter which is still in effect as of the date of (i) intended title transfer, (ii) obtaining a building permit for any type of construction that exceeds one hundred thousand dollars (\$100,000.00) in construction valuation or one hundred thousand dollars (\$100,000.00) in cumulative construction valuation for all building permits issued for any type of construction over a three (3) year period, or (iii) obtaining an approval from EBMUD for a change in water service.

(Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

7-8.208 Emergency Work by City.

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 or she is hereby authorized to proceed with all necessary work to abate the condition and may enter upon private property for such purpose. The Director may erect and maintain all necessary barricades, warning lights, and other protective devices upon public or private property. The Director shall notify the owner of the premises as the circumstances shall permit.

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.

(Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

7-8.209 Order to Abate.

The Director shall investigate all dangerous and unsanitary conditions existing in or about building sewer 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 including this chapter, the Director 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.

(Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

7-8.210 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 a lien shall be placed against the property for any and all costs incurred to recover said costs as authorized by this chapter.

(Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

7-8.211 Adoption of the EBMUD Regional PSL Ordinance by Reference.

The East Bay Municipal Utility District Ordinance No. 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, as the ordinance may be periodically revised by EBMUD. One copy of the EBMUD Regional PSL Ordinance shall be kept on file at the Department of Public Works.

(Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

Article 3. Sewer Connections

7-8.301 Sewer Connection Fee Fund.

The sewer connection fee fund is hereby established. Money collected by the City for sewer connection fees shall be deposited in the sewer connection fee fund and shall be used only to increase the capacity of the sanitary sewer system by construction of additions or modifications to the sanitary sewer system. Any interest earned on the fund shall remain in the fund.

(Sec. 2, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.201)

7-8.302 Sewer Connection Requirement.

The owner of every premises, such as a house, building, or property used for human occupancy, employment, commercial or industrial purposes, recreation, or other purpose, situated within the City and abutting on any street, alley, or right-of-way in which there is now located or may in the future be located a public sanitary sewer, is required to install, at his own expense and as soon as practicable, suitable toilet facilities therein or thereon, and to connect, without any undue delay, and, in no event at a date later

than ninety (90) days following official notice from the Director, such premises directly with the proper public sewer in accordance with the provisions of this chapter.

(Sec. 2, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.202)

7-8.303 Connection Applications.

Applications for connections to a City sewer shall, in every case, be made by the owner or his agent on a form furnished by the City. Each application shall be supplemented by such plans, specifications, analyses of strength and quantity of wastewater to be produced, flow data, or other information as shall, in the judgment of the Director, be considered pertinent. In the case of every industrial sewer service connection, irrespective of whether a new physical connection is to be made, a new or amended application shall be filed with the City (1) upon change of ownership of the property served, (2) upon change of occupancy, or (3) upon change of any activity resulting in changes in type of industrial waste. The holders of all permits issued hereunder shall be subject at all times to all applicable Federal, State, and local laws and regulations. At no time and in no way shall the holder of any permit acquire or be regarded as having acquired a vested or continuing right to maintain or to have continued any connection to the public sewer.

(Sec. 2, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.203)

7-8.304 Cost of Sewer Connection.

The connection to the public sewer, including the piping within any public street right-of-way, shall be properly installed in accordance with applicable codes at the sole expense of the owner of the property served. Such connections shall not be made without required approved permits issued by the Director, upon receipt of an acceptable, complete application and payment of all applicable fees and charges.

(Sec. 2, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.204)

7-8.305 Sewer Connection Fees.

A sewer connection fee shall be paid as a condition of the issuance of a building permit. A sewer connection fee shall be levied whenever the use of the property changes and is expected by the City to discharge a greater amount of sewage than was discharged under the previous use. The charge shall be calculated as a single-family dwelling equivalent.

A single-family dwelling equivalent (SFDE) shall be defined as the average volume of wastewater discharged from an average single-family dwelling over a thirty (30) day period of time. For the purposes of this chapter, one (1) SFDE shall equal five thousand (5,000) gallons. Each single-family living unit in a multiple-family dwelling, apartment house, condominium, or any other multiple-family structure shall be considered one (1) SFDE, except units which contain two (2) rooms or less or one (1) bedroom or less. Each living unit which contains one (1) bedroom or less or not more than two (2) rooms total shall be considered a one-half (1/2) SFDE. All nonresidential use shall be charged based on the anticipated volume of water use. The City may verify actual water use after issuance of the building permit and

assess a supplemental sewer connection charge in the event that actual water use is greater than the original estimate upon which the sewer connection charge was calculated.

(Sec. 2, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.205)

7-8.306 Amount of Charge.

The sewer connection charge for an SFDE is set at five hundred seventy dollars (\$570.00). This rate shall be adjusted annually on July 1 by resolution of the City Council to reflect the change in the Engineering News Record (ENR) Connection Cost Index during the preceding twelve (12) months. The March ENR Construction Cost Index value shall be used as the basis of adjustment.

(Sec. 2, Ord. 82-013, eff. Nov. 25, 1982; Sec. 1, Ord. 90-7, eff. Aug. 9, 1990; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.206)

7-8.307 Construction of Trunk Sewer in Lieu of Payment of Sewer Construction Fees.

The sewer connection fee may be waived where the applicant agrees to construct, at no cost to the City, a new trunk sanitary sewer from his development or interceptor sewer which is determined to have adequate capacity.

All facilities constructed by the applicant must be designed by a registered professional engineer and must be constructed to City standards.

(Sec. 2, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.207)

Article 4. Sewer Use Regulations

7-8.401 Use of Public Sewers Required.

All sewage, waste and wastewater shall be discharged to the sanitary sewer system except as hereinafter provided.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.301)

7-8.402 Prohibited Uses.

(a) Limitation on Use.

(1) Use of the sanitary sewer system is limited to the discharge of wastewater 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 sanitary sewer system or wastewater treatment facilities, or which may cause a nuisance or hazard, or which will in any manner obstruct the efficient operation or maintenance of the sanitary sewer system or wastewater treatment facilities.

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

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

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

- (1) Any unpolluted industrial process water.
- (2) Any liquid or vapor having a temperature detrimental to the sanitary 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 sewer. No particle shall in any event be greater than three-eighths inch (3/8") 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 sanitary 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 the 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 five hundred (500) milligrams per liter of suspended solids.
- (10) Any noxious or malodorous gas or substance capable of creating a public nuisance.
- (11) Any waste having more than one (1) milligram per liter of sulfides.

(12) Any waste having a pH of less than 5.5 or more than 10.5.

(13) Any material that obstructs or prevents the effective maintenance or normal operation of the building sewer lateral or sewer main.

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

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

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.302)

7-8.403 Requirements for Food Service Establishments.

(a) Grease Control Requirement. It is prohibited to discharge fats, oils and grease (FOG) to the sanitary sewer system. Food service establishment owners and operators are required to control FOG discharge from their food service establishments to the sanitary sewer system and not cause or contribute to FOG-related overflows, blockages or increased maintenance in the sanitary sewer system.

(b) Grease interceptor(s) shall be installed and maintained to prevent FOG-related overflows, blockages or increased maintenance in the sanitary sewer system. Grease control devices are required if food service establishments meet any of the following conditions:

(1) New construction, including new construction or conversion from a non-food service establishment to a food service establishment.

(2) Remodels, additions, alterations or repairs of food service establishments valued at seventy-five thousand dollars (\$75,000.00) or greater.

(3) Multiple permits for remodels, additions, alterations or repairs by the same food service establishment owner or operator within a three (3) year period and with a cumulative value over seventy-five thousand dollars (\$75,000.00).

(4) An existing food service establishment has caused or contributed to FOG-related increased maintenance requirements in the sanitary sewer system, or a FOG-related sanitary sewer system overflow or blockage.

(c) Approved Grease Control Device.

(1) A grease interceptor device designed to intercept FOG from wastewater discharge shall be required. Grease interceptors include but are not limited to gravity grease interceptors and various other types of grease interceptors that require cleaning/servicing by a pumping company due to design or per manufacturer's specifications.

(2) On a case-by-case basis due to site practicality reasons, the Director may allow an automatic grease removal device which is designed to retain FOG from wastewater discharge. An automatic grease removal device automatically removes FOG from the wastewater stream and transfers the FOG to an external container. Automatic grease removal devices are typically installed inside and above ground and are generally cleaned by food facility staff.

(d) Grease Control Device Maintenance.

(1) If a food service establishment has one or more grease interceptors, they must be maintained as follows:

(i) By removing the entire contents of the interceptor each time the interceptor is pumped.

(ii) To ensure proper operation, maintenance and performance during the entire period of wastewater discharge.

(iii) A minimum pumping frequency of once per three (3) month period, or more frequently to ensure that the food service establishment discharge does not cause or contribute to FOG-related overflows, blockages, or increased maintenance in the sanitary sewer system.

(2) If a food service establishment has one (1) or more automatic grease removal devices, the device(s) must be operated and maintained according to manufacturer's specifications, including, but not limited to, maintaining appropriate power supply and emptying the FOG receptacle at the frequency described by the manufacturer in the owner's manual.

(3) More frequent maintenance and/or additional grease control device equipment may be required if a food service establishment continues to cause or contribute to FOG-related overflows, blockages, or increased maintenance in the sanitary sewer system.

(e) Maintenance Records. Food service establishments shall retain maintenance records with the following information:

(1) Grease interceptor:

(i) Date of service;

(ii) Volume pumped (gallons);

(iii) Waste disposal location.

- (2) Automatic grease removal device:
 - (i) Date of grease receptacle emptying and/or maintenance;
 - (ii) Signature by staff conducting maintenance;
 - (iii) Waste disposal location.

The maintenance records shall be kept a minimum of three (3) years from the date of service and shall be provided to the City upon request.

(Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

7-8.404 Authority to Require Special Treatment Facilities or Measures.

Whenever deemed necessary by the Director, the owner shall at his own expense provide such treatment or take such other measures as shall be required in order to reduce or eliminate objectionable waste characteristics or to reduce the rate of discharge of wastewater being deposited in the sanitary sewer system, so that the same may be received therein:

- (a) Without causing any damage to or any undue interference with the operation of the sanitary sewer system;
- (b) Without causing violation of the City's NPDES permit or water quality requirements;
- (c) Without causing hazard of any kind to humans or animals.

In the event pretreatment or special facilities are required to make the industrial wastes acceptable as provided under this chapter, the applicant shall be required to furnish plans, approved prior to construction, showing the method of collection and pretreatment proposed to be used, and a permit shall not be issued until said plans or required modifications thereof have been checked and approved by the Director. All such facilities shall then be installed in conformity with aforementioned approved plans.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.303)

7-8.405 Discharge into Storm Drain Prohibited.

It shall be unlawful to discharge within the City any wastewater or polluted waters into any storm drain or natural outlet or channel.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.304)

7-8.406 Prohibited Infiltration/Inflow Discharges.

No person shall discharge or cause to be discharged any rainwater, stormwater, groundwater, street drainage, subsurface drainage, or yard drainage into any pipe which is directly or indirectly connected to the sanitary sewer system.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.305)

7-8.407 Prohibition on Use of Diluting Waters.

The use of diluting waters to meet the required standards for discharge of waste into the sewer is prohibited.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.306)

7-8.408 Prohibition on Unpolluted Water.

Unpolluted water, including but not limited to cooling water, process water, or blowdown from cooling towers or evaporative coolers, shall not be discharged through direct or indirect connection to the public sewer unless a permit is issued by the City. The City may approve the discharge of such water only when no reasonable alternative method of disposal is available. If a permit is granted for the discharge of such water into the public sewer, the user shall pay the applicable user charges and fees and shall meet such other conditions as required by the Director.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.307)

7-8.409 Prohibitions on Radioactive Wastes.

No person shall, and it shall be unlawful to, discharge, cause to be discharged, or permit to be discharged any radioactive waste into the sanitary sewer system; provided, however, that:

- (a) Persons authorized to use radioactive materials by the California Department of Health Services or other governmental agency empowered to regulate the use of radioactive materials may discharge, cause to be discharged, or permit to be discharged such wastes; provided, that such wastes are discharged in strict conformance with the current California radiation control regulations for safe disposal of such wastes as they now exist or may hereafter be amended;
- (b) The person so acting does so in compliance with all applicable rules and regulations of the City and all other regulatory agencies;
- (c) The person so acting must have a permit to do so from the Director.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.308)

7-8.410 Limitations on the Use of Garbage Grinders.

Waste from garbage grinders shall not be discharged into the sewerage system except:

- (a) Wastes generated in preparation of food normally consumed on the premises, such as in a home or restaurant;
- (b) In other cases where the user has obtained a permit for that specific use from the Director, and agrees to undertake whatever self-monitoring is required to enable the Director to equitably determine the charges and fees based on the waste constituents and characteristics. Such grinders must shred the

waste to a degree that all particles will be carried freely under normal flow conditions prevailing in the sanitary sewer system, with no particle greater than three-eighths of an inch (3/8"). Garbage grinders shall not be used for grinding plastic, paper products, inert materials, garden refuse, or waste products resulting from the handling, storage and sale of fruits and vegetables in wholesale and retail produce establishments and wastes from plants engaged in the preparation, processing or preserving of foods not intended primarily for immediate consumption. Such discharge shall not cause the City to violate water quality requirements imposed on it by State or Federal regulatory agencies.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.309)

7-8.411 Limitations on Point of Discharge.

No person shall discharge any substances directly into a manhole or similar opening in a City sewer other than through an approved building sewer.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.310)

7-8.412 Prohibitions on Stored Liquid Wastes.

Liquid wastes that have been collected and held in tanks or containers shall not be discharged into the sanitary sewer system, unless first approved in writing by the Director, including payment of processing charges. Wastes of this category include but are not limited to:

- (a) Septic tank pumpings;
- (b) Chemical toilet wastes;
- (c) Pleasure boat wastes;
- (d) Industrial wastes collected in containers or tanks;
- (e) Fats, oils and grease; and
- (f) Any other material not classified as residential sewage, including chemicals and other materials stored on the premises of the user which might, directly or indirectly, enter the City sewer, accidentally or otherwise.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.311)

7-8.413 Wastewater Volume Determination: Metered Water Supply.

When charges and fees are based upon the water usage, such charges and fees shall be applied against the total amount of water used from all sources unless, in the opinion of the Director, significant portions of water received are not discharged to a public sewer. The total amount of water used from public and private sources will be determined by means of public meters or private meters, installed and maintained at the expense of the user and as approved by the Director.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.312)

7-8.414 Metered Wastewater Volume and Metered Diversions.

When charges and fees are based upon water usage and when, in the opinion of the Director, a significant portion of the water received from any metered source does not flow into the public sewer because of the principal activity of the user or removal by other means, the user charges and fees will be applied against the volume of water discharged from such premises into the public sewer. Written notification and proof of the diversion of water must be provided by the user and approved by the City if the user is to avoid the application of the charges and fees against the total amount of water used from all sources. The user may install a meter of a type and at a location approved by the Director and at the user's expense. Such meters shall measure either the amount of sewage discharged or the amount of water diverted. Such meters shall be maintained at the expense of the user and be tested for accuracy at the expense of the user when deemed necessary by the Director. For users who, in the opinion of the Director, divert a significant portion of their flow from a public sewer, the charges and fees may be based upon measurement of the flow and volume to be discharged, prepared by the user and approved by the Director. The measurement must include the method, calculations and type of equipment used to determine the wastewater volume.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.313)

7-8.415 Discharge Reports.

The Director may require that any person discharging wastewater into a public sewer file a periodic discharge report. The discharge report may include, but need not be limited to: nature of process; volume; rates of flow; mass emission rate; production quantities; hours of operation; number and classification of employees; or other information which relates to the generation of waste, including wastewater constituents and characteristics in the wastewater discharge. Such reports may also include the chemical constituents and quantity of liquid or gaseous materials stored on site even though they may not normally be discharged, or any chemicals or raw materials not in liquid or gaseous form which are stored on the premises, and could reach the sanitary sewer system by accidental spillage or washdown of spillage.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.314)

7-8.416 Mandatory Wastewater Discharge Permits.

All major contributing industries proposing to connect or to discharge into a public sewer or discharging into a public sewer must comply with applicable permits and fees.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.315)

7-8.417 Monitoring Facilities.

The Director may require the user to construct, at his own expense, sampling manholes or monitoring facilities to allow inspection, sampling, and flow measurement of the building sewer lateral or internal plumbing and drainage systems and may also require sampling or metering equipment to be provided, installed, and operated at the user's premises, but the City may, when such location would be impractical

or cause undue hardship on the user or City, require a sampling facility to be constructed in the public street or right-of-way and located so that it will not be obstructed by landscaping or parked vehicles, assuming that such location consent is first obtained from the public agency having jurisdiction of such public area. The Director may require the user to provide and operate an independent power supply for the monitoring facilities.

If the monitoring facility or sampling manhole is inside the user's fence, there shall be accommodations to allow access for City personnel. There shall be ample room in or near such sampling manhole to allow accurate sampling and compositing of samples for analysis. The manhole, sampling, and measuring equipment shall be maintained at all times in a safe and proper operating condition at the expense of the user.

Whether constructed on public or private property, the sampling and monitoring facilities shall be provided in accordance with the City's requirements and all applicable local agency requirements, construction standards and specifications. Construction shall be completed within one hundred twenty (120) days following written notification by the Director, unless a time extension is granted by the City.

In the event that no special facility is available, the point of inspection shall be considered to be the nearest downstream manhole in the public sewer.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.316)

7-8.418 Inspection and Sampling.

The City may inspect the facilities of any user to ascertain whether the purpose of this chapter is being met and all requirements are being complied with. Persons or occupants of premises where wastewater is created or discharged shall allow the Director, or his or her representative, ready access at all times to all parts of the premises for the purpose of inspection or sampling in the performance of any of their duties. The City shall have the right to establish on the user's property such devices as are necessary to conduct sampling or metering operations. Where a user has security measures in force which would require proper identification and clearance before entry into its premises, the user shall make necessary arrangements with its security guards so that, upon presentation of suitable identification, personnel from the City will be permitted to enter without delay for the purpose of performing their specific responsibilities.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.317)

7-8.419 Pretreatment.

Users shall make wastewater acceptable to the City under the limitations established herein before discharging into any public sewer. Any facility required to pretreat wastewater to a level acceptable to the City shall be provided and maintained at the user's expense. Detailed plans showing the pretreatment facilities and operating procedures shall be submitted to the Director for review, and shall be approved by the City before construction of the facility. The review and approval of such plans and operating procedures will in no way relieve the user from the responsibility of modifying the facility as necessary to

produce an effluent complying with the provisions of this chapter. Any subsequent changes in the pretreatment facilities or method of operating affecting the effluent shall be reported to and approved by the City.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.318)

7-8.420 Protection from Accidental Discharge.

Each user shall provide protection from accidental discharge of prohibited materials or other wastes regulated by this chapter. Facilities, to prevent accidental discharge of prohibited materials, shall be provided and maintained at the user's expense. Detailed plans showing facilities and operating procedures to provide this protection shall be submitted to the Director for review prior to construction of the facility.

The review of such plans and operating procedures will in no way relieve the user from the responsibility of modifying the facility as necessary to provide the protection necessary to meet the requirements of this chapter. Any costs to the City arising from accidental discharge shall be paid by the user.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.319)

7-8.421 Confidential Information.

To the extent authorized by applicable State of California and/or Federal statutes and regulations:

- (a) All information and data on a user obtained from reports, questionnaires, permit applications, permits and monitoring programs and from inspection shall be available to the public or other governmental agencies without restriction unless the user specifically requests and is able to demonstrate to the satisfaction of the Director that the release of such information would divulge information, processes or methods which would be detrimental to the user's competitive position;
- (b) When requested by the person furnishing a report, the portions of a report which might disclose trade secrets or secret processes shall not be made available to governmental agencies for use in making studies; provided, however, that such portions of a report shall be available for use by the State or any State agency in judicial review or enforcement proceedings involving the person furnishing the report;
- (c) Wastewater constituents and characteristics will not be recognized as confidential information; and
- (d) Information accepted by the Director as confidential shall not be transmitted to any governmental agency or to the general public by the City unless prior and adequate notification is given to the user.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.320)

7-8.422 Special Agreements.

Special agreements and arrangements between the City and any persons or agencies may be established when in the opinion of the Director unusual or extraordinary circumstances compel special terms and conditions.

(Sec. 3, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.321)

7-8.423 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.

(Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

Article 5. Charges and Fees

7-8.500 General.

All costs of operation, maintenance, rehabilitation and improvement of the public sewer system shall be paid by the users of the sanitary sewers. General funds shall not be used for this purpose. Revenues collected from the users of the sanitary sewer system shall be reserved for this single purpose and shall not be expended for any other purpose. Interest earned on the various funds shall remain in those funds.

(Sec. 4, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.400)

7-8.501. Sewer Funds Are Established.

A total of three (3) sewer funds are established as follows: (a) operation and maintenance fund; (b) sewer rehabilitation/replacement fund; and (c) relief sewer construction fund.

All revenues collected shall be allocated be-tween each of the three (3) funds in accordance with the percentage of the budgeted amounts contained in the official approved budget for the fiscal year in which the revenue is collected. The amounts so deposited in each fund shall be reserved for expenditures appropriated to that fund, as described in this section, except that loans may be made against one (1) or more funds to supplement funds deposited in another fund to meet the needs of a particular project approved by the City Council.

(a) Operation and Maintenance Fund. All expenditures budgeted and required for the normal, routine operation and maintenance and incidental repair and improvement of the public sewer shall be from this fund. The following line budget items shall be included, as a minimum, in each annual budget for this fund:

- (1) Personnel services;
- (2) Supplies and services;
- (3) Marina maintenance and utilities (pump station);
- (4) Sewer system studies and minor rehabilitation;
- (5) Sewer maintenance equipment.

All maintenance equipment expenditures shall be paid from this fund. Example expenditures include purchase of maintenance equipment, purchase of manhole castings, covers, and other materials required for sewer system maintenance, and contracts for the design and construction of the same.

(b) Sewer Rehabilitation/Replacement Fund. All expenditures for the design and rehabilitation, repair, sealing or construction of improvements to the public sewer requiring replacement because of structural failure, excessive infiltration/inflow, or other defects shall be paid from this fund.

(c) Relief Sewer Construction Fund. All expenditures for the design and construction of relief sewers required to convey peak flows from infiltration/inflow shall be paid from this fund.

(Sec. 4, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.401)

7-8.502 User Classifications Established.

For the purpose of the levy of sewer use charges, the following classification of users is established:

(a) Single-Family Residential User (SF). This classification shall include single-family homes and each single-family living unit of a duplex, multiplex or multiple-family service, if each single-family living unit is served by its own water meter. Where two (2) or more single-family living units are served by a common water meter, the rates for the multiple-family classification shall apply;

(b) Multiple-Family Use (M). User where more than one (1) single-family living unit is served by a common water meter;

(c) Commercial Service (C). All commercial, retail, wholesale and miscellaneous small industrial users which do not qualify under one (1) of the other classifications shall be included in this classification;

(d) Institutional (I). All schools, churches, medical facilities and governmental users;

(e) Parks (P). All parks having sanitary sewer service;

(f) Heavy Industrial (HI). All industrial and commercial users, except multifamily residential services, which have a sewer connection larger than four inches (4") in diameter and have a water service greater than three-quarter inch (3/4") in diameter.

(Sec. 4, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.402)

7-8.503 User Rates Established.

Sewer use charges shall be established by resolution of the City Council and shall require annual adjustment to be determined by the Council to be appropriate. Any adjustments of rates shall be equally applied to all user classifications.

(Sec. 4, Ord. 83-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.403)

7-8.504 Collection of User Charges.

The City reserves the right to collect the user charge monthly, bimonthly, semiannually, or annually, by separate billings to the user, an additional charge on the user's water bill, or by an annual levy collected by the County Tax Collector on the tax rolls. Each delinquent user charge shall automatically become a lien on the real property from which the sewer connection has been made; after ninety (90) days delinquent, the City may place the delinquent user charge plus estimated user charge for an additional nine (9) months on the tax rolls for collection.

(Sec. 4, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.404)

7-8.505 Appeal Procedures.

If the user charge is believed to be incorrect or not equitable, an individual user may appeal the charge to the Director within thirty (30) days of receipt of the bill. The appeal shall be in writing and shall clearly state the reason that the charge is believed to be in error. The Director shall make a determination of the appeal within thirty (30) days of receipt of the written statement from the user. User charges determined to be in error shall be corrected by the City and the appropriate credits and/or adjustments shall be made by the City to the user. The Director's determination may be appealed to the City Council, whose determination is final.

(Sec. 4, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.405)

7-8.506 Special Charges.

The City may assess additional charges to any discharge of commercial sewage or industrial waste if such discharge results in costs to the City attributable to such discharge. Examples of City costs incurred include cleaning of fat, oil, grease, solids, or debris from the sewers, repairing sewers damaged by discharges, damage to equipment or injury of personnel from toxic or hazardous gases or volatile fractions of the discharge to the sewer, or any other financial liability incurred by the City as a result of the industrial waste or commercial sewage discharge. Such charge or any fines or penalties imposed by the City on others as a result of violation of this chapter shall be added to the user's bill and shall, if delinquent, be collected in accordance with the provisions of Section 7-8.504.

(Sec. 4, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.406)

7-8.507 City User Charges Are in Addition to User Charges Levied by Others.

The sewer use charges provided by this chapter are in addition to any and all sewer use charges and water sales charges levied by others.

(Sec. 4, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.407)

Article 6. Enforcement

7-8.601 Responsibility.

The primary responsibility for enforcement of the provisions of this chapter shall be vested in the Director, or agents of the City as he shall designate; and provided further, that designated field inspectors or other employees of the City are hereby authorized to act as agents of the City for and on behalf of the Director with the power to inspect and issue notices for violations of this chapter.

(Sec. 5, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.501)

7-8.602 Accidental Discharges: Notification of Discharge.

Users shall notify the City Department of Public Works or Police Department by telephone immediately upon accidentally discharging wastes in violation of this chapter.

This notification shall be followed, within two (2) days of the date of occurrence, by a detailed written statement describing the causes, volume and nature of the accidental discharge and the measures being taken to prevent future occurrence. Such notification will not relieve users of liability for any expense, loss or damage to the sanitary sewer system or for any fines imposed on the City on account thereof by any regulatory agencies.

(Sec. 5, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.502)

7-8.603 Accidental Discharges: Notices to Employees.

A notice shall be furnished and permanently posted on the bulletin of each commercial and industrial user advising employees whom to contact in case of an accidental discharge in violation of this chapter.

(Sec. 5, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.503)

7-8.604 Issuance of Cease and Desist Orders.

When the Director finds that a discharge of waste has taken place or is likely to take place in violation of this chapter, the Director may issue an order to cease and desist such discharge, or practice or operation likely to cause such discharge, and direct that those persons not complying shall:

- (a) Comply forthwith;
- (b) Comply in accordance with a time schedule set forth by the Director; or
- (c) Take appropriate remedial or preventive action.

(Sec. 5, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.504)

7-8.605 Submission of Time Schedule.

When the Director finds that a discharge of waste is taking place, has been taking place or threatens to take place, in violation of prohibitions or limitations prescribed in this chapter, or wastewater source control requirements, effluent limitations or pretreatment standards, the Director may require the user to submit for approval, with such modifications as he deems necessary, a detailed time schedule of specific actions which the user shall take in order to prevent or correct a violation of requirements.

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 chapter 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. Noncompliance in excess of said time limits may be deemed a separate violation of this chapter and could subject the property owner to cost recovery and administrative penalties as specified in this chapter.

(Sec. 5, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.505)

7-8.606 Emergency Corrections.

In the event repairs, construction, or other public work is performed on any premises pursuant to any provision of law relating to the emergency performance of public work and the expenditure of public funds therefor, or pursuant to any other provision of law authorizing public work in private property in order to correct, eliminate or abate a condition upon such premises which threatens to cause, causes, or has caused a violation of any provision of this chapter, or of any other requirement of law, the user responsible for the occurrence or condition giving rise to such work, the occupant and the owner of the premises shall be liable jointly and severally to the City for such public expenditures.

Nothing in this chapter 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 sewer lateral permit as specified in this chapter on the next working day.

(Sec. 5, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.506)

7-8.607 Damage to Facilities: Additional Remedy.

When a discharge of wastes causes an obstruction, damage, or any other impairment to City facilities, the City, after providing the user with notice and opportunity to be heard, may assess a charge against the user for the work required to clean or repair the facility and add such charge to the user's charges and fees.

(Sec. 5, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.507)

7-8.608 Right of Entry.

The Building Official and Director may enter, inspect, and test any buildings, structures, or premises to secure compliance or prevent a violation of any portion of this chapter. 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.

(Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

7-8.609 Termination of Service.

The City may terminate or cause to be terminated wastewater service to any premises if a violation of any provision of this chapter is found to exist or if a discharge of wastewater causes or threatens to cause a condition of contamination, pollution, or nuisance as defined in this chapter. Before termination of service, the involved user (permittee, etc.) shall be provided notice and an opportunity to be heard unless an emergency situation exists requiring summary termination in order to protect the public health and safety. This provision is in addition to other statutes, rules or regulations authorizing termination of service for delinquency in payment.

(Sec. 5, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.508)

7-8.610 Appeals.

(a) Any user, permittee, applicant or other person aggrieved by any decision, action, finding, determination, order or directive of the Director made or authorized pursuant to the provisions of this chapter, or relating to any permit issued pursuant to said sections, or interpreting or implementing the same, may file a written request with the Director for reconsideration thereof within ten (10) days of such decision, action, finding, determination, or order, setting forth in detail the facts supporting each user's or person's request for reconsideration. The Director shall render a final decision within fifteen (15) days of the receipt of such request for reconsideration.

(b) Any user, permittee, applicant, or other person aggrieved by the final determination of the Director may appeal such determination to the City Council within fifteen (15) days after notification of the final determination of the Director, and shall set forth in detail the facts and reasons supporting the appeal in writing. The appeal shall be heard by the City Council within forty-five (45) days from the date of filing the notice of appeal. The appellant, the Director, and such other persons as the Council may deem appropriate shall be heard at the hearing on such appeal. Upon conclusion of hearing, the Council may affirm, reverse or modify the final determination of the Director as the Council deems just and equitable, and in furtherance of the provisions, purposes and intent of this chapter. During the pendency of any such appeal, the final determination of the Director shall remain in full force and effect. The Council's determination on the appeal shall be final.

(Sec. 5, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.509)

7-8.611 Falsification of Information.

It shall be unlawful knowingly to make any false statement, representations, record, report, plan or other document, or knowingly to tamper with, bypass, or render inaccurate any sample monitoring device or equipment installed or operated pursuant to this chapter or of any permit issued under this chapter. In addition to any punishment or remedy provided by law, any such falsification or tampering shall be grounds for revocation of any permit.

(Sec. 5, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.510)

7-8.612 Public Nuisance.

Waste or wastewater discharge, threatened waste or wastewater discharge, or any condition or act in violation of any provision of this chapter or of any provision of any permit issued pursuant to this chapter or of any order or directive of the Director authorized by the provisions of this chapter is hereby declared to be a public nuisance. Such nuisance may be abated, removed or enjoined and damages assessed therefor in any manner provided by law.

(Sec. 5, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.511)

7-8.613 Damage to Sewerage System.

No person(s) shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface, or tamper with any structure, appurtenance or equipment which is a part of the sanitary sewer system. Any person(s) violating this provision shall be subject to immediate arrest under charge of disorderly conduct.

(Sec. 5, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.512)

7-8.614 Cost Recovery – Building Sewer Lateral Overflows.

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

(Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

7-8.615 Administrative Penalties – Noncompliance.

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 chapter, or for continued violation of any requirement of this chapter, 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 chapter.

- (a) Five hundred dollars (\$500.00) for the first violation which remains out of compliance in excess of the time limit established in the first notice of violation.
- (b) One thousand dollars (\$1,000.00) for the second violation occurring within three (3) years of the first violation.
- (c) Two thousand five hundred dollars (\$2,500.00) for each additional violation exceeding two (2) violations within three (3) years of the first violation.

(Sec. 3 (part), Ord. 11-004, eff. June 2, 2011)

7-8.616 Civil Penalties.

Any person who intentionally or negligently violates any provision of any permit issued pursuant to this chapter, or who intentionally or negligently discharges waste or wastewater which causes pollution, or who so violates any cease and desist order, prohibition, effluent limitation, national standard of performance or national pretreatment or toxicity standard may also be in violation of the Porter-Cologne Act and subject to its sanctions including civil penalty.

(Sec. 5, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.513)

7-8.617 Misdemeanor.

Every person who violates any provisions of this chapter is guilty of a misdemeanor and punishable as provided in Health and Safety Code Section 4766.

(Sec. 5, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.514)

7-8.618 Remedies Cumulative; Attorneys' Fees.

The remedies provided for in this chapter shall be cumulative and not exclusive, and shall be in addition to any and all other remedies available to the City. Further, to the extent the City brings any action to enforce the provisions of this chapter, in addition to any other relief provided by law, the City shall be entitled to recover its reasonable attorneys' fees.

(Sec. 5, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.515)

7-8.619 Validity.

If any provision of this chapter or the application thereof to any person or circumstances is held invalid, no other provision of this chapter will be affected thereby.

(Sec. 5, Ord. 82-013, eff. Nov. 25, 1982; Sec. 3 (part), Ord. 11-004, eff. June 2, 2011. Formerly 7-8.516)

APPENDIX C
EBMUD Regional PSL Ordinance



**REGIONAL
PRIVATE SEWER
LATERAL ORDINANCE**

Effective November 28, 2014

**Adopted by Ordinance No. 359-13
Amended by Ordinance No. 362-14**

REGIONAL PRIVATE SEWER LATERAL ORDINANCE

Effective November 28, 2014

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SECTION 1

SHORT TITLE

This ordinance shall be known as the “Regional Private Sewer Lateral Ordinance” and may be cited accordingly.

(Ord. No. 359-13, 7-23-2013)

SECTION 2

PURPOSE

This Regional Private Sewer Lateral Ordinance establishes regulations for the inspection, testing, repair, replacement, and ongoing maintenance of Private Sewer Laterals. The purpose of this Regional Ordinance is to provide for the operation and maintenance of the District’s wastewater conveyance and treatment facilities in a reliable and serviceable manner and to reduce infiltration and inflow into the regional sanitary sewer system.

(Ord. No. 359-13, 7-23-2013)

SECTION 3

APPLICABILITY OF REGIONAL ORDINANCE

This Regional Ordinance applies only within the sewer service areas of the City of Emeryville, City of Oakland, City of Piedmont, and Stege Sanitary District. This Regional Ordinance also applies within the sewer service areas of the City of Alameda and City of Albany effective January 1, 2015.

(Ord. No. 359-13, 7-23-2013; Ord. No. 362-14, 10-28-2014)



SECTION 4

DEFINITIONS

(a) Cleanout. A pipe fitting and associated piping connected to a Private Sewer Lateral that provides access to the Private Sewer Lateral for purposes of flushing, rodding, cleaning, and other maintenance and diagnostic purposes.

(b) Common Interest Development. A development managed or governed by a Homeowners' Association. Examples of Common Interest Developments may include condominium projects, planned unit developments, community apartment projects (in which the individual units are owned), and stock cooperatives.

(c) Compliance Certificate. A certificate issued by the District upon its determination that all Private Sewer Laterals associated with a parcel have demonstrated compliance with applicable standards by passing a Verification Test.

(d) Director. The Director of Wastewater of the East Bay Municipal Utility District, or his or her designated representative.

(e) District. Special District No. 1 of the East Bay Municipal Utility District.

(f) Exemption Certificate. A certificate issued by the District as described in Section 10. A Property Owner who holds an Exemption Certificate for a given parcel need not obtain a Compliance Certificate for that parcel during the period the Exemption Certificate remains valid.

(g) General Waiver. A status that applies to a Property Owner that relieves the Property Owner from the requirement to perform work on and testing of the Lower Sewer Lateral, or a specified portion of it, where a Satellite presents the District with sufficient evidence that the entire Lower Sewer Lateral was Replaced by the Satellite at any time during the 20 year period preceding a Triggering Event.

(h) Homeowners' Association. A nonprofit corporation or unincorporated association created for the purpose of managing or governing a Common Interest Development and that operates in accordance with governing documents, whether or not the corporation or association is formally designated or commonly referred to as a Homeowners' Association.



(i) Limited Waiver. A document with a definite expiration date issued by a Satellite to a Property Owner for any reason other than the Satellite's prior Repair or Replacement of the Lower Sewer Lateral that relieves the Property Owner from the requirement to perform work and testing on the Lower Sewer Lateral, or a specified portion of it, until the Limited Waiver's expiration date.

(j) Lineal Consanguinity Relationship. A person is in a Lineal Consanguinity Relationship with another person if, and only if, one person is a direct descendent of the other person. The following are examples of Lineal Consanguinity Relationships: parent and child, grandparent and grandchild, and great-grandparent and great-grandchild. Persons are not in a Lineal Consanguinity Relationship if neither person is directly descended from the other, even if both persons are descended from a common ancestor. The following are not Lineal Consanguinity Relationships: aunt and niece, uncle and nephew, siblings, and cousins of any degree.

(k) Local Ordinance Requirements. All standards or requirements duly adopted by a Satellite or a department of a Satellite that relate to the maintenance or condition of Private Sewer Laterals, Lower Sewer Laterals, and/or Upper Sewer Laterals.

(l) Lower Sewer Lateral. The portion of the Private Sewer Lateral extending from the Cleanout near the curb line to the Sewer Main, or from the curb line in the street to the Sewer Main if there is no Cleanout near the curb line. The Lower Sewer Lateral includes the connection to the Sewer Main. A Lower Sewer Lateral is associated with a parcel if it, or any portion of it, is located upon the parcel or conveys sewage and liquid waste from any Structure located on that parcel. More than one Lower Sewer Lateral may be associated with an individual parcel.

(m) Non-Sanitary Sewer Connection. Anything that directly or indirectly conveys storm water, surface water, roof runoff, intercepted groundwater or subsurface drainage into the Sanitary Sewer, including, but not limited to, down spouts, yard drains, sump pumps, or other sources of storm water, run-off or groundwater.

(n) Parcel Group. Two or more contiguous or directly adjacent parcels of real property under common ownership.

(o) Permitting Authority. A city, city department, county or special district, including a Satellite but excluding the District, that regulates buildings, construction, land use, and/or sewers within any portion of the District's wastewater service area.



(p) Private Sewer Lateral. A pipe or pipes and appurtenances that carries sewage and liquid waste from the Structure(s) served, whether the Structure(s) is or are publicly or privately owned, to the Sewer Main. The Private Sewer Lateral includes the Upper Sewer Lateral. The Private Sewer Lateral of a given parcel includes the Lower Sewer Lateral only if applicable Local Ordinance Requirements require the Property Owner to obtain a Compliance Certificate for the Lower Sewer Lateral. A Private Sewer Lateral is associated with a parcel if it, or any portion of it, is located upon the parcel or conveys sewage and liquid waste from any Structure located on that parcel. More than one Private Sewer Lateral may be associated with an individual parcel.

(q) Property Owner. A person that owns a parcel of real property, or that person's authorized representative including a tenant or contractor. As used in this paragraph, "person" means an individual, trust, corporation, nonprofit organization, Homeowners' Association, partnership, firm, joint venture, limited liability company, or association. A Public Entity is not a Property Owner for purposes of this Regional Ordinance. Any person expressly required by applicable Local Ordinance Requirements to obtain a Compliance Certificate from the District or pursuant to this Regional Ordinance is a Property Owner for purposes of this Regional Ordinance.

(r) PSL. Has the same meaning as "Private Sewer Lateral" and is used interchangeably with that term.

(s) Public Entity. Any of the following: (1) a city or county, (2) a special district or agency of the state formed pursuant to general law or special act for the local or regional performance of governmental or proprietary functions within limited boundaries, (3) an agency or entity created pursuant to the Joint Exercise of Powers Act (Cal. Gov. Code, § 6500, et seq.), (4) a school district or community college district, (5) the University of California, (6) the California State University, (7) an air pollution control district or an air quality maintenance district, (8) a housing authority, or (9) any other entity with the capacity to own real property created by any of the above.

(t) Regional Ordinance. This Regional Private Sewer Lateral Ordinance.

(u) Remodeling. Any significant improvement, addition, construction, reconstruction, remodeling, modification or alteration of or to an existing or previously existing Structure.



(v) Repair. Construction activities performed to bring a Private Sewer Lateral into compliance with this Regional Ordinance and/or applicable Local Ordinance Requirements consisting of the correction of less than the entire Private Sewer Lateral, except a Replacement of the entire Upper Sewer Lateral is a Replacement and not a Repair if the Property Owner holds General Waiver status.

(w) Replacement. Construction activities performed to bring a Private Sewer Lateral into compliance with this Regional Ordinance and/or applicable Local Ordinance Requirements consisting of the replacement or lining of the complete length of the Private Sewer Lateral, or the complete length of the Upper Sewer Lateral if the Property Owner holds General Waiver status. “Replaced” has the same meaning as “Replacement” where used in this Ordinance.

(x) Sanitary Sewer. Sewer pipes that convey wastewater from a Structure and to which storm water, groundwater or surface water is not intentionally admitted. The Sanitary Sewer includes Sewer Mains and Private Sewer Laterals.

(y) Satellite. A city or special district that owns and operates a sanitary sewer collection system to which a Private Sewer Lateral is connected within the District’s wastewater service area. Satellites include the cities of Alameda, Albany, Berkeley, Emeryville, Oakland, and Piedmont, and the Stege Sanitary District.

(z) Section. A section of this Regional Ordinance unless otherwise specified.

(aa) Sewer Main. A publicly owned Sanitary Sewer that receives flows from Private Sewer Laterals. The Sewer Main does not include any portion of a Private Sewer Lateral.

(bb) State of Emergency. A State of Emergency exists while there is in effect a declaration of emergency within the District’s service area or any portion thereof, made by Board of Directors of the District under the Municipal Utility District Act (Pub. Util. Code, § 11501 et seq.), or by any person to whom the Board of Directors has expressly delegated that authority, or by any person authorized to declare an emergency of any degree under the California Emergency Services Act (Gov. Code, § 8550 et seq.) or under Federal law.

(cc) Structure. Any building or facility that is required to be provided with public sewer service, or that is actually provided with public sewer service, or that is served by a Private Sewer Lateral.



(dd) Time Extension Certificate. A certificate issued by the District in connection with a Title Transfer transaction to a Property Owner, or to a transferee, that extends the deadline to obtain a Compliance Certificate for 180 days from the date the Time Extension Certificate is issued.

(ee) Title Transfer. The sale or transfer of an entire real property estate or the fee interest in that real property estate, excluding the sale or transfer of partial interest such as a leasehold. The following are not Title Transfers for purposes of this Regional Ordinance:

(1) a transfer to an heir by a fiduciary in the course of the administration of a decedent's estates, guardianship, conservatorship, or trust;

(2) a 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;

(3) a transfer made by a trustor to fund an inter vivos trust;

(4) a transfer made to a spouse, or to a registered domestic partner as defined in Section 297 of the Family Code, or to a person or persons in a Lineal Consanguinity Relationship with one or more of the transferors;

(5) a transfer between spouses or registered domestic partners resulting from a decree of dissolution of marriage or domestic partnership, or resulting from a decree of legal separation or from a property settlement agreement incidental to a decree; and

(6) a transfer from a Property Owner to a financial institution as a result of a foreclosure or similar process. A transfer from a financial institution to a new Property Owner is a Title Transfer for purposes of this Regional Ordinance.

(ff) Triggering Event. Any event described in Section 6 that, upon the occurrence of the event and subject to the exceptions listed in that Section, imposes an obligation on a Property Owner to obtain a Compliance Certificate.

(gg) Upper Sewer Lateral. The portion of the Private Sewer Lateral extending from the Cleanout near the curb line to the Structure(s) served by that Private Sewer



Lateral, or from the curb line in the street to the Structure(s) served by that Private Sewer Lateral if there is no Cleanout near the curb line. The Upper Sewer Lateral includes all portions of the Private Sewer Lateral upon the parcel containing the Structure(s) served. If the parcel contains a sewer pipe system or multiple Private Sewer Laterals, the entire sewer pipe system, including manholes and other appurtenances, and all Private Sewer Laterals are part of the Upper Sewer Lateral to the extent they are located on that parcel. If a Private Sewer Lateral connects to a rear or side yard Sewer Main located in an easement, or to a manhole, the entire Private Sewer Lateral, including the connection to the Sewer Main or manhole, is an Upper Sewer Lateral. An Upper Sewer Lateral is associated with a parcel if it, or any portion of it, is located upon the parcel or conveys sewage and liquid waste from any Structure located on that parcel. More than one Upper Sewer Lateral may be associated with an individual parcel.

(hh) Verification Test. A test witnessed by the District's authorized representative(s) to verify that all PSLs associated with the parcel comply with this Regional Ordinance and applicable Local Ordinance Requirements.

(Ord. No. 359-13, 7-23-2013; Ord. No. 362-14, 10-28-2014)

SECTION 5

RESPONSIBILITY AND STANDARDS FOR MAINTENANCE OF UPPER SEWER LATERALS

- (a) All Upper Sewer Laterals must meet the following standards:
- (1) The Upper Sewer Lateral shall be kept free from roots, grease deposits, and other solids which may impede or obstruct the flow.
 - (2) All joints shall be watertight and all pipes shall be sound.
 - (3) The Upper Sewer Lateral shall be free of any structural defects such as fractures, cracks, breaks, openings, or missing portions.
 - (4) All Cleanouts shall be securely sealed with a proper cap or approved overflow device at all times.



(5) There shall be no Non-Sanitary Sewer Connections to the Upper Sewer Lateral or to any plumbing that connects thereto.

(b) Property Owners must maintain all Upper Sewer Laterals associated with their parcels to the extent necessary to ensure the Upper Sewer Laterals meet the standards of this Section and comply with all other requirements of this Regional Ordinance and all applicable Local Ordinance Requirements. Property Owners must perform any Repair or Replacement necessary to ensure the Upper Sewer Laterals meet those standards and requirements.

(c) Public Entities shall maintain Upper Sewer Laterals in full compliance with the standards of this Section.

(Ord. No. 359-13, 7-23-2013; Ord. No. 362-14, 10-28-2014)

SECTION 6

WHEN A COMPLIANCE CERTIFICATE IS REQUIRED

(a) All Property Owners must obtain a Compliance Certificate at the time and in the manner required by this Section, except for the following:

(1) Property Owners entitled to an Exemption Certificate under Section 10;

(2) Property Owners within certain Common Interest Developments governed by Section 11; and

(3) Property Owners of any parcel or Parcel Group with Private Sewer Laterals totaling greater than 1000 feet, which are governed by Section 12.

(b) Title Transfer. Before completing a Title Transfer associated with a parcel containing any Structure, either the transferor or the transferee, as negotiated between them, shall obtain a Compliance Certificate under Section 7, unless a Time Extension Certificate is obtained as provided in Section 9. After the Title Transfer is complete, the transferee is solely responsible for obtaining a Compliance Certificate. The requirement



to obtain a Compliance Certificate before Title Transfer in no way affects the legality of the transfer of title in the underlying property transaction.

(c) Construction or Remodeling. Whenever a Property Owner submits an application to a Permitting Authority for any permit or other approval needed for new construction upon a parcel, or for Remodeling of an existing or previously existing Structure, the Property Owner shall obtain a Compliance Certificate under Section 7 before obtaining a final permit or approval from the Permitting Authority. This paragraph applies to construction and Remodeling if the cost of the permitted work exceeds \$100,000.00.

(d) Change in Water Services. Whenever a Property Owner requests an increase or decrease in size of the Property Owner's water meter, the Property Owner shall obtain a Compliance Certificate under Section 7 before the East Bay Municipal Utility District will perform work on the water meter. The East Bay Municipal Utility District may increase or decrease a water meter's size without first requiring the Property Owner to obtain a Compliance Certificate if the Property Owner holds a permit for construction or Remodeling subject to paragraph (c) of this Section.

(e) Local Ordinance Requirements. A Property Owner must obtain a Compliance Certificate under Section 7 when expressly required to do so by Local Ordinance Requirements.

(Ord. No. 359-13, 7-23-2013; Ord. No. 362-14, 10-28-2014)

SECTION 7

HOW TO OBTAIN A COMPLIANCE CERTIFICATE

(a) Whenever a Compliance Certificate is required under this Regional Ordinance, or at any time a Property Owner voluntarily requests a Compliance Certificate, a Property Owner who does not hold a valid Compliance Certificate shall do the following at the Property Owner's expense:

(1) Condition Assessment and Repair or Replacement. The Property Owner shall take steps to assess the condition of all Private Sewer Laterals associated with the parcel to determine whether the PSLs comply with the



standards set forth in Section 5, all other requirements of this Regional Ordinance, and all applicable Local Ordinance Requirements. If the PSLs are not in compliance, the Property Owner shall obtain any required permits and perform all Repair or Replacement work needed to bring the PSLs into compliance.

(2) Verification Testing. After the Property Owner determines through any combination of inspection, Repair and/or Replacement that the PSLs associated with the parcel are in compliance with this Regional Ordinance and applicable Local Ordinance Requirements, and upon payment of the required Compliance Certificate fee and any other applicable fees, the Property Owner shall perform a Verification Test in accordance with the District's procedures in the presence of the District's authorized representative. The District will issue a Compliance Certificate if its authorized representative determines that the Verification Test confirms that all PSLs associated with the parcel are in compliance with this Regional Ordinance and applicable Local Ordinance Requirements, except that Compliance Certificates issued within certain Common Interest Developments under Section 11(b)(3) will be issued on the conditions set forth in that Section.

(b) Procedures for Verification Testing of Private Sewer Laterals. The Director will maintain written procedures for Verification Testing. The procedures shall be made available upon request.

(c) Effect of General Waiver. A Property Owner who holds General Waiver status may obtain a Compliance Certificate without performing condition assessment, Repair or Replacement work, or Verification Testing on the Lower Sewer Lateral.

(d) Effect of Limited Waiver. If a Satellite has issued a Limited Waiver for the Lower Sewer Lateral or a portion of it, the Property Owner may obtain a Compliance Certificate without performing condition assessment, Repair or Replacement work or Verification Testing on the Lower Sewer Lateral, except such work and testing is required for any portion of the Lower Sewer Lateral not covered by the Limited Waiver.

(e) Voluntary Certification. The District shall provide a Compliance Certificate to any Property Owner or Public Entity who requests one and passes a Verification Test conducted pursuant to this Section, including but not limited to a Property Owner or Public Entity who receives notice from the District or a Satellite that



the Private Sewer Lateral is damaged, deteriorating, defective, or in any other way fails to comply with Section 5 or with applicable Local Ordinance Requirements.

(Ord. No. 359-13, 7-23-2013; Ord. No. 362-14, 10-28-2014)

SECTION 8

COMPLIANCE CERTIFICATE TERM LIMITS

(a) Term Limit. A Compliance Certificate obtained as a result of Replacement of all PSLs associated with the parcel shall be valid for 20 years from the date of issuance. All other Compliance Certificates shall be valid for 7 years from the date of issuance, except as provided in paragraphs (b) and (c) and in Sections 11(c) and 12(c).

(b) Effect of General Waiver. A Compliance Certificate obtained by a Property Owner while the Property Owner holds General Waiver status shall be valid for a specified period as follows:

(1) A Compliance Certificate obtained as a result of Replacement of the entire Upper Sewer Lateral shall be valid for 20 years from the date the Compliance Certificate is issued; and

(2) All other Compliance Certificates shall be valid for 7 years from the date the Compliance Certificate is issued, except as provided in Sections 11(c) and 12(c).

(c) Effect of Limited Waiver. If a Satellite has issued a Limited Waiver for the Lower Sewer Lateral, or a portion of it, the Compliance Certificate shall be valid for the same period as the Limited Waiver and shall expire on the Limited Waiver's expiration date, provided that the Compliance Certificate shall in no case be valid beyond 7 years from the date it is issued.

(Ord. No. 359-13, 7-23-2013; Ord. No. 362-14, 10-28-2014)



SECTION 9

TIME EXTENSION CERTIFICATES

(a) Availability. If a Compliance Certificate cannot be obtained before Title Transfer, the transferor, transferee, or other interested party or parties may obtain a Time Extension Certificate from the District. Time Extension Certificates are issued in connection with Title Transfer transactions only.

(b) Deposit. The Time Extension Certificate shall be completed and submitted to the District along with a refundable \$4,500.00 deposit and any nonrefundable fee that the District may require. The deposit will be refunded after a Compliance Certificate is issued.

(c) Validity Period. A Time Extension Certificate expires 180 days after it is issued.

(d) Obligation of Property Owner or Transferee. During the 180-day validity period of a Time Extension Certificate, the Property Owner or transferee must complete any necessary Repair or Replacement and obtain a Compliance Certificate. Property Owners are responsible for the full cost of compliance with this Regional Ordinance and applicable Local Ordinance Requirements and that cost may exceed the deposit.

(e) Forfeiture of Deposit. If a Compliance Certificate is not obtained before a Time Extension Certificate expires, the deposit may be forfeited and the current Property Owner is subject to enforcement action as provided by this Regional Ordinance. The Property Owner may apply to the District for release of forfeited funds, less the District's costs. The District will not release forfeited funds unless the Property Owner first demonstrates full compliance with this Regional Ordinance.

(f) No Renewal. Time Extension Certificates are not renewable.

(g) Transferability. The Director may authorize and regulate the transferability of Time Extension Certificates. Transfers, if authorized, shall not extend the Time Extension Certificate's expiration date.

(Ord. No. 359-13, 7-23-2013)



SECTION 10

EXEMPTION CERTIFICATES

(a) Generally. An Exemption Certificate issued in connection with a parcel excuses the Property Owner of that parcel, while the Exemption Certificate remains valid, from any requirement to obtain a Compliance Certificate upon the occurrence of a Triggering Event. An Exemption Certificate also documents to third parties that no Compliance Certificate is required. Grounds for Exemption Certificates are specified in this Section. The District may require a Property Owner to submit specified supporting documentation for review before an Exemption Certificate will be issued.

(b) Exemption for Documented Prior Work on Private Sewer Lateral.

(1) Alameda, Albany & Stege Sanitary District. The City of Alameda, the City of Albany and Stege Sanitary District issued documents similar to Compliance Certificates before this Regional Ordinance became effective in their jurisdictions. A Property Owner may request an Exemption Certificate from the District if one of these Satellites, before the Regional Ordinance became effective in its jurisdiction, issued a valid and un-expired document similar to a Compliance Certificate indicating that all Private Sewer Laterals associated with the Property Owner's parcel met applicable standards at the time the document was issued, and such Exemption Certificate will expire on the same date that the document issued by the Satellite expires.

(2) Emeryville, Oakland & Piedmont. The Cities of Emeryville, Oakland, and Piedmont did not issue documents similar to Compliance Certificates before this Regional Ordinance became effective in their jurisdictions but did issue final building and sewer permits that, in some cases, indicate the Private Sewer Laterals on the parcel were Replaced or newly constructed. A Property Owner may request an Exemption Certificate from the District if one of these Satellites issued a dated and approved final building or sewer permit indicating that all Private Sewer Laterals associated with the Property Owner's parcel were Replaced or newly constructed. The District will issue an Exemption Certificate upon receiving confirmation from the issuing Satellite of the final permit's validity. The Exemption Certificate expires ten years after the date the Satellite issued the final permit that provides the basis for the Exemption Certificate. An Exemption Certificate will not be issued unless the Satellite issued



the final permit during the ten-year period preceding the Regional Ordinance’s effective date within the Satellite sewer service area in which the parcel is located:

Satellite	First Day of Ten-Year Period	Last Day of Ten-Year Period	Regional Ordinance Effective Date
City of Emeryville	8/22/2001	8/21/2011	8/22/2011
City of Oakland	1/16/2002	1/15/2012	1/16/2012
City of Piedmont	8/22/2001	8/21/2011	8/22/2011

(c) Other Exemptions.

(1) Grounds. A Property Owner may request a short-term Exemption Certificate on any of the following grounds:

- (i) an entire real property estate, or the fee interest in that real property estate, has been sold or transferred, and the District is provided documentation showing the sale or transfer is not a Title Transfer as defined by this Regional Ordinance;
- (ii) no Private Sewer Lateral ever existed on the parcel;
- (iii) no Private Sewer Lateral associated with the parcel is connected to the public sewer system; or
- (iv) all Private Sewer Laterals associated with the parcel are pressurized.

(2) Expiration. An Exemption Certificate issued on any grounds provided by paragraph (c)(1) will expire as follows:

- (i) six months after issuance, if issued on the grounds provided in paragraph (c)(1)(i) and before the sale or transfer is recorded; and



(ii) one month after issuance in all other cases.

(d) Common Interest Developments. A Property Owner of an individual unit within a Common Interest Development need not obtain and will not be issued an Exemption Certificate if the Homeowners' Association has assumed responsibility to maintain all Private Sewer Laterals within the Common Interest Development.

(Ord. No. 359-13, 7-23-2013; Ord. No. 362-14, 10-28-2014)

SECTION 11

COMMON INTEREST DEVELOPMENTS

(a) Compliance Certificate Requirement. Compliance Certificates must be obtained with respect to Common Interest Developments as described in this Section.

(b) Responsibility of Homeowners' Associations and Individual Unit Owners.

(1) The Homeowners' Association and the Property Owner of an individual unit within the Common Interest Development are each responsible to obtain a Compliance Certificate to the same extent each party is responsible to maintain PSLs within the Common Interest Development. The division of responsibility for PSL maintenance between the Homeowners' Association and the Property Owners of individual units may be described in any document but is typically described in the Covenants, Conditions and Restrictions applicable to Common Interest Developments or the parcels in them. In some Common Interest Developments, the Homeowners' Association has assumed responsibility to maintain all PSLs. In other Common Interest Developments, the owner of each individual unit is responsible to maintain the PSLs associated with the unit he or she owns, and the Homeowners' Association is responsible to maintain the remaining PSLs within the Common Interest Development.

(2) If the Homeowners' Association has assumed responsibility to maintain all PSLs within the Common Interest Development, the Homeowners' Association must obtain Compliance Certificates under Section 7 on or before July 12, 2021 for all parcels within the Common Interest Development, except that the Homeowners' Association must comply with Section 12 if the total



combined length of PSLs within the Common Interest Development exceeds 1000 feet.

(3) If the Property Owners of individual units and the Homeowners' Association share responsibility to maintain PSLs within the Common Interest Development, the parties' respective responsibility to obtain Compliance Certificates is as follows:

(A) The Property Owner of the individual unit must obtain a PSL Compliance Certificate at the time and in the manner required by Section 6 and notwithstanding paragraph (a)(2) of that Section, provided that the District will require Verification Testing only of those PSLs or portions of PSLs that are the responsibility of the Property Owner of the individual unit before issuing a Compliance Certificate.

(B) The Homeowners' Association must obtain a Compliance Certificate under Section 7 on or before July 12, 2021 for all parcels associated with any PSL that is the Homeowners' Association's responsibility to maintain, provided that the District will require Verification Testing only of those PSLs or portions of PSLs that are the responsibility of the Homeowners' Association before issuing a Compliance Certificate.

(C) The issuance of a Compliance Certificate under paragraph (b)(3) of this Section to either a Property Owner of an individual unit or to a Homeowners' Association, with respect to a specific parcel within a Common Interest Development, does not relieve another party that shares responsibility to maintain PSLs associated with the same parcel of its obligation under paragraph (b)(3) of this Section to obtain a Compliance Certificate for that parcel.

(c) A Compliance Certificate issued to a Homeowners' Association under this Section shall be valid for 20 years from the date it is issued. The Homeowners' Association must obtain a new Compliance Certificate under Section 7 upon the expiration of the previously issued Compliance Certificate.



(d) Developments Where No Homeowners' Association Exists. For the purposes of this Regional Ordinance, any development without a Homeowners' Association is not a Common Interest Development, even if the development is classified in county records as condominiums, residential planned unit developments, or similar. This Section does not apply to such developments. Individual unit owners within such developments must obtain a PSL Compliance Certificate at the time and in the manner required by Section 6.

(Ord. No. 359-13, 7-23-2013)

SECTION 12

PARCELS OR PARCEL GROUPS WITH PRIVATE SEWER LATERALS EXCEEDING 1000 FEET

(a) Condition Assessment Plan. On or before July 12, 2016, the Property Owner of any parcel or any Parcel Group with Private Sewer Laterals exceeding 1000 feet in total combined length within the parcel or Parcel Group shall submit for District approval a Condition Assessment Plan. The Condition Assessment Plan shall include a schedule for the performance of testing to assess the condition of all PSLs associated with the parcel or Parcel Group.

(b) Corrective Action Work Plan. On or before July 12, 2021, a Property Owner subject to this Section shall complete all condition assessment testing and submit a Corrective Action Work Plan for District approval. The Corrective Action Work Plan shall describe the type, quantity and schedule of work needed to bring all PSLs associated with the parcel or Parcel Group into compliance with the standards set forth in Section 5, all other requirements of this Regional Ordinance, and all applicable Local Ordinance Requirements. The District shall approve the Corrective Action Work Plan if it determines the proposed work will result in full compliance within a reasonable time.

(c) Compliance Certificate. After the Property Owner completes the work described in the approved Corrective Action Plan, the Property Owner must obtain a Compliance Certificate under Section 7(a)(2) for the parcel or parcels. The Compliance Certificate(s) shall be valid for 20 years from the date issued, and upon expiration the Property Owner must obtain new Compliance Certificate(s) under Section 7.

(Ord. No. 359-13, 7-23-2013)



SECTION 13

ENFORCEMENT

(a) The Director shall enforce this Regional Ordinance. Enforcement of Local Ordinance Requirements is the responsibility of the Satellite that adopted the Local Ordinance Requirements.

(b) Violations of this Regional Ordinance include, but are not limited to:

(1) Failure to obtain a Compliance Certificate when one is required, including after the expiration of a Time Extension Certificate;

(2) Failure to obtain a Time Extension Certificate if a Compliance Certificate is not obtained or to timely perform all required work after receiving a Time Extension Certificate;

(3) Failure to comply with the District's requirements for Repair, Replacement and Verification Testing;

(4) Falsifying facts to obtain an Exemption Certificate or a Compliance Certificate; and/or

(5) Presenting a false Exemption Certificate or Compliance Certificate.

(c) Enforcement

(1) When the Director finds that a person violates or threatens to violate this Regional Ordinance, the Director may notify the person in writing. Within 30 days of the mailing of that notification, the notified person must submit for approval by the Director a detailed time schedule of specific actions the person shall take in order to correct or prevent a violation of this Regional Ordinance. The person must take the actions within 90 days of the mailing date of the Director's notification.

(2) The Director may take enforcement action against a person who violates the provisions of this Regional Ordinance or fails to perform any act required by this Regional Ordinance, including but not limited to initiating court



action to obtain an injunction requiring the work to be done and/or terminating water service. The District may recover from any person in violation of this Regional Ordinance the costs it incurs in connection with enforcing this Regional Ordinance, including staff time, and may seek attorneys' fees in any court action or proceeding.

(Ord. No. 359-13, 7-23-2013)

SECTION 14

REQUESTS FOR RELIEF OR RECONSIDERATION

(a) Requests for Relief. Any person or entity unable to comply with the requirements of this Regional Ordinance, or any person affected by any District decision, action, or determination related to this Regional Ordinance, may submit to the District a written request for relief setting forth in detail the facts supporting the request. The Director shall designate a District officer or employee with managerial authority who will consider the matter without a hearing and decide whether to grant relief. The Director's designee may request additional information. The Director's designee may decide the matter within fifteen (15) business days from the receipt of the request, or, if additional information is requested and received within fifteen (15) business days from the receipt of the request, then fifteen (15) business days from the date the District receives all additional requested information. If the Director's designee does not decide the matter within the above-stated time period, the request for relief shall be deemed denied on the first day following that time period. Notice of any decision will be mailed to the person or entity requesting relief.

(b) Requests for Reconsideration.

(1) Within 30 days after the date of mailing of written notice of any District decision granting or denying relief under paragraph (a) of this Section, or within 30 days after the date the request for relief is deemed denied, any person or entity affected by the requirements, decision, action or determination that was the subject of the request for relief may submit to the Director a written request for reconsideration. The Director shall personally consider all requests for reconsideration. The request for reconsideration must set forth in detail the facts supporting the request.



(2) The Director may act on the request for reconsideration with or without a hearing in any manner the Director deems reasonable and shall thereafter issue a final written determination concerning the request for reconsideration. If the Director fails to act upon the request for reconsideration within fifteen (15) business days of receipt of the request for reconsideration, the request shall be deemed denied. The decision, action or determination shall remain in effect during the period of review by the Director.

(3) The Director's decision shall become final and binding at the time the Director acts on the request or fails to act within the time specified by this paragraph (b). If the Director acts on the request for reconsideration, notice of the Director's action will be mailed to the person or entity requesting reconsideration within five (5) business days of the action.

(4) Any person or entity affected by a decision, action or determination related to this Regional Ordinance who wishes to appeal or challenge the decision, action or determination must request reconsideration using the process specified in this paragraph (b). This requirement is jurisdictional. The failure to seek reconsideration shall be deemed a failure of the person or entity subject to the decision, action or determination to exhaust administrative remedies.

(Ord. No. 359-13, 7-23-2013; Ord. No. 362-14, 10-28-2014)

SECTION 15

FEES AND REGULATIONS

(a) Fees. The District may establish fees in the Water and Wastewater System Schedule of Rates and Charges and Fees for administration of this Regional Ordinance and may modify those fees from time to time.

(b) Regulations. The Director may develop and maintain written regulations, procedures and guidance materials for administration of this Regional Ordinance and shall make them available on the District's website and upon request.

(Ord. No. 359-13, 7-23-2013)



SECTION 16

EMERGENCIES

During a State of Emergency, the Director may temporarily suspend any or all provisions of this Regional Ordinance until the next regular or special meeting of the District's Board of Directors. At the regular or special meeting a report shall be made and the Board may consider whether to authorize continued suspension of this Regional Ordinance for the full duration of the State of Emergency, or for any shorter time period the Board finds appropriate.

(Ord. No. 359-13, 7-23-2013)

SECTION 17

SEVERABILITY

If any provision of this Regional Ordinance, or the application thereof to any person or circumstance, is held invalid, the remainder of the Regional Ordinance, or the application of such provision to other persons or circumstances, shall not be affected thereby.

(Ord. No. 359-13, 7-23-2013)

SECTION 18

EFFECTIVE DATE

This Regional Ordinance, as amended, shall become effective and in full force at 12:01 a.m. on the thirty-first day following its passage.

(Ord. No. 359-13, 7-23-2013; Ord. No. 362-14, 10-28-2014)



APPENDIX D
Overflow Response and Reporting Procedure

CITY OF EMERYVILLE

SANITARY SEWER OVERFLOW (SSO) RESPONSE AND REPORTING PROCEDURE

EFFECTIVE: September 30, 2014

OVERVIEW

PURPOSE

To provide guidance to incident response crew personnel when remediating an overflow from the sanitary sewer system.

SCOPE

This procedure is applicable to all overflows of the sanitary sewer system. There are slightly different procedures associated with the three categories of overflows.

OVERFLOW DEFINITION

An overflow is 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 sewer main lines. The categories of overflows listed in Table 1 are as defined in State Water Resources Control Board Order No. WQ 2013-0058-EXEC.

**TABLE 1
OVERFLOW CATEGORIES AND DEFINITIONS**

CATEGORY	DEFINITIONS
Category 1	Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's sanitary sewer system failure or flow condition that: <ul style="list-style-type: none">• Reach surface water and/or reach a drainage channel tributary to a surface water; or• Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).
Category 2	Discharges of untreated or partially treated wastewater of 1,000 gallons or greater resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.
Category 3	All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.

RESPONSIBILITY

The Public Works Operations and Facilities Manager (OPS-Manager) and the Alameda County Fire Department are responsible for carrying out this procedure. When the OPS-Manager is not available, the Public Works Standby Assigned Staff will assume the responsibility to carry out this procedure and to direct the efforts of the maintenance crew and work with the assigned Alameda County Fire Department Incident Commander (FDIC) (i.e. the Fire Station Captain on duty at the time the overflow is reported). The FDIC is responsible for filing the immediate overflow reports with the required regulatory agencies and forwarding those reports to the City's Environmental Programs Analyst (City-EPA) who will file additional reports such as the monthly or quarterly overflow summary reports.

SANITARY SEWER OVERFLOW REPORT

The Sanitary Sewer Overflow Report (SSO-Report) form (Appendix A) should be completed by on-scene responders to the appropriate degree for all overflow responses and forwarded to the OPS-Manager and City-EPA for follow-up/completion after the initial field response to an overflow is completed. This report has five basic activities:

- **Initial Incident Report** - Basic information about when the City staff first became aware of the SSO
- **Investigation** - Information on conditions found when crew arrived at the site and immediate actions to remediate the situation
- **Overflow Response** - Documentation of field conditions and estimation of severity of SSO, including Cal-OES notification, if required
- **Corrective Action** - Work to be performed after the overflow occurred to prevent future recurrences
- **Follow-up/Close out** - Incident close out reporting and certification

COMMUNICATIONS

An overview of the required communication at various stages of an overflow response as outlined in State Water Resources Control Board Order No. WQ 2013-0058-EXEC is summarized in Table 2.

PROCEDURE

The procedure specified herein is to be followed by Public Works field maintenance personnel, Alameda County Fire Department Crews, and City-EPA when remediating an overflow from the sewer collection system. It is the goal of the City to respond and take action on sewage overflows within 60 minutes of notification of the overflow.

**TABLE 2
SUMMARY OF COMMUNICATION REQUIREMENTS FOR SANITARY SEWER
OVERFLOWS**

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

INCIDENT NOTIFICATION

INTERNAL PROCEDURES

The Public Works Crew Chief or any Maintenance Department Worker is responsible for reporting any major overflow immediately to the OPS-Manager or the Public Works Director. Alternatively, during regular business hours, the Public Works Department may receive a call from a concerned citizen or property owner regarding an SSO. Whoever takes such a call will notify the Fire Department immediately. **Fire Station Captains are the first point of contact for a sewer overflow.** The Fire Department will make the appropriate immediate report to Cal-OES as outlined below.

Category 1 Overflows

As indicated in Table 2, within two hours of becoming aware of any Category 1 SSO **greater than or equal to 1,000 gallons* discharged to surface water or overflowed in a location where it probably will be discharged to surface water**, the California Office of Emergency Services (Cal OES) ((800) 852-7550) is to be notified. A Notification Control Number will be issued by Cal-OES and should be noted on the SSO Report. All other pertinent information should be recorded.

*There are guidelines in Appendix B for estimating the volume of the overflow. A volume of 1,000 gallons of wastewater will fill a square area approximately 16 feet x 16 feet x 6 inches deep or a circle with a diameter of 18 feet to a depth of 6 inches.

Category 2 and 3 Overflows

Cal-OES Notification Category 2 and 3 overflows is not required, however all other pertinent information should be recorded.

INCIDENT OPERATIONS

It is the goal of the response team to use pre-defined procedures to maximize containment, termination, recovery, and cleanup of overflowed sewage depending on the circumstances of the overflow. These procedures are designed to:

- Prevent overflows from reaching storm drains and surface water,
- Mitigate the impact of any overflow that does reach storm drains and/or surface water, and
- Ensure that the public is protected from any potential health impacts that may occur as a result of an overflow.

It is imperative that all Public Works Maintenance personnel have a working familiarity with the procedures and equipment available to respond to an SSO incident.

The Public Works and Fire Department employees have a responsibility and goal to respond to any notification of an SSO within 60 minutes. This means a response with the proper supplies and

equipment necessary to correct the problem, mitigate the damages, and clean the area, with assistance from a private contractor as appropriate.

There are three basic types of problems which could result in an SSO situation:

- Wet weather capacity deficiency - the amount of infiltration/inflow exceeds the hydraulic capacity of the system
- Structural failure - collapsed pipe
- Mechanical blockage - grease, paper products, roots, grease, etc.

Over the past 20 years, the City of Emeryville has systematically replaced most of its sanitary sewer system. The new sewers have been sized to provide adequate wet weather capacity and efforts have been made to remove extraneous flow from the system. Therefore, the City rarely experiences an SSO from either wet weather capacity deficiency or structural failure. The City has identified portions of the system that require routine cleaning to maintain pipe capacity, thereby reducing the risk of SSOs from grease in mains with sags and downstream of food service establishments. In the recent past, there has only been the occasional blockage from debris that has resulted in an SSO.

Since the City staff is not equipped to handle a structural failure, this work would need to be completed by a licensed underground contractor. While arrangements are being made to repair such a structural failure, the City will initiate bypass pumping and continue it as long as needed. In the event of a wet weather overflow, every effort will be taken to minimize the amount of waste products entering the storm drain system.

The Maintenance Crews will work with the Fire Department and other Departments and agencies to ensure a positive result from any SSO. Normally, the Fire Department will assume Incident Command and be on site prior to arrival of Public Works Personnel. The Fire Department is responsible for any initial reporting requirements. Public Works Personnel will work with the Fire Department to contain, isolate, and deny entry to the overflow site; identify the cause of the overflow; and keep the overflow from entering the storm drain system. They will also notify a private contractor to provide assistance in the response activity.

The vactor/hydrojet is the primary equipment used to clear a blocked line. The vactor operator should attempt all clearing/cleaning operations by locating the first functional manhole downstream of the overflow and jetting upstream to the surcharged manhole. NOTE: it is best to keep the manhole cover on the surcharged manhole to minimize the amount of solids escaping the system. This effort will involve the assistance of a Cleaning and CCTV inspection contractor.

Once the blockage has been removed every attempt will be made to collect and return all solids to the sanitary sewer system. This can be achieved by washing any solids back into the manhole from which they came, and by washing the affected area into the nearest functional manhole.

To clean up, the area shall be washed down into the **sanitary sewer** with fresh water. Under no circumstances will chemicals or deodorant be used. Wash down operations can be done using the Hydro jet hose, water trailer, or hydrant meter and fire hose and nozzle.

Each Public Works vehicle will be equipped with the copy of these instructions and copies of the Sanitary Sewer Overflow Report work sheet. The responding Crew Chief will complete this work sheet and document the field conditions with photographs. These pictures it will assist in the estimation of the quantity of the overflow as well as the clean up results.

The procedures to be followed to remediate an overflow are outlined in Table 3.

**TABLE 3
OVERFLOW REMEDIATION**

STEPS	ACTIVITY
Service Call Response	<ul style="list-style-type: none"> • Identify yourself to customer and explain what you will be doing • Barricade area, establish traffic control, and post warning signs (See Appendix C) • Identify and document the problem with photographs (in street, on private property, in buildings) • If the problem is in the private lateral, inform the customer and respond to their questions. The City is not responsible for overflows associated with sewer laterals either on private property or in the public right-of-way • If blockage is in the sewer main, call for outside cleaning and CCTV assistance. <p>Advise anyone coming into casual contact with overflowed sewage to do the following:</p> <ul style="list-style-type: none"> • Wash hands with antibacterial soap and clean, preferably hot water • Immediately wash and disinfect any wound that comes into contact with sewage • Rinse clothes with clean water then wash, separately from other clothing, in a hot wash cycle, preferably with bleach
Contain Overflow	<p>Dry Weather Overflow</p> <ul style="list-style-type: none"> • Build dike with sandbags and plastic sheeting around the overflow site • Use sandbags and plastic sheeting to plug storm drain. Use plastic sheet over inlet to stop any flow entering the storm drain <p>Wet Weather Overflow</p> <ul style="list-style-type: none"> • Containment may not be feasible under extreme high flow conditions
Warning Signs	<p>Posting Signs</p> <p>The Public Works Maintenance Crew will post signs warning the public of a sewage release in the affected area (a sample sign is included in Appendix C). The local Windsurfers organization, Emeryville Marina and Emery Cove Marina, and Watergate Condominium Association are to be notified if warning signs are posted in the vicinity of their facilities. The City will advise the public to avoid contact with the sewage.</p> <p>Warning Sign Removal</p> <p>When site remediation has been completed and public access to the affected area is once again, (typically 24 hours after the incident is stopped) safety warning signs will be removed.</p>

**TABLE 3
OVERFLOW REMEDIATION**

STEPS	ACTIVITY
Receiving Water Sampling	<p>If the overflow volume exceeds from a Category 1 SSO exceeds 50,000 gallons, receiving water quality sampling will be conducted. There are two locations in Emeryville with access to receiving waters:</p> <ul style="list-style-type: none"> • Outfall at Powell Street and the Frontage Road • Near Point Emery at 65th Street <p>Such sampling and testing will be conducted by the EBMUD laboratory. Samples will be analyzed for:</p> <ul style="list-style-type: none"> • Fecal Coliform • Ammonia
Overflow Site Clean-up	<ul style="list-style-type: none"> • Remove all signs of gross pollution (solids, toilet paper, grease, etc.). • Flush area with fresh water. All flush water and sewage should be contained and subsequently pumped to the nearest sanitary sewer or removed by vacor truck.
Property Damage	<p>The City is only responsible for property damage caused by overflows or backups in the <u>sewer mains</u>. The property owner is responsible for property damage caused by their sewer lateral, whether it is on private property or in the public right-of-way.</p> <p>If the damage has been caused by the City's sewer system either backing up or overflowing:</p> <ul style="list-style-type: none"> • Report overflow to OPS-Manager or Public Works Director • Protect undamaged areas • Remove sewage if possible • Transfer mitigation activity to a restoration services contractor • Advise customer of claim procedures for sewer main backup-related repair or cleaning costs
Follow-up	<p>Collection System Facilities</p> <ul style="list-style-type: none"> • Investigate cause of spill • Add main to cleaning schedule, change frequency, or change cleaning method, as appropriate • Re-clean the line segment <u>within 2 days</u> to ensure it is thoroughly clean • Inspect by video camera • Repair or replace line segment if it is damaged • If incident is grease related, prepare FOG Hot Spot report and submit to EBMUD <p>Customer</p> <ul style="list-style-type: none"> • Complete follow-up with customer <p>Crew Response</p> <ul style="list-style-type: none"> • Conduct de-briefing to evaluate response and implement changes as needed

INCIDENT REPORTING

Incident reporting and certification are performed using the CIWQS Online SSO Database. Requirements vary depending on the SSO category:

- **Category 1 or Category 2 SSO**

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

- **Category 3 SSO**

Certify within 30 calendar days of the end of month in which SSO the occurred.

- **SSO Technical Report**

Submit within **45 calendar days** after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters.

The following mandatory information, specified in WQ 2013-0058-EXEC shall be reported prior to finalizing and certifying an SSO report for each category of SSO:

Draft Category 1 SSOs

At a minimum, the following mandatory information shall be reported for a **draft** Category 1 SSO report:

1. SSO Contact Information: Name and telephone number of enrollee contact person who can answer specific questions about the SSO being reported.
2. SSO Location Name.
3. Location of the overflow event (SSO) by entering GPS coordinates. If a single overflow event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the SSO appearance point explanation field.
4. Whether or not the SSO reached surface water, a drainage channel, or entered and was discharged from a drainage structure.
5. Whether or not the SSO reached a municipal separate storm drain system.
6. Whether or not the total SSO volume that reached a municipal separate storm drain system was fully recovered.
7. Estimate of the SSO volume, inclusive of all discharge point(s).
8. Estimate of the SSO volume that reached surface water, a drainage channel, or was not recovered from a storm drain.
9. Estimate of the SSO volume recovered (if applicable).
10. Number of SSO appearance point(s).
11. Description and location of SSO appearance point(s). If a single sanitary sewer system failure results in multiple SSO appearance points, each appearance point must be described.
12. SSO start date and time.

13. Date and time the enrollee was notified of, or self-discovered, the SSO.
14. Estimated operator arrival time.
15. For spills greater than or equal to 1,000 gallons, the date and time Cal OES was called.
16. For overflows greater than or equal to 1,000 gallons, the Cal OES control number.

Certified Category 1 SSOs

At a minimum, the following mandatory information shall be reported for a **certified** Category 1 SSO report, in addition to all fields required for the **draft** Category 1 SSO:

1. Description of SSO destination(s).
2. SSO end date and time.
3. SSO causes (mainline blockage, roots, etc.).
4. SSO failure point (main, lateral, etc.).
5. Whether or not the overflow was associated with a storm event.
6. Description of overflow corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the overflow; and a schedule of major milestones for those steps.
7. Description of overflow response activities.
8. Overflow response completion date.
9. Whether or not there is an ongoing investigation, the reasons for the investigation and the expected date of completion
10. Whether or not a beach closure occurred or may have occurred as a result of the SSO.
11. Whether or not health warnings were posted as a result of the SSO.
12. Name of beach(es) closed and/or impacted. If no beach was impacted, NA shall be selected.
13. Name of surface water(s) impacted.
14. If water quality samples were collected, identify parameters the water quality samples were analyzed for. If no samples were taken, NA shall be selected.
15. If water quality samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA shall be selected.
16. Description of methodology(ies) and type of data relied upon for estimations of the SSO volume discharged and recovered.
17. SSO Certification: Upon SSO Certification, the CIWQS Online SSO Database will issue a final SSO identification (ID) number.

Draft Category 2 SSOs

At a minimum, the following mandatory information shall be reported for a **draft** Category 2 SSO report:

Items 1-14 above for Draft Category 1 SSO

Certified Category 2 SSOs

At a minimum, the following mandatory information shall be reported for a **certified** Category 2 SSO report:

Items 1-14 above for Draft Category 1 SSO and Items 1-9, and 17 above for Certified Category 1 SSO.

Certified Category 3 SSOs

At a minimum, the following mandatory information shall be reported for a **certified** Category 3 SSO report:

Items 1-14 above for Draft Category 1 SSO and Items 1-5, and 17 above for Certified Category 1 SSO.

RESPONSE STAFFING RESOURCES AND CONTACT INFORMATION

CITY STAFF

Fire Department: Three (Including one FDIC)
Public Works Department-Maintenance: Two (Crew Chief and Maintenance Worker)
Public Works Department-Administration: Three (Public Works Director, Operations and Facilities Manager, and Environmental Program Analyst)
Police Department: One (Dispatch additional as needed for traffic control)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

Cal OES: 1-800-852-7550

GROUPS TO NOTIFY UPON POSTINGS OF WARNING SIGNS/BEACH CLOSINGS

Emeryville Marina (510) 654-3716
Emery Cove Marina (510) 428-0505
Watergate Community Property Manager (510) 450-1720
Windsurfers Association iwindsurf.com

OUTSIDE CONTRACTORS

Sewer Cleaning and CCTV	Presidio Systems Inc.	(925) 575-0175 or (925) 575-0217
	Roto Rooter	(510) 483-2324
Restoration Services	Restoration Management	(800) 400-5058
	Four Star Cleaning & Restoration	(800) 255-3333
Analytical Laboratory	Micro Analytical Laboratory	(510) 653-0824
Licensed Underground Contractor	Fermin Construction	(510) 784-6376
Environmental Remediation	Morgan Environmental Services Inc.	(510) 261-0134

EQUIPMENT LIST

The following equipment shall be maintained and kept ready for incident response:

1. Personal Protective Equipment (i.e.: eye protection, gloves)
2. Vactor
3. Bypass pump with suction and discharge hose
4. Trash pump with suction and discharge hose
5. Water trailer
6. Portable hydrant meter
7. Fire hose and nozzle
8. Sand bags and rope
9. Plastic sheeting
10. Wattles
11. Hand tools (shovels, rakes, brooms)
12. Plastic bags
13. Signage appropriate to overflow area
14. Cones/Barricades/caution tape
15. Copy of SSMP with reporting forms

**APPENDIX A
CITY OF EMERYVILLE
SANITARY SEWER OVERFLOW REPORT**

CITY OF EMERYVILLE
SANITARY SEWER OVERFLOW REPORT

INITIAL INCIDENT REPORT

Complaint or Emergency

Notified by: _____ Address: _____ Phone: _____
Email: _____

Initial Response by: _____ Date/Time: Notification: _____ Arrival: _____
What was the Reported Problem/Situation: _____

INVESTIGATION

Spill/Blockage Appearance Point: Main Line/Manhole Private Lateral Other(Specify): _____

Nearest Manhole: _____ Pipe Reach: Upstream ID: _____ Downstream ID: _____

Contractor Assistance Provided By: _____ Arrival at Incident Date/Time: _____

Maintenance Activities Performed: Rod Hydrojet Dye Test CCTV Other (Specify): _____

Final Destination of Overflow: Building or Structure Unpaved Surface Street/Curb/Gutter Other Paved Surface
 Storm Drain System; if so was it fully recovered? Y/N

Surface Water: SF Bay @Oakland/Emery Crescent SF Bay @Powell and Frontage Road SF Bay @Point Emery
 Temescal Creek; if so, estimated volume that reached surface water _____ gal (see calculations)

Other (Specify): _____

Findings/Cause: Broken Main Debris in Main/Manhole Grease Roots Water Main/EBMUD PG&E Wipes/Rags
 Operator Error Vandalism (Specify): _____ Other (Specify): _____

OVERFLOW SPILL RESPONSE

Estimated Spill Start Date/Time: _____ Spill End Date/Time: _____

Estimated Volume of Overflow: _____ gal Estimated Volume of Overflow Recovered: _____ gal

Spill Volume Estimated by : Area x Depth Eyeball Duration and Flow Rate
(Attach Notes and Photos to document initial volume and clean-up)

Measures Taken (check all that apply): Restore Flow Contain Overflow Recover Overflow Return overflow to sewer
 Clean up CCTV Inspect Signs Posted/Removed Barricades Placed /Removed Other (Specify): _____

Was all of the wastewater fully captured and returned to the sanitary sewer system? Y / N / NA

Agencies Notified: CalOES: Date/Time: _____ OES Control No: _____

Other (Specify Agency/Date/Time): _____

Cleanup Description/Notes: _____

_____ No. of Photos Taken: _____

CORRECTIVE ACTION

Actions Taken: Change Cleaning Frequency Repair/Replace main Refer to EBMUD FOG Program
 Other (Specify): _____

Work Order No./Date Opened: _____

Corrective Action Taken/Date Closed: _____

FOLLOW-UP/CLOSE OUT

Field Reports/Notes by: _____ Form Completed by: _____ Date: _____

Report Entry to CIWQS by: _____ Date: _____ CIWQS Event ID: _____

Certification in CIWQS by: _____ Date: _____

**CITY OF EMERYVILLE
SANITARY SEWER OVERFLOW REPORT WORKSHEET**

Call to CalOES (800-852-7550) CalOES Control Number: _____

Call made by: _____ Date/Time of Notification: _____

EMERGENCY CONTACTS

Sewer Cleaning and CCTV	Presidio Systems Inc.	(925) 575-0175 or (925) 575-0217
	Roto Rooter	(510) 483-2324
Restoration Services	Restoration Management	(800) 400-5058
	Four Star Cleaning & Restoration	(800) 255-3333
Analytical Laboratory	EBMUD	(510) XXX-XXXX
Licensed Underground Contractor	Fermin Construction	(510) 784-6376
Environmental Remediation	Morgan Environmental Services Inc.	(510) 261-0134

FIELD NOTES (including Spill Volume Determination)

APPENDIX B OVERFLOW VOLUME ESTIMATING

This appendix documents the three methods that are most often employed to estimate overflow volume.

METHOD 1: EYEBALL ESTIMATE

This method can be useful for small overflows up to 100 gallons. To use this method, imagine the amount of water that would overflow from a bucket or barrel. A bucket contains 5 gallons and a barrel contains 50 gallons. If the overflow is larger than 50 gallons, try to break the standing water into barrels and multiply by 50 gallons.

METHOD 2: MEASURED VOLUME

Most small overflows can be estimated with this method. The shape, dimensions, and depth of the overflowed wastewater are needed. The shape and dimensions are used to calculate the area of the overflow and the depth is used to calculate the volume.

- Step 1 - Sketch the shape of the contained sewage
- Step 2 - Measure or pace off the dimensions.
- Step 3 - Measure the depth at several locations
- Step 4 - Convert the dimensions including depth to feet
- Step 5 - Calculate the area using the following formulas:
 - Rectangle Area = length x width
 - Circle Area = diameter x diameter x 0.785
 - Triangle Area = base x height x 0.5
- Step 6 - Multiply area times the depth
- Step 7 - Multiply the volume by 7.5 to convert it to gallons

METHOD 3: DURATION AND FLOW RATE

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

Duration: The duration is the elapsed time from the start time to the time the overflow stopped.

Start time is sometimes difficult to establish. Here are some approaches:

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

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

Flow Rate: The flow rate is the average flow that left the sewer system during the time of the overflow. There are two ways to estimate the flow rate:

- San Diego Manhole Flow Rate Chart: This chart shows the sewage flowing from a manhole cover for a variety of flow rates. The observations of the field crew are used to select the approximate flow rate from the chart.
- Estimate based on up-stream connections: Once the location of the overflow is known, the number of upstream connections can be determined from the field books. Multiply the number of connection by 200 to 250 gallons per day per connection or 8 to 10 gallons per hour per connection.

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



City of San Diego
Metropolitan Wastewater Department

**Reference Sheet for Estimating Sewer Spills
from Overflowing Sewer Manholes**
All estimates are calculated in gallons per minute (gpm)



Wastewater Collection Division
(619) 654-4160



5 gpm



100 gpm



225 gpm



25 gpm



150 gpm



250 gpm



50 gpm



200 gpm



275 gpm

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

rev. 4/99

APPENDIX C SIGNAGE

Posting of Raw Sewage Signs in Connection with SSOs

This requirement applies to SSOs that have the potential to impact public health

1. Follow overflow emergency response procedures for overflow assessment and containment.
2. When pedestrian and auto traffic need to be diverted around/away from the overflow area to minimize risk to public health, Raw Sewage signs should be posted.
3. Signs should be posted in conspicuous locations to minimize potential human exposure.

Warning signs should remain posted until when site remediation has been completed and public access to the affected area is once again safe.

DANGER

RAW SEWAGE

Keep Children and pets out of this area.



PELIGRO

AGUA CONTAMINADA

Mantenga niños y mascotas fuera de esta área.

For more information – Para más información

Contact: City of Emeryville

Department of Public Works

(510) 596-4341

APPENDIX E
EBMUD Regional Fog Control Program Outline

EBMUD Regional FOG Control Program Outline

The FOG Control Program consists of permitting, inspections, and multiple language outreach to food service facilities in the service area. The Permit requires the installation of a grease interceptor under defined circumstances, maintenance of all grease removal devices at a facility, and maintenance record keeping.

A key element of the program includes hotspot response, a targeted response to grease-related blockages and sanitary sewer overflows. Response activities include facility inspections at food service facilities upstream of the problem area, camera investigations, and corrective actions and enforcement procedures as needed.

The following program elements are outlined below

- Source identification
- Legal authority
- Program structure/requirements
- Grease removal device technology for FSFs
- Inspections and monitoring for FSFs
- Enforcement for FSFs
- FOG disposal
- Public Education and outreach

SSMP Outline

- Source identification
 - Non-hotspot discharges
 - Food Service Facilities (FSFs) (includes restaurants, hospitals, nursing homes, grocery stores, caterers & commissaries) not known to be causing or contributing to grease-related sanitary sewer overflows (SSOs) and blockages
 - Residential
 - Food manufacturing
 - Hotspots – FSFs causing or contributing to grease-related sanitary sewer overflows (SSOs) and blockages
- Legal Authority for FOG program requirements
 - EBMUD Wastewater Control Ordinance 311A-03
 - Prohibited substances – those that cause or threaten to cause obstruction of flows in community sewers or interceptors
 - Authority to require pretreatment prior to discharge to the community sewer
 - Authority to inspect dischargers and sample discharge
 - Enforcement and penalties
 - Individual agency codes and/or ordinances
 - Plumbing Codes (Uniform and State)
 - Other applicable local codes (ex: health)

- Program Structure/Requirements
 - FSFs
 - Wastewater Discharge Permit Requirements for Food Handling Facilities
 - Grease interceptor installation required
 - New facilities
 - Remodels \$75,000 or greater
 - Facilities causing or contributing to a sanitary sewer overflow or blockage (hotspot)
 - Grease removal device maintenance
 - Minimum of every three months or more frequently to ensure discharge does not cause or contribute to SSOs or blockages for grease interceptors
 - Complete pump out of grease interceptor each time pumped
 - Maintenance records kept on site
 - Use of an EBMUD Approved Grease Hauler
 - Residential
 - Educational
 - Food manufacturing
 - EBMUD Wastewater Discharge Permit with requirements for FOG control elements
- Grease removal device technology – for FSFs
 - Grease interceptor installation, design and sizing
 - State Plumbing Code
 - Local agency requirements
 - Grease interceptor waivers and variance
 - Business type
 - Grease generating capability of FSF
 - Installation design restrictions
 - Grease trap installation, design and sizing
 - Alternative pretreatment in instances where grease interceptor cannot be installed (ex: space and slope restrictions)
 - Coordinate installation with local health authority and building/planning departments
- Inspections/Monitoring – for FSFs
 - Non-hotspot areas
 - Inspect all FSFs once during Permit period
 - Grease interceptor inspection – measurement of grease/water/solids
 - Determine compliance with Permit requirements
 - Distribution of educational materials
 - Perform follow-up tasks as needed
 - Increase grease interceptor pumping frequency
 - Require grease interceptor repairs

- Hotspot areas
 - Identification of grease-related SSOs and blockage areas by collection system agencies
 - Investigation to determine potential to cause or contribute to grease hotspot
 - Targeted inspections of FSFs upstream of reported hotspot
 - Grease interceptor inspection – measurement of grease/water/solids
 - Determine compliance with Permit requirements
 - Lateral camera inspections
 - Main line camera inspections
 - Distribution of educational materials
 - Perform follow-up tasks as needed
 - Require grease interceptor installation
 - Increase grease interceptor pumping frequency
 - Verify required grease interceptor repairs
- Enforcement – for FSFs
 - Escalating (progressive) enforcement structure
- FOG Disposal (grease trap and grease interceptor waste)
 - EBMUD wastewater treatment plant is a receiving facility for waste grease from inside and outside of the EBMUD service area
- Public Education and Outreach
 - FSFs (available in Chinese, Spanish, Vietnamese, and Korean)
 - Program brochure
 - Best Management Practices (BMP) chart
 - “How to Maintain a Grease Interceptor” flyer
 - “Do Not Pour” poster
 - BMP poster
 - EBMUD FOG webpage
 - Residential
 - Brochure
 - Scrapers
 - Flyers
 - Used cooking oil collection centers
 - EBMUD residential FOG webpage
 - Public information events